Kansas Board of Regents

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Contact Information

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Cashiers and Student Accounts........ 112 Horace Mann ................................. 620-235-4092, Fax 620-235-6056
Enrollment Management and
   Student Success.................................................. 213 Russ Hall ................................. 620-235-4109, Fax 620-235-6582
   Gorilla Bookstore ....................................... Student Center ................................. 620-235-4876, Fax 620-235-4055
   Graduate and Continuing Studies ........ 112 Russ Hall ........................................ 620-235-4223, Fax 620-235-4219
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   Student Life ........................................... 221 Russ Hall ........................................ 620-235-4231, Fax 620-235-6002
   University Housing ......................... 209 Horace Mann ................................. 620-235-4245, Fax 620-235-4229
   Veterans’ Services .............................. 103 Russ Hall ........................................ 620-235-4202, Fax 620-235-4015

Use this address following the appropriate title or office.

Pittsburg State University
1701 South Broadway
Pittsburg, KS 66762
(620) 231-7000
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University Calendar
The Pittsburg State University calendar is compiled by the Registrar and reviewed by the Faculty Senate and approved by the President’s Council. The Kansas Board of Regents establish the holiday calendar for all 4-year public universities in Kansas.

FALL SEMESTER 2017

August 21, Monday ........................................................................................................................................... Classwork begins
August 28, Monday ........................................................................................................................................... Last day to enroll or add classes without instructor permission
August 28, Monday ........................................................................................................................................... Last day for full refund of tuition and fees
August 29, Tuesday ........................................................................................................................................... Instructor permission required to enroll or add classes
August 29, Tuesday ........................................................................................................................................... GUS on-line enrollment is closed

Enrollment is processed through the Registrar’s Office, 103 Russ Hall

September 4, Monday (Labor Day) .............................................................................................................................. Holiday
September 5, Tuesday ........................................................................................................................................... Final day for dropping course without transcript notation
September 6, Wednesday ............................................................................................................................................... The grade of W will be recorded on a transcript for dropped courses September 6 through November 6
September 15, Friday ............................................................................................................................................... Last day to apply for Spring 2018 Professional Education Semester
September 28, Thursday ........................................................................................................................................... Last day for one-half fee refund

October 5 and 6, Thursday and Friday .......................................................................................................................... Fall Break
October 16, Monday ............................................................................................................................................... Midsemester D and F grades due
November 3, Friday ............................................................................................................................................... Final day to apply for degrees/December graduation
November 6, Monday ............................................................................................................................................... Final day for a W to be recorded for dropped courses
November 6, Monday ............................................................................................................................................... Final day to drop non-completed individual course(s)
November 7, Tuesday ............................................................................................................................................... Students may no longer drop a single course/must withdraw from all courses for the fall term
November 7, Tuesday ............................................................................................................................................... Students may totally withdraw from the fall term through November 30
November 20, Monday ............................................................................................................................................... Final day for first draft of thesis and Ed.S. project
November 21, Tuesday after last class ........................................................................................................................................... Dismissal for Thanksgiving

November 27, Monday ............................................................................................................................................... Classwork resumes
December 1, Friday ............................................................................................................................................... Students are prohibited from withdrawing for the fall term
December 4, Monday ............................................................................................................................................... Final day for submission of thesis and Ed.S. project
December 11, Monday ............................................................................................................................................... Final examinations begin
December 15, Friday ............................................................................................................................................... Final examinations close
December 15, Friday ............................................................................................................................................... Semester closes
December 15, Friday ............................................................................................................................................... Commencement

SPRING SEMESTER 2018

January 15, Monday ............................................................................................................................................... Martin Luther King, Jr. Day, Holiday
January 16, Tuesday ............................................................................................................................................... Classwork begins
January 23, Tuesday ............................................................................................................................................... Fees must be paid by 3:30 p.m.
January 23, Tuesday ............................................................................................................................................... Last day for full refund of tuition and fees
January 23, Tuesday ............................................................................................................................................... Last day to enroll or add classes without instructor permission
January 24, Tuesday ............................................................................................................................................... Instructor permission required to enroll or add classes
January 24, Tuesday ............................................................................................................................................... GUS on-line enrollment is closed

Enrollment is processed through the Registrar’s Office, 103 Russ Hall

January 29, Monday ............................................................................................................................................... Final day for dropping course without transcript notation
January 30, Tuesday ............................................................................................................................................... The grade of W will be recorded on a transcript for dropped courses January 30 through April 9
February 15, Thursday ............................................................................................................................................... Last day to apply for Fall 2018 Professional Education Semester
February 19, Monday ............................................................................................................................................... Last day for one-half fee refund
March 12, Monday ............................................................................................................................................... Midsemester D and F grades due
March 17, Saturday after last class ........................................................................................................................................... Dismissal for Spring Vacation
March 26, Monday ............................................................................................................................................... Classwork resumes
March 30, Friday ............................................................................................................................................... Final day to apply for degrees/Spring or Summer graduation
April 9, Monday ............................................................................................................................................... Final day for a W to be recorded for dropped courses
April 9, Monday ............................................................................................................................................... Final day to drop non-completed individual course(s)
April 10, Tuesday ............................................................................................................................................... Student can no longer drop a single course/must withdraw from all courses for the spring term
April 10, Tuesday ............................................................................................................................................... Students may totally withdraw from the spring term through April 26
April 16, Monday ............................................................................................................................................... Final day for first draft of thesis and Ed.S. project
April 27, Friday ............................................................................................................................................... Students are prohibited from withdrawing for the spring term
May 7, Monday ............................................................................................................................................... Final day for submission of thesis and Ed.S. project
May 7, Monday ............................................................................................................................................... Final examinations begin
May 11, Friday ............................................................................................................................................... Final examinations close
May 11, Friday ............................................................................................................................................... Semester closes
May 12, Saturday ............................................................................................................................................... Commencement: College of Education, College of Technology
May 12, Saturday ............................................................................................................................................... Commencement: College of Arts and Sciences, College of Business
SUMMER SESSION 2018: Eight Week June 4-July 27

June 4, Monday .............................................................................................................. Classwork begins
June 5, Tuesday ............................................................................................................. Tuition & Fees due by 3:30 p.m.
June 5, Tuesday ............................................................................................................. Last day to enroll or add classes beginning June 4 without instructor permission
June 5, Tuesday ............................................................................................................. Last day for full refund of tuition and fees
June 6, Wednesday ....................................................................................................... Instructor permission required to enroll or add classes
June 6, Wednesday ....................................................................................................... GUS on-line enrollment is closed

Enrollment is processed through the Registrar’s Office, 103 Russ Hall

June 7, Thursday ............................................................................................................. Final day for dropping course without transcript notation
June 8, Friday .................................................................................................................. The grade of W will be recorded on a transcript for dropped courses June 8 through July 11
June 18, Monday ............................................................................................................. Last day for one-half tuition & fee refund
June 29, Friday ............................................................................................................... Final day to apply for degrees/Summer graduation

July 4, Tuesday ............................................................................................................... Holiday

July 11, Wednesday ....................................................................................................... Final day for a W to be recorded for dropped courses
July 12, Thursday ........................................................................................................... Student can no longer drop a single course/must withdraw from all non-completed courses for the 8 week session
July 12, Thursday ........................................................................................................... Students may totally withdraw from the 8 week session through July 16
July 13, Friday ............................................................................................................... Final day for first draft of thesis and Ed.S. project
July 17, Tuesday .............................................................................................................. Students are prohibited from withdrawing from the 8 week summer session
July 23, Monday ............................................................................................................. Final day for submission of thesis and Ed.S. project
July 27, Friday ............................................................................................................... Eight Week Summer Session closes

SUMMER SESSION 2018: First Four Week June 4-June 29

June 4, Monday .............................................................................................................. Classwork begins
June 5, Tuesday ............................................................................................................. Tuition & Fees due by 3:30 p.m.
June 5, Tuesday ............................................................................................................. Last day to enroll or add classes without instructor permission
June 5, Tuesday ............................................................................................................. Last day for full refund of tuition and fees
June 6, Wednesday ....................................................................................................... Instructor permission required to enroll or add classes
June 6, Wednesday ....................................................................................................... GUS on-line enrollment is closed

Enrollment is processed through the Registrar’s Office, 103 Russ Hall

June 7, Thursday ............................................................................................................. The grade of W will be recorded on a transcript for dropped courses June 7 through June 18
June 11, Monday ............................................................................................................. Last day for one-half tuition & fee refund
June 18, Monday ............................................................................................................. Final day for a W to be recorded for June dropped courses
June 18, Monday ............................................................................................................. Final day to drop non-completed individual course(s)
June 19, Tuesday ........................................................................................................... Student can no longer drop a single course/must withdraw from all non-completed courses for the first session
June 19, Tuesday ........................................................................................................... Students may totally withdraw from the first session through June 20
June 21, Thursday ........................................................................................................ Students are prohibited from withdrawing from the first session
June 29, Friday ............................................................................................................... Final day to apply for degrees/Summer graduation
June 29, Friday ............................................................................................................... First Four Week Summer Session Closes

SUMMER SESSION 2018: Second Four Week July 2–July 27

July 2, Monday .............................................................................................................. Classwork begins
July 3, Tuesday ............................................................................................................. Last day to enroll or add classes without instructor permission
July 3, Tuesday ............................................................................................................. Last day for full refund of tuition and fees
July 4, Wednesday ....................................................................................................... Holiday

July 5, Thursday ............................................................................................................. The grade of W will be recorded on a transcript for dropped courses July 6 through July 16
July 10, Tuesday ............................................................................................................. Last day for one-half tuition & fee refund
July 13, Friday ............................................................................................................... Final day for first draft of thesis and Ed.S. project
July 16, Monday ............................................................................................................. Final day for a W to be recorded for dropped July courses
July 16, Monday ............................................................................................................. Final day to drop non-completed individual course(s)
July 17, Tuesday ........................................................................................................... Student can no longer drop a single course/must withdraw from all non-completed courses for the second session
July 17, Tuesday ........................................................................................................... Students may totally withdraw from the second session through July 18
July 19, Thursday ........................................................................................................ Students are prohibited from withdrawing from the second session
July 23, Monday ........................................................................................................... Final day for submission of thesis and Ed.S. project
July 27, Friday ............................................................................................................... Second Four Week Summer Session closes

Final examinations will be held in the last regular class period of each summer course.
FALL SEMESTER 2018

August 20, Monday .................................................................................................................. Classwork begins
August 27, Monday .................................................................................................................. Last day to enroll or add classes without instructor permission
August 27, Monday .................................................................................................................. Fees must be paid by 3:30 p.m.
August 27, Monday .................................................................................................................. Last day for full refund of tuition and fees
August 28, Tuesday .................................................................................................................. Instructor permission required to enroll or add classes
August 28, Tuesday .................................................................................................................. GUS on-line enrollment is closed

Enrollment is processed through the Registrar’s Office, 103 Russ Hall

September 3, Monday (Labor Day) .......................................................................................... Holiday
September 4, Tuesday ............................................................................................................. Final day for dropping course without transcript notation
September 5, Wednesday ....................................................................................................... The grade of W will be recorded on a transcript for dropped courses September 5 through November 5
September 14, Friday ............................................................................................................. Last day to apply for Spring 2019 Professional Education Semester
September 26, Thursday ....................................................................................................... Last day for one-half fee refund

October 11 and 12, Thursday and Friday .................................................................................. Fall Break
October 15, Monday .................................................................................................................. Midsemester D and F grades due
November 2, Friday .................................................................................................................. Final day to apply for degrees/December graduation
November 5, Monday .............................................................................................................. Final day for a W to be recorded for dropped courses
November 5, Monday .............................................................................................................. Final day to drop non-completed individual course(s)
November 6, Tuesday ............................................................................................................. Student can no longer drop a single course/must withdraw from all courses for the fall term
November 6, Tuesday ............................................................................................................. Students may totally withdraw from the fall term through November 29
November 19, Monday .......................................................................................................... Final day for first draft of thesis and Ed.S. project
November 20, Tuesday after last class ..................................................................................... Dismissal for Thanksgiving
November 26, Monday .............................................................................................................. Classwork resumes
November 30, Friday ............................................................................................................... Students are prohibited from withdrawing for the fall term
December 3, Monday .............................................................................................................. Final day for submission of thesis and Ed.S. project

December 10, Monday ............................................................................................................. Final examinations begin
December 14, Friday ............................................................................................................... Final examinations close
December 14, Friday ................................................................................................................ Semester closes
December 14, Friday ................................................................................................................ Commencement

SPRING SEMESTER 2019

January 14, Monday .................................................................................................................. Classwork begins
January 21, Monday .................................................................................................................. Martin Luther King, Jr. Day, Holiday
January 22, Tuesday .................................................................................................................. Fees must be paid by 3:30 p.m.
January 22, Tuesday .................................................................................................................. Last day to enroll or add classes without instructor permission
January 22, Tuesday .................................................................................................................. Last day for full refund of tuition and fees
January 22, Tuesday .................................................................................................................. Last day to enroll or add classes without instructor permission
January 23, Wednesday ........................................................................................................... Instructor permission required to enroll or add classes
January 23, Wednesday ........................................................................................................... GUS on-line enrollment is closed

Enrollment is processed through the Registrar’s Office, 103 Russ Hall

January 28, Monday .................................................................................................................. Final day for dropping course without transcript notation
January 29, Tuesday .................................................................................................................. The grade of W will be recorded on a transcript for dropped courses January 29 through April 5
February 14, Thursday ............................................................................................................ Last day to apply for Fall 2019 Professional Education Semester
February 19, Tuesday ............................................................................................................. Last day for one-half fee refund
March 9, Saturday after last class .......................................................................................... Dismissal for Spring Vacation
March 11, Monday ................................................................................................................... Classwork resumes
March 18, Monday ................................................................................................................... Midsemester D and F grades due

April 5, Friday .......................................................................................................................... Final day for a W to be recorded for dropped courses
April 5, Friday .......................................................................................................................... Final day to drop non-completed individual course(s)
April 8, Monday ...................................................................................................................... Student can no longer drop a single course/must withdraw from all courses for the spring term
April 8, Monday ...................................................................................................................... Students may totally withdraw from the spring term through April 26
April 15, Monday ..................................................................................................................... Final day for first draft of thesis and Ed.S. project
April 27, Friday ....................................................................................................................... Students are prohibited from withdrawing for the spring term
May 6, Monday ........................................................................................................................ Final day for submission of thesis and Ed.S. project
May 6, Monday ........................................................................................................................... Final examinations begin
May 10, Friday .......................................................................................................................... Final examinations close
May 10, Friday .......................................................................................................................... Semester closes
May 10, Friday .......................................................................................................................... Commencement: College of Arts and Sciences, College of Business
May 11, Saturday ........................................................................................................................ Commencement: College of Education, College of Technology
SUMMER SESSION 2019: Eight Week June 3-July 26

- **June 3, Monday**: Classwork begins.
- **June 4, Tuesday**: Last day to enroll or add classes without instructor permission. Last day for full refund of tuition and fees. Instructor permission required to enroll or add classes.
- **June 5, Wednesday**: GUS on-line enrollment is closed. Enrollment is processed through the Registrar's Office, 103 Russ Hall.
- **June 6, Thursday**: Final day for dropping course without transcript notation.
- **June 7, Friday**: The grade of W will be recorded on a transcript for dropped courses June 6 through June 17.
- **June 10, Monday**: Final day for a W to be recorded for dropped 8-week courses.
- **June 11, Thursday**: Students can no longer drop a single course/must withdraw from all non-completed courses for the 8 week session.
- **June 12, Friday**: Final day for first draft of thesis and Ed.S. project.
- **June 16, Tuesday**: Students are prohibited from withdrawing from the 8 week summer session.
- **June 20, Thursday**: Final day for submission of thesis and Ed.S. project.
- **June 28, Friday**: Final day for one-half tuition & fee refund.

SUMMER SESSION 2019: First Four Week June 3-June 28

- **June 3, Monday**: Classwork begins.
- **June 4, Tuesday**: Last day to enroll or add classes without instructor permission. Last day for full refund of tuition and fees. Instructor permission required to enroll or add classes.
- **June 5, Wednesday**: GUS on-line enrollment is closed. Enrollment is processed through the Registrar's Office, 103 Russ Hall.
- **June 6, Thursday**: Final day for dropping course without transcript notation.
- **June 7, Friday**: The grade of W will be recorded on a transcript for dropped courses June 7 through June 17.
- **June 10, Monday**: Final day for a W to be recorded for dropped courses June 6 through June 17.
- **June 11, Thursday**: Students can no longer drop a single course/must withdraw from all non-completed courses for the first session.
- **June 12, Friday**: Final day for first draft of thesis and Ed.S. project.
- **June 20, Thursday**: Students are prohibited from withdrawing from the first session.
- **June 28, Friday**: Final day to apply for degrees/Summer graduation.

SUMMER SESSION 2019: Second Four Week July 1–July 26

- **July 1, Monday**: Classwork begins.
- **July 2, Tuesday**: Last day to enroll or add classes without instructor permission. Last day for full refund of tuition and fees. Instructor permission required to enroll or add classes.
- **July 3, Wednesday**: Final day for dropping course without transcript notation.
- **July 4, Thursday**: Holiday.
- **July 5, Friday**: The grade of W will be recorded on a transcript for dropped courses July 5 through July 15.
- **July 9, Tuesday**: Final day for first draft of thesis and Ed.S. project.
- **July 12, Friday**: Final day for a W to be recorded for dropped 8-week courses.
- **July 15, Monday**: Final day for submission of thesis and Ed.S. project.
- **July 26, Friday**: Second Four Week Summer Session closes.

Final examinations will be held in the last regular class period of each summer course.
**University Mission Statement**

The mission of Pittsburg State University is to provide transformational experiences for its students and the community.

**Vision Statement**

Pittsburg State University will be the first choice for:

- Students seeking a quality education through nationally-recognized programs;
- The most talented faculty and staff seeking dynamic careers;
- Partnerships with communities, businesses, organizations, and individuals in the region;
- External investment by donors, grant makers, and government.

**Values**

**STUDENT-FOCUSED**

Continue a campus environment where students feel a connection to the university and its faculty and staff by making students and their success the driving force behind institutional decisions at all levels.

**EXCELLENCE**

Ensure the university strives for outcomes that are exemplary by demanding quality in all aspects of the institution’s operations.

**BY DOING LEARN**

Perpetuate the university’s founding principal of “By doing learn,” through the creation of academic programs and opportunities that engage students in real world activities.

**DIVERSITY**

Foster a diverse and international campus culture among students, faculty, and staff and students that supports an understanding and acceptance of a variety of ideas, beliefs, and cultures, thereby creating opportunity for all.

**COMMUNITY**

Enhance the university’s strong relationship with the region and the Pittsburg community by maintaining a welcoming campus and creating big university opportunities in a small campus atmosphere.

**INNOVATION**

Encourage students, faculty, and staff to take informed, calculated, and strategic risks to build upon their success, start new ventures, utilize new technologies, and forge an entrepreneurial path forward.

**SUSTAINABILITY**

Recognize there are limited and finite resources in the world, and, therefore, commit ourselves to establishing best practices to conserve resources as well as decrease the university’s carbon footprint.

**Accreditation and Institutional Memberships**

Pittsburg State University is accredited by the Higher Learning Commission, 230 South LaSalle Street, Chicago, IL 60604. In addition, Pittsburg State University holds accreditation for academic programs from the following:

- Council for the Accreditation of Educator Preparation
- National Association of Schools of Music
- Commission on Collegiate Nursing Education (for bachelor’s and master’s)
- Association to Advance Collegiate Schools of Business (AACSB International)
- Masters of Psychology and Counseling Accreditation Council
- National Recreation and Park Association: Council on Accreditation for Parks, Recreation, Tourism and Related Professions
- Council on Social Work Education
- ABET, Inc. - accreditation for the baccalaureate programs in construction engineering technology, electronics engineering technology, manufacturing engineering technology, mechanical engineering technology and plastics engineering technology.
- The university is on the list of approved schools published by the American Chemical Society, and The Foundry Education Foundation.
- National Automotive Technicians Education Foundation
- National Association for the Education of Young Children (preschool - Family & Consumer Sciences)
- Commission on English Language Program Accreditation
- Kansas State Board of Education
• Kansas State Board of Nursing

The university has institutional memberships in the following:

• AACTE - American Association of Colleges for Teacher Education
• AASCU - American Association of State Colleges & Universities
• AASHE - Association for the Advancement of Sustainability in Higher Education
• AASHE - STARS
• ACUA - Association of College & University Auditors
• ACUPEC - American College & University President's Leadership Council
• APPA/CAPPA - (Central) Association of Higher Education Officers
• BMI - Broadcast Music
• CASE - Council for the Advancement and Support of Education
• CUPA - College and University Personnel Association
• HLC - Higher Learning Commission
• MIAA - Mid America Intercollegiate Athletics Conference
• NACUA - National Association of College & University Attorneys
• NACUBO/CACUBO - National/Central Association of College & University Business Officers
• NCAA - National Collegiate Athletic Association
• CAEP - Council for the Accreditation of Educator Preparation
• SESAC - Society of European Stage Authors and Composers

History of Pittsburg State University

Pittsburg State University began in 1903 as the Auxiliary Manual Training Normal School under the State Normal School of Emporia. The institution became a four-year college in 1913 and became known as Kansas State Teachers College. During the Kansas State Teachers College era, the graduate studies program and the Master of Science and Specialist in Education degrees were established.

By 1959, the year that Kansas State Teachers College became known as Kansas State College of Pittsburg, the school had an enrollment of 2,800 and more than 20 major buildings had been added to the campus, including, Hartman, Porter, and McCray Halls, the Student Center, four residence halls and Brandenburg Field.

As Kansas State College of Pittsburg, the university continued to expand its undergraduate and graduate offerings, and in 1966, the current structure of four schools and the graduate division was organized. Additional facilities erected by 1975 included Hughes Hall and Grubbs Hall, the Weede Physical Education Building and the Cecil and Eva C. Wilkinson Alumni Center. By the fall of 1976, the college enrollment had swelled to 5,200.

On April 21, 1977, Kansas State College of Pittsburg was granted university status and was renamed Pittsburg State University. Enrollments have continued to increase and in 2015 surpassed 7,200 full-time students.

Many additional buildings have been constructed to support the University's educational programs since 1977. These include the McPherson Nurse Education Building (1977); the Leonard H. Axe Library (1979); Heckert-Wells Hall (1984); the Kansas Technology Center (1997); the Family and Consumer Sciences Building (2004); the Tyler Polymer Research Center (2007); the Student Recreation Center/National Guard Armory (2008); and the Bryant Student Health Center (2009).

Significant additions to Brandenburg Field and Carnie Smith Stadium occurred in 1989, 2001, and 2006. Major renovations were completed in Willard Hall (2000); the Horace Mann Welcoming Center (2000); Russ Hall (2001); McCray Hall (2008 and 2012); Bowen Hall (2009); Trout Hall (2010); Tanner Hall (2011); Tanner Annex (2012); John Lance Arena (2012); Dellinger Hall (2013) and Nation Hall (2015).

Other new facilities completed since 1986 include KRPS Radio, a National Public Radio affiliate (1988); the Gene Bicknell Sports Complex (1996); the Prentice Gudgen track (1989); the Francis A. Monahan Outdoor Education Center (2001); the Robb Prairie (1986); the Veterans Memorial Amphitheater (2004), Crimson Commons (2010), Crossland Family University House (2012), Bicknell Family Center for the Arts (2014), Robert W. Plaster Center (2015) and an expanded Overman Student Center (2015).
**Academic Programs**

Legend

AAS – Associate of Applied Science degree
BA – Bachelor of Arts degree
BAS – Bachelor of Applied Science degree
BBA – Bachelor of Business Administration degree
BFA – Bachelor of Fine Arts degree
BGS – Bachelor of General Studies degree
BIS – Bachelor of Integrated Studies degree
BM – Bachelor of Music degree
BME – Bachelor of Music Education degree
BS – Bachelor of Science degree
BSCTE – Bachelor of Science in Career and Technical Education degree
BSE – Bachelor of Science in Education degree
BSET – Bachelor of Science in Engineering Technology degree
BSMT – Bachelor of Science in Medical Technology degree
BSN – Bachelor of Science in Nursing degree
BST – Bachelor of Science in Technology degree
DNP - Doctor of Nursing Practice
EdS – Specialist in Education degree
MA – Master of Arts degree
MBA – Master of Business Administration degree
MET – Master of Engineering Technology degree
MM – Master of Music degree
MS – Master of Science degree
MSN – Master of Science in Nursing degree

**Degrees Available**

**College of Arts and Sciences**

**Department of Art**

Art ................................................................. BFA
Art (minor)
Illustration and Visual Storytelling (minor)

**Department of Biology**

Biology ....................................................... BA, BS, BSE, MS
Biology-Medical Technology ......................... BSMT
Biology (minor)
Cell Biology (minor)

General Science (minor)
Natural History (minor)

**Department of Chemistry**

Chemistry ...................................................... BS, BSE, MS
Polymer Chemistry ...................................... BS, MS
Chemistry (minor)

**Department of Communication**

Communication ........................................... BS, BSE, MA
Communication (minor)
Communication (Teaching minor)
Communication (Graduate certificate)

**Department of English and Modern Languages**

English ........................................................ BA, BSE, MA
Modern Languages .................................... BA
Creative Writing (minor)
English (minor)
English (Teaching minor)
English (Graduate certificate)
French (minor)
Professional Writing (minor)
Spanish (minor)

**Department of Family and Consumer Sciences**

Family and Consumer Sciences ..................... BS
Family and Consumer Sciences Education ........ BSE
Childhood Development (minor)
Family and Consumer Sciences (minor)
Fashion Merchandising (minor)
Human Ecology (minor)
Youth and Adolescence (minor)

**Department of History, Philosophy and Social Sciences**

Geography ...................................................... BS
History ......................................................... BA, MA
History/Government ..................................... BSE
Justice Studies ............................................. BS
Political Science .......................................... BA
Social Work ................................................ BS
Sociology ..................................................... BS
Fraud Examination (minor)
Geographic Information Systems (certificate)
Geography (minor)
History (minor)
Justice Studies (minor)
Multicultural Studies (minor)
Philosophy (minor)
Political Science (minor)
Sociology (minor)

Department of Mathematics
Mathematics.............................................. BS, BSE, MS
Mathematics (minor)
Mathematics (Graduate certificate)
Teaching Mathematics for Grades 5-8 (minor)

Department of Military Science
Military Science (minor)

Department of Music
Music.............................................. BA, BM, BME, MM
Music (minor)

Irene Ransom Bradley School of Nursing
Nursing.............................................. BSN, MSN
Advanced Practice Nursing..........................DNP

Department of Physics
Physics.............................................. BS, BSE, MS
Earth and Space Science (minor)
Physical Science (minor)
Physics (minor)

Interdisciplinary

General Studies........................................... BGS

Film & Media studies (minor)

Gerontology (minor)

Innovation Engineering (minor)

Integrated Studies......................................... BIS

Analytics emphasis
Fraud Examination emphasis
Liberal Studies emphasis
Sustainability, Society and Resource Management emphasis

International Studies..................................... BA

International Studies (minor)

Program in Women's and Gender Studies

Women's and Gender Studies (minor) (certificate)

Public Health (minor)

Women's Health (minor)

Gladys A. Kelce College of Business

Department of Accounting and Computer Information Systems

Accounting............................................. BBA
Computer Information Systems.................... BBA
Accounting (minor)
Computing (minor)
Fraud Examination (minor)
Internal Auditing (minor) (certificate)

Department of Economics, Finance and Banking

Economics............................................. BBA
Finance............................................. BBA
Economics (minor)
Kansas Insurance (certificate)

Department of Management and Marketing

Business Administration............................ MBA
Emphasis in Accounting
Emphasis in General Administration
Emphasis in International Business
International Business.............................. BBA
Management.......................................... BBA
Marketing............................................. BBA
Business Administration (minor)
International Business (minor)
Marketing (minor)

College of Education

Department of Health, Human Performance and Recreation

Exercise Science..................................... BS
Health, Human Performance and Recreation..... MS
Physical Education................................... BSE
Recreation............................................ BS
Coaching (minor)
Coaching (certificate)
Dance (minor) (certificate)
Exercise Science (minor)
Physical Education (minor)
Recreation (minor)

Department of Psychology and Counseling

School Counseling.................................... MS
Psychology........................................... BA, BS, MS
School Psychology.................................. EdS
Psychology (minor)
Substance Abuse Services (minor)

Department of Teaching and Leadership

Advanced Studies in Leadership ....................... EdS
Elementary Education (K-6) ............................. BSE
Early Childhood Unified Birth Through 3rd Grade .. BSE
Education ....................................................... MS
Educational Leadership ................................... MS
Educational Technology ................................... MS
Reading ......................................................... MS
Special Education Teaching............................... MS
Teaching .......................................................... MA, MS
Autism Spectrum Disorders (certificate)
District Leadership (certificate)
English for Speakers of Other Languages (minor)
Inclusive Education (minor)
International Teaching (minor)
Leadership Studies (minor)
Reading/Language Arts (certificate)
School Library (certificate)
Special Education (Family and Consumer
Sciences-Early Childhood minor)
Teaching English to Speakers of Other
Languages (TESOL) (certificate)
Technological Literacy (minor)
Technology Integration (certificate)
Urban and Suburban Experience (minor)

College of Technology

Department of Automotive Technology

Automotive Service Technology ...................... AAS
Automotive Technology .................................... BST
Technology ..................................................... BAS
Automotive Technology (minor)
Diesel/Heavy Equipment (minor)

School of Construction

Construction Engineering Technology ............... BSET
Construction Management ............................. BST
Environmental and Safety Management ............. BST
Interior Design ............................................... BS
Technology ...................................................... BAS
Construction Management (minor)
Construction Technology (minor)
Construction Technology for Interior Design (minor)
Interior Design (minor)
Safety, Health and Environmental Management
(minor)

Department of Engineering Technology

Electronics Engineering Technology ................. BSET
Engineering Technology ................................. MET
Manufacturing Engineering Technology ............ BSET
Mechanical Engineering Technology ............... BSET
Plastics Engineering Technology .................... BSET
Technology ...................................................... BSE
Electronics Technology (minor)
Manufacturing Management (minor)
Manufacturing Technology (minor)
Mechanical Technology (minor)
Plastics Technology (minor)

Department of Graphics and Imaging Technologies

Graphic Communications ............................... BST
Technology .................................................... BAS
Graphic Design (minor)
Digital Media (minor)
Packaging Graphics (minor)
Print Media (minor)
Photography (minor)
Web/Interactive Media (minor)

Department of Technology and Workforce Learning

Career and Technical Education ..................... BSCTE, MS
Electrical Technology ..................................... Certificate, AAS
Human Resource Development ........................ MS
Technology ..................................................... BAS, MS
Technology and Engineering Education ............ BAS, MS
Wood Technology .......................................... AAS, BST
Workforce Development ................................ BS
Workforce Development and Education ............. BS
Career and Technical Education Administrator
(certificate)
Human Resource Development (minor)
Industrial Management and Supervision (minor)
Technical Teacher Education (certificate)
Technology Education (minor) (non-teaching)
Technological Literacy (minor)
Wood Technology (minor)
Admission to University

Room: 107 Student Welcoming Center – Horace Mann
Telephone: 620-235-4251 or 1-800-854-PITT (7488)
Fax: (620) 235-6003
e-mail: psuadmit@pittstate.edu
http://www.pittstate.edu/admission

The Office of Admission is the initial contact point for prospective undergraduate domestic students. All necessary records of new students are collected by the Office of Admission and evaluated in accordance with admission requirements as outlined by Pittsburg State University and the Kansas Legislature under KSA 76-717. The following admission standards apply to students who graduated from high school during the 2014-2015 academic year and beyond. For admission requirements for students who graduated prior to the 2014-2015 academic year, please visit http://www.pittstate.edu/admission.

New Freshmen Application Procedure

(New freshmen are defined as students who have less than 24 college credits completed after high school graduation.)

1. Complete the Undergraduate Application for Admission and submit the $30 application fee. Apply online at http://www.pittstate.edu, download an application from the website or request an application from the Office of Admission and send to Office of Admission, Pittsburg State University, 1701 South Broadway, Pittsburg, KS 66762.

2. Submit ACT scores to the Office of Admission. To have scores automatically sent to Pittsburg State University, enter the code 1449 on the ACT test form prior to completing the exam. Students who do not have their scores automatically sent to Pittsburg State University should check with their high school counselors to see if scores appear on transcripts. Additional copies of scores can be obtained from ACT, www.act.org. SAT scores can be used in substitution of the ACT. (Students who are 21 years of age or older are not required to submit ACT scores.)

3. A final high school transcript showing graduation date must be sent directly from your high school to Pittsburg State University prior to the beginning or your first semester to complete your admission file. Please note: In accordance with federal financial aid requirements, a student planning to receive federal financial assistance must have a final high school transcript on file before funds will be applied to the student’s account.

4. If you have a General Education Diploma (GED) or high school equivalency diploma, submit a copy, including scores, to the Office of Admission.

5. Apply for federal financial aid by completing the Free Application for Federal Student Aid (FAFSA) available at http://www.fafsa.gov. Pittsburg State University’s Title IV code is 001926.

6. Complete the Pittsburg State University scholarship application at http://www.pittstate.edu/affordability/scholarships by February 1st if you did not complete the scholarship questions on the application for admission.

7. Complete the University Housing contract at http://www.pittstate.edu/office/housing. All first-year students under the age of 21 are required to live in a university residence hall for their first two academic semesters on campus.

8. Submit the Proof of Immunization Compliance Form to the Bryant Student Health Center. To access the form and for details on required immunizations, please visit https://www.pittstate.edu/health.

9. Register to attend the new student orientation program called Pitt C.A.R.E.S. Registration materials are mailed to all newly admitted undergraduates approximately one month prior to the event. For more information visit http://www.pittstate.edu/admission.

10. Students who have completed college coursework must have the college mail official transcripts to Pittsburg State University. Faxed copies can be used initially for admission and scholarship purposes (fax#: 620-235-6003).

Admission Requirements for New Freshmen under the age of 21

For students who have graduated from an accredited high school:

1. Complete the pre-college curriculum (or equivalent for non-residents) with at least a 2.0 GPA (2.5 for non-residents) on a 4.0 scale*

AND one of the following:
2. ACT composite score of 21 or higher

OR

3. Rank in the top 1/3 of high school graduating class

AND (if applicable)

4. Achieve at least a 2.0 GPA on a 4.0 scale on all transferable college credits

Students graduating from an unaccredited high school or homeschooled must meet the following:

1. Complete the pre-college curriculum or equivalent with at least a 2.0 GPA (2.5 for non-residents) on a 4.0 scale*

AND

2. ACT composite score of 21 or higher

AND (if applicable)

3. Achieve at least a 2.0 GPA on a 4.0 scale on all transferable college credits

GED or HiSET recipients must meet the following:

1. Complete the General Education Development (GED) test with an overall score of at least 2,550 points and a minimum score of 510 points on each subtest if the GED was taken before January 1, 2002 and before January 1, 2014 or an overall score of at least 680 points and a minimum score of 150 points on each subtest if the GED was taken on or after January 1, 2014 OR took the High School Equivalency (HiSET) test on or after January 1, 2014 with an overall score of at least 75 points and a minimum score of 8 points on each subtest

AND

2. ACT composite score of 21 or higher

AND (if applicable)

3. Achieve at least a 2.0 GPA on a 4.0 scale on all transferable college credits

Admission Requirements for New Freshmen over the age of 21

1. Graduated from an accredited or unaccredited high school or homeschool (unaccredited high school or homeschool not applicable for non-residents, non-residents must meet option 2)

OR

2. Completed the General Education Development (GED) test with an overall score of at least 250 points and a minimum score of 50 points on each subtest if the GED was taken before January 1, 2002 or an overall score of at least 2,550 points and a minimum score of 510 points on each subtest if the GED was taken on or after January 1, 2002 and before January 1, 2014 or an overall score of at least 680 points and a minimum score of 150 points on each subtest if the GED was taken on or after January 1, 2014 OR took the High School Equivalency (HiSET) test on or after January 1, 2014 with an overall score of at least 75 points and a minimum score of 8 points on each subtest

There are provisions for a small number of exceptions to the qualified admission standards above. If a student does not meet any of the requirements listed, the admission application will be reviewed individually before an admission decision is made. Please contact the Office of Admission if you have any questions.

*Kansas Board of Regents’ Pre-College Curriculum includes:

(One unit equals one year or two semesters.)

- 4 units of English
- 4 units of Math (Algebra I and above, one unit taken each year of high school) OR 3 units and ACT college readiness math benchmark (22)
- 3 units of Natural Science (at least one unit must be Chemistry or Physics)
- 3 units of Social Science
- 3 units of Electives (taken from the following subjects: English, Math, Natural Sciences, Social Science, Fine Arts, Computer/Information Systems, Foreign Languages, Personal Finance, Speech, Debate, Forensics, Journalism and Career Technical Education)

New Transfer Students

(Transfer students are defined as students who have 24 or more transferable college credits completed after high school graduation.)

Pittsburg State University welcomes qualified students who complete college level work at another college or
university. To receive transfer credit, a student must have attended an institution accredited by a regional accrediting body, such as The Higher Learning Commission.

All courses completed at previous institutions are recorded on the student’s permanent record at Pittsburg State University. All grades, including “D’s” and “F’s”, are used in determining the student’s cumulative grade point average. The Registrar’s Office evaluates all credits for general acceptance to Pittsburg State University; however, each major department makes the final determination of credits accepted toward a specific degree.

Transcript evaluations are available to all students who have official college transcripts mailed directly to Pittsburg State University. Students are encouraged to meet with faculty in their respective academic areas of interest to learn how their credits will fulfill degree requirements.

Course equivalency information is available at http://www.pittstate.edu/admission. If course equivalency information is not available for your institution, please contact the Registrar’s Office at 620-235-4200.

New Transfer Student Application Procedure

1. Complete the Undergraduate Application for Admission and submit the $30 application fee. Apply online at http://www.pittstate.edu, download an application from the website or request an application from the Office of Admission and send to Office of Admission, Pittsburg State University, 1701 South Broadway, Pittsburg, KS 66762.

2. Request that official transcripts from all previously attended institutions be sent directly to Pittsburg State University. Acknowledging your attendance at an institution is mandatory, regardless of your wishes to transfer the credit. Failure to disclose attendance at an institution may disqualify your admission application. Official transcripts received for evaluation of transfer credit will be considered to be a complete academic record from that institution up to and including the last completed semester as listed on the transcript. Subsequent official transcript/transcripts from the same institution showing additional previously completed work will not be accepted. Please note: for federal financial aid requirements, once your courses are assessed by our Registrar’s Office, transferable hours totaling less than 60 requires that a final high school transcript or a copy of your current high school equivalency diploma be on file in the Office of Admission prior to any aid disbursement.

3. Apply for federal financial aid by completing the Free Application for Federal Student Aid (FAFSA) available at http://www.fafsa.gov. Pittsburg State University’s Title IV code is 001926.

4. Complete the Pittsburg State University scholarship application at http://www.pittstate.edu/affordability/scholarships by February 1st if you did not complete the scholarship questions on the application for admission.

5. Submit the Proof of Immunization Compliance Form to the Bryant Student Health Center. To access the form and for more details on required immunizations, please visit https://www.pittstate.edu/health.

6. Register to attend the new student orientation program called Pitt C.A.R.E.S. Registration materials are mailed to all newly admitted undergraduates approximately one month prior to the event. For more information visit http://www.pittstate.edu/admission.

Admission Requirements for New Transfers

To qualify for admission, a transfer student must have a minimum cumulative college grade point average of a 2.0 on a 4.0 scale. Students with less than 24 college credits will be required to submit additional information including a final high school transcript, General Education Diploma (GED) or high school equivalency diploma and ACT scores before they are considered for admission.

If a student does not meet any of the requirements above, the admission application will be reviewed individually before an admission decision is made.

New Non-Degree Seeking Students

A student who falls into one of the categories below is required to apply for admission as a non-degree seeking student:

- Wants to take college coursework, but is not interested in completing a degree.
• Attending another institution and wants to take one or two courses from Pittsburg State University.

A student seeking admission as a non-degree seeking student must complete the Undergraduate Application for Admission and submit the $30 application fee. Apply online at [http://www.pittstate.edu](http://www.pittstate.edu), download an application from the website or request an application from the Office of Admission and send to Office of Admission, Pittsburg State University, 1701 South Broadway, Pittsburg, KS 66762.

Test scores and transcripts are not required for admission as a non-degree seeking student unless the desired course(s) requires prerequisites. Non-degree seeking students are typically not eligible for federal financial aid.

If a non-degree seeking student wants to change his/her status to degree seeking, regular admission requirements must be met. Courses completed as a non-degree seeking student will have credit awarded, but whether the courses taken will apply to degree requirements will depend on the nature and applicability of the courses.

*A student who has been denied admission as a new freshman or transfer student is not eligible for admission as a non-degree seeking student.*

**New Guest Students**

Academically prepared high school students interested in taking college coursework prior to high school graduation may apply for admission as a guest student. A student seeking admission as a guest student must complete the Undergraduate Application for Admission and submit the $30 application fee. Apply online at [http://www.pittstate.edu](http://www.pittstate.edu), download an application from the website or request an application from the Office of Admission and send to Office of Admission, Pittsburg State University, 1701 South Broadway, Pittsburg, KS 66762.

Pittsburg State University may seek acknowledgement/permission from high school officials and may require ACT scores and/or a partial high school transcript depending on the desired course(s). If a guest student wants to change his/her status to degree seeking after high school graduation, new freshman admission procedures and requirements must be met. Guest students are typically not eligible for federal financial aid.

**New Undergraduate International Students**

Pittsburg State University is committed to international education for current domestic students and for students from countries outside the United States. The university seeks qualified and motivated students from other countries. International students may be classified as follows: cultural exchange, degree seeking, university exchange, study abroad or credit hour by home institution-not Pittsburg State University.

International students, entering the university either directly from their home country or by transfer from another college or university in the United States, are required to file an international application and furnish appropriate records.

All records must be translated into English and must be properly certified. Official transcripts received for evaluation of transfer credit will be considered to be a complete academic record from that institution up to and including the last completed semester as listed on the transcript. Subsequent official transcript/transcripts from the same institution showing additional previously completed work will not be accepted.

Degree seeking international students from countries in which English is not the official language must document English language proficiency by one of the following:

1. Minimum score on the Test of English as a Foreign Language (TOEFL) of 68 (Internet based). Some departments may require a higher TOEFL score for admission. Pittsburg State University does not accept institutional TOEFL scores.
2. Twenty-four transfer hours from an accredited post secondary institution in the United States that includes 3 hours of English Composition equivalent to Pittsburg State University English Composition 101 with a grade of C or better.
4. Graduation from an accredited high school or university in the United States.
5. International English Language Testing System (IELTS) overall band score 6 with a minimum score on each band of 5.
6. Pearson Test of English Academic (PTE) overall score of 47.
International students wishing to apply for admission to the university should write or e-mail the International Programs & Services Office, Pittsburg State University, 1701 S. Broadway, Pittsburg, KS 66762, i-admit@pittstate.edu. The International Office will provide the appropriate application form and other information to assist the student in applying for admission. The international student may also apply online through links on our website http://www.pittstate.edu/international.

Admission requirements and procedures for international students are subject to change according to the recognized needs of students and the university. All international students are required by the Department of Homeland Security (DHS) to be full-time students. The DHS requires undergraduate students to complete at least 12 semester hours each fall and spring semester to maintain their student status.

A tuberculosis (TB) test is required and will be administered on campus when the student arrives on the Pittsburg State University campus before enrollment into classes will be permitted.

For Graduate Admission see link.

**Tuition and Fees**

**UNIVERSITY FEES PER SEMESTER**

<table>
<thead>
<tr>
<th>UNDERGRADUATE FEES</th>
<th>Residents of Kansas</th>
<th>Non-Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate students enrolled in 10 hours or more</td>
<td>$3550.00</td>
<td>$9076.00</td>
</tr>
</tbody>
</table>

Tuition and fees per credit hour for undergraduates enrolled in 9 hours or less | $251.00 | $620.00 |

**GRADUATE STUDENT FEES**

Graduate students enrolled in 9 hours or more | $3972.00 | $9155.00 |

Tuition and fees per credit hour for graduate students enrolled in 8 hours or less | $333.00 | $765.00 |

**SUMMER SESSION**

General Fee, per credit hour --

Undergraduate | $251.00 | $620.00 |

Graduate | $333.00 | $765.00 |

**CONTINUING STUDIES FEE**

Instruction fee per credit hour-Undergraduate...$251.00

Instruction fee per credit hour--Graduate........... $333.00

Distance fee, add to per credit hour fee............. $36.00*

Non-credit activity fees are set by program costs.

*The Distance fee applies only to classes held an extended distance from campus. This fee compensates for additional distance costs associated with the delivery of instruction.

Non-resident students enrolled as a campus student and taking Continuing Studies courses will be charged the non-resident tuition rate. Part-time students enrolled in a degree program offered off-campus or online will pay the Continuing Studies tuition and fee rates.

This schedule of fees is for information purposes and does not constitute a contract. While this schedule was prepared with the latest information available on July 1, 2017, the statements on fees are subject to change. See http://www.pittstate.edu/office/Registrar/fees.dot for current information.

**Residency Requirements**

Residency for tuition and fee purposes at a Kansas Regent’s institution is governed by the state of Kansas under statute K.S.A. 76-729. Adult persons enrolling in Pittsburg State University who have not been residents of the state of Kansas for 12 months prior to enrollment for any term are non-residents for tuition and fee purposes. As of July 1, 2006, if you can prove you were a resident for tuition and fee purposes within the last five years (60 months) and that you have returned to live in Kansas, you will be deemed a resident for tuition and fee purposes. (K.S.A. 76-729 as amended by 2007 HB 2185 10). A minor’s residency is determined by the parents’ residency status. For more information regarding residency, please visit http://www.pittstate.edu/admission/undergraduate/residency.dot

**REDUCED TUITION PROGRAMS**

**Gorilla Advantage Program**

The Gorilla Advantage program makes it possible for eligible students to automatically receive in-state tuition. To be eligible, an applicant must meet Pittsburg State University admission requirements and reside in or will graduate from an accredited high school in one of the following counties: Missouri – Barton, Barry, Bates, Cass, Cedar, Clay, Dade, Henry, Jackson, Jasper,
Lawrence, McDonald, Newton, Platte, St. Clair and Vernon; Oklahoma – Craig, Delaware, Mayes, Nowata, Ottawa, Rogers, Tulsa and Washington; Northwest Arkansas – Benton and Washington. Students transferring from an accredited college/university must be a permanent resident of a Gorilla Advantage county. Attending college in a Gorilla Advantage county does not automatically qualify the student for this program.

Students qualifying for the Gorilla Advantage program based on residency must meet the twelve month requirement of living in the appropriate county. International students are not eligible for the Gorilla Advantage program.

**Gorilla Edge Program**

Students admitted to Pittsburg State University under the Gorilla Edge Program are assessed 150% of the current in-state tuition rate versus full out-of-state tuition. Applicants who are permanent residents of Arkansas, Missouri, Oklahoma, or Texas are eligible provided they have lived in the state for a full twelve months, they are admitted and enrolled at Pittsburg State University, and classified as a nonresident of Kansas for tuition purposes.

Those eligible for the Gorilla Advantage program will not qualify for Gorilla Edge. Eligibility is initially determined by the Office of Admission. International students are not eligible for the Gorilla Edge program.

**Midwest Student Exchange Program (MSEP)**

MSEP allows undergraduate students who are residents of Illinois, Indiana, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio and Wisconsin to attend Pittsburg State University at a reduced tuition rate of one and one-half times in-state tuition. Only applicants in the following majors are considered: Automotive Technology, Biology, Chemistry, Communication, Construction Management, Construction Engineering Technology, Electronic Engineering Technology, English, Exercise Science, Family and Consumer Sciences, Geography, Graphic Communications Management, History, Justice Studies, Music, Physics, Plastics Engineering Technology, Political Science, Recreation, Sociology, Technology and Engineering Education and Wood Technology.

To qualify for MSEP, the following requirements must be met (see [http://www.pittstate.edu/admission/undergraduate/msep.dot](http://www.pittstate.edu/admission/undergraduate/msep.dot)).

- New Freshmen - Achieve ACT composite score of 21 or higher (SAT score of at least 980) and complete the Kansas Board of Regent’s Qualified Admission Curriculum with at least a 2.5 grade point average on a 4.0 scale.

- New Transfer Students - Have a minimum cumulative college grade point average of 2.5 on a 4.0 scale with a minimum of 24 credit hours completed.

**TUITION PAYMENT PROCESS**

Tuition payment is due within one week of the first date of full-term classes for both the Fall and Spring Semesters and by the second day of class for most summer and short courses. Pittsburg State University offers many options for payment and encourages every student to explore federal financial assistance as an option as well as scholarships. Students may also enter into a payment plan through the Cashier’s and Student Account Office. We highly recommend you take the following steps and start the process well in advance of your enrollment to ensure that your tuition payment obligations will be met on time:

1. Complete the FASFA application available online at [http://www.fafsa.gov/](http://www.fafsa.gov/). If enrolling as a less than half-time student, please contact the Pittsburg State University Financial Assistance Office.

2. If receiving financial assistance (grants, loans, and scholarships), verify your enrollment online via GUS (see [Applying for Financial Assistance](http://www.pittstate.edu/admission/undergraduate/msep.dot)) approximately three weeks prior to the semester start date.

3. Identify your tuition amount by logging onto GUS and visiting your Student Account link.

4. If a parent or other party is paying or needs access to your tuition information, provide this access through eProxy also found on GUS.

5. Plan ahead and review your options of paying your balance in full or initiate a payment plan at the Cashier’s and Student Account Office.

Multiple offices on campus are prepared to assist students with their tuition payment questions. Consider contacting Student Financial
Assistance, Cashier’s and Student Accounts, or the Registrar’s Office with your concerns.

**LATE ENROLLMENT FEE**

Students who pay tuition after the deadline date as published in the University Calendar will be charged a late fee of $50.00. This includes students that enroll after the payment deadline in a course beginning at the start of the semester. Individual student exceptions may be made by the Registrar in instances of courses starting after the tuition payment deadline or delays in enrollment due to university procedures.

**REFUND POLICY**

A student who withdraws during the first week of the semester will be refunded all tuition.

A student who withdraws after the first week but during the first one-third of a semester will be refunded one-half tuition with the exception of class, laboratory and computer access fees.

A student who withdraws after the first one-third of a semester is not entitled to any refund.

Fees for private lessons are not refunded.

The refund policy shall apply to semesters. Prorated refunds will be applied to classes, or terms of shorter duration, including summer term. (See university calendar).

Withdrawals and refunds must be processed by several offices before being processed. Students should allow three weeks for refunds to be processed and funds are returned to the source from which they were initially received. If paid by credit card, refunds are returned to the same credit card.

There are no refunds for 1-2 day courses or travel courses once the program has begun.

An appeal process is available to the student who feels their situation warrants an exception from the stated fee refund policy. Students should direct written appeals to the University Registrar. The Petition for Refund form can be found on the Registrar’s web page at [http://www.pittstate.edu/office/registrar/forms.dot](http://www.pittstate.edu/office/registrar/forms.dot)

**MILITARY TUITION REFUND POLICY**

Students serving in the National Guard or Reserves who are called to active duty during an academic term are entitled to receive a full refund of tuition and fees. Students who are drafted and must report for active duty during an academic term are entitled to receive a full refund of tuition and fees. All refunds are subject to presentation of official documentation. Students who volunteer for military service will be subject to the University's non-military refund policy. Room and board charges will be prorated to the extent that services have been provided.

**RETURN OF TITLE IV FUNDS POLICY**

Students who withdraw from the University after receiving Title IV funds including the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (SEOG), Federal Perkins Loan, the Federal Direct Loan Programs, the Federal TEACH Grant or Federal Parent PLUS Loan may be required to repay a portion of the aid funds received.

The Office of Student Financial Assistance is required to recalculate financial aid eligibility for students who withdraw, stop attending or are dismissed prior to completing 60 percent of a semester using the following formula:

Percent of aid earned is calculated based on the number of days completed up to the withdrawal date divided by total days in the semester. Withdrawal date is defined as the actual date the student began the institution’s withdrawal process through the Registrar’s Office, the student’s last date of recorded attendance, or the midpoint of the semester for a student who leaves without notifying the institution or cannot prove attendance later within the semester.

Federal financial aid is returned to the federal government based on the percent of unearned aid disbursed toward institutional charges for tuition, fees, and on-campus room and board.

When aid is returned, the student may owe a debit balance to the University and/or Department of Education Title IV Programs. If a student owes a debit balance to the Department of Education, payment arrangements will be made with the Department. If the student owes a debit balance to the University, these payments should be made to the Cashiers/Student Accounts Office.

**COMMENCEMENT FEE**

Candidates for degrees or certificates pay a non-refundable fee to defray the cost of diploma and commencement activities. Commencement fees are:
Associate and Baccalaureate Degree............... $55.00
Masters and Specialist in Education Degrees...... $65.00
Dual degrees (ex. students receiving the Bachelor of Music Education and Bachelor of Music degrees simultaneously).................................................$90.00
Certificate of Completion........................... $55.00

Candidates who write a thesis for a master's degree pay an additional fee of $36.00 to defray the cost of binding four copies of the thesis. Candidates for the Specialist in Education degree pay an additional fee of $36.00 to defray the cost of binding four copies of the special project. This fee is not subject to refund.

TRANSCRIPT FEE

The university charges for all transcripts at the rate of $10.00 if mailed or picked up at the Registrar's office. See http://www.pittstate.edu/office/registrar/transcripts.dot for more information.

CHARGES RELATED TO NURSING

Students are required to purchase uniforms, liability insurance, National League of Nursing Achievement tests, course syllabi and laboratory kits. Students are also responsible for their own transportation to clinical areas.

CLASS FEES

There are courses that require students to pay for expendable materials used in the class. For many of these courses this amount can vary by the individual student and the amount of the materials used by that student. The courses listed are mandated fees that are the same for every student and are included in the tuition and fee assessment.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 212</td>
<td>Principles of Biology II</td>
<td>$12.00</td>
</tr>
<tr>
<td>BIOL 258</td>
<td>Anatomy and Physiology Lab</td>
<td>$10.00</td>
</tr>
<tr>
<td>BIOL 660</td>
<td>Human Anatomy &amp; Dissection</td>
<td>$235.00</td>
</tr>
<tr>
<td>EDUC 261</td>
<td>Explorations in Education</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 307</td>
<td>Clinical Experience</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 308</td>
<td>Specialized Clinical Experience</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 345</td>
<td>Topics in (___)</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 455</td>
<td>Elementary and Middle Level Education</td>
<td>$10.00 per credit hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 458</td>
<td>Methods and Curriculum</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 462</td>
<td>Secondary and Middle Level Education</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 464</td>
<td>Foundations of Measurement and Evaluation</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 475</td>
<td>Supervised Teaching in the Elementary School</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 476</td>
<td>Supervised Teaching in the Elementary School</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 477</td>
<td>Supervised Teaching in Foreign Languages in the Elementary Schools</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 480</td>
<td>Supervised Teaching in the Secondary School</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 482</td>
<td>Supervised Teaching in the Secondary School</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EDUC 579</td>
<td>Supervised Student Teaching and Follow-up of Teachers</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>EXSCI 510</td>
<td>Technology and Instrumentation in Exercise Physiology</td>
<td>$20.00</td>
</tr>
<tr>
<td>FCS 401</td>
<td>Science of Food Prep</td>
<td>$50.00</td>
</tr>
<tr>
<td>HHP 150</td>
<td>Lifetime Fitness Concepts</td>
<td>$10.00</td>
</tr>
<tr>
<td>HHPR 760</td>
<td>Technology and Instrumentation in Human Performance</td>
<td>$20.00</td>
</tr>
<tr>
<td>PHYS 130</td>
<td>Elementary Physics Laboratory I</td>
<td>$10.00</td>
</tr>
<tr>
<td>PHYS 131</td>
<td>Elementary Physics Laboratory II</td>
<td>$10.00</td>
</tr>
<tr>
<td>PHYS 172</td>
<td>Physical Science Laboratory</td>
<td>$10.00</td>
</tr>
<tr>
<td>PSYCH 803</td>
<td>Intellectual Assessment</td>
<td>$125.00</td>
</tr>
<tr>
<td>PSYCH 809</td>
<td>Personality Assessment</td>
<td>$50.00</td>
</tr>
<tr>
<td>SPED 350</td>
<td>Methods, Infant/Toddlers with Disabilities</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>SPED 450</td>
<td>Methods, Preschoolers with Disabilities</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>SPED 510</td>
<td>Overview of Special Education</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>SPED 511</td>
<td>Overview of Special Education (Birth thru 6th Grade)</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>SPED 550</td>
<td>Methods, Primary Children with Disabilities</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>TCHL 825</td>
<td>The Professional Semester Teacher - Initial Experience</td>
<td>$10.00 per credit hour</td>
</tr>
<tr>
<td>TCHL 849</td>
<td>The Professional Semester Teacher - Culminating Experience</td>
<td>$10.00 per credit hour</td>
</tr>
</tbody>
</table>
INSUFFICIENT FUND CHECKS

A $30.00 charge is made for all insufficient fund checks written to the university.

Applying for Financial Assistance

Room: 103 Horace Mann
Telephone: 620-235-4240 or 1-800-854-PITT (toll free)
e-mail: finaid@pittstate.edu
http://www.pittstate.edu/finaid

The Office of Student Financial Assistance assists a diverse student population in obtaining financial aid to support their educational endeavors. Financial aid is provided through a combination of sources including scholarships, grants, loans, and part-time employment.

The university participates in all federal aid programs including PELL Grants, Supplemental Education Opportunity Grants, TEACH Grant, Army ROTC Scholarships, the College Work Study Program, and the Federal Direct Loan Program.

Free Application for Federal Student Aid (FAFSA)

Any student admitted to or attending Pittsburg State University is encouraged to apply early for financial aid. Students who wish to be considered for scholarships should file by February 1. Applications are still collected, but early applications have the best advantage.

The online FAFSA application is used to determine the student's financial aid eligibility. Information used in determining eligibility includes family income, assets, number of family members, number in college, etc. The university will attempt to assist the student with the difference between the total expected family contribution and the cost of attending the university. Students are encouraged to apply as early after January 1 as possible at: http://www.fafsa.gov.

Scholarship and Grants

Each year scholarships are awarded to incoming freshmen as well as to upperclassmen. Criteria employed by scholarship committees in making these awards may include: past academic performance, leadership, character, and financial need. Some awards are based entirely on merit. The best way to find and apply for Pittsburg State University scholarships is through our on-line application at http://www.pittstate.edu/affordability/scholarships/. Students interested in athletic scholarships should contact the Athletic Director. Applicants for music scholarships should contact the chairperson of the Department of Music.

Loans

The university participates in the following federal programs: Perkins Loan, Direct Subsidized Loan, Direct Unsubsidized Loan, Direct Additional Unsubsidized Loan, Direct PLUS Loan.

Federal Work-Study and Student Employment

A part-time job can be a valuable and rewarding experience. About 700 Pittsburg State University students work on campus. Some part-time jobs require students to demonstrate financial need (federal work-study), while others are open to all students. Students work on average of 15 hours per week. The university has an active referral system for part-time jobs. Please contact the Career Services Office for further detail on these listings.

Short-Term Loans

Students who are in good standing and who have a temporary need for funds to pay school-related expenses may borrow a University Short Term Loan for a period not to exceed 85 days. Please see the Office of Financial Assistance on details of how to apply for these emergency funds.

Verification of Enrollment for Financial Aid

Disbursement of funds from financial aid and scholarships to a student's tuition/fee and housing (if applicable) accounts can occur only after the student has verified enrollment via the GUS system. Verification access in GUS becomes available approximately three weeks prior to the beginning of the fall or spring semesters. Summer verification will be available approximately 7 days prior to the beginning of the summer term. Some students may have Bookstore Voucher options available while going through the Verification of Enrollment process. If you chose to opt-in to this process, you may begin charging funds through the Pittsburg State University bookstore located in the Overman Student Center, up to the amount of your availability. See the Student Financial Assistance website for further details.
**Enrollment**

**NEW UNDERGRADUATE STUDENT ENROLLMENT PROCEDURES**

In order to enroll in coursework, students will need have access to the Gorilla User System (GUS), a web-based, real-time, interactive information portal specifically designed to allow users to securely access academic and administrative information. Some examples of the services available for students are Enrollment, Degree Audit, Personal Information, Unofficial Transcript, Grade Reports, Financial Assistance updates, Tuition information, and Online Parking Permit ordering. To use GUS, you must have a GusPIN. To apply for a GusPIN, bring a photo ID to the help desk (109 Whitesitt) or use the on-line password generator [https://go.pittstate.edu/guspin/forgot](https://go.pittstate.edu/guspin/forgot).

**Freshmen**

All new students are strongly encouraged to participate in Pitt C.A.R.E.S. (Campus Advisement, Registration and Enrollment Services) to help ensure a smooth transition to the University. Students who are members of the most recent high school graduating class are required to attend C.A.R.E.S. Pitt C.A.R.E.S. is offered in the summer for students planning to enroll for the fall semester and in January for students planning to enroll for the spring semester. Advance registration is required. Additional information about Pitt C.A.R.E.S. including specific dates the program will be offered is available from the Office of Admission.

During Pitt C.A.R.E.S., each student receives information about the programs and services available at Pittsburg State University and meets with an academic advisor to choose classes and enroll in coursework for the upcoming semester. A student who is enrolling as a freshman, but who is not required to attend a Pitt C.A.R.E.S. session, may enroll during open enrollment. Open enrollment begins immediately after early enrollment for current Pittsburg State University students and new transfer students has occurred, usually late November for a spring semester and late April for a summer or fall semester. The enrollment process begins in the Office of Admission where students are provided a new student checklist and departmental contact information. The student then makes an appointment to meet with an academic advisor in his or her major area of study.

During the advising appointment, the student can expect to discuss course sequencing and selection, as well as planning for future semesters. Online enrollment in coursework may occur during the advising appointment or the advisor may provide an advisement number to the student to access the Gorilla User System (GUS) to enroll.

**Transfer Students**

Students transferring to Pittsburg State University are encouraged to participate in Transfer Pitt C.A.R.E.S. (Campus Advisement, Registration and Enrollment Services). Transfer C.A.R.E.S. is offered in April for students enrolling for the summer or fall semesters and in November for students enrolling for the spring semester. Transfer Pitt C.A.R.E.S. allows new transfer students to enroll earlier than new students not participating in this program. Advance registration is required. Additional information about Transfer Pitt C.A.R.E.S., including specific dates the program will be offered, is available from the Office of Admission.

During Pitt C.A.R.E.S., students receive information about the programs and services available at Pittsburg State University and meet with an academic advisor and enroll in coursework for the upcoming semester. During the advising appointment, the student can expect to discuss course sequencing and selection, as well as planning for future semesters. Online enrollment in coursework may occur during the advising appointment or the advisor may provide an advisement number to the student to access the Gorilla User System (GUS) to enroll. A transfer student may also enroll during open enrollment (see Freshmen for details).

**Readmission**

The student who has been away from the university for three or more semesters should first contact Office of Admission to be readmitted to the university. Upon readmission, the student may enroll during open enrollment. Open enrollment begins immediately after enrollment for current Pittsburg State University students and new transfer students has occurred. The enrollment process begins in the Office of Admission where students are provided a new student checklist departmental contact information. The student then makes an appointment to meet with an academic advisor in his or her major area of study.

During the advising appointment, the student can expect to discuss course sequencing and selection, as well as planning for future semesters. Online
enrollment in coursework may occur during the advising appointment or the advisor may provide an advisement number to the student to access the Gorilla User System (GUS) to enroll.

Non-degree Seeking (undergraduate)

An undergraduate student who has been admitted as non-degree seeking may enroll during open enrollment. Open enrollment begins immediately after enrollment for current Pittsburg State University students and new transfer students has occurred. Advising and enrollment will occur in the Office of Admission.

Continuing Students

A current student wishing to enroll for the upcoming semester may enroll during early enrollment week. Early enrollment occurs in April for students enrolling for the summer and/or fall semesters and in November for students enrolling for the spring semester. Students are assigned a specific enrollment day and time based upon the number of college credit hours passed and may enroll on that day or any day thereafter.

A student seeking to enroll is encouraged to contact his/her advisor in advance of the assigned enrollment date to discuss course sequencing and selection and plan for future semesters. An advisement number is required to access the online enrollment system in GUS. Online enrollment in coursework may occur during the advising appointment or the advisor may provide an advisement number to the student to access the Gorilla User System (GUS) to enroll.

Late Enrollment

An admitted student who wishes to enroll in coursework, but who was not enrolled prior to the end of open enrollment, may seek special permission for late enrollment from the instructor of each course the student is seeking to take. Once permission is granted by the instructor via the GUS system, the student should go to the Registrar’s office to be enrolled. Payment for the coursework will be due immediately. Late fees will apply.

Schedule Changes

A student who has enrolled for an upcoming semester and wishes to add, drop or change sections of a course may do so during open enrollment (through the first week of classes for the fall and spring semesters) as long as the advisor has provided the student with a current advisement number or by contacting the Registrar’s office, 103 Russ Hall, 620-235-4200.

Once open enrollment is closed, it is necessary for the student to gain permission from the instructor(s) of each course to add a class. See Late Enrollment.

Schedule of Classes

The schedule of classes becomes available to students in March for the Summer and Fall semesters and in October for the Spring semester. The schedule is available online only and can be accessed at http://www.pittstate.edu/office/registrar/.

Selecting and Changing Academic Major

Degree seeking undergraduate students must select an academic major or declare exploratory studies upon initial enrollment in the university. It is strongly recommended that students have a declared major prior to attaining 60 credit hours.

A student may change majors in one of three ways: 1) consulting with an advisor in the department of the major to be declared, 2) making a request to change major to the Registrar’s office, or 3) using the Change My Major option in the GUS system. A new advisor will be assigned to the student in the new major area of study. Courses previously taken may or may not be accepted as part of the new degree program as determined by the department in which the new major is located. Once a student has an official degree check, only the Degree Checking office can change a major, minor or catalog.

Student Identification Card

After enrolling in courses for the first time, on-campus students are required to obtain a student identification card, called the Gorilla Card. For additional information on the Gorilla Card, visit http://www.pittstate.edu/audiences/current-students/gorilla-card/.

Verification of Enrollment for Financial Aid

Disbursement of funds from financial aid and scholarships to a student’s tuition/fee and housing (if applicable) accounts can occur only after the student has verified enrollment via the GUS system. Verification access in GUS becomes available approximately three weeks prior to the beginning of the fall semester. Spring verification will be available approximately two weeks prior to the beginning of the spring term. Summer
verification will be available approximately 7 days prior to the beginning of the summer term. Some students may have Bookstore Voucher options available while going through the Verification of Enrollment process. If you chose to opt-in to this process, you may begin charging funds through the Pittsburg State University bookstore located in the Overman Student Center, up to the amount available to you. See the Student Financial Assistance website for further detail.

**Academic Advising**

Each student is assigned an academic advisor by the chairperson of the student’s academic department at the time the student initially enrolls at the University. Students are required to consult with their academic advisor and to obtain an advisement number prior to enrolling for courses each semester or the advisor may choose to enroll the student (distribution of advisement numbers is at the discretion of each academic advisor).

The Office of Student Success Programs has responsibility for students in the Exploratory Studies program and will assign advisors to students who have chosen to postpone the selection of a degree program while exploring the opportunities available and working to meet the general education requirements.

Students who wish to change advisors but retain the same department should request the assignment of a new advisor from the department chairperson.

**Responsibilities of Advisors**

The following responsibilities of advisors and advisees at Pittsburg State University was developed by the University Advising Council and approved by the Vice President of Academic Affairs on November 11, 2005.

Pittsburg State University ensures a high quality of academic advising by maintaining that all academic advisors should:

1. Post appropriate office hours and always make time for students a priority during these hours and at other times as available.

2. Assist students in understanding all degree requirements including institutional, departmental, course sequencing and other pertinent information.

3. Never give out an advisement number without adequate contact with, and advisement of, each individual student.

4. Be proactive throughout the advisement process by initiating contact with advisees to communicate requirements and deadlines and to discuss their educational plan.

5. Learn to access and use enrollment information on the GUS system.

6. Project that you genuinely care about students by serving as a resource to help them clarify life, career and academic goals.

7. Know about and make referrals to support services as appropriate.

8. Be aware of policies, requirements, resources and materials necessary for students’ academic progress and achievement.

**Responsibilities of Advisees**

Successful academic advising requires active participation in the advising process by both the advisor and the student. As such, students seeking academic advisement should:

1. Make, keep and be on time for appointments with academic advisor at least one time each semester.

2. Review the online course schedule, program guides and course catalog to prepare a tentative schedule to discuss with your advisor prior to initiating contact.

3. Have alternative courses in mind, after all some courses do close.

4. Learn to access and use enrollment information on the GUS system.

5. Ask questions when you do not know and follow through on referrals made by your advisor.

6. Get to know your advisor and let him/her get to know you. This person is a valuable resource and can be of benefit to you not only while you are at Pittsburg State University, but also afterwards once you enter the job market or graduate school.

7. Remember that it is also your responsibility to be aware of graduation and degree requirements. Do your very best and accept responsibility for your academic decisions.

8. Be aware of policies, requirements, resources and materials necessary for your academic progress and achievement.
Academic Regulations

Final Examinations

Final Examinations

Final examinations will be given according to the schedule of examinations distributed by the Registrar each semester.

No tests or major assignments will be presented during the week prior to final examination week, unless identified in the course syllabus presented at the start of the semester.

Final Exam Overload Policy

Students who have three or more final exams officially scheduled for a single day are entitled to arrange with the faculty member instructing the highest numbered course (the 3 digit number following the department code) a different day for the exam. If two courses have the same number, the course with the lower enrollment would be rescheduled.

The student requesting accommodation should submit this request on the form provided on the Registrar’s web page http://www.pittstate.edu/office/registrar/forms.dot (click on Overload Petition for Final Exams) along with a copy of his or her class schedule, at least two weeks prior to the beginning of final exam week. The faculty member has until the Monday of pre-finals week to arrange a mutually convenient time for administration of the final exam. If the matter cannot be resolved between student and faculty member, the student may take the request to the Office of the Provost, 220 Russ Hall, no later than the Wednesday of pre-finals week.

ENROLLMENT POLICIES

Required Courses for Freshmen

Considering the fundamental nature and value of the freshman courses in English Composition, it is the policy of Pittsburg State University that all full-time freshman students shall enroll in ENGL 101 English Composition unless given credit by examination or the student has previously completed the course at an accredited United States college, and UGS 100 The Freshman Experience unless exempted by the Director of Student Success Programs.

Course Numbering and Upper Division Courses

Pittsburg State University courses are numbered as follows:

- 000-099 Non Credit Courses
- 100-299 Undergraduate, Lower Division
- 300-699 Undergraduate, Upper Division
- 700-799 Graduate I. (Primarily for graduate students, although some upper level undergraduates can enroll.)
- 800-899 Graduate I
- 900-999 Graduate II

Graduate I courses are at masters degree level. Graduate II courses, are at the post-master level.

Students shall enroll for courses in an orderly sequence that recognizes the interdependence and progression of the acquisition of knowledge. Therefore, students must meet prerequisites as identified by the faculty for specified courses and must meet grade point requirements for admission to upper division courses as follows:

a. Courses numbered 700-799 require 170 grade points. These courses are primarily for graduate students.

b. Courses numbered 800-899 require admission to graduate studies.

c. Courses numbered 900-999 require admission to postmaster graduate studies.

Enrollment in Courses Above Freshman-Sophomore Level

1. Admission to courses numbered 700-799 requires 170 grade points. These courses are primarily for graduate students.

2. Admission to graduate courses (numbered 800-899) requires admission to the Graduate School.

3. Admission to courses numbered 900-999 is open only to students with a master's degree.

Normal Academic Load/ Course Overload Policy

The typical course load for a full-time undergraduate is between 15 and 18 semester hours in a regular semester (or a proportionate number of hours in a summer session). A student who wishes to enroll in more than 21 hours must have demonstrated solid academic achievement (normally a 3.00 cumulative GPA
or above) and receive special permission from his or her dean.

**Definition of a Credit Hour**

**Policy Statement**

As an institution of higher education, Pittsburg State University holds the responsibility for determining and upholding standards associated to the awarding of credit hours for student work consistent with national standards. At Pittsburg State University, a credit hour represents at least a minimum level of student achievement of specific learning outcomes, as verified by an assessment of student work. Pittsburg State University’s definition of the credit hour establishes a basis to quantify academic activity for purposes of awarding academic credentials and determining federal funding, including institutional eligibility, program eligibility, and student enrollment status and eligibility. Each department proposing new courses must insure that it meets the Definition of a Credit Hour policy, and procedures and responsibilities as indicated herein. Credit hour policy and procedures are monitored by the Office of the Registrar to ensure compliance with this policy.

**Procedures and Responsibilities**

Pittsburg State University defines one credit hour as:

1. A level of student learning demonstrated by the achievement of learning outcomes obtained through one hour of classroom or direct faculty instruction and a minimum of two hours outside of class student work each week, for approximately 15 weeks, or the achievement of equivalent learning outcomes over a different length of time; or

2. A level of student learning demonstrated through academic activities other than classroom or direct faculty instruction as equivalent to that stated in #1, above. For example, such equivalence may be demonstrated by faculty assessment of student knowledge, skills, and abilities in relation to stated learning outcomes through laboratory work, internships, practica, studio work, and/or independent research activity, and judged to meet standards established through recognized disciplinary or accrediting bodies, peer institutions, or other established methodology to affirm equivalency, so long as those standards have been formally accepted by Pittsburg State University through its curricular approval process.

**Definition of Hybrid Course**

Hybrid Courses provide a minimum of 50% of the instruction (course material, discussion, evaluation) on-line through the learning management system. This does not include courses that are by appointment, independent study, or do not provide a learning experience on-line. These courses must have established classroom (face-to-face) meeting dates listed in the Schedule of Classes at the time the course is listed. Courses will have the media fee charged to the student.

**Definition of On-line Course**

On-Line Courses provide 100% of the instruction (course material, discussion, evaluation) on-line through the learning management system and do not require attendance on campus. This does not include courses that are by appointment, independent study, or do not provide a learning experience on-line. These courses will have the media fee charged to the student.

**Adding Courses**

Students may enroll or add courses through the fifth day of classes during a regular semester or proportionate time period for a summer session. See University Calendar for summer session deadlines.

Enrollment deadlines vary for short courses that begin later in a semester.

**Dropping a Course or Withdrawing from the University**

<table>
<thead>
<tr>
<th>Timeframe*</th>
<th>Academic notation for course drop</th>
<th>Academic notation for withdrawal from all courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through 10th day of classes</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>11th day of classes through end of 11th week of semester</td>
<td>“W” (does not affect GPA)</td>
<td>“W” for each course (does not affect GPA)</td>
</tr>
<tr>
<td>Beginning of 12th week</td>
<td>Individual courses cannot be dropped</td>
<td>“W” or “F” in each course as assigned by instructor. “F” grades calculated in GPA.</td>
</tr>
</tbody>
</table>
Timeframe is for a full-term course in a regular fall or spring semester. Proportionate deadlines apply to summer sessions and less than full term courses. See University Calendar for summer session deadlines.

A student who does not officially withdraw from a course or from the university will be given an “F” grade in the course or courses concerned. These “F” grades will be included in the computation of the grade point average.

The dates for withdrawal from courses which run less than sixteen weeks shall be set to proportionate time periods.

Exceptions to this policy may be appealed through petitioning for an Administrative Withdrawal. The form can be found on the Registrar’s webpage.

Administrative Withdraw

The university administration has the authority to withdraw a student from classes. This process is managed by the Office of the Registrar. Examples of such instances include, but are not limited to the following reasons:

- Application/Enrollment in violation of university regulations (e.g. student presents false information in order to gain admission or enrollment)
- Failure to pay university tuition in full, full refund granted, or failure to honor payment arrangements by due date.
- Failure to comply with university requirements (e.g. completion of TB screening as a new student).
- Disciplinary action that prohibits the student from returning to campus for the remainder of the term or longer as determined by the Office of Campus Life and Auxiliary Services.
- Severe psychological or physical health problems that it is deemed in the student’s and campus’ best interest to discontinue attendance based on information from a medical provider.
- Student is personally unable to withdraw from classes due to a catastrophic occurrence and it is beyond the withdraw date for that term based on the academic calendar.

A grade of WX is recorded for Administrative Withdrawals from the 11th day of class and beyond. Proportionate deadlines apply to summer sessions and less than full term courses. The grade of WX is not computed in the student’s grade point average and therefore involves no academic penalty. The Registrar must authorize the recording of this grade based on documentation provided. This grade may only be applied to the student’s record by the Registrar’s Office.

The regular tuition and fee assessment and refund policies of the university prevail. Tuition Refund appeals are handled separately through the Office of the Registrar. Administrative withdrawals do not guarantee a tuition refund.

Students who are administratively withdrawn from the university may be eligible for readmission when stated conditions, if any, have been met.

Administrative Withdrawals may be processed retroactively for up to one year beyond the end of the semester in question. Documentation supporting such a late withdraw must be provided and instructor permission to change the original grade to WX will be required for each course in the term. If the instructor is no longer employed at Pittsburg State, the department chairperson may provide the permission to change the grade.

Class Attendance Policy

Students at Pittsburg State University are expected to attend class regularly and participate fully in class activities. It is the responsibility of the course instructor to set the attendance policy for his or her courses and communicate that policy to students in the course syllabus. The syllabus should address whether and how attendance affects the course grade, the issue of excused absences, and whether students will be dropped for nonattendance or excessive absence.

As noted above, students who have not attended or who have been excessively absent from a class may be dropped from the course by the instructor. In such instances, this policy must be clearly stated in the syllabus and uniformly enforced. Students may be dropped at anytime in the semester based on course policy, but instructor drops after the beginning of the 12th week of a full semester class will result in a grade of “F” for the course.

Regardless of the faculty prerogative to drop a student for nonattendance or excessive absence, the ultimate responsibility for monitoring and maintaining up-to-date course enrollment rests with the student.
Enrollment as an Auditor

Each individual wishing to audit must have signed permission from the instructor of the class on a form provided by the Registrar’s Office or found at http://www.pittstate.edu/office/registrar/forms.dot - Application to Audit. Auditors will be assessed the full tuition rate appropriate for their enrollment and residency status. Auditors who are 60 or older and benefit earning PSU employees may audit at no cost. If a class fee applies to the course, all auditors including Pittsburg State University employees and those 60 and older are required to pay this fee. Student Activity fees are not assessed, nor are campus privileges extended to auditors.

All auditing enrollment is based on availability in the class and the instructor’s permission. It is the responsibility of the auditor to determine in advance the expectations of the instructor for the class. A grade of AU will be recorded as the final grade and add/drops for the class follow the standard academic calendar. Auditors must follow the student code of contact and adhere to student guidelines and policies.

Duplication of Undergraduate Credit

Duplication of a course differs from repeating a course. Duplication occurs when a student enrolls in a non-repeatable course in which they have previously completed. In such instances the first grade and associated grade points remain on the transcript and the latest course has no credit awarded.

Credit for Prior Learning

Credit by Examination

Pittsburg State University grants credit by examination for three purposes: in order to enable a student to demonstrate that a body of knowledge or skill has been attained, to validate life experiences which parallel course work offered by the university, and to gain credit for work completed at an institution not accredited by a regional accrediting institution.

Students awarded credit by examination must be enrolled at Pittsburg State University.

Pittsburg State University accepts results of the College Entrance Examination Board Advanced Placement, Dantes and College Level Examination Programs for credit by examination. Pittsburg State University is not a College Board Test Center, thus, students who participate in these programs have their test results forwarded to the university.

Department curriculum committees recommend the courses and the number of credit hours in which credit by examination is awarded. Departments with no curriculum committee will function as committees of the whole. Recommendations for credit by exam must be ratified by the department faculty and chairperson.

The results of all tests administered for the purpose of credit by examination will be recorded as pass, fail, or letter grade on the students transcript. Students taking Pittsburg State University departmental examinations may elect to accept or not to accept the grade assigned.

Courses receiving pass as a grade for credit by examination will not be used to determine students’ GPA. Courses for which letter grades are awarded will be used to determine students’ GPA.

The registrar will post credit by examination to the students' transcripts at the direction of the appropriate departmental faculty.

Advanced Placement Program of the College Board

Subject to department approval, students completing the Advanced Placement (AP) examination with scores of 5, 4 or 3 may receive appropriate university credit recorded as pass.

The results of AP examinations must be sent to Pittsburg State University directly from the College Board. There is no fee charged by Pittsburg State University for evaluating or posting the results of AP examinations.

College Level Examination Program (CLEP)

The general examination and subject examinations are accepted at Pittsburg State University to validate previous learning for academic credit provided the credit does not represent a duplication of college credit previously earned. Academic departments determine the norm group and the percentile at or above which credit will be awarded. Typically, credit is awarded for scores starting at the 50th percentile. There is no fee for evaluating or posting the results of the CLEP general examination.

A maximum of 6 semester hours credit can be earned in each of the following areas: social science-history, natural sciences, humanities and mathematics.
International Baccalaureate Credit

For information concerning international baccalaureate credit, refer to the following page http://www.pittstate.edu/office/registrar/advanced-standing.dot#InternationalBaccalaureateCredit.

Military Service

Pittsburg State University generally follows the recommendations of the Office of Educational Credits listed by the American Council of Education (ACE). Advanced standing credits, as noted on the student’s military transcript, will be given to veterans for formal service school courses on the basis of the ACE.

Departmental Examinations

Departmental examinations are available for both placement and credit and are available by special arrangement through the individual academic department involved. No fee is charged for departmental examinations. The department will establish the maximum number of credit hours that may be earned by taking departmental examinations and set the standards for awarding and determining grades. These standards may vary from year to year.

The Department of English and Modern Languages offers the Writing Skills Assessment examination for interested students. Students who score at least a 4 are eligible for credit for ENGL 101 English Composition. In addition, credit for ENGL 101 English Composition is offered to students under the age of 22, who score a 27 or higher on the ACT English subscore. For more information regarding the examination procedures in the English and Modern Languages Department, please visit http://www.pittstate.edu/department/english/index.dot.

Retroactive credits are available through the English and Modern Languages Department. Students must sign up for the Retro-Credits Program through the department during the first three weeks of the semester in which they take their first language course. That course determines their entry level and the maximum credits they can earn through retroactive-credits. Transfer students who took language courses at another university or college are not eligible. The maximum number of hours in which students receive retroactive-credits is 15. For more information, please visit http://www.pittstate.edu/department/languages/.

Grades and the Grading System

Awarding of Grades

Grades are earned by students and awarded by faculty. Grade changes can only be made by the instructor with the approval by the department chairperson and the dean of the college.

The Grading System


A Excellent achievement, credit given, four grade points per semester hour.

AU Audit must be approved by instructor prior to beginning of class with application process. Zero credit, zero grade points. Grade is not computed into the GPA.

B Above average achievement, credit given, three grade points per semester hour.

C Average achievement, credit given, two grade points per semester hour.

D Below average achievement, credit given, one grade point per semester hour.

P Passing work (equivalent to “A”, “B”, “C”, “D” achievement), credit given, zero grade points per semester hour. This grade is not used in the computation of the grade point average.

F Failing work, zero credit given, this grade is given at the end of the semester or if the student withdraws from the university after the last day of the eleventh week and is doing failing work. Zero grade points given per semester hour. Counted as a course attempted. Included in computation of grade point average.

XF Indicates the “F” was the result of academic dishonesty. Zero grade points given per semester hour. Counted as a course attempted. Included in computation of grade point average.

IN Incomplete grade is to be utilized in rare instances when a student is unable to complete a course due to circumstances beyond his/her control. The student must have successfully completed a majority of the course work to be eligible. The instructor must state clearly in writing what is needed to successfully complete the course. This information will be provided via GUS to both the student and the department.
chairperson. The plan cannot require the student to repeat the course as an option for removing an “IN” grade. Instructor must provide the grade the student would earn if no additional work is completed by entering a grade of “IB” “IC” “ID” “IF”, calculating the missing work as zero grades. The second letter supplies the default grade that will replace the “IN” grade at the end of one full subsequent fall or spring semester if no additional work is completed. Instructor permission may extend the semester deadline up to one year beyond the initial deadline. If the student opts to graduate prior to the allowed deadline for removal of an incomplete, the default grade will be recorded, and the student may not complete the work to achieve a higher final grade after graduation.

**IP** In Progress, zero credit given, zero grade points per semester hour. Temporarily recorded as a grade when a student is enrolled in a course that requires the student to engage in projects that extend past the end of the semester. The “IP” signifies that the faculty member acknowledges the student is enrolled in a long term project and that the project is not yet complete. Credit is postponed and the course is not included in the student’s grade point average. An In Progress course must be satisfactorily completed within one year from the date the “IP” was given. An In Progress not removed within one year shall be regarded as a failure and the “IP” grade will be changed to “F” and included in the computation of the student’s GPA.

Courses to be established for the use of the “IP” grade must be legislated through department/college curriculum committees and the Faculty Senate/Graduate Council. Courses can be legislated to be excluded from the one-year regulation of changing to “F” if the course is not completed.

**W** Withdrawal, zero credit, zero grade points per semester hour. This grade is not computed in the grade point average. This grade is given under two conditions: 1) when a student withdraws from a course prior to the end of the eleventh week; 2) when a student withdraws from the university after the last day of the eleventh week and is passing.

**WX** Administrative Withdraw. A grade of WX is recorded for Administrative Withdrawals from the 11th day of class and beyond. Proportionate deadlines apply to summer sessions and less than full term courses. The grade of WX is not computed in the grade point average and therefore involves no academic penalty. The Registrar must authorize the recording of this grade based on documentation provided.

**NC** No Credit, zero credit given, zero grade points per semester hour. No credit given (does not necessarily imply failure).

**Grade Point Average**

Earned grade points are computed by multiplying the point value of “A”, “B”, “C”, “D”, “F” and “XF” grades earned by the number of credit hours of the course(s) in which the student was enrolled. (A=4, B=3, C=2, D=1, F=0, XF=0). Grade Point Average is computed by dividing total grade points by total credit hours. Grades of “P” earned in "Pass-Fail" courses are not used in the computation of the GPA.

When a student repeats a course, only the last grade earned is computed in the student’s GPA. Grades earned on the first attempt will continue to appear on the transcript but will be marked as a repeat and will not be calculated in the GPA. Grades of “P” earned in "Pass-Fail" courses are not used in the computation of the GPA. Grades of “F” earned in a "Pass-Fail" course are used in the computation of the GPA. Grades of “IN”, "IP", “NC”, “W” and "WX" are not used in the computation of the GPA.

**Mid-Semester Report of D and F Grades**

After the eighth week of the fall and spring semester, mid-semester “D” and “F” grades submitted by faculty are reported by the Office of the Registrar to the dean of the college in which the student is completing a major. All “D” and “F” grades submitted by faculty will be reported by the Registrar to the student and the student’s academic advisor through the on-line student information system (GUS). No mid-semester report of “D” and “F” grades are distributed for the summer session.

**Final Grade Report**

Final grades are reported to the Registrar’s Office at the conclusion of the course. Students may access their grades via GUS (see New Undergraduate Student Enrollment Procedures) on their on-line transcript immediately upon grade posting. Grade reports are mailed by the Registrar’s Office upon the student’s request.
Grade Appeals

Final course grades are to be awarded upon criteria communicated to the student at the beginning of the semester. Additional work after a final grade was submitted cannot be used to change the grade.

If the student believes that an error has been made in the assignment or recording of a final grade, the student should first confer with the instructor. If such a conference does not resolve the problem, a grade appeal form must be submitted to the head of the academic department that offers the course in question. This appeal form must be submitted no later than six weeks after the beginning of the fall or spring semester immediately following the semester in which the grade being appealed was received.

The appeal form is available online on the Registrar’s Office and Graduate School’s webpage under forms.

Repeated Courses

Grades earned on the final attempt will be used in computing the GPA. Grades earned on all previous attempts will continue to appear on the transcript, but will be marked as repeated and will not be calculated in the GPA. Students may not repeat a course failed in resident study via credit by exam.

Pass-Fail System of Grading

The Faculty Senate adopted the pass-fail system of grading certain courses under certain conditions.

I. Courses legislated on a pass-fail basis only may not be taken for a letter grade. These are noted in the course description.

II. Other courses:

Students may elect to take other courses with only a “P” or “F” grade being recorded. Such a system is advantageous to students since they may take courses that they may not otherwise attempt because of competition. Only free electives may be taken under this system of grading. The following conditions or restrictions apply:

A. Eligible students:

1. Those with at least junior standing (60 hours).
2. Those not on academic warning.
3. Those who have declared a major.

B. Courses which would be ineligible:

1. Courses used to fulfill the general education requirements.
2. Courses used to fulfill the student’s major or minor requirements.
3. Supporting courses required by a student’s major department.
4. Courses which have been attempted for a letter grade.

C. Exceptions when Pass/Fail would be acceptable:

1. Credit earned by CLEP, Advanced Placement (AP), International Baccalaureate (IB) regardless of the course.
2. Study Abroad credit if agreed upon in advance by the student, chairperson and Transcript Analyst.
3. International student transfer credit from international colleges and universities.

D. Other regulations:

1. A student is allowed one course per semester with a maximum of four courses on the pass-fail basis.
2. At the time of enrollment a student must apply to the registrar for approval to take a course on a pass-fail basis. The grading option may not be changed after the last day for adding new classes.
3. A student taking a pass-fail grading option would receive a grade of “P” or “F” for the course with a “P” (pass) being given for any grade of “D” or higher with respect to the rest of the class.
4. Grades of “P” earned under pass-fail are not used in the computation of a student’s grade point average. Grades of “F” earned under pass-fail are used in the computation of a student’s grade point average. Courses passed are counted in the total courses required for graduation.
5. A student who has received a pass in a course may not repeat the course for a letter grade.

Transcripts

A transcript is a certified, official copy of a student’s permanent academic record. The transcript reflects courses and grades in accordance with academic regulations as listed in the University Catalog. The transcript cannot be altered at the request of a student. The entire transcript will be prepared each time a transcript is requested.

Transcripts may be requested from the Registrar’s Office. Transcripts are charged at the rate of $10.00 for mailed transcripts, transcripts picked up at the
Registrar’s Office, for domestic faxed transcripts, for international faxed transcripts and for electronic transfer. No transcript will be provided if the student has not met their financial obligations to the university. Disciplinary actions are not recorded on academic transcripts. Additional information may be found at: http://www.pittstate.edu/office/registrar/transcripts.dot

**ACADEMIC STANDING AND PROGRESS**

**Classification of Students**

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Less than 30 hours passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomore</td>
<td>30 hours passed</td>
</tr>
<tr>
<td>Junior</td>
<td>60 hours passed</td>
</tr>
<tr>
<td>Senior</td>
<td>90 hours passed</td>
</tr>
</tbody>
</table>

**Academic Good Standing**

An undergraduate student in academic good standing is a student who has not received an academic warning nor has been dismissed for academic reasons and who has earned a total number of grade points that will average to within four grade points of 2.00.

**Satisfactory Academic Progress**

Undergraduate students are considered as making satisfactory academic progress, if they have not been academically dismissed or are not on academic warning. Undergraduate students who are enrolled full time are considered as making satisfactory academic progress, if they are not on academic warning and complete at least a minimum number of semester hours credit permitting them to graduate in ten semesters, if working toward a baccalaureate degree and five semesters, if working toward an associate degree.

**Dean's Scholastic Honors**

To qualify for Deans' Scholastic Honors, a student must:

a. Complete at least 12 semester hours (or at least 6 semester hours during a summer session),

b. Receive a GPA of 3.60 for all credit course work that semester or summer session, and

c. Have no grade lower than “B” and no grade of “IN” in any course during that semester or summer session.

The Office of the Registrar will compile the list of Deans' Scholastic Honors recipients and inform both the dean and the student of the award.

Deans' Scholastic Honors will be noted on the student’s grade report and transcript.

**All A Scholastic Honors**

To qualify for All “A” Scholastic Honors, a student must:

a. Be enrolled for at least 12 semester hours (or at least 6 semester hours during a summer session).

b. Receive a grade of “A” in all credit course work for that semester or summer session.

c. Have no grade lower than “A” and no grade of “IN” in any course during that semester or summer session.

All “A” Scholastic Honors are awarded each semester or summer session. The Office of the Registrar compiles the list of All “A” Scholastic Honors recipients and informs both the deans and the students of the award.

All “A” Scholastic Honors will be noted on the student’s grade report and transcript.

**Part-time Student Scholastic Honors**

To qualify for Deans’ Scholastic Honors, a part-time student must:

a. Accumulate at least 12 semester credit hours of 3.60 during the most recent consecutive enrollments.

b. Have no grade lower than “B” and no grade of “IN” in any course for the most recent consecutive enrollments.

c. Grades of “P” are not counted toward the 12 semester credit hours.

To qualify for All “A” Scholastic Honors, a part-time student must:

a. Accumulate at least 12 semester credit hours of 4.0 during the most recent consecutive enrollments.

b. Have no grade lower than “A” and no grade of “IN” in any course for the most recent consecutive enrollments.

c. Grades of “P” are not counted toward the 12 semester credit hours.

Once a part-time student has earned Scholastic Honors, the student must complete an additional 12 credit hours before the student is considered again for Scholastic Honors. The student must meet all the above criteria at the time of subsequent consideration.
**Academic Warning and Dismissal**

A student whose cumulative grade point average at the end of a regular semester or the summer session falls below the GPA standard for retention in the university will be placed on academic warning. Academic Warning and Dismissal are based on the following standards:

<table>
<thead>
<tr>
<th>Credit hours attempted</th>
<th>Cumulative GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 29</td>
<td>&lt; 1.4</td>
</tr>
<tr>
<td>30 – 59</td>
<td>&lt; 1.6</td>
</tr>
<tr>
<td>60 – 89</td>
<td>&lt; 1.8</td>
</tr>
<tr>
<td>90+</td>
<td>&lt; 2.0</td>
</tr>
</tbody>
</table>

To avoid suspension while enrolled and on academic warning, the student must earn a 2.00 semester GPA or raise the cumulative GPA to the retention standard for hours attempted. Failure to meet either of these criteria will result in academic dismissal.

Once dismissed, a student is not allowed to enroll for at least one regular semester (fall/spring) before being considered for reinstatement by the dean of the academic college in which he or she wishes to major.

A senior (90 hours earned) who is academically dismissed may be reinstated without remaining away from the University for a semester at the discretion of his or her academic dean. This student will continue under academic warning. The senior exception may be granted only once.

**Academic Reinstatement**

Students who are academically dismissed are not permitted to re-enroll at the university until one full semester (fall or spring) has elapsed after the date of the dismissal. At the conclusion of one full semester of dismissal, the student may petition for reinstatement to the dean of the student's college. Each petition will be considered on its own merit. Reinstatement is not automatic. Seniors may be granted one exception to the full-semester away at the discretion of his or her academic dean.

**Academic Fresh Start**

Academic Fresh Start allows returning undergraduate students with poor or marginal academic records to resume work towards an undergraduate degree without the detriment of their past academic performance in college. Although previous courses and grades will remain on the student’s transcript, if granted Academic Fresh Start, the calculation of grade point average (GPA) and credit hours earned is based solely on work completed after Fresh Start. This policy is designed for students who have gained maturity through extended experience outside of educational institutions and who have decided to return to the University. Academic Fresh Start is not an option for every returning student.

Six conditions must be met by the student:

1. Has not been enrolled in any institution of higher education for at least four years.
2. Is pursuing first undergraduate degree.
3. Is reinstated by the Dean of the College where the student will be majoring as described in the reinstatement policy if returning after being academically dismissed.
4. Submits a petition to the Dean of the College in which the student will be majoring describing the reasons for past poor performance and outlining an academic plan that includes the declaration of a major. Academic Fresh Start can be granted only once.

Petition form may be found on the Registrar’s webpage [http://www.pittstate.edu/office/registrar/forms.dot](http://www.pittstate.edu/office/registrar/forms.dot)

5. Forfeits all credit earned prior to Academic Fresh Start.
6. Enrolls and completes at least twelve hours at Pittsburg State University with a 2.0 GPA before Academic Fresh Start is recorded on the transcript.

Once approved, the student’s record will carry a notation stating when the Academic Fresh Start was granted and that the calculation of GPA and credit hours earned begins with that date. Students applying for readmission under Academic Fresh Start must meet admission requirements established by the individual colleges.

**Graduation**

**Undergraduate GPA Requirements**

Since a “C” average is required on total hours attempted for graduation, on major courses, and courses taken in residence (see Requirements for All Baccalaureate Degrees), a student’s record should reflect progress toward that level of achievement. A “C”
average at Pittsburg State University requires two grade points for each hour attempted on recorded grades of “A”, “B”, “C”, “D”, or “F”, except those “C”, “D” or “F” grades that have been cancelled by a repeat enrollment. “F” grades earned under Pass-Fail are used in the computation of a student's grade point average. When a student repeats a course for the purpose of raising a “C”, “D” or “F” grade, only the last grade earned shall be counted and computed in the student’s cumulative grade point average. Grades earned on the first attempt will continue to appear on the transcript but will be marked as a repeat and will not be calculated in the GPA. A student will lose credit for a “C” or “D” grade repeated with a grade of “F”, or a “C” grade repeated with a grade of “D”.

Writing to Learn Program

For a description of the Writing To Learn Program see Writing to Learn Requirement.

Catalog Expiration Date

A student must complete the degree requirements of the most recent Pittsburg State University catalog in effect at the time of the student's first matriculation at any college or university, provided that the catalog has not expired. A student may also select any subsequent catalog, provided that the catalog has not expired.

This 2017-2018 University Catalog will expire at the end of the 2023 summer session for students who take their first college course fall semester 2017 or before. Those students who take their first college course after fall 2017 will have six years to complete their degree under the 2017-2018 University Catalog.

University Scholastic Honors

There are three levels of University Scholastic Honors: Summa Cum Laude, Magna Cum Laude, and Cum Laude.

University Scholastic Honors are based on the student’s cumulative grade point average at the time of the first baccalaureate graduation. University Scholastic Honors are not awarded for a second baccalaureate degree. To qualify for University Scholastic Honors, a student must have a cumulative grade point average equal to or greater than 3.95 for Summa Cum Laude, 3.90 for Magna Cum Laude, and 3.85 for Cum Laude.

The Office of the Registrar, as an agent of the faculty, will determine the student’s qualifications for University Scholastic Honors.

Departmental Academic Honors

PURPOSE:

The Departmental Academic Honors Program is designed to challenge students with superior academic abilities. The program provides an opportunity to develop a deeper understanding of an academic area through independent study and close faculty-student association. Projects should provide the student the opportunity to develop critical thinking skills, data analysis skills, research skills within their discipline, and/or the ability to present in a public and professional setting. Students who complete the requirements outlined below graduate with the distinction of “With Departmental Academic Honors” noted on their transcript.

Departmental Academic Honors are awarded to students who:

1. Maintain a cumulative 3.5000 GPA.
2. Complete a minimum of nine semester hours of credit designated as taken for honors in the student’s major department.

What is a departmental academic honors contract?

A departmental academic honors contract is a mechanism for adding an “honors dimension” to a department course in the student’s major. The contract project should add an academic dimension to the course by introducing new material or by allowing the student to go into greater depth than normally required in some aspect of the course. Any 300-799 undergraduate level course may be taken for honors with approval of the instructor and chair or director. A student must be enrolled in the course he/she wishes to take for honors during the current semester. The course must be in the student's major department. Independent Studies and/or Readings courses are not allowed to be taken for departmental academic honors.

How are honors contracts related to grades?

The honors contract does not affect the student’s grade in the course. No project/paper and/or course shall be accepted with a grade less than B. To receive honors credit for the course, however, the student must earn a grade of “A” or “B” in the course in addition to completing the contract in a satisfactory manner. All incompletes must be finished no later than four weeks after the completion of the semester they are given. In extreme circumstances, the professor involved with the
project can request an extension of the committee, and this request must be in writing and provide a significant reason why the project needs to be carried longer than the four week window. In any case, no project will be carried any longer than one semester. Students are not allowed to submit an application for another Departmental Honors Project until any previous incomplete has been finished.

**How much work should an honors contract involve?**

The honors contract project should be one that encompasses around 20 to 25 hours of work. In the case of courses which carry a credit hour other than three credits, the scope of the project should be adjusted accordingly so that the depth and length of the project is congruent with the number of credit hours being taken. For instance, a seven credit hour course in Nursing should have a project at least twice the scope of a three credit hour course project. Conversely, a two credit hour course project would then have a bit less scope than a three credit hour course project.

**What kinds of projects can be involved?**

The departmental academic honors contract is designed to foster creativity in projects which are acceptable both to the honors student and the professor. The examples given here are just that—examples. While the scope and length of the project is up to the respective College Departmental Academic Honors Committee to establish, the following list is presented to provide some historical perspective on past projects accepted by the Faculty Senate Departmental Academic Honors Committee. The list is not in any way intended to limit the scope or nature of projects.

- Class/Public presentation of research undertaken for the honors contract project. Typically in the range of 20-30 minutes, accompanied by a power point presentation or some other sort of visual aid
- Original computer program or project
- Original musical composition, sculpture, theatrical script, or other work of art, or recital of musical work (s) that is beyond the normal scope of the degree requirements for the major
- Additional laboratory experiments or mathematical problems, followed by written report, typically at least 5-8 pages in length
- Research paper or written report (usually 8-12 pages) based on interviews, library resources on a topic related to the course, a biography of a famous person in the academic field, or a review of additional readings (books, articles) related to the course

**In the case of all written documents and presentations, an appropriate bibliography is required.**

Students who participate in the Departmental Academic Honors Program are encouraged to enter the annual Research Colloquium sponsored each spring term by the Office of Graduate and Continuing Studies.

**How many contracts are possible in a semester?**

Students are limited to one Departmental Academic Honors project per semester or summer session. Exceptions are permitted only with special permission by the College Departmental Academic Honors Committee.

**What are the procedures and deadlines?**

Students must formally elect to take a course for honors within the first one-fourth of the length of the course by completing the [Enrollment For Departmental Academics Honors form](http://www.pittstate.edu/office/registrar/departmen-20-tal-academic-honors.dot). The Departmental Academic Honors Committee requires that the application be typed. Handwritten forms will not be accepted.

**Reporting Honors Contract Results**

Contract results are reported to the Registrar’s Office when the professor enters the student’s grade for the course.

Any exceptions to the above guidelines must be approved by the Honors Committee of the Pittsburg State University Faculty Senate.

**The Honors College**

For a description of [The Honors College](http://www.pittstate.edu/office/registrar/departmen-tal-academic-honors.dot) see link.

**Commencement**

Public conferring of degrees occur at commencement ceremonies held at the conclusion of the spring semester for spring and summer graduates and at the conclusion of the fall semester for fall graduates. Additional information regarding commencement at Pittsburg State University can be found at
http://www.pittstate.edu/office/registrar/commencement.dot.

Diplomas

Diplomas are awarded to graduating students each semester and summer session upon graduation of the student. The diploma is dated with the end of semester date. The diploma is imprinted with the name of the degree awarded and the student's major. Minors or emphases are not printed on the diploma. Holds placed on a student's record from any department must be cleared before the diploma can be released. A replacement diploma may be issued upon a request from the original holder which certifies to the loss or damage of the original diploma. A charge is made for each replacement.
Student Rights and Responsibilities

Definition of Student Status

Any person actively pursuing a course of study is considered to hold student status. For the purposes of these and other regulations, a student is further defined as one who is currently enrolled at the university or has completed the immediately preceding term and is eligible to enroll for the next term.

Duration of Student Status

In the broadest context, an individual is termed a student of Pittsburg State University from the time of admission in any status to the university until such time as formal association with the university ceases.

Undergraduate Students

Students enrolled exclusively in undergraduate courses will be considered undergraduate students.

Graduate Student

Students enrolled exclusively in graduate courses and who possess a baccalaureate degree will be considered graduate students.

In cases where a student is enrolled in both undergraduate and graduate courses and possesses a baccalaureate degree, he/she will be considered a graduate student. In cases where the student is in his/her last semester of undergraduate enrollment and does not possess a baccalaureate degree, the student will be considered an undergraduate.

Educational Equity and Access to Higher Education

Pittsburg State University is committed to a policy of educational equity. Accordingly, the university admits students, grants financial aid and scholarships, conducts all educational programs, activities and employment practices without regard to race, color, religion, sex, national origin, sexual orientation, age, marital status, ancestry, or disabilities.

In accordance with Kansas statutes and policies of the Board of Regents, the university is open to all persons who qualify according to the Pittsburg State University admission standards. These standards are defined and made available in the undergraduate and graduate section of this University Catalog.

Financial Obligations

Pittsburg State University adopted the following practices concerning any student who has an outstanding obligation to the university:

1. The student will not be permitted to enroll for a new semester if he/she has an outstanding obligation due the university for a previous semester.
2. The student may not obtain a transcript nor have a transcript sent to any party if he/she has an outstanding obligation due the university.
3. The student may not obtain their diploma if he/she has an outstanding obligation due the university.

Students wishing to appeal a financial obligation decision may do so as outlined in the Office of the Provost Memorandum 81-10.

Instructional Rights and Responsibilities

Students have the right to know the goals, objectives, regulations, and grading practices of the course in which they enroll at the beginning of the course.

Students shall be free to take reasoned exception to the data or the views offered in any course of study but they are responsible for learning the content of any course in which they are enrolled.

Students have protection through orderly procedure against improper academic evaluation. Procedures for exercising the right of appeal are defined by the institution and made available to all members of the academic community through departmental chairpersons.

Class Attendance

Students at Pittsburg State University are expected to attend class regularly and participate fully in the activities of that class under the guidance of a university instructor. The instructor is responsible for setting and communicating to the students the attendance requirements for each class.
**Class Absence**

Students are responsible for clearing their absences with each instructor. The Office of Student Life will notify instructors of unusual circumstances of health or family problems if absences are in excess of three days.

**Absence Due to Military Leave**

Students are expected to schedule military training duty at times other than those that conflict with academic work.

In the event students must attend military reserve training duty during a semester or summer session, they must receive special permission to be absent from each instructor whose class will be missed prior to completing enrollment. Instructors are not expected to give approval if they do not wish to do so. However, if absence from classes is granted, the instructor may make appropriate assignments in lieu of the classwork.

**Privacy Rights**

**Rights Under FERPA**

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student's education records within 45 days of the day the University receives a request for access.

Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.

Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Pittsburg State University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

Family Policy Compliance Office  
U.S. Department of Education  
600 Independence Avenue, SW  
Washington, DC 20202-4605

**Directory Information**

The university from time to time publishes several bulletins, lists, brochures, catalogs, directories, yearbooks, annuals, guidebooks, news releases, sports information, honor rolls, etc., containing information that specifically identifies students and information about them. The university is authorized to publish,
and will publish, such Directory Information, collectively or individually, unless a student within a reasonable time after the start of the semester notifies the Student Privacy Office (Registrar, 103 Russ Hall) in writing that all of the categories listed below (designated Directory Information) should not be released without prior written consent. The following information is considered Directory Information.

1. Student name
2. Address
3. Telephone listing
4. Electronic mail address
5. Parents and next-of-kin information
6. Age
7. Classification
8. Enrollment Status (full/part-time)
9. Major and minor field of study
10. Student advisor
11. Dates of attendance
12. Degrees, honors, and awards received and dates awarded/conferring
13. Previous educational institutions
14. Participation in officially recognized activities and sports
15. Weight and height of members of athletic teams
16. Photograph, video or electronic image with exception of ID cards

**Social Security Number**

When applying for admission, a student is asked to provide the university with a social security number. While students may choose not to provide this information, no student may receive financial aid from any federally funded program or state payroll unless the social security number is on file. The university may be required to provide your social security number to the Kansas Division of Accounts and Reports for use in detection of fraudulent or illegal claims against state monies in accord with the general authority of K.S.A. 75-3728b.

**Academic Integrity**

**Dishonesty in Academic Work**

**Academic Misconduct**

Education at the university level requires intellectual integrity and trust between faculty and students. Professors are obliged to master their subject and present as fair an account of it as possible. For their part, students are obliged to make an honest effort to fulfill both the letter and the spirit of course requirements. Academic dishonesty violates both integrity and trust. It jeopardizes the effectiveness of the educational process and the reliability of publicly reported records of achievement.

Academic dishonesty by a student is defined as unethical activity associated with course work or grades.

It includes, but is not limited to:

(a) Giving or receiving unauthorized aid on examinations,

(b) Giving or receiving unauthorized aid in the preparation of notebooks, themes, reports, papers or any other assignments,

(c) Submitting the same work for more than one course without the instructor's permission, and,

(d) Plagiarism. Plagiarism is defined as using ideas or writings of another and claiming them as one's own. Copying any material directly (be it the work of other students, professors, or colleagues) or copying information from print or electronic sources (including the internet) without explicitly acknowledging the true source of the material is plagiarism. Plagiarism also includes paraphrasing another individuals' ideas or concepts without acknowledging their work, or contribution. To avoid charges of plagiarism, students should follow the citation directions provided by the instructor and/or department in which the class is offered.

Unless otherwise stated by the instructor, exams, quizzes, and out-of-class assignments are meant to be individual, rather than group, work. Hence, copying from other students’ quizzes or exams, as well as presenting as one’s own work an assignment prepared wholly or in part by another is in violation of academic honesty.

The above guidelines do not preclude group study for exams, sharing of sources for research projects, or students discussing their ideas with other members of the class unless explicitly prohibited by the instructor.

Since the violation of academic honesty strikes at the heart of the educational process, it is subject to the severest sanctions, up to and including receiving an "F" or "XF" (an "XF" indicates the "F" was the result of academic dishonesty) for the entire class and dismissal from the university.
When an instructor has a reasonable good faith belief that a student(s) has committed academic misconduct, that instructor has the sole discretion to give the student an “F” on the assignment/test to which the student committed academic misconduct or an “F” for the entire course. If such an “F” negatively affects the student’s final grade in the course, that student(s) may appeal the final grade pursuant to the current Pittsburg State University Catalog’s Grade Appeal process.

When the instructor wishes to impose an “XF”, and/or more severe sanctions, he or she must first notify their department chair, dean, and the University’s Academic Honesty Committee Chairperson in writing. In addition, the same procedure applies if similar sanctions seem warranted for a student(s) or former student(s) who have assisted in a serious act of academic dishonesty.

**University Academic Honesty Committee**

The Academic Honesty Committee is convened under the auspices of the Provost. It is composed of nine members. The Faculty Senate Executive Committee is responsible for appointing six of these members. All must be full-time members of the teaching faculty. Members chosen by the Executive Committee serve staggered two-year terms. The Faculty Senate Executive Committee shall make its appointments at the beginning of the academic year. In addition to its six faculty members, the Academic Honesty Committee shall include three student members. Two (2) students of sophomore status or higher shall be appointed by the Student Government Association. An additional (1) student shall be appointed by the Graduate Student Advisory Council. The students from both organizations will be appointed annually and at the beginning of the Fall semester.

The President-Elect of the Faculty Senate will serve as the Academic Honesty Committee Chairperson. If the President-Elect of the Faculty Senate is excluded because of possible bias, the President of the Faculty Senate will appoint a temporary chair. The Academic Honesty Committee Chairperson is responsible for advising the Provost on cases involving alleged student academic dishonesty.

The committee may recommend one or more of the following sanction(s):

- The imposition of a grade of “XF”
- The addition of a permanent note on the student’s transcript indicating his/her participation in a serious act of academic dishonesty (such as taking an exam for another student)
- Disciplinary probation
- Suspension
- Expulsion from the university

The decision made by the Academic Honesty Committee may be appealed to the Provost.

**The following procedures shall be adhered to:**

Step 1: The instructor charging a student with academic dishonesty shall submit a written request for hearing to the Chairperson of the Academic Honesty Committee, giving full detail of the alleged act(s) of academic dishonesty and send copies of the request to their department chair and dean. The Chairperson of the Academic Honesty Committee will then convene the committee and inform its members of the details of the incident. The aforementioned request shall be forwarded by the Chairperson of the Academic Honesty Committee to the student(s) charged with academic dishonesty. Following the instructor’s request, a hearing will be scheduled as soon as a quorum of the Academic Honesty Committee can be convened and allowing at least five (5) class days for review of evidence. There must be at least five (5) class days remaining in the current semester following the hearing.

Step 2: The instructor, and student(s) charged with academic dishonesty, will be notified of the time and date of the said hearing at least five (5) class days before the hearing is to be held. The instructor, and student(s) charged with academic dishonesty may seek advice concerning the hearing from any person such as a faculty member or department chairperson. The instructor and each student(s) may also be accompanied to the hearings by an advisor. The student(s), at their own cost, has the right to provide a transcriptionist at their hearing. **Note: The university attorney has the right to be present at any Academic Honesty Committee hearing.**

The two parties, the instructor and student(s) charged with academic dishonesty, may each request removal of any one member of the committee. This request shall be presented to the chairperson of the committee in writing at least two (2) class days prior to the time of the hearing. After the request for removal has been made the chairperson will notify the individual and the respective individual will be removed from the hearing.
Step 3: The Academic Honesty Committee will conduct an appropriate hearing and may gather additional evidence pertaining to the issue.

During the hearing, the instructor, student(s) charged with academic dishonesty, and witnesses with direct first-hand knowledge of the incident shall have the opportunity to testify (within the guidelines and time frames established by the committee). Hearings are evaluations by members of the university community and are not legal proceedings. Cross-examination is the prerogative of the instructor, the student(s) charged with academic dishonesty, and the committee. For future reference, the hearing shall be audio tape recorded (Committee deliberations on sanctions shall not be recorded). During the entire process the proceedings of the committee shall be closed and confidential, unless the matter becomes the subject of litigation.

Step 4: Within five (5) class days of the conclusion of the hearing, the committee will render a written opinion concerning its findings, as well as a written verdict which the Provost will impose.

Step 5: Upon notification of the imposed sanction, the student(s) will have five (5) class days to appeal to the Provost. This appeal must be in a written format and must provide detail for the reason of the appeal.

Step 6: Once the Provost receives the appeal, he/she will have 8 class days to review the hearing and, in consultation with the President, render a decision. The Provost may uphold, or overturn the Academic Honesty Committee's sanction(s) or propose an alternate penalty which the student may accept.

Removal of Sanctions

After two (2) years have elapsed, the student may present a written request for removal of the imposed sanctions to the Provost. If the request is not granted, the student may present up to 4 more requests for removal but in no case can the student present more than 1 request per academic year.

If the request is granted, the student will be returned to good standing with the university and/or have the notification of the disciplinary action removed from their transcript, provided that no other sanction for academic dishonesty has been imposed in the interim. It shall be at the Provost discretion to determine what fairness requires.
Undergraduate Degrees and Requirements

Undergraduate Programs

BACHELOR OF APPLIED SCIENCE (BAS)

The Bachelor of Applied Science degree offers students who have graduated from an accredited two-year associate degree technical program the opportunity to extend their education and training. Students earning the BAS degree complete a major in technology with a selected emphasis through one of the four departments in the College of Technology.

BACHELOR OF ARTS

The Bachelor of Arts degree offers the student opportunity to become acquainted with a variety of subjects which provide the fundamentals of a liberal education. It enables the student to secure preparation for advanced work and provides opportunity for specialization in some areas. Persons completing this degree who plan to teach should see the teacher education section.

Requirements for a Major

Each student must select a major area of concentration from among the following departments or areas: biology, English, history, international studies, modern languages, music, political science and psychology.

Requirements for a Minor

Each student must select one minor from among the following departments or areas: art, biology, business administration, chemistry, communication, computing, economics, English, family and consumer sciences, geography, history, international studies, mathematics, military science, modern languages and literatures, multicultural studies, music, philosophy, physics, political science, psychology and sociology. Minors from other departments or areas may be selected if approved by the major department.

Special Regulations

(1) Not more than 23 hours of professional education courses may be counted toward this degree. (2) Not more than 6 hours in courses of a practice or shop nature may be counted and then they will reduce the 23 hours maximum allowed in education courses proportionately. (3) Nine hours of foreign language are required for the Bachelor of Arts degree. These 9 hours are to be in one language.

BACHELOR OF BUSINESS ADMINISTRATION (BBA)

The Bachelor of Business Administration is a professional degree providing preparation for business careers through: (1) broad preparation in communication, social sciences, natural sciences, mathematics, and humanities; (2) a substantial knowledge of economics and the functional areas of business; and (3) a limited specialization selected from: accounting, economics, finance, information systems, international business, management or marketing. Cooperative education courses offered outside the Kelce College of Business may not be applied toward the BBA degree. A minor is not required.

BACHELOR OF FINE ARTS

This degree is structured to provide a concentrated art experience for those students interested in a professional career in art and for those interested in specializing in a specific art form or study. Students with an interest in commercial art should consider this degree. Emphasis is placed on the study of historical and contemporary techniques and philosophies of art. A minor is not required.

BACHELOR OF GENERAL STUDIES (BGS)

The objective and intent of the Bachelor of General Studies degree is to encourage students to define clearly their own objectives and to design a course of study that will best achieve their objectives. The Bachelor of General Studies degree is for students who wish to develop new combinations of courses to serve personal or occupational goals which are not met by traditional majors and minors. In consultation with faculty advisors, students may design four-year programs of study which combine courses from any department or college.

Basic Assumptions

This is a campus-wide degree that allows students to select courses as they wish and to organize them in logical, coherent programs of study which meet their defined objectives.

The degree may incorporate studies from any combination of fields of study, department, or colleges to serve specific personal or occupational goals. Students electing this degree option work very closely with their advisor to organize an academic experience
that represents identifiable goals: it is not intended to be used as a means of circumventing the academic expectations associated with more traditional degree programs.

Students are responsible for the selection of the program that they take and for its use after graduation. Problems of transferring into other degree programs, admission to graduate school, and licensing and certification that are required in some professions and occupations are the responsibility of the students. Students will also complete a program assessment document, administered by the director, near the completion of their course of study.

**Admission and Advisement**

Admission to the degree program must be approved by the director of the BGS program, Office of Enrollment Management and Student Success, 213a Russ Hall. The conditions for admission to the Bachelor of General Studies degree program are (1) the submission of an acceptable plan of study, and (2) the completion of at least forty-five hours of college credit before application to the program.

It shall be the responsibility of the director and the student to develop a statement of objectives, to plan a program, and to review the student’s progress. Continuation in the program requires development of a final plan of study at the beginning of the junior year. Bachelor of General Studies student programs shall include a minimum of 24 (twenty-four) semester hours in at least one specific discipline or 24 hours of coursework tailored for a specific goal; these constitute the emphasis. Students must achieve a minimum 2.00 GPA within the courses taken in the emphasis. The emphasis does not appear on the diploma.

**Degree Requirements**

Students must complete 124 semester hours of selected courses and meet all other university requirements including general education requirements. Students must achieve a minimum 2.00 cumulative GPA to earn the BGS degree. Students must complete a minimum of 45 upper division hours. Students must complete the 24 hour emphasis with a minimum 2.00 GPA as well as complete the Assessment Essay. Students will not complete a traditional major or minor. The only minor allowed is military science.

**BACHELOR OF INTEGRATED STUDIES (BIS)**

The Bachelor of Integrated Studies degree provides a means for the creation of interdisciplinary programs. The degrees are aimed at providing an education that is a basis for life-long learning while equipping students to work in areas that are underserved by established disciplines.

**Basic Assumptions**

This is a university-wide degree that allows students to select jointly sponsored and defined programs of study which meet their objectives. The degree will consist of specific coursework established and approved by any combination of departments or colleges to serve specific personal or occupational goals. Students electing this degree option must work very closely with their advisors in the sponsoring departments to ensure the academic experience provides a path to their identifiable goals.

Students are responsible for the selection of the program that they take and for its use after graduation. Problems of transferring into other degree programs, admission to graduate school, and licensing and certification required in some professions and occupations are the responsibility of individual students.

**Admission and Advisement**

Admission to the degree program must be approved by the director of the BIS program, Office of the Dean of the College of Arts and Sciences, 311 Grubbs Hall. The condition for admission to the Bachelor of Integrated Studies degree program is acceptance by a faculty advisor in each department participating in the program. Current programs or areas of study may be located at the College of Arts and Sciences web site. It shall be the responsibility of the BIS director and the student to contact the departmental advisor for a specific program and to review the student’s progress. Continuation in the program requires a statement of satisfactory progress from each department at the beginning of the junior year.

**Degree Requirements**

Students must complete 124 semester hours of selected courses and meet all other university requirements including general education requirements. Students may select a minor which enhances their preparation for employment; courses required as part of the
integrated program, however, may not be used to meet minor requirements.

BACHELOR OF MUSIC

The curriculum for this degree is highly specialized enabling the student to attain maximum performance potential on a major in vocal or instrumental, together with skills in piano, music theory, history of music, and conducting. A minor is not required.

BACHELOR OF MUSIC EDUCATION

The curriculum for this degree prepares the student to teach and supervise music in the schools from kindergarten through senior high school. The program requires thorough knowledge of an applied instrument or vocal together with conducting and basic techniques of keyboard, woodwinds, strings, brass and percussion instruments. Music theory, history of music and participation in organizations are also included. A minor is not required.

BACHELOR OF SCIENCE

The Bachelor of Science degree provides the fundamentals of a liberal education with opportunity for specialization. Persons completing this degree who plan to teach should see the teacher education section.

Requirements for a Major

Each student must select a major area of concentration from among the following departments or areas: biology, chemistry, communication, exercise science, family and consumer sciences, geography, justice studies, mathematics, physics, psychology, recreation, social work, sociology.

Requirements for a Minor

A minor for a Bachelor of Science is dependent on the major. Students should refer to the catalog or seek advice from their advisor on minor requirements for their selected major.

Special Regulations

Not more than 10 hours of approved practice or shop courses may be counted toward this degree.

BACHELOR OF SCIENCE IN EDUCATION

The Bachelor of Science in Education degree is designed for students preparing to teach in elementary or secondary schools, or in vocational-technical schools offering work at the secondary level. The degree is also designed to serve students planning graduate preparation for school service positions and for those planning graduate preparation for teaching in community junior colleges and other institutions of higher education.

The degree requires a substantial program of work in general education to provide opportunity for the student to acquire the fundamentals of a liberal education. In addition, the degree requires specialized preparation, or concentration, in the areas, or fields to be taught, together with a sequence of courses in psychology and professional education designed to assist the individual to function effectively as a teacher. See teacher education section.

Requirements for a Major

Students preparing to teach in the elementary school major in elementary education (K-6) complete two fifteen-hour fields and one 14 hour field of concentration in specified subject matter areas.

Individuals preparing to teach at the secondary level select a major area of concentration from any one of the departments offering a teaching major. In most instances, it is recommended that the individual preparing to teach in a secondary school develop adequate breadth as well as depth in the major field.

Preparation to teach in higher education, including the junior college, requires depth of preparation in a teaching field and usually requires a fifth or sixth year of preparation.

Requirements for a Minor

The minor, when required on the student's degree program, must be selected with advisement as one appropriate to teacher preparation.

BACHELOR OF SCIENCE IN ENGINEERING TECHNOLOGY

Curricula offered under this degree are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) and are designed to prepare graduates for employment in industry. Students enrolled in these curricula have the opportunity to specialize in one of five engineering technology options. Graduates find employment in administrative and supervisory positions in industrial organizations and assume responsibilities in the areas of product design and development, manufacturing and production, sales and distribution,
maintenance and service and industrial training. A minor is not required.

**BACHELOR OF SCIENCE IN MEDICAL TECHNOLOGY**

This degree is designed to prepare students for employment in clinical laboratories as medical technologists. The degree is necessary before a person is eligible to take the National Registry Examination for certification as a medical technologist. A minor in chemistry is required.

**BACHELOR OF SCIENCE IN NURSING**

The Bachelor of Science in Nursing degree is designed to prepare students for the practice of professional nursing in a variety of settings including hospitals, clinics and homes in the community. Persons receiving this degree are eligible to write the licensure examination required to become a registered nurse. A minor is not required.

**BACHELOR OF SCIENCE IN TECHNOLOGY**

This degree is designed to prepare students for employment in business and industry in high level technical, managerial and supervisory positions. A minor is not required.

**BACHELOR OF SCIENCE IN CAREER AND TECHNICAL EDUCATION**

The degree program is designed for those desiring positions as teachers and supervisors in vocational, industrial and technical education, and in health occupations. In addition, to meeting curriculum requirements, the individual must meet work experience requirements established by the Division of Vocational Education, Kansas State Department of Education. A minor is not required.

**ASSOCIATE DEGREE**

The Associate of Applied Science degree is granted upon the completion of the following specified two-year program:

**Department of Automotive Technology**

  Automotive Service Technology

**Department of Technology and Workforce Learning**

  Electrical Technology
  Wood Technology

**CERTIFICATES**

- **Department of Accounting and Computer Information Systems**
  - Internal Auditing

- **Department of Automotive Technology**
  - Automotive Service Technology

- **Department of Communication**
  - Communication

- **Department of Economics, Finance and Banking**
  - Kansas Insurance

- **Department of English and Modern Languages**
  - English

- **Department of Health, Human Performance and Recreation**
  - Coaching
  - Dance

- **Department of History, Philosophy and Social Sciences**
  - Geographic Information Systems

- **Department of Mathematics**
  - Mathematics

- **Department of Teaching and Leadership**
  - Autism Spectrum Disorders
  - District Leadership
  - Reading/Language Arts
  - School Library
  - Teaching English to Speakers of Other Languages (TESOL)

- **Department of Technology and Workforce Learning**
  - Career and Technical Education Administrator
  - Electrical Technology (Two Year Certificate)
  - Technical Teacher Education

- **Women’s and Gender Studies Certificate**
Requirements for All Baccalaureate Degrees

1. Students must successfully complete a minimum of 124 semester hours of credit with an earned grade point average of 2.00 for all hours attempted and included in the GPA computation.

2. Students must successfully complete a minimum of 45 semester credit hours outside the department in which they are enrolled as a major. The Department of History, Philosophy and Social Sciences is considered a multidiscipline department and students with majors in those disciplines must complete 45 semester hours outside their discipline. The College of Technology is considered one department and students majoring in the College of Technology must complete 45 semester hours outside of that college.

3. Students must have a grade point average of 2.00 for all major and minor credit hours attempted; all Bachelor of Science in Education (secondary) students must have a minimum grade point average of 2.75 in major credit hours, 2.50 overall; All Bachelor of Science in Education (elementary education K-6 and early childhood unified birth through third grade licensure) students must have a minimum grade point average of 3.00 in major credit hours, 2.80 overall. Department of Art undergraduate degree programs require a 3.00 in art courses.

4. A minimum of 45 semester hours of credit must be earned in upper division courses (numbered 300 to 799).

   Upper division credit may be earned only through a four year institution.

5. A minimum of 30 semester hours of credit must be earned in residence (courses taken from Pittsburg State University) with a grade point average of 2.00 for all resident hours attempted. These minimum resident hours must include eight semester hours of credit in the major department.

6. A two-year college transfer student must complete a minimum of sixty credit hours at an accredited four-year university or college.

7. A maximum of six semester hours of credit completed at another college or university may be applied on the last thirty hours prior to graduation.

8. Freshman English--Students must earn credit in 6 hours of English Composition/Research Writing (ENGL 101 and ENGL 190 or 299) with a grade of C or above.

9. Speech Communication--A student must earn credit in a course in basic speech communication, COMM 207 Speech Communication.

10. Upon attaining 85 semester hours of credit (including current enrollment), the student must apply in writing for an official degree check, with the Degree Checking Office in the Office of the Registrar or through their GUS account. Following the record analysis, the student will be provided with an outline of specific requirements which must be met before a degree can be granted. A copy of this official degree check is sent to the student’s advisor.

11. Degrees are issued only at the close of each semester and summer session.

12. A student must complete the degree requirements of the most recent Pittsburg State University catalog in effect at the time of the student’s first matriculation at any college or university provided that the catalog has not expired. A student may also select any subsequent catalog provided that the catalog has not expired.

This 2017-2018 University Catalog will expire at the end of 2023 summer session for students who take their first college course fall semester 2017 or before. Those students who take their first college course after fall 2017 will have six years to complete their degree under the 2017-2018 University Catalog.

13. Minors typically must be selected from a different department than the major. Minors that are chosen from the same department or discipline area may be awarded if at least nine hours are unique to that minor in reference to any major or emphasis area. When the degree does not specify a minor requirement, departments may legislate a minor to be included with the major which varies from these guidelines.

14. Additional minors or majors will not be awarded or posted to a transcript after a baccalaureate degree has been granted unless a second baccalaureate degree is earned.

15. A student with a bachelor’s degree may be granted a second bachelor’s degree, in a major area other than that in which the first degree was granted provided the student has met all requirements for the second degree, including no fewer than thirty semesters hours of Pittsburg State University credit beyond the number
required for the first degree. In cases where the two degrees will be awarded in the same semester, the student will designate which is to be his or her “first degree” for the purpose of this policy.

For dual degrees academic honors (e.g., summa cum laude) will be determined, recognized and recorded treating each degree as a separate academic achievement.

The Bachelors of General Studies cannot be awarded as a second bachelors, nor can it be awarded concurrently with another Pittsburg State University degree. A student seeking a second bachelor’s degree who earned the first bachelor’s degree at another institution will not be required to meet Pittsburg State University general education requirements, except English Composition/Research Writing and Speech Communication requirements. All other requirements must be met, including minimum hours in residence as stipulated in “Requirements for All Baccalaureate Degrees.”

Students are strongly encouraged to file for a degree audit with the Degree Checking Office as soon as they determine they will seek a second baccalaureate degree.

16. All students must successfully complete the Degree Specific Assessment Program prior to graduation.

17. Students must successfully complete the Writing To Learn requirement. See Writing to Learn Requirement.

18. All international students must submit an acceptable score on either the Test of English as a Foreign Language (TOEFL), or the International English Languages Testing System (IELTS). Minimum score for the TOEFL internet based test is 68 for most undergraduate programs (Communication, Nursing, Psychology and English for Speakers of Other Languages majors require a minimum score of 79). Minimum score for the IELTS is band 6.0 with all section scores of at least band 5.5.

The successful completion of the highest level of the Pittsburg State University Intensive English Program is equivalent to an acceptable score on the TOEFL or IELTS and can be substituted for this requirement.

19. All students planning to graduate are required to apply for graduation in their last semester and pay graduation fees even if the student is not participating in graduation ceremonies.

20. Second, or additional, majors chosen from the same department or discipline area may be awarded if at least fifteen hours are unique to that major in reference to any major or emphasis area being completed.

21. A student pursuing a second major with a first major requiring a minor may complete the requirements of the minor with the completion of the second major. Until the second major is completed, the student will continue to see the required minor notation on his/her official degree audit.

Requirements for Dual Degree

Students who seek to complete two or more degrees simultaneously at Pittsburg State University must meet the following requirements:

1) File for an official degree audit with the Degree Checking Office at the point this decision is made.

2) Meet the General Education requirements for each degree.

3) Verify requirements for a minor based on the student’s choice for the first degree by contacting the Degree Checking Office.

4) Complete all Support Courses for each major.

5) Review #15 under Requirements for all Baccalaureate degrees, for policy relating to awarding of second bachelors applies for dual degrees.

Posthumous Degree Policy

A deceased student may be considered as a candidate for a posthumous degree when nominated by the Dean of the College in which the student was enrolled. The student must have met the minimum academic degree requirements with a majority of the coursework required for the student’s declared major and a GPA which meets the minimum requirement for the major. The Dean’s proposal will be reviewed on a case-by-case basis by the Provost and Registrar or Graduate Dean to determine eligibility.

Writing to Learn Requirement

The General Education writing requirement at Pittsburg State University consists of four courses: two required courses taught by the English and Modern Languages Department (ENGL 101 and ENGL 299) and two courses chosen from the menu of courses designated Writing to Learn (WL).
ENL 101 English Composition is the foundational course in college-level writing. In this course, students will be challenged to develop a higher level of academic literacy through reading and responding to challenging texts and developing written works that explore the complex connections between assigned texts, students' own experience, and the larger world. ENL 101 is designed for incoming students with no prior college writing experience.

ENL 299 Introduction to Research Writing is designed to extend students' academic literacy and reinforce students' skills in writing from sources and doing independent research. Introduction to Research Writing serves as preparation for the writing required by upper-division courses in students' majors and should be taken within the first 60 credit hours.

Writing to Learn courses are writing intensive courses offered in a wide variety of departments and subject areas. In addition to teaching course content, Writing to Learn courses are designed to enhance students' ability to formulate and articulate complex ideas and to convey those ideas in writing to a professional and/or academic audience.

Which course should I take first?

If you have an ACT English subscore of 26 or below and no transferable college writing courses, you should enroll in ENL 101 English Composition.

If you have an ACT English subscore of 27 or above and no transferable college writing courses, you have the option of earning test-out credit for ENL 101 by earning a grade of C or better in your first WL course. To choose that option, enroll in a Writing to Learn course and ENL 101-40. ENL 101-40 is the test-out section of ENL 101. ENL 101-40 does not hold class meetings and includes no required assignments. NOTE: If your ACT English subscore is 28 or above, you have the additional option of taking ENL 190 Honors English Composition instead of ENL 299 after completing at least one Writing to Learn course.

If you are transferring credit for a college writing course (ENL 101) from a community college, a dual-enrollment high school writing course, or another four-year institution, and you have fewer than 55 total transfer credits (for all transferred courses), you should enroll in a Writing to Learn course or ENL 299.

If you are transferring 55 or more credits, including credit for one college writing course (ENL 101), you should enroll in ENL 299. Students transferring 55 or more credits are exempt from the Writing to Learn requirement.

If you are transferring 55 or more credits, including credit for two college writing courses (ENL 101 and ENL 299), you have completed the General Education requirement and are not required to enroll in any writing or Writing to Learn courses.

How can I find out what WL courses are offered?

Writing to Learn course offerings are listed in the schedule of classes for each semester and are designated WL. You can see a list of all WL courses by clicking on the Writing to Learn option at the top of the schedule of classes.

How much writing will my WL courses include?

The amount of writing varies by course. However, most 100- and 200-level WL courses are designed to require at least 7 pages of polished, finished draft (usually in the form of multiple short papers), along with informal writing done in class or in online discussion forums. Most 300- to 500-level WL courses are designed to include at least 12 pages of polished, finished draft along with informal writing.

What if I need help with my writing?

Students are encouraged to use the services provided by the Writing Center. The Writing Center offers face-to-face and online consultations at any stage of the writing process for any type of writing, as well as workshops for students and faculty. The Writing Center is located in 112 Axe Library and online at http://www.pittstate.edu/office/writing_center/. Appointments can be made online (https://pittstate.mywconline.com) or in person. Hours are 10:00 a.m. to 8:00 p.m. Monday through Thursday during Fall and Spring semesters. See the website for summer hours. All service are provided free of charge.

The Writing Center regularly employs graduate and undergraduate students from any major who have demonstrated success with academic or workplace writing. The application for employment is available on our website and should be submitted by e-mail to jzepernick@pittstate.edu or in person at the Writing Center (112 Axe Library).
How can I get more information?

For more information about the WL program or to ask questions about your specific situation, contact Dr. Jessica Jorgenson Borchert at jorgenson@pittstate.edu (620-235-4717) or Dr. Janet Zepernick at jzepernick@pittstate.edu (620-235-6539).

Requirements for the Associate Degree

1. The associate degree requires the successful completion of a minimum of 60 semester hours of credit, with at least the last 15 semester hours earned at Pittsburg State University.

2. The student must earn a grade point average of 2.00 for total hours, for all hours in their area of concentration, and for all hours attempted at Pittsburg State University.

3. The associate degree has the same general academic policies and regulations that exist for baccalaureate degrees at Pittsburg State University.

4. All students planning to graduate are required to apply for graduation in their last semester and pay graduation fees even if the student is not participating in graduation ceremonies. This also applies to students receiving certificates of completion.

General Education Policy

Philosophy

General Education is the study of humans in their global setting. The general education curriculum, therefore, acts as the heart of a university education by developing the capacities that typify the educated person and providing a basis for life-long learning and intellectual, ethical, and aesthetic fulfillment. General education examines the world around us and fosters an understanding of our interactions with the world and our place in the universe. General education celebrates the creative capacities of humankind and helps to preserve and transmit to future generations the values, knowledge, wisdom, and sense of history that are our common heritage.

Goals of General Education

General Education plays a pivotal role at Pittsburg State University. As a key component of undergraduate education, it furthers the University’s mission of “providing programs and services that create opportunities for students to develop intellectually, ethically, aesthetically, emotionally, socially and physically.”

The overall purpose of the General Education program is to provide an environment in which students can acquire the basic knowledge and skills common to educated people in our global society. To do this, the program provides instruction in certain basic disciplines ranging from the arts to science and technology. But it does more. It stimulates critical thinking and encourages decision-making free from prejudice or insularity. It develops the ability to communicate effectively via a variety of means. The program promotes ethical and aesthetic growth. It cultivates an appreciation of different cultures and the rights of others. In short, the foundation provided by General Education helps Pittsburg State University graduates lead satisfying lives and function responsibly in a complex and ever-changing world. And above all, the program provides a basis for future growth.

The General Education program accomplishes its task through a set of courses that meets the following goals and objectives.

Goal #1: Students should be able to communicate effectively.

OBJECTIVES:

1. Apply the principles of effective oral communication either in-group or individual presentations. 

2. Apply the principles of effective writing and other forms of communication.

3. Demonstrate the ability to formulate and solve problems using the tools of mathematics.

Goal #2: Students should be able to think critically.

OBJECTIVES:

1. Demonstrate the ability to distinguish between relevant and irrelevant information in problem solving.

2. Articulate a problem and develop a logical and reasonable response to it using appropriate sources.

3. Apply generalizations, principles, theories, or rules to the real world.

4. Demonstrate the ability to analyze and synthesize information.
Goal #3: Students should be able to function responsibly in the world in which they live.

OBJECTIVES:

Part I: Sciences
1. Demonstrate an understanding of the basic principles, facts, and theories of the biological and physical sciences.
2. Demonstrate an understanding of the basic methods of inquiry, analysis and description in the biological and physical sciences.
3. Demonstrate an understanding of how the natural sciences contribute to the general welfare of civilization.

Part II: Social Studies
1. Demonstrate an understanding of contemporary social issues.
2. Evaluate the impact of scientific, technological, economic, and intellectual change on social and political institutions.
3. Demonstrate an understanding of cultural diversity within the United States and in the world at large.

Part III: Political Studies
1. Demonstrate an understanding of the basic governmental institutions of the United States.
2. Demonstrate an understanding of the principles underlying democracy.
3. Demonstrate an awareness of the impact of public policy on people’s lives.
4. Demonstrate an understanding of the global context in which the political system of the United States operates.

Part IV: Producing and Consuming
1. Demonstrate an understanding of fundamental philosophies, principles, and theories that govern the world of producing and consuming.
2. Demonstrate an understanding of how the world of producing and consuming impacts the individual, society, institutional structures, the economy, and the world.
3. Demonstrate an understanding of how the practices and outcomes of producing and consuming apply to our daily decision-making and to the solution of societal problems.

Part V: Aesthetic Studies
1. Demonstrate an understanding of the creative process, both practical and theoretical, and its relationship to an audience or viewers.
2. Demonstrate the ability to make informed critical responses when exposed to artistic endeavors.
3. Understand the relationship between the arts and society in a multicultural environment.

Part VI: Cultural Studies
1. Demonstrate the ability to recognize the value of diverse cultural, national, and ethnic backgrounds.
2. Demonstrate an awareness of the rights of individuals and groups from diverse cultural, national, and ethnic backgrounds.
3. Demonstrate an understanding of the relationships of gender, race, and class within and across cultures.

Part VII: Health and Well-being
1. Demonstrate an understanding of the relationships between lifestyle and functional health.
2. Demonstrate the ability to incorporate concepts of the human body, mind, and emotions that lead to a well-adjusted individual.

Part VIII: Human Heritage
1. Demonstrate an appreciation for the range and diversity of humankind’s wisdom, values, ideas, beliefs, and reasoning.
2. Demonstrate an understanding of human behavior, the human condition, and human institutions in the context of historical, literary, or philosophical inquiry.
3. Demonstrate recognition of the inter-relatedness of the past, present, and future.
General Education Requirements

**General Education Requirements for All Baccalaureate Degrees**

The general education degree requirements consist of 46-52 credit hours of course work.

All baccalaureate students must successfully pass the general education requirements. Separate general education requirements have been approved to meet degree requirements for some departments. See each department section for specific requirements.

Courses meeting general education requirements may also satisfy major, minor, emphasis or program requirements.

The following courses have been approved by the General Education Committee.

### Basic Skills (12-13 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 190: Honors English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

### Mathematics (select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 110: College Algebra with Review</td>
<td>5</td>
</tr>
<tr>
<td>MATH 113: College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 126: Pre-Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 133: Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>MATH 143: Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

### General Education Electives (34-39 hours)

#### Sciences (8-9 Hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211: Principles of Biology I</td>
<td>4</td>
</tr>
</tbody>
</table>

#### Natural Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>and CHEM 106: Introductory Chemistry Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>and CHEM 107: Chemistry for the Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 108: Chemistry for the Life Sciences Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 160: Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 165: Physical Geology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 166: Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 167: Meteorology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 175: Descriptive Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 176: Astronomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 375: Solar System Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 176: Astronomy Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Physical Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>and CHEM 106: Introductory Chemistry Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>and CHEM 107: Chemistry for the Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 108: Chemistry for the Life Sciences Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 160: Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 165: Physical Geology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 166: Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 167: Meteorology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 175: Descriptive Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 176: Astronomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 375: Solar System Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 176: Astronomy Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

### Social Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>WGS 200: Introduction to Women's Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

### Political Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 101: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 103: Comparative Political Institutions</td>
<td>3</td>
</tr>
</tbody>
</table>

### Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

#### Economy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 191: Issues in Today's Economy</td>
<td>3</td>
</tr>
<tr>
<td>FCS 230: Consumer Education and Personal Finance</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Technology

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 247: Computer Programming for Electronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>GT 190: Introduction to Technological Systems</td>
<td>2</td>
</tr>
<tr>
<td>GT 350: Technology and Civilization</td>
<td>3</td>
</tr>
<tr>
<td>EDTH 330: Technology for the Classroom</td>
<td>3</td>
</tr>
<tr>
<td>TE 551: Integrated Technology for Educators</td>
<td>3</td>
</tr>
<tr>
<td>TM 350: Societal Influence of Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Business

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCCTG 201: Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>CIS 130: Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGT 101: Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 105: Introduction to Entrepreneurship</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Fine Arts and Aesthetic Studies (Select one) (2-3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 155: Printmaking and Paper Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 178: Introduction to the Visual Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 188: The Designed World</td>
<td>3</td>
</tr>
<tr>
<td>ART 217: Crafts I</td>
<td>3</td>
</tr>
<tr>
<td>ART 222: Jewelry Design I</td>
<td>3</td>
</tr>
<tr>
<td>ART 233: Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 244: Ceramics I</td>
<td>3</td>
</tr>
<tr>
<td>ART 266: Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>ART 277: Painting I</td>
<td>3</td>
</tr>
<tr>
<td>ART 288: Introduction to Art History I</td>
<td>3</td>
</tr>
<tr>
<td>ART 289: Introduction to Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ART 311: Art Education</td>
<td>3</td>
</tr>
<tr>
<td>ART 351: Printmaking, Papermaking, Bookarts and the Letterpress</td>
<td>3</td>
</tr>
<tr>
<td>ART 430: Automotive: Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>COMM 105: Performance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>COMM 205: Performance Studies</td>
<td>3</td>
</tr>
<tr>
<td>COMM 295: Theatre History (_____)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 250: Introduction to Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>HHP 151: Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 120: Music Appreciation (_____)</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 121: Introduction to Music Literature</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Cultural Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101: Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>MLL 114: Chinese language and Culture I</td>
<td>3</td>
</tr>
</tbody>
</table>
Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology .......................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ............................................................... 3
FCS 301: Nutrition .................................................................................. 3
HHP 150: Lifetime Fitness Concepts .................................................... 1
NURS 303: Introduction to Public Health .............................................. 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 ......................................................... 3
HIST 102: World History from 1500 ...................................................... 3
HIST 201: American History to 1865 .................................................... 3
HIST 202: American History from 1865 ............................................... 3

Literature
ENGL 113: General Literature ............................................................... 3
ENGL 114: General Literature (Genre) ................................................... 3
ENGL 116: General Literature (Theme) .................................................. 3
ENGL 120: Literature and Film ............................................................... 3
ENGL 315: Mythology ............................................................................ 3
ENGL 320: Literature and Film ............................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy .................................................. 3
PHIL 105: Ethics ...................................................................................... 3
PHIL 112: Biomedical Ethics ................................................................. 3
PHIL 113: Business Ethics .................................................................... 3
PHIL 114: Environmental Ethics .......................................................... 3
PHIL 207: Critical Thinking .................................................................. 3
PHIL 208: Logic ...................................................................................... 3
PHIL 231: World Religions ................................................................. 3

General Education Requirements for Students Preparing to Teach Elementary School

These requirements are for undergraduate students who are preparing to teach elementary school. The requirements as listed will meet general education degree requirements as well as teaching program requirements.

The general education degree requirements consist of 51-54 credit hours of course work.

Courses meeting general education requirements may also satisfy major and other program requirements.

Refer to curriculum guides in the Department of Teaching and Leadership for additional course requirements specific to the major.

See Scholastic Achievement in Common Core general education courses for Elementary Education (K-6) majors.

General Education Components

COMM 207, ENGL 101, ENGL 190 OR ENGL 299, MATH 204, BIOL 113 OR BIOL 111 and BIOL 112, PHYS 171 and PHYS 172 OR CHEM 105 and CHEM 106, SOC 100, POLS 101, GEOG 106 OR GEOG 300, PSYCH 155, FCS 203 OR FCS 301 OR HHP 150 OR NURS 303, HIST 101 OR HIST 102 OR HIST 201 OR HIST 202 are the general education content core curriculum of 33-36 hours. A 2.80 GPA in this content core is required for admission to Teacher Education.

Basic Skills (15 hours)

COMM 207: Speech Communication ................................................... 3
ENGL 101: English Composition ......................................................... 3
ENGL 190: Honors English Composition ............................................. 3
or ENGL 299: Introduction to Research Writing ................................ 3
MATH 204: Mathematics for Education I .......................................... 3
MATH 304: Mathematics for Education II .......................................... 3

Must have a "C" or better in COMM 207, ENGL 101, ENGL 190, ENGL 299, MATH 204.

General Education Electives (36-39 hours)

Sciences (8-9 hours)

Natural Sciences
BIOL 113: Environmental Life Science ............................................... 4
or BIOL 111: General Biology ............................................................ 3
and BIOL 112: General Biology Laboratory ...................................... 2

Physical Sciences (Select one)
PHYS 171: Physical Science ............................................................... 3
and PHYS 172: Physical Science Laboratory .................................... 1
CHEM 105: Introductory Chemistry ............................................... 3
and CHEM 106: Introductory Chemistry Laboratory .................... 1

Social Studies** (3 hours)
SOC 100: Introduction to Sociology .................................................. 3
**One of the two courses counts for the 33-36 hours General Education Core GPA of 2.80.

**General Education Requirements for Students Preparing to Teach Secondary School**

Undergraduate students preparing to teach secondary or K-12 school must meet University general education requirements and earn a minimum grade of “C” in ENGL 101 and 299, COMM 207, and three credit hours of mathematics.

The general education degree requirements consist of 46-52 credit hours of course work.

Courses meeting general education requirements may also satisfy major, minor, emphasis or program requirements.

Refer to curriculum guides in the department of your major for additional course requirements.

**General Education Components**

### Basic Skills (12-13 hours)

- COMM 207: Speech Communication .......................................................... 3
- ENGL 101: English Composition ............................................................. 3
- ENGL 190: Honors English Composition .................................................. 3
- ENGL 190: Introduction to Research Writing .............................................. 3
- MATH 110: College Algebra with Review .................................................. 5
- MATH 113: College Algebra ......................................................................... 3
- MATH 126: Pre-Calculus ............................................................................. 4
- MATH 133: Quantitative Reasoning ............................................................ 3
- MATH 143: Elementary Statistics ................................................................. 3

Must have a “C” or better in each of these Basic Skills courses.

### General Education Electives (34-39 hours)

### Sciences (8-9 hours)

- BIOL 111: General Biology ................................................................. 3
- BIOL 112: General Biology Laboratory ....................................................... 2
- BIOL 113: Environmental Life Science ....................................................... 4
- BIOL 211: Principles of Biology ................................................................. 1
- CHEM 105: Introductory Chemistry .......................................................... 3
- CHEM 106: Introductory Chemistry Laboratory .......................................... 1
- CHEM 107: Chemistry for the Life Sciences ............................................. 3
- CHEM 108: Chemistry for the Life Sciences Laboratory ........................... 1
- PHYS 100: Physical Geology ......................................................................... 3
- PHYS 165: Physical Geology Laboratory .................................................... 1
- PHYS 166: Meteorology ............................................................................... 3
- PHYS 167: Meteorology Laboratory ............................................................ 1
PHYS 171: Physical Science ................................................. 3
and PHYS 172: Physical Science Laboratory ..................... 1
PHYS 175: Descriptive Astronomy .................................... 3
and PHYS 176: Astronomy Laboratory ............................. 1
PHYS 375: Solar System Astronomy .................................. 3
and PHYS 176: Astronomy Laboratory ............................. 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ................................. 3
WGS 200: Introduction to Women's Studies .................... 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ..................................................... 3
POLS 103: Comparative Political Institutions .................. 3

Producing and Consuming (Select one from
two of the following three categories) (5-6 hours)

Economy
ECON 191: Issues in Today's Economy ......................... 3
FCS 230: Consumer Education and Personal Finance .... 3

Technology
EET 247: Computer Programming for Electronic Systems 3
GT 190: Introduction to Technological Systems ............ 2
GT 350: Technology and Civilization ......................... 3
EDTH 330: Technology for the Classroom .................. 3
TE 551: Integrated Technology for Educators .......... 3
TM 350: Societal Influence of Technology ................ 3

Business
ACCTG 201: Financial Accounting ......................... 3
CIS 130: Computer Information Systems ............... 3
MGT 101: Introduction to Business ...................... 3
MGT 105: Introduction to Entrepreneurship ........ 3

Fine Arts and Aesthetic Studies (select one) (2-3 hours)
ART 155: Printmaking and Paper Arts ..................... 3
ART 178: Introduction to the Visual Arts ................... 3
ART 188: The Designed World .................................. 3
ART 217: Crafts I ......................................................... 3
ART 222: Jewelry Design I .......................................... 3
ART 223: Drawing I .................................................... 3
ART 244: Ceramics I ................................................... 3
ART 266: Sculpture I .................................................. 3
ART 277: Painting I .................................................... 3
ART 288: Introduction to Art History I .................. 3
ART 289: Introduction to Art History II .................. 3
ART 311: Art Education ............................................ 3
ART 351: Printmaking, Papermaking, Bookarts and the
Letterpress ......................................................... 3
ART 430: Automotive: Art and Design .................. 3
COMM 105: Performance Appreciation .................. 3
COMM 205: Performance Studies ......................... 3
COMM 295: Theatre History (____) ......................... 3
ENGL 250: Introduction to Creative Writing ........ 3
HHP 151: Dance Appreciation ................................ 3

MUSIC 120: Music Appreciation (____) ................... 3
MUSIC 121: Introduction to Music Literature ............ 2

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology .......... 3
MLL 114: Chinese language and Culture I ............... 3
MLL 124: French Language and Culture I .............. 3
MLL 154: Spanish Language and Culture I ............. 3
MLL 184: Russian Language and Culture I ............ 3
MLL 194: Korean Language and Culture I ............ 3
GEOG 106: World Regional Geography .................. 3
GEOG 300: Elements of Geography ...................... 3
GEOG 304: Human Geography .......................... 3
WGS 399: Global Women's Issues ......................... 3

Health and Well Being (4-6 hours)
Psychological
PSYCH 155: General Psychology .......................... 3

Physical (Select one)
FCS 203: Nutrition and Health .................................. 3
FCS 301: Nutrition .................................................. 3
HHP 150: Lifetime Fitness Concepts ..................... 1
NURS 303: Introduction to Public Health ........... 3

Human Heritage (Select one from two of
the following three categories) (6 hours)

History
HIST 101: World History to 1500 .......................... 3
HIST 102: World History from 1500 ...................... 3
HIST 201: American History to 1865 .................... 3
HIST 202: American History from 1865 ............ 3

Literature
ENGL 113: General Literature .................................. 3
ENGL 114: General Literature (Genre) ................. 3
ENGL 116: General Literature (Theme) ............... 3
ENGL 120: Literature and Film .................................. 3
ENGL 315: Mythology .............................................. 3
ENGL 320: Literature and Film .................................. 3

Philosophy
PHIL 103: Introduction to Philosophy ...................... 3
PHIL 105: Ethics ..................................................... 3
PHIL 112: Biomedical Ethics .................................. 3
PHIL 113: Business Ethics .................................... 3
PHIL 114: Environmental Ethics ......................... 3
PHIL 207: Critical Thinking .................................... 3
PHIL 208: Logic ..................................................... 3
PHIL 231: World Religions ..................................... 3

57
Interdisciplinary and Pre-Professional Programs

Interdisciplinary

Bachelor of Integrated Studies

Bachelor of Integrated Studies

The Bachelor of Integrated Studies degree provides a means for the creation of interdisciplinary programs. The degrees are aimed at providing an education that is a basis for life-long learning while equipping students to work in areas that are underserved by established disciplines.

Currently there are emphases in

- Analytics
- Fraud Examination
- Liberal Studies
- Sustainability, Society, and Resource Management

Bachelor of Integrated Studies with an Emphasis in Analytics

Director: Bobby Winters
Telephone: 620-235-4079
Office: 311b Grubbs Hall
e-mail: bwinters@pittstate.edu

The Analytics emphasis in the Bachelor of Integrated Studies was designed to bridge students with mathematical talent into applications in a business setting. Those completing the emphasis will be equipped to work in a variety of quantitative oriented areas in the world of business.

Analytics Program Requirements

Mathematics (19 hours)

- MATH 150 Calculus (satisfied by general education) (0 hours)

Mathematics (19 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150: Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 155: Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 212: Matrix Algebra</td>
<td>2</td>
</tr>
<tr>
<td>MATH 253: Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 543: Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 656: Mathematical Modeling</td>
<td>3</td>
</tr>
<tr>
<td>MATH 658: Financial Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

Computer Science (6 hours)

- CIS 230 Visual Basic Programming I (satisfied by general education) (0 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 240: C ++ Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIS 615: Database Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Business and Marketing (18 hours)

- ECON 200 Principles of Microeconomics (satisfied by general education) (0 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 201: Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCTG 202: Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>MGT 310: Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 330: Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 510: Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 520: Marketing Research</td>
<td>3</td>
</tr>
</tbody>
</table>

Other (3 hours)

- PHIL 208 Logic (satisfied by general education) (0 hours)
- COMM 207 Speech Communication (satisfied by general education) (0 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 301: Technical/Professional Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

- Total Electives* (22-29 hours)
- Total Minimum Requirements (124 hours)

*Electives-Recommended but not required

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 105: Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 726: Introduction to Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201: Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>TM 679: Presentation Skills</td>
<td>3</td>
</tr>
</tbody>
</table>

Below are the standard general education requirements which have been amended so as to take into account those general education courses which have been included in the program.

Basic Skills (14 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 190: Honors English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 150: Calculus I</td>
<td>5</td>
</tr>
</tbody>
</table>

General Education Electives (35-39 hours)

Sciences (8-9 Hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211: Principles of Biology I</td>
<td>4</td>
</tr>
</tbody>
</table>

Natural Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211: Principles of Biology I</td>
<td>4</td>
</tr>
</tbody>
</table>
Physical Sciences (Select one)
CHEM 105: Introductory Chemistry .............................................. 3
and CHEM 106: Introductory Chemistry Laboratory ........................ 1
CHEM 107: Chemistry for the Life Sciences .................................. 3
and CHEM 108: Chemistry for the Life Sciences Laboratory .......... 1
PHYS 160: Physical Geology .......................................................... 3
and PHYS 165: Physical Geology Laboratory ................................. 1
PHYS 166: Meteorology ................................................................. 3
and PHYS 167: Meteorology Laboratory ......................................... 1
PHYS 171: Physical Science ............................................................ 3
and PHYS 172: Physical Science Laboratory ................................... 1
PHYS 175: Descriptive Astronomy ............................................... 3
and PHYS 176: Astronomy Laboratory ......................................... 1
PHYS 375: Solar System Astronomy ............................................. 3
and PHYS 176: Astronomy Laboratory ......................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology .............................................. 3
WGS 200: Introduction to Women's Studies ................................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ................................................................. 3
POLS 103: Comparative Political Institutions ............................... 3

Producing and Consuming (6 hours)
ECON 200: Principles of Microeconomics ................................... 3
CIS 230: Visual Basic Programming .............................................. 3

Fine Arts and Aesthetic Studies (Select one) (2-3 hours)
ART 155: Printmaking and Paper Arts ......................................... 3
ART 178: Introduction to the Visual Arts ...................................... 3
ART 188: The Designed World ..................................................... 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I ........................................................... 3
ART 233: Drawing I ............................................................... 3
ART 244: Ceramics I ............................................................... 3
ART 266: Sculpture I ............................................................... 3
ART 277: Painting I ............................................................... 3
ART 288: Introduction to Art History I ...................................... 3
ART 289: Introduction to Art History II ..................................... 3
ART 311: Art Education .......................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress 3
ART 430: Automotive: Art and Design ...................................... 3
COMM 105: Performance Appreciation ..................................... 3
COMM 205: Performance Studies ............................................. 3
COMM 295: Theatre History (_____) ........................................... 3
ENGL 250: Introduction to Creative Writing ............................... 3
HHP 151: Dance Appreciation .................................................. 3
MUSIC 120: Music Appreciation (_____) ..................................... 3
MUSIC 121: Introduction to Music Literature ............................. 2

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ...................... 3
MLL 114: Chinese Language and Culture I .................................. 3
MLL 124: French Language and Culture I ................................. 3
MLL 154: Spanish Language and Culture I ............................... 3
MLL 184: Russian Language and Culture I ............................... 3
MLL 194: Korean Language and Culture I ............................... 3
GEOG 106: World Regional Geography .................................... 3
GEOG 300: Elements of Geography ........................................... 3
GEOG 304: Human Geography ................................................. 3
WGS 399: Global Women's Issues .............................................. 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ............................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ................................................... 3
FCS 301: Nutrition ................................................................... 3
HHP 150: Lifetime Fitness Concepts ......................................... 3
NURS 303: Introduction to Public Health .................................. 3

Human Heritage (Select PHIL 208 and one from either of the other two categories) (6 hours)

History
HIST 101: World History to 1500 ................................................ 3
HIST 102: World History from 1500 ......................................... 3
HIST 201: American History to 1865 ......................................... 3
HIST 202: American History from 1865 .................................. 3

Literature
ENGL 113: General Literature ...................................................... 3
ENGL 114: General Literature (Genre) ....................................... 3
ENGL 116: General Literature (Theme) ..................................... 3
ENGL 120: Literature and Film ................................................... 3
ENGL 315: Mythology .............................................................. 3
ENGL 320: Literature and Film ................................................... 3

Philosophy
PHIL 208: Logic ................................................................ 3

Total hours required for General Education (49-53 hours)

Bachelor of Integrated Studies with an Emphasis in Fraud Examination

The departments of Accounting and Computer Information Systems and History, Philosophy and Social Sciences offer this integrated program that prepares students for careers in fraud examination. Based on advice from the Internal Revenue Service, students who elect this degree will be eligible to be hired as IRS special agents as well as being qualified to serve in other public agencies and the private sector.

The 60-62 hour interdisciplinary major (no minor required) will have required Accounting and Computer Information Systems and Business classes totaling 27
hours (students may NOT take more than 30 hours in the College of Business, excluding introductory general education classes); 6 hours of skills classes; 18 hours of Justice Studies classes; and 9-11 hours of electives. Several of the classes can be used to meet General Education requirements. Using their elective hours, students may choose to have a concentration in one of the following areas (students do not have to elect a concentration):

**Areas of Concentration:**

- Computer Forensics
- Advanced Accounting
- Law Enforcement
- Business Finance
- Forensic Psychology
- Mapping and Geographic Information Systems

**Fraud Examination Curriculum:**

**Accounting Classes (15 hours)**

- ACCTG 201: Financial Accounting ........................................ 3
- ACCTG 202: Managerial Accounting ...................................... 3
- ACCTG 411: Individual Taxation .......................................... 3
- ACCTG 422: Internal Auditing .............................................. 3
- ACCTG 625: Fraud Examination .......................................... 3

- ACCTG 201 Financial Accounting satisfied by general education.

**Business Classes (12 hours)**

- ECON 200: Principles of Microeconomics ................................ 3
- FIN 326: Business Finance .................................................. 3
- CIS 130: Computer Information Systems ................................ 3
- CIS 420: Management Information Systems ......................... 3

- ECON 200 Principles of Microeconomics and CIS 130
- Computer Information Systems are satisfied by general education.

**Justice Studies (18 hours)**

- JUST 223: Basic Interviewing and Counseling Skills ............... 3
- JUST 500: Criminal Law and Society ..................................... 3
- JUST 501: Criminal Procedure ............................................ 3
- JUST 528: White Collar Crime ............................................ 3
- JUST 695: Senior Seminar in Justice Issues .............................. 3

**Skill Classes (6 hours)**

- ENGL 301: Technical/Professional Writing ............................. 3

**An ethics class chosen from:**

- PHIL 105: Ethics ..................................................................... 3
- PHIL 113: Business Ethics .................................................... 3
- JUST 322: Ethics and Justice Policy ...................................... 3

**Electives (9-11 hours)**

- ACCTG 315: Intermediate Managerial Accounting .................. 3
- ACCTG 585: Accounting Law .................................................. 3
- ACCTG 614: Internship in Accounting ..................................... 3-6
- FIN 621: Investments I ............................................................ 3
- FIN 623: Financial Institutions and Markets ............................ 3
- FIN 624: Investments II ........................................................... 3
- MGT 330: Management and Organizational Behavior ............ 3
- MGMKT 444: Legal and Social Environment of Business .......... 3
- CIS 670: Information Assurance and Computer Security I ....... 3
- CIS 690: Topics in Computer Science (____) ......................... 1-3
- JUST 328: Police and Justice .................................................. 3
- JUST 475: Community Policing ............................................. 3
- JUST 502: Criminal Profiling ................................................. 3
- JUST 518: Serial Killers ......................................................... 3
- JUST 671: Internship ............................................................... 3
- SOC 547: Criminology ............................................................. 3
- SOC 549: Social Deviance ...................................................... 3
- PSYCH 571: Abnormal Psychology ........................................ 3
- PSYCH 773: Criminal Psychopathology ................................. 3
- GEOG 303: Geographic Information Systems ......................... 4
- GEOG 305: Cartography .......................................................... 3
- GEOG 403: Geographic Information Systems II ..................... 4

**Computer Forensics (minimum of 6 hours)**

- CIS 670: Information Assurance and Computer Security I ....... 3
- CIS 690: Topics in Computer Science (____) ......................... 1-3

**Prerequisites for CIS 670 Information Assurance and Computer Security I are CIS 350 Introduction to System Administration or CIS 470 Computer Networking.**

- CIS 690 Topics in Computer Science (topic should be Computer Forensics).
Advanced Accounting (minimum of 6 hours)
ACCTG 315: Intermediate Managerial Accounting ....................................... 3
ACCTG 585: Accounting Law ..................................................................... 3
ACCTG 614: Internship in Accounting ...................................................... 3-6

Prerequisite for ACCTG 585 Accounting Law is MGMKT 444 Legal and Social Environment of Business.

ACCTG 614 Internship in Accounting must be Fraud related.

Law Enforcement (minimum of 6 hours)
JUST or SOC classes from the above elective list.

Business Finance (minimum of 6 hours)
FIN 621: Investments I ............................................................................. 3
FIN 623: Financial Institutions and Markets .............................................. 3
FIN 624: Investments II ........................................................................... 3

Prerequisite for FIN 624 Investments II is FIN 621 Investments I.

Forensic psychology (minimum of 6 hours)
PSYCH 571: Abnormal Psychology .......................................................... 3
PSYCH 773: Criminal Psychopathology ..................................................... 3

PSYCH 773 Criminal Psychopathology is only offered in the summer.

Mapping and Geographic Information Systems (minimum of hours)
GEOG 303: Geographic Information Systems I ....................................... 4
GEOG 305: Cartography ........................................................................... 3
GEOG 403: Geographic Information Systems II ...................................... 4

Total hours for Bachelor of Integrated Studies with an Emphasis in Fraud Examination (60-62 hours)

Bachelor of Integrated Studies with an Emphasis in Liberal Studies

General Education Degree Requirements

Basic Skills (12-13 hours)
COMM 207: Speech Communication ......................................................... 3
ENGL 101: English Composition ................................................................ 3
ENGL 190: Honors English Composition ................................................... 3
or ENGL 299: Introduction to Research Writing ........................................ 3

Mathematics (select one)
MATH 110: College Algebra with Review ............................................... 5
MATH 113: College Algebra ..................................................................... 3
MATH 126: Pre-Calculus ........................................................................ 4
MATH 133: Quantitative Reasoning ......................................................... 3
MATH 143: Elementary Statistics .............................................................. 3

General Education Electives (34-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)
BIOL 111: General Biology ..................................................................... 3
and BIOL 112: General Biology Laboratory ............................................... 2
BIOL 113: Environmental Life Science .................................................... 4
BIOL 211: Principles of Biology I .............................................................. 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry .......................................................... 3
and CHEM 106: Introductory Chemistry Laboratory .............................. 1
CHEM 107: Chemistry for the Life Sciences ............................................ 3
and CHEM 108: Chemistry for the Life Sciences Laboratory .................. 1
PHYS 160: Physical Geology .................................................................... 3
and PHYS 165: Physical Geology Laboratory ........................................... 1
PHYS 166: Meteorology .......................................................................... 3
and PHYS 167: Meteorology Laboratory ................................................... 3
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and PHYS 172: Physical Science Laboratory .......................................... 1
PHYS 175: Descriptive Astronomy ........................................................... 3
and PHYS 176: Astronomy Laboratory .................................................... 1
PHYS 375: Solar System Astronomy .......................................................... 3
and PHYS 176: Astronomy Laboratory .................................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology .......................................................... 3
WGS 200: Introduction to Women's Studies .............................................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ............................................................................ 3
POLS 103: Comparative Political Institutions ........................................... 3

Producing and Consuming (Select one for two of the following three categories) (5-6 hours)

Economy
ECON 191: Issues in Today's Economy .................................................... 3
FCS 230: Consumer Education and Personal Finance ............................. 3

Technology
EET 247: Computer Programming for Electronic Systems ........................ 3
GT 190: Introduction to Technological Systems ........................................ 2
GT 350: Technology and Civilization ....................................................... 3
EDTH 330: Technology for the Classroom .............................................. 3
TE 551: Integrated Technology for Educators .......................................... 3
TM 350: Societal Influence of Technology ................................................ 3
### Business
- ACCTG 201: Financial Accounting ............................................. 3
- CIS 130: Computer Information Systems .................................... 3
- MGT 101: Introduction to Business ............................................... 3
- MGT 105: Introduction to Entrepreneurship ................................. 3

### Fine Arts and Aesthetic Studies (Select one) (2-3 hours)
- ART 155: Printmaking and Paper Arts ........................................ 3
- ART 178: Introduction to the Visual Arts ...................................... 3
- ART 188: The Designed World ................................................... 3
- ART 217: Crafts I .................................................................. 3
- ART 222: Jewelry Design I ......................................................... 3
- ART 233: Drawing I .................................................................. 3
- ART 244: Ceramics I ................................................................. 3
- ART 266: Sculpture I ................................................................. 3
- ART 277: Painting I .................................................................. 3
- ART 288: Introduction to Art History I ......................................... 3
- ART 289: Introduction to Art History II ....................................... 3
- ART 311: Art Education ............................................................. 3
- ART 351: Printmaking, Papermaking, Bookarts and the Letterpress .................................................. 3
- ART 430: Automotive: Art and Design ....................................... 3
- COMM 105: Performance Appreciation ..................................... 3
- COMM 205: Performance Studies .............................................. 3
- COMM 295: Theatre History (___) ............................................. 3
- ENGL 250: Introduction to Creative Writing ............................ 3
- HHP 151: Dance Appreciation ................................................ 3
- MUSIC 120: Music Appreciation (___) ...................................... 3
- MUSIC 121: Introduction to Music Literature ......................... 2

### Cultural Studies (Select one) (3 hours)
- ANTH 101: Introduction to Cultural Anthropology .................. 3
- MLL 114: Chinese Language and Culture I ............................. 3
- MLL 124: French Language and Culture I .............................. 3
- MLL 154: Spanish Language and Culture I .............................. 3
- MLL 184: Russian Language and Culture I .............................. 3
- MLL 194: Korean Language and Culture I .............................. 3
- GEOG 106: World Regional Geography ................................. 3
- GEOG 300: Elements of Geography ................................. 3
- GEOG 304: Human Geography .............................................. 3
- WGS 399: Global Women's Issues ...................................... 3

### Health and Well Being (4-6 hours)

#### Psychological
- PSYCH 155: General Psychology ............................................ 3

#### Physical (Select one)
- FCS 203: Nutrition and Health .............................................. 3
- FCS 301: Nutrition ................................................................. 3
- HHP 150: Lifetime Fitness Concepts ...................................... 1
- NURS 303: Introduction to Public Health ............................... 3

### Human Heritage (Select one from two of the following three categories) (6 hours)

### History
- HIST 101: World History to 1500 ............................................ 3
- HIST 102: World History from 1500 ....................................... 3
- HIST 201: American History to 1865 ..................................... 3
- HIST 202: American History from 1865 ............................... 3

### Literature
- ENGL 113: General Literature ............................................... 3
- ENGL 114: General Literature (Genre) .................................... 3
- ENGL 116: General Literature (Theme) .................................... 3
- ENGL 120: Literature and Film .............................................. 3
- ENGL 315: Mythology ............................................................ 3
- ENGL 320: Literature and Film .............................................. 3

### Philosophy
- PHIL 103: Introduction to Philosophy .................................... 3
- PHIL 105: Ethics .................................................................... 3
- PHIL 112: Biomedical Ethics ................................................ 3
- PHIL 113: Business Ethics .................................................... 3
- PHIL 114: Environmental Ethics ............................................ 3
- PHIL 207: Critical Thinking .................................................. 3
- PHIL 208: Logic .................................................................... 3
- PHIL 231: World Religions .................................................... 3

### Requirements

The student in this emphasis will work with a faculty advisor to create a plan of study that will include at least 45 hours. These 45 hours will be composed of three parts of at least 15 hours each, with one part being chosen from three different departments; none of these may be counted as general education. This plan of study must receive the approval of the Director of Integrated Studies. Upon completion of the general education component and the 45 hours within the emphasis, the remaining hours to degree completion can be elective hours chosen through consultation with the faculty advisor.

Students will be required to have at least six hours in a single foreign language, with further coursework in the language encouraged.

Students must have a 2.75 GPA and 3 hours of college credit to be admitted to this emphasis and must maintain 2.75 GPA to remain eligible.

A minor is allowed but not required.
Bachelor of Integrated Studies with an Emphasis in Sustainability, Society and Resource Management

The primary focus of this curriculum is to provide an opportunity for students to pursue an interdisciplinary program that will prepare them to participate in programs dealing with resource management within the framework of sustainability.

General Education Degree Requirements

Basic Skills (12-13 hours)
COMM 207: Speech Communication .............................................. 3
ENGL 101: English Composition .................................................. 3
ENGL 190: Honors English Composition ....................................... 3
or ENGL 299: Introduction to Research Writing ............................ 3

Mathematics (select one)
MATH 110: College Algebra with Review .................................... 5
MATH 113: College Algebra ......................................................... 3
MATH 126: Pre-Calculus ............................................................. 4
MATH 133: Quantitative Reasoning ............................................. 3
MATH 143: Elementary Statistics ................................................ 3

General Education Electives (34-39 hours)

Sciences (8-9 hours)

Natural Sciences (select one)
BIOL 111: General Biology ......................................................... 3
and BIOL 112: General Biology Laboratory ................................. 2
BIOL 113: Environmental Life Science ...................................... 4
BIOL 211: Principles of Biology I ................................................. 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry ............................................ 3
and CHEM 106: Introductory Chemistry Laboratory .................. 1
CHEM 107: Chemistry for the Life Sciences ............................... 3
and CHEM 108: Chemistry for the Life Sciences Laboratory ...... 1
PHYS 160: Physical Geology ....................................................... 3
and PHYS 165: Physical Geology Laboratory .............................. 1
PHYS 166: Meteorology ............................................................ 3
and PHYS 167: Meteorology Laboratory .................................... 1
PHYS 171: Physical Science ....................................................... 3
and PHYS 172: Physical Science Laboratory .............................. 1
PHYS 175: Descriptive Astronomy ............................................. 3
and PHYS 176: Astronomy Laboratory ...................................... 1
PHYS 275: Solar System Astronomy ........................................... 3
and PHYS 176: Astronomy Laboratory ...................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ...................................... 3
WGS 200: Introduction to Women’s Studies ............................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ......................................................... 3
POLS 103: Comparative Political Institutions ............................... 3

Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

Economy
ECON 191: Issues in Today’s Economy ................................. 3
FCS 230: Consumer Education and Personal Finance ............ 3

Technology
EET 247: Computer Programming for Electronic Systems ........ 3
GT 190: Introduction to Technological Systems ....................... 2
GT 350: Technology and Civilization .................................... 3
EDTH 330: Technology for the Classroom .............................. 3
TE 551: Integrated Technology for Educators ........................... 3
TM 350: Societal Influence of Technology .............................. 3

Business
ACCTG 201: Financial Accounting ........................................ 3
CIS 130: Computer Information Systems ............................. 3
MGT 101: Introduction to Business ....................................... 3
MGT 105: Introduction to Entrepreneurship ............................ 3

Fine Arts and Aesthetic Studies (Select one) (2-3 hour)
ART 155: Printmaking and Paper Arts ................................... 3
ART 178: Introduction to the Visual Arts .................................. 3
ART 188: The Designed World ............................................... 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I .................................................... 3
ART 233: Drawing I .............................................................. 3
ART 244: Ceramics I ............................................................ 3
ART 266: Sculpture I .............................................................. 3
ART 277: Painting I ............................................................... 3
ART 288: Introduction to Art History I .................................. 3
ART 289: Introduction to Art History II .................................. 3
ART 311: Art Education ......................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress 3
ART 430: Automotive: Art and Design .................................. 3
COMM 105: Performance Appreciation ................................. 3
COMM 105: Performance Appreciation ................................. 3
COMM 205: Performance Studies ......................................... 3
COMM 295: Theatre History (____) ......................................... 3
ENGL 250: Introduction to Creative Writing ......................... 3
HHP 151: Dance Appreciation ............................................. 3
MUSIC 120: Music Appreciation (____) ............................... 3
MUSIC 121: Introduction to Music Literature ........................ 2

Cultural Studies (Select one) (3 hours)
MLL 114: Chinese Language and Culture I .............................. 3
MLL 124: French Language and Culture I .............................. 3
MLL 154: Spanish Language and Culture I .............................. 3
MLL 184: Russian Language and Culture I .............................. 3
MLL 194: Korean Language and Culture I .............................. 3
Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ...................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ....................................................... 3
FCS 301: Nutrition ........................................................................ 3
HHP 150: Lifetime Fitness Concepts ............................................. 1
NURS 303: Introduction to Public Health ...................................... 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .................................................... 3
HIST 102: World History from 1500 ............................................... 3
HIST 201: American History to 1865 ............................................. 3
HIST 202: American History from 1865 ....................................... 3

Literature
ENGL 113: General Literature ...................................................... 3
ENGL 114: General Literature (Genre) ........................................... 3
ENGL 116: General Literature (Theme) ......................................... 3
ENGL 120: Literature and Film ..................................................... 3
ENGL 315: Mythology .................................................................. 3
ENGL 320: Literature and Film ..................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy ......................................... 3
PHIL 105: Ethics ........................................................................ 3
PHIL 112: Biomedical Ethics ......................................................... 3
PHIL 113: Business Ethics ............................................................ 3
PHIL 114: Environmental Ethics ................................................... 3
PHIL 207: Critical Thinking .......................................................... 3
PHIL 208: Logic ........................................................................... 3
PHIL 231: World Religions ............................................................. 3

Total hours required for General Education (46-52 hours)

Sustainability, Society and Resource Management Program Requirements

Biology - Select 5 courses
BIOL 304: Soil Ecology ................................................................. 3
BIOL 313: Principles of Conservation ........................................... 3
BIOL 330: Principles of Ecology .................................................. 3
BIOL 537: Regional Natural History ............................................. 3
BIOL 602: Topics in Biology (___) ............................................... 1-3
BIOL 612: Internship in Biology .................................................. 1-3
BIOL 615: Environmental Protection ......................................... 3
BIOL 617: Environmental Health ............................................... 3

- Total Biology (15 hours)

BIOL 602 Topic is Conflict Resolution in Natural Resource Management.

Communication - Select 5 courses
COMM 277: Introduction to Public Relations .................................. 3
COMM 450: Small Group Communication ..................................... 3
COMM 530: Interpersonal Communication .................................... 3
COMM 601: Intercultural Communication ..................................... 3
COMM 690: Internship in Applied Communication (___) ............... 1-3
COMM 702: Mass Media Management ........................................ 3
COMM 726: Media Analysis and Criticism (___) ............................ 3
COMM 755: Organizational Communication ............................... 3
COMM 785: International Communication .................................... 3
COMM 795: Issues in Communication (___) .................................. 3

- Total Communication (15 hours)

COMM 795 Issues in Communications must be taken as Risk/Crisis Communication

Social Science Requirements

Environmental Geography - Select 3 courses
GEOG 302: Introduction to Environmental Geography ................. 3
GEOG 303: Geographic Information Systems I ............................. 4
GEOG 401: Urban and Regional Planning ..................................... 3
GEOG 502: Global Environmental Change ................................... 3
GEOG 602: Service Learning in Sustainability Laboratory .............. 3

Legal/Ethical - Select 2 courses
PHIL 114: Environmental Ethics ................................................ 3
POLS 512: Environmental Politics .............................................. 3
POLS 609: Administrative Law ..................................................... 3
SOC 676: Global Sociology ......................................................... 3

- Total Social Sciences (15-16 hours)

Other Required Courses
SSRM 200: Introduction to Sustainability, Society and Resource Management ........................................ 1
ECON 201: Principles of Macroeconomics ................................... 3
ENGL 301: Technical/Professional Writing .................................... 3
SSRM 600: Senior Seminar in Sustainability, Society and Resource Management ............................... 3

- Total Other Required Courses (10 hours)
- Total Major Hours (BIOL + COMM + SSC + Other) (55-56 hours)
Free Electives

Can be courses specific to a student focus, such as the ones recommended below, additional BIOL/COMM/SOSC1 courses not used for major requirements, or courses recommended in consultation with advisor.

INT 690: Study Abroad (___) ................................................................. 3-6
TM 679: Presentation Skills ................................................................. 3

• XXX Service Learning (Dept Specific) (3 hours)
• Total Electives (14-18 hours)
• Total Minimum Requirements for Bachelor of Integrated Studies with an Emphasis in Sustainability, Society and Resource Management (124 hours)

Minor in Film and Media Studies (21 hours)

Core (3 courses - 9 hours)
COMM 200: Introduction to Mass Communication ................................. 3

Two of the following*:
ENGL 120: Literature and Film ............................................................... 3
ENGL 305: Introduction to Film Studies ................................................ 3
ENGL 320: Literature and Film ............................................................... 3
ENGL 558: Topics in Film and Media Studies ....................................... 3

*These courses cannot be counted as electives.

Electives (4 courses - 12 hours in at least two departments)
ART 178: Introduction to the Visual Arts ............................................... 3
ART 688: History of Modern Art ............................................................ 3
COMM 274: Introduction to Audio and Video Production ........................ 3
COMM 374: Broadcast Writing ............................................................... 3
COMM 480: Exploration in Communication (___) .................................. 3
COMM 590: Sports, Media and Society .................................................. 3
COMM 626: Law of Mass Communication ........................................... 3
COMM 715: Documentary Filmmaking .................................................. 3
COMM 726: Media Analysis and Criticism (___) ...................................... 3
ENGL 120: Literature and Film ............................................................... 3
ENGL 305: Introduction to Film Studies ................................................ 3
ENGL 320: Literature and Film ............................................................... 3
ENGL 558: Topics in Film and Media Studies ....................................... 3
POLS 412: Law in Film and Literature ................................................... 3

Other courses approved by the Director of the Film and Media Studies Minor (3-12 hours)

Students are not allowed to take more than two lower-level elective courses to fulfill the minor.

Communication majors should substitute an appropriate elective in consultation with the Minor’s director for COMM 200 Introduction to Mass Communication.

COMM 274 Introduction to Audio and Video Production is a pre-requisite of COMM 374 Broadcast Writing.

COMM 480 Exploration in Communication (___) should be taken when an appropriate film or media studies topic is offered.

COMM 274 Introduction to Audio and Video Production and COMM 374 Broadcast Writing are pre-requisites of COMM 715 Documentary Filmmaking.

ENGL 305 Introduction to Film Studies should be taken if not taken as part of the core.

ENGL 558 Topics in Film Studies may be repeated if topic varies.

Minor Innovation Engineering

The minor in Innovation Engineering is a collaborative effort of the College of Technology and the Kelce College of Business and is open to any major on campus. The minor will teach students the techniques and systems used to create, connect, and commercialize unique ideas. The primary purpose is to provide students with the tools necessary to identify potential new ventures, create marketable concepts, connect with potential target markets, and to follow through and commercialize the product, service or activity. A total of 18 hours are required for the minor.

IE 580: Create: Innovation Engineering I .............................................. 3
IE 590: Communicate: Innovation Engineering II .................................. 3
IE 670: Commercialize: Innovation Engineering III ............................. 3
IE 680: Experience: Innovation Engineering Case Study ........................ 3
IE 685: Innovation Engineering Internship .......................................... 3
IE 695: Innovation Engineering Independent Study ................................ 3

Minor Interdisciplinary Gerontology

The Interdisciplinary Gerontology Minor will provide students an introduction to the range of experiences and the service needs of older adults. Specifically, students will learn how aging affects older adults’ family
relations, role in society (as grandparents, parents, employees, and friends), emotional experiences, cognitive abilities, health functioning, and recreational activities. Additionally, through use of an interdisciplinary approach, students will develop an appreciation of the range of professionals whose activities influence and are influenced by older adults. The Interdisciplinary Gerontology Minor is particularly relevant to students across disciplines as it is expected that the population of people 65 years of age and older will continue to outstrip the number of professionals receiving training experiences preparing them for meeting the needs of older adults.

The Interdisciplinary Gerontology Minor requires 21 credit hours, which includes the three credit hour course GER 155 Interdisciplinary Introduction to Gerontology, which will provide a survey of the aging process from an interdisciplinary perspective. The Interdisciplinary Gerontology Minor compliments a variety of majors at Pittsburg State University, including, but not limited to: Health, Human Performance, and Recreation; Family and Consumer Sciences; Sociology; Social Work; Psychology and Counseling; Political Science; Nursing; Biology (Pre-Dental and Pre-Medicine); Management and Marketing; and Technical Education. The overarching goal of this minor is to provide students from diverse academic backgrounds the knowledge, skills and experiences enabling them to provide services tailored to the unique needs of older adults.

To complete the Interdisciplinary Gerontology Minor, students must complete a total of 21 credit hours from the courses listed below. GER 155 Interdisciplinary Introduction to Gerontology is a required course. The following courses are being recommended for the Interdisciplinary Gerontology Minor:

GER 155: Interdisciplinary Introduction to Gerontology 3

Eighteen Hours Chosen from the Following

PSYCH 263: Developmental Psychology 3
PSYCH 285: Lifespan Human Development 3
SWK 341: Social Work and the Aged 3
PSYCH 360: Psychology of Aging 3
PSYCH 362: Death and Dying 3
NURS 405: Gerontological Nursing 3
REC 441: Therapeutic Interventions for Older Adults 3
FCS 581: Aging and the Family 3

Special Notes

GER 155 Interdisciplinary Introduction to Gerontology is a required course.

PSYCH 263 Developmental Psychology: Prerequisite
PSYCH 155 General Psychology or permission of instructor.

NURS 405 Health Alterations in Older Adults: Prerequisite of successful completion of Level 1 nursing courses waived with permission of instructor.

FCS 581 Aging and the Family: Prerequisite of FCS 480 Dynamics of Family Relationships waived with permission of instructor.

International Knowledge and Experience (IKE) Certificate

Director: Dr. Darren Botello-Samson, 327D Russ Hall, 
dbotello-samson@pittstate.edu, 620-235-4334

Coordinator: Angela Moots, 118 Whitesitt Hall, 
amoots@pittstate.edu, 620-235-4221

The International Knowledge and Experience (IKE) Certificate promotes international knowledge and encourages student international experiences. The IKE certificate consists of three components of international experience – Study Abroad, Academic Courses, and Co-Curricular programming. A student may complete any two of the components to fulfilling the certificate requirements. Students completing IKE by choosing to include the Academic Courses component will also receive a notation on their academic transcript. All students who complete the program receive a detailed listing of the activities they have fulfilled to achieve this certificate. The completion of each component will be accounted as follows:

Study Abroad: Earning credit through a Pittsburg State University Study Abroad program, or any approved partner study abroad program.

International students taking credit courses at Pittsburg State University will fulfill this component.

Academic Courses: This component has two areas, language study and international coursework, and both must be completed to fulfill the component. The foreign language area is fulfilled by completion of a second-semester language course with a grade of C or better, or the equivalent. (Equivalencies may be considered with the approval of the English and Modern Languages department). The international coursework area is fulfilled by completing three courses in three different disciplines with a grade of C or better. Courses
are selected from a list approved by the International Studies program.

International students may fulfill the foreign language area by meeting the English proficiency for international students set by the University. They may also meet the international coursework area by taking one course (two with permission) with a significant modern US focus.

Co-curricular: This component is fulfilled by participating in a number of intercultural activities, lectures, meetings, student organizations, etc. equaling 60 units. The units are calculated from an approved list maintained by the International Programs and Services office.

**Minor Public Health**

Coordinator: Dr. Janis Schiefelbein
Office: 110 McPherson Hall
Telephone: 620-235-4441
email: jschiefelbein@pittstate.edu

The study of public health will combine the social sciences, sciences, mathematics, humanities, and the arts. It will serve as a vehicle for the development of written and oral communication skills, critical and creative thinking, teamwork and problem solving. The public health minor focuses on maintaining a healthy society through the control of disease, education about health promotion and disease prevention, and organized efforts to preserve healthy environments. It will incorporate civic knowledge and commitment – locally, nationally and globally and ethical reasoning and action, forming the foundation for lifelong learning for healthier populations and communities.

To complete the Interdisciplinary Public Health Minor, students must complete a total of 21 credit hours from the courses listed below. All the core courses (8-9 credit hours) must be completed with an additional 12-13 hours from the listed electives. No more than 12 hours from the core and electives courses can be used as duel credit toward the major and minor degree.

**Core Requirements (8-9 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 277: Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 410: Biological and Medical Terminology</td>
<td>2</td>
</tr>
<tr>
<td>or NURS 314: Health Care Terminology and Drug Calculations</td>
<td>3</td>
</tr>
<tr>
<td>NURS 303: Introduction to Public Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses (12-13 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 617: Environmental Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total hours required for Minor in Public Health (21 hours)**

**Women's and Gender Studies**

Director: Browyn K. Conrad
Telephone: 620-235-4333
Office: 316 Russ Hall
e-mail: bconrad@pittstate.edu

Women's and Gender Studies is an interdisciplinary program that places women and gender at the center of academic analysis. Students learn how gender affects social relationships, artistic expression, institutional structures, and national and international political, cultural and economic relations. While centrally concerned with gender dynamics, Women's and Gender Studies also explores the ways other dimensions of diversity, including race, ethnicity, nationality, class, sexual orientation, age, and ability shape the experiences of both women and men.

**Minor in Women's Health**

**Core Requirements (8 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 370: Women's Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>WGS 200: Introduction to Women's Studies</td>
<td>3</td>
</tr>
<tr>
<td>WGS 399: Global Women's Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

**Women's Health Electives * (12 hours) chosen from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 580: Family Violence and Child Abuse</td>
<td>3</td>
</tr>
<tr>
<td>or FCS 780: Family Violence and Child Abuse</td>
<td>3</td>
</tr>
<tr>
<td>FCS 581: Aging and the Family</td>
<td>3</td>
</tr>
</tbody>
</table>
JUST 480: Women, Crime, and Justice .................................................. 3
NURS 452: Nursing the Childbearing Family ........................................... 4
PSYCH 736: Psychology of Family Development ....................................... 3
PSYCH 740: Topics in Psychology: (____) ........................................... 1/2-3
SOC 569: Society and Sexuality .......................................................... 3

*Other courses may be approved as they are offered, for example a Biology course in Women's Health.

NURS 452 Nursing the Childbearing Family, available to nursing majors only.

PSYCH 740 Topics in Psychology. The topic must be approved for Women's Health, for example Human Sexuality.

Total hours required for Minor in Women's Health (20 hours)

Certificate in Women's and Gender Studies

The requirements for a certificate are 15 hours, including a 6 hour core consisting of WGS 200 Introduction to Women’s Studies and WGS 399 Global Women’s Issues. Additional Women’s and Gender Studies courses or electives will supplement this core. Graduate courses such as ENGL 875 Seminar can also be used if pursuing the certificate as part of post-graduate or graduate studies.

Both WGS 200 Introduction to Women’s Studies, and WGS 399 Global Women’s Issues can be used to fulfill general education requirements.

Minor in Women's and Gender Studies

The Women's and Gender Studies minor involves twenty-one credit hours, including a six credit hour core emphasizing collaborative learning and critical thinking in global, activist and feminist contexts. It complements a wide variety of majors, including Business, Communication, Education, English, Family and Consumer Sciences, History, Justice Studies, Psychology, and Sociology, and is an excellent preparation for careers in the non-profit sector or in private sector fields such as human resources, marketing, management, education, and law.

Core Requirements (6 hours)
WGS 200: Introduction to Women’s Studies ........................................... 3
WGS 399: Global Women’s Issues ....................................................... 3

Women's and Gender Studies Electives*

(15 hours)
ART 178: Introduction to the Visual Arts ............................................. 3

ART 689: Contemporary Issues in Art .................................................. 3
COMM 530: Interpersonal Communication ........................................... 3
COMM 795: Issues in Communication (____) ....................................... 3
ENGL 555: Topics in Literature (____) ................................................. 1-3
or ENGL 755: Topics in Literature (____) ............................................. 1-3
ENGL 566: American Theme (____) .................................................... 3
ENGL 771: Major Author(s) (____) ..................................................... 3
FCS 154: Dress and Culture ............................................................... 3
FCS 455: History of Costume ............................................................. 3
FCS 480: Dynamics of Family Relationships ....................................... 3
FCS 580: Family Violence and Child Abuse ........................................ 3
or FCS 780: Family Violence and Child Abuse ..................................... 3
HIST 608: Women in American History ............................................ 3
JUST 480: Women, Crime, and Justice ................................................. 3
NURS 370: Women's Health Issues ..................................................... 2
NURS 452: Nursing the Childbearing Family ....................................... 4
PSYCH 736: Psychology of Family Development .................................. 3
PSYCH 740: Topics in Psychology: (____) ........................................... 1/2-3
SOC 512: Social Stratification ............................................................ 3
SOC 536: The Family and Society ....................................................... 3
SOC 569: Society and Sexuality .......................................................... 3
SOC 663: Women, Men and Society ................................................... 3

Total hours required for Minor in Women's and Gender Studies (21 hours)

WGS 500 or WGS 700 may be substituted for WGS 200 or WGS 399 with permission.

*Women's and Gender Studies Electives: Must be selected from at least three different departments, with departments defined to include courses with distinct program designations (e.g., HIST, JUST and SOC). At least 12 of the 21 hours must be completed with courses numbered 300 or above, including WGS 399. Students may receive credit toward both their major and the Women’s and Gender Studies minor for no more than one elective. Courses offered at the graduate level are typically available only to those earning the Certificate in Women’s and Gender Studies as part of graduate or post-graduate studies. Students should refer to the Women’s and Gender Studies link in the online course schedule for a complete list of Women’s and Gender Studies electives as additional courses may be offered on a per semester basis. Students should also consult their Women’s and Gender Studies advisor or the Director of Women’s and Gender Studies.

COMM 795 Issues in Communication must be taken as Gender Communication.

ENGL 555/755, 566, 771 and 875 must be relevant to Women’s and Gender Studies.

PSYCH 740 Topics in Psychology must be taken as Human Sexuality Issues.
Pre-Professional Programs

Engineering and Pre-Engineering

Students preparing for careers in engineering have three kinds of programs available at Pittsburg State University:

(1) Two-year pre-engineering;

(2) A chemistry or physics Bachelor of Science degree as preparation for graduate work in engineering;

(3) An engineering technology Bachelor of Science degree as preparation for transfer to engineering Bachelor of Science program or graduate work in engineering.

Pre-Engineering

Pre-engineering is the name given to the first two years of study for students who plan to transfer to an engineering school. Unlike some "pre"-programs, pre-engineering is an engineering curriculum and not something taken before studying engineering.

The chairperson of the Department of Physics coordinates the pre-engineering curricula. These are administered by the Departments of Mathematics, Physics, and Engineering Technology. Advisors for specific engineering specialties may be contacted in these departments:

Department of Engineering Technology:

Architectural Engineering
Construction Engineering
Electrical Engineering
Industrial Engineering
Manufacturing Engineering
Mechanical Engineering
Plastics/Polymer Engineering

Department of Mathematics:

Civil Engineering
Mining Engineering

Department of Physics:

Mechanical Engineering
Electrical Engineering
Engineering Physics
Agricultural Engineering
Aeronautical Engineering

General Engineering
Industrial Engineering

Students who have not selected a particular specialty will be advised in the Department of Physics initially.

Pre-Law Curricula

Pre-Law Advisor: Dr. Darren Botello-Samson, History, Philosophy and Social Sciences
Room: 327D Russ Hall
Telephone: 620-235-4334
e-mail: dbotello-samson@pittstate.edu

Law schools, unlike medical or some other professional schools, do not require any particular degree or course of study for admission. Each applicant is required to have completed only a bachelor’s degree and the Law School Admission Test (LSAT). Someone who is interested in pre-law at Pittsburg State University may choose any field in which to complete a baccalaureate degree. However, prospective law students should consult with the pre-law advisor to make sure their coursework is developing the analytic and language skills necessary for admission into and success in law school.

For students interested in attending law school after graduation, the Department of History, Philosophy and Social Sciences provides pre-law advising. The purpose of a pre-law advisor is to prepare students to be successful law school applicants and law school students. This entails providing advice on courses of study, application strategies, LSAT preparation, and general topics related to student’s interest in the legal field. The pre-law advisor is NOT your academic advisor; the latter advises the student to help the student satisfy Pittsburg State University’s graduation requirements; the role of the pre-law advisor is more akin to that of a career counselor, providing information to which students may avail themselves if they so choose.

The Political Science major provides students with a Bachelor of Arts- Political Science: Pre-Law Emphasis. The emphasis area exposes students to the material and learning approach prevalent in law schools and helps to develop the requisite skills necessary to law school success.

Pre-Medicine

The program of study for pre-medical students is designed to meet the course work requirements for application to most medical schools. While students
may major in any field of study, most choose either biological or physical science. Most pre-medical advisors are in the Department of Biology or the Department of Chemistry. For a suggested program of study, see the pre-professional curriculums listed in the catalog sections for the Department of Biology and the Department of Chemistry or consult pre-medical advisors in the Department of Biology or the Department of Chemistry.

**Pre-Dentistry**

The pre-dental student may pursue either a Bachelor of Arts or a Bachelor of Science degree in a major of their choice, although most choose either a biological or a physical science. Although the minimum requirements for admission to approved schools of dentistry as established by the Council of Dental Education, American Dental Association provides for admission to most dental schools after the completion of two full years of college work, the applicants will find their chances of being accepted are increasingly improved with the completion of the third or even the fourth year of college work. Early contact with a pre-dental advisor is imperative.

**Pre-Pharmacy**

The university offers a Bachelor of Science in Chemistry with an emphasis in Pharmaceutical Chemistry which prepares students for entry into a pharmacy school after two years at Pittsburg State University. Details concerning this program can be obtained from the Department of Chemistry. Following pharmacy emphasis studies at Pittsburg State University, students must be admitted to a school of pharmacy to complete their program requirements. Names and addresses of nearby schools of pharmacy are available.

**Other Pre-Professional Programs**

The Department of Biology offers pre-professional work in forestry, medical technology, physical therapy, optometry and veterinary medicine. Consult the chairperson of the department for details concerning these programs.
Student and Faculty Services

Enrollment Management and Student Success

Howard W. Smith, Associate Vice President for Enrollment Management and Student Success
213 Russ Hall
620-235-4006
e-mail: hwsmith@pittstate.edu
http://www.pittstate.edu/admission

The eight administrative offices within Enrollment Management and Student Success (EMSS) serve the Pittsburg State University community by providing leadership and coordination for the university’s efforts to attract and retain a student body that meets the University’s strategic enrollment goals. EMSS offices serve students from the prospective student inquiry stage to the commencement ceremony, providing transition programming, support for special needs, and enrichment opportunities for special abilities along the way. The focus of our offices is to promote student success through high quality programs and services that enhance the university experience and support the efforts of the faculty.

Admission

Melinda Roelfs, Director
107 Student Welcoming Center- Horace Mann
620-235-4251 or 1-800-854-PITT
e-mail: psuadmit@pittstate.edu
http://www.pittstate.edu/admission

The Office of Admission provides leadership in the planning and implementation of undergraduate recruitment, admission and new student enrollment at Pittsburg State University.

Campus Visits

Prospective students are welcome and encouraged to visit the campus Monday through Friday or by attending one of the many special visit events throughout the year. Campus visit information, including how to schedule visits, can be found at http://www.pittstate.edu/admission/events or by calling 800-854-PITT (7488). While on campus, students have an opportunity to visit with an Admission representative, meet with faculty in their academic areas of interest and tour campus. Campus tours are given by University Student Ambassadors, a student organization on campus that tours prospective students and their families and provides assistance to the Admission Office during special visit events.

Undergraduate Admission Decisions

In addition to undergraduate recruitment initiatives, the Office of Admission evaluates undergraduate applicants for admission in accordance with Kansas Legislature under KSA 76-717. Pittsburg State University is committed to a policy of educational equity. Accordingly the University admits students, grants financial aid and scholarships, conducts all educational programs, activities and employment practices without regard to race, color, religion, sex, national origin, sexual orientation, age, marital status, ancestry or disabilities. Specific admission requirements can be found at http://www.pittstate.edu/admission

New Student Orientation

To facilitate the enrollment of new students, the Office of Admission also coordinates a freshman and transfer student orientation program called Pitt C.A.R.E.S. (Campus Advisement, Registration and Enrollment Services). During Pitt C.A.R.E.S. students get connected to college life through small-group activities and meet with an academic advisor to enroll for the upcoming semester. Parent sessions run concurrently with student sessions. Sessions for new freshmen occur in June, August, and January and in November, April and July for new transfers. For additional details regarding Pitt C.A.R.E.S. visit http://www.pittstate.edu/admission

Financial Assistance

Tammy Higgins, Director
103 Horace Mann
620-235-4240 or 1-800-854-PITT (toll free)
e-mail: finad@pittstate.edu
http://www.pittstate.edu/office/financial_aid/

See Applying for Financial Assistance for additional information on Student Financial Assistance.

Registrar’s Office

Debbie Greve, Registrar
Room: 103 Russ Hall
Telephone: 620-235-4200
Fax: 620-235-4015
e-mail: registrar@pittstate.edu
http://www.pittstate.edu/office/registrar/

The Registrar’s Office, 103 Russ Hall, maintains the official student records of Pittsburg State University. Technical questions concerning enrollments, degree
requirements, academic regulations, or transcript evaluations should be asked of the Registrar, Assistant Registrar for Degree Checking or Assistant Registrar for Transcript Analysis.

The Registrar’s Office is responsible for maintaining correct records of student enrollments. Students wishing to obtain official transcripts or to verify their enrollments should contact the Registrar office staff. Changes in enrollments are initiated in the Registrar’s Office or on the Web-based enrollment system (GUS).

The Registrar’s Office processes enrollment verification forms for employers, Social Security, Sallie Mae and other lenders (often through National Student Clearinghouse), as well as other agencies at the student’s request.

Early enrollments are coordinated by the Registrar’s Office as are the regular enrollment periods at the beginning of each semester or summer session. The Registrar’s Office also assesses tuition and related fees.

Many Registrar office services can be facilitated on line under the student's Personal Information menu (ex. order transcript, degree audit, change major, verify enrollment status and update contact information).

**Degree Checking**

Janet Hoyer, Assistant Registrar  
Room: 102 Russ Hall  
Telephone: 620-235-4211  
Fax: 620-235-4015  
e-mail: jhoyer@pittstate.edu

When a student attains 85 semester hours of credit (including current enrollment), the student must apply for an official degree check as prepared by the Degree Checking Office. Application may be made on-line through the GUS audit OR by written application in the Degree Checking Office. [Students seeking an associate degree or a technology certificate must contact the Degree Checking Office to receive instructions for applying for this official check]. The student’s permanent record and current enrollment will be examined in detail to assess progress toward the degree objective. A letter is written to the student following the record analysis outlining specific requirements which must be met before a degree may be granted. A copy of this letter is sent to the student’s advisor.

A Web-based degree audit can be run for undergraduates through GUS or by their advisors at any time. The degree audit lists all requirements to be met for the degree, major and minor as selected by the student. Courses on the degree audit DO NOT list required prerequisites. It will be indicated on the degree audit [see prompt at end of GUS audit: ‘apply now for official degree check,’ if you qualify] when an official degree check application must be made. The degree audit is also available through the on-line Web-based enrollment system.

**Transcript Analyst**

Barbara Van Becelaere, Assistant Registrar  
Room 103 Russ Hall  
Telephone: 620-235-4253  
Fax: 620-235-4015  
e-mail: bvanbecelaere@pittstate.edu

Pittsburg State University accepts transfer credits from regionally accredited community colleges, technical colleges and universities. Transcript evaluation is a component of the application process and a transcript from each institution that a student has attended should be submitted upon application. The student will be notified by email that the transcript evaluation has been completed and is available to be viewed on GUS. Students without an email address in our system, will receive a paper copy of their evaluation by mail.

Acceptance of transfer credit toward major degree requirements is at the discretion of each major department.

- CLEP and AP credit are considered transfer credit and application to the student’s transcript requires an official transcript from College Board.
- Courses transferred from other 4 year institutions will be designated as lower or upper division according to the original institutions numbering system.
- Courses retain the credit hour value taken at the original institution except for the adjustment of courses taken at an institution that operates on the quarter hour system.
- International transcripts must be in English and accompanied by course descriptions in English.
- Pittsburg State University reserves the right to decide the applicability of transfer course work to the degree program.
- Official transcripts received for evaluation of transfer credit will be considered to be a complete academic record from that institution up to and including the last completed semester as listed on the transcript. Subsequent official transcript/transcripts from the same institution
showing additional previously completed work will not be accepted.

Transfer Articulation

Students transferring to Pittsburg State University with an Associate of Arts or an Associate of Science may meet general education requirements through one of two options, transfer articulation or by completing the general education courses as listed in the catalog. Eligible students may choose the method best suited to their program.

Eligibility for transfer articulation is major dependent and subject to meeting the criteria set by the Kansas Board of Regents.

2 + 2 Articulation Agreements

Pittsburg State has entered into 2 + 2 agreements with many area community colleges and technical colleges. For up-to-date listings of these agreements see http://www.pittstate.edu/academics/2-plus-2-programs/.

Reverse Transfer

Pittsburg State University has entered into state-wide Reverse Transfer agreements with community colleges throughout Kansas. As of August 2017 the agreement community colleges include: All Kansas Community and Technical Colleges, Northeastern A&M, Northwest Arkansas Community College and Ozark Technical Community College. This agreement provides an opportunity for students presently attending Pittsburg State University, who transferred from an agreement community college just short of completing their associate degree, to use their Pittsburg State University credit to earn their associate degree from that community college. The student must opt-out if they do not wish to allow us to send their Pittsburg State University transcript to their community college in order to facilitate that college’s review and continued to contact regarding needed credit. Questions may be directed to the Registrar’s Office.

Veterans' Services

Michelle Hensley, Coordinator
Room: 103 Russ Hall
Telephone: 620-235-4202
Fax: 620-235-4015
E-mail: mhensley@pittstate.edu

The Veteran's Certifying Official, located in the Registrar’s Office, assists veterans, spouses, and dependents who may be eligible for veteran’s benefits under the Montgomery GI Bill® and Vocational Rehabilitation and Employment programs. The certifying official assists in completing applications and provides certification of enrollment to the Veteran’s Administration. The university is approved for veterans training by the Kansas Veterans Commission.

In order to qualify for full payments benefits, an undergraduate veteran or dependent must carry a minimum of 12 hours of credit per semester. Graduate students qualify for full payments by carrying nine hours of credit per semester. Pay rates for summer are dependent upon both number of credit hours and length of class.

Student Success Programs

Heather Eckstein, Director
113 Axe Library
620-235-6578
E-mail: heckstein@pittstate.edu
http://www.pittstate.edu/office/student-success-programs/

The Student Success Programs office is part of the Enrollment Management and Student Success division and has responsibility for the Freshman Experience and Transitions courses, support for academic advising, and coordination of the Exploratory Studies Program.

Freshman Experience (UGS 100)

The primary purpose of the Freshman Experience course is to assist new students in making a successful transition to Pittsburg State University. Students in the course will learn about resources available and develop skills to assist them academically, personally and socially. This two credit hour course is required of freshman enrolling at Pittsburg State University in the fall or spring semester immediately following their high school graduation.

Transitions (UGS 101)

The primary purpose of the Transitions course is to assist new students, who are not required to take Freshman Experience, in making a successful transition to Pittsburg State University. Students in this one credit hour course will learn about the resources available to assist them as they work to pursue their educational goals after attending another college, working fulltime, or a lengthy break from the educational setting. The
one credit hour course is recommended for all new students enrolling at Pittsburg State University who are transferring or are new freshmen who are not required to take Freshman Experience; undeclared transfer and non-traditional students are required to take the course. New international students are required to take the two credit hour course to assist in their transition to the American educational experience.

Exploratory Studies Program

The Exploratory Studies Program is coordinated through the Student Success Programs office. Exploratory Studies provides a gateway for entering students who are not yet ready to declare an academic area of study to explore academic areas and potential career options while fulfilling University requirements and earning credit toward a future college degree.

The Exploratory Studies Program is a legitimate, though temporary, academic program of the University with between 300 and 400 students in the program annually. Advisors assist students in this program to enroll in courses that meet general education requirements and address their interest areas. Advisors encourage the use of the Do What You Are program to provide direction toward career paths and major choice that combine the student’s skills, talents and interests. Exploratory Studies students enrolled in or with previous credit in UGS 100 (Freshman Experience) or UGS 101 (Transitions) are assigned to the instructor of that course for academic advising.

Students in the Exploratory Studies are encouraged to take PSYCH 230 (Career Explorations) during the first semester of the sophomore year. This course will assist the student in clarifying individual interests and demonstrate how combining interests, skills, talents and personal values relate to potential career options.

The Honors College

Director: Dr. Craig A. Fuchs
Telephone: 620-235-4176
Office: 213A Russ Hall
e-mail: cfuchs@pittstate.edu

First and foremost, the Honors College at Pittsburg State University has the goal of not only attracting high-quality applicants, but also of retaining them as high-achieving students until graduation.

A second goal is to provide educationally enriched experiences (reflected both in and out of the classroom) for the members of Pittsburg State University’s Honors College.

A third goal is to provide a socially responsive, supportive environment to the students in the Honors College whereby members feel personally connected to others throughout the college.

A final goal is to promote a sound start for incoming freshmen. Freshmen begin bonding from the beginning through overnight orientation experiences (including team-building activities), enrollment in an Honors Freshmen Experience course, and completion of a community service requirement.

Honors College members are a carefully screened select group of scholars. Freshmen, to be eligible for application, must have a 28 ACT composite or equivalent, a minimum 3.50 (unweighted) high school grade point average on a four point scale. A transcript verifying class rank, GPA, ACT, a completed Honors College application form displaying activities and awards, an essay, and recommendation forms comprise the application package. The deadline for applicants is January 15.

Application packets may be obtained on-line at http://www.pittstate.edu/academics/honors/.

A total of 30 students are selected for the Honors College each year and they receive scholarships as well as the opportunity to participate in Honors programs. Presidential Scholars receive an academic scholarship in the amount of $9,500 per year with a one-time study abroad stipend of $2,000. University Scholars receive an academic scholarship in the amount of $4,500 per year with a one-time study abroad stipend of up to $2,000. Crimson and Gold Scholars receive an academic scholarship in the amount of $1,000 per year with a one-time study abroad stipend of up to $2,000. These scholarships are renewable annually provided the student maintains a full-time Pittsburg State University enrollment, active participation in Honors, participates in one community service project each semester, and a 3.50 grade point average. Honors College graduates receive special recognition at commencement ceremonies and their college transcripts indicate
completion of the university and applicable Departmental Academic Honors programs.

Members of the Honors College have the opportunity to enroll in select honors sections of the general education program. Freshman students in the Honors College will automatically be eligible for an honors section of ENGL 190 Honors English Composition. They will also take an honors section of UGS 100 The Freshman Experience during their first semester. Honors sections are generally limited to 25 students, which allows for increased student interaction and course enhancement.

**Center for Student Accommodations**
Nicole Dublin, Coordinator of the Center for Student Accommodations
Room: 218 A Russ Hall, 1701 S Broadway
Telephone: 620-235-6584
[http://www.pittstate.edu/office-center-for-student-accommodations/index.dot](http://www.pittstate.edu/office-center-for-student-accommodations/index.dot)

Pittsburg State University is committed to the provisions of Section 504 of Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, civil rights laws designed to prohibit discrimination on the basis of disability. Pittsburg State University strives to create an accessible university community where individuals with disabilities have an equal opportunity to fully participate in all aspects of the educational environment.

The Center for Student Accommodations (CSA) provides accommodation and educational support services to currently enrolled Pittsburg State University students. To qualify, they must have documentation of a diagnosed Learning Disability, Attention Deficit/Hyperactivity Disorder (ADHD), or a Physical/Mental Illness which substantially impairs one or more major life activities. Students with a documented physical, mental, or learning disability may qualify for educational accommodations to provide equal access to educational opportunity as that provided to students without documented disabilities.

Reasonable accommodations depend upon the nature and degree of severity of the documented disability. While the Americans with Disabilities Act of 1990 requires that priority consideration be given to the specific accommodation methods requested by the student, it does not imply that a particular accommodation must be granted if it is deemed unreasonable and if other suitable methods are available.

The specific type of accommodation is determined on an individual basis. The CSA Coordinator attempts to match the student with the appropriate accommodation. Reasonable accommodations are typically categorized on the basis of: (a) mode of presentation (e.g., note-taker for class lectures, reader for exams); (b) mode of expression (e.g., use of computer for written exams), (c) location and setting (e.g., distraction reduced testing location), and (d) time (e.g., extra time for tests). The Center for Student Accommodations can also provide study skill strategies and direct students to other appropriate university support services.

To apply for services:

1. Apply for admission to Pittsburg State University.
2. Contact the Coordinator for the Center for Student Accommodations for an appointment to complete the CSA Application materials and review your eligibility for accommodations.
3. Send a copy of your most recent disability documentation from your school and/or qualified healthcare professional to the Center for Student Accommodations, 218A Russ Hall, Pittsburg, KS 66762.

**Notice of Nondiscrimination**

Pittsburg State University prohibits discrimination on the basis of race, color, religion, sex, national origin, sexual orientation, age, marital status, ancestry, genetic information, or disabilities. The following person has been designated to address inquiries regarding the nondiscrimination policies: Director of Institutional Equity/Title IX Coordinator, 218 Russ Hall, 1701 S. Broadway, Pittsburg, KS 66762-7528, telephone (620) 235-4189, equity@pittstate.edu.

Students seeking assistance with academic programs because of learning disabilities or physical limitations should contact the Coordinator of the Center for Student Accommodations, 218A Russ Hall, Pittsburg State University, Pittsburg, KS 66762, telephone 620-235-6584.
Student Diversity Programs
Director: Deatrea S. Rose
Room: 104 Horace Mann
Telephone: 620-235-6556
e-mail: drose@pittstate.edu
http://www.pittstate.edu/office/diversity/

The Office of Student Diversity (OSD), 104 Horace Mann, offers its programs and services to students from all backgrounds and cultures.

The mission of OSD is to provide support and resources that promote student success at Pittsburg State University, helping students gain awareness and appreciation of the cultural, racial, and ethnic diversities represented in the university community. OSD’s Multicultural Resource Center provides a library of books, films and documents that can benefit academic programs and research.

International Programs and Services
Director: Dr. Howard Smith, Interim Director
Telephone: 620-235-4680
Office: 118 Whitesitt Hall
e-mail: i-admit@pittstate.edu
http://www.pittstate.edu/office/international/index.dot

The office of International Programs and Services (IPSO) provides leadership and coordination to the university’s international efforts among students. The office staff offer a variety of services that include programs for all students at Pittsburg State University, from services for our international student community to programs for American students to help internationalize their experience at Pittsburg State University. Our main services include the following:

International Student Services

IPSO staff assist international students with their transition into American culture, advise international students on immigration and visa regulations, along with augmenting their cultural experience outside the classroom. In order to meet these goals, IPSO provides an array of services throughout the year which address the needs of our international students.

Each semester new international students are required to attend an orientation. During this orientation they are introduced to the American educational system and Pittsburg State University student life. Seminars are given on cultural adjustment, academic advising, immigration issues, insurance information, and enrollment assistance.

IPSO advises F1 and J1 visa students on all visa related issues and matters necessary to maintain proper immigration status in the US. This includes special work permissions and changes of visa status and official letters for immigration related processes.

Every month the IPSO staff assists with activities and programs which give all Pittsburg State University students an opportunity to learn more about cultures from all over the world, and allow international students an insight on American life. In addition to the campus activities available, IPSO organizes international gatherings, tea times, sporting events, and educational excursions.

Study Abroad

Pittsburg State University is dedicated to offering a variety of opportunities for students to have an international experience abroad during their college career. Pittsburg State University students can study abroad through faculty led group programs, exchange partnerships which Pittsburg State University has developed with universities abroad, the Pittsburg State University in Paraguay program, and programs outside of Pittsburg State University as long as they are pre-approved. The study abroad staff works with students through the stages of study abroad from choosing a program to preparing for the program to their return to the university. The staff also works closely with the faculty who are leading students abroad. Pittsburg State University is proud to offer Study Abroad Travel Stipends to assist our students in the added expenses of study abroad.

International Knowledge and Experience Certificate

The International Knowledge and Experience (IKE) program was created to offer a broad based internationalization opportunity for all Pittsburg State University undergraduates – especially those who find it difficult to study abroad during their college experience. Through this program, Pittsburg State University promotes international experiences amongst Pittsburg State University students and recognizes students that are involved internationally on and off campus. The IKE certificate consists of three components of international experience: Study Abroad, Academic Courses, and Co-Curricular Activities. Students must complete two of the three components to earn the IKE certificate. Students that choose to
complete the Academic Component along with another component will earn a notation on their academic transcript. All students who complete the program receive a certificate and a detailed listing of the activities they have fulfilled to achieve this certificate. The program is open to all undergraduate students including transfer students and international students.

**Intensive English Program**

**Intensive English Program**
Telephone: 620-235-4644
Office: 120-C Whitesitt Hall

The mission of the Intensive English Program is to provide a variety of specific language and cultural services to international students. The main objectives of the IEP are to raise students' English language level through quality classroom instruction and to prepare students to pursue their academic degree programs at Pittsburg State University. Furthermore, the Intensive English Program strives to provide opportunities for students to experience and learn about American culture.

The Intensive English Program is a full-time program featuring four eight-week sessions during the academic year and one eight-week session during the summer. Classes are offered at six levels, from beginning to advanced. Students spend approximately 20 hours per week in class, taking courses in grammar, reading, listening/speaking, writing, and academic preparation. The program is flexible, and every effort is made to meet individual student needs.

The successful completion of the highest level of the Intensive English Program, IEP 061 and IEP 062, is the equivalent of a 79 iBT, 213 cBT or 550 pBT TOEFL score. It can be substituted for the TOEFL requirement for admission purposes to Pittsburg State University for most undergraduate degrees and graduate programs.

All members of the Intensive English Program faculty hold at least a master's degree in teaching English as a foreign language. The instructors are full-time faculty with teaching experience both in the United States and overseas. Most faculty members have successfully mastered a foreign language, making them aware of the language learning process that their students face.

**Kansas/Paraguay Exchange Program**

**Bobby Winters, Coordinator**
311D Grubbs Hall
620-235-4079
e-mail: bwinters@pittstate.edu

The university is a member of the six Board of Regents universities in Kansas that have a reciprocal faculty and student exchange program with the two universities in Paraguay—the National University of Asuncion and the Catholic University of Our Lady of Asuncion. This program provides the opportunity for faculty and students to study, to do research, and to live in Paraguay, with students also having the opportunity to earn academic credit.

**Pittsburg State University in Paraguay Program**

**Dr. Bobby Winters, Director**
311D Grubbs Hall
620-235-4079
e-mail: bwinters@pittstate.edu

The purpose of the Pittsburg State University in Paraguay program is two-fold: 1) Offer Pittsburg State University General Education courses in Asuncion, Paraguay, 2) Kansas students can have a study abroad experience in a non-English speaking country and take Pittsburg State University courses that meet General Education Requirements. International students can complete their course of study at Pittsburg State University or any Kansas or US university.

The courses are taught in Asuncion, Paraguay by Pittsburg State University or adjunct instructors in a two year cycle with each course taught one time every two years. The General Education courses are taught in English and use the same syllabus and objectives as the courses offered on the Pittsburg campus.

International students follow the regular admissions policies of Pittsburg State University and a TOEFL score of 520 or Cambridge Language Band score of 6.5 or ACT 21+ or SAT I 990+. If a student graduates high school where English is the language of instruction, the TOEFL is waived.

Home stays are available for Kansas students in Asuncion, Paraguay. Interested students should contact the Study Abroad coordinator in the International Programs Office. Interested Pittsburg State University faculty should contact the director of the program.
**Student Life**
Steve Erwin, Vice President for Student Life  
Room: 221 Russ Hall  
Telephone: 620-235-4231  
e-mail: serwin@pittstate.edu  

The area of Student Life coordinates a number of programs and services which offers support to students to ensure success within the overall university experience. Major services of the area are: Gorilla Bookstore, Campus Activities Center, Dining Services (Catering, Resident Dining-Gibson Dining Hall, The Gorilla Crossing, The University Club, KTC Café, and Axe Grind), Overman Student Center, Prevention and Wellness, Bicknell Family Center for the Arts, Bryant Student Health Center, Student Organizations, Student Recreation Center and Intramurals, University Counseling Services, University Housing, University Police and Parking Services and Student Rights and Responsibilities.

Students who have questions about any services or regulations at Pittsburg State University should contact the Office of the Vice President for Student Life, 221 Russ Hall, 620-235-4231.

**Bookstore**
Fawn Chesnutt, Director  
Room: Main Level Overman Student Center  
Telephone: 620-235-4875  
e-mail: fchesnutt@pittstate.edu  

The Gorilla Bookstore, located in the Overman Student Center, can provide your entire textbook and school/office supply needs. There is also a full line of “Gorilla-Wear” and “Pitt State” gifts to show your Pittsburg State University pride! Other merchandise includes general reading and reference books and convenience items. Bookstore service areas include textbook rentals, textbook buyback, and special-order service in text and general books. Graduation regalia for Pittsburg State University graduates and faculty are also available. Textbooks and merchandise can also be ordered online through the bookstore’s Web site at [http://pittstate.bncollege.com/](http://pittstate.bncollege.com/).

**Campus Activities Center**
Eva Sager, Associate Director/Campus Activities  
Room: 109 Overman Student Center  
Telephone: 620-235-4795  
e-mail: campusactivities@pittstate.edu  
[http://www.pittstate.edu/cac](http://www.pittstate.edu/cac)

Located on the main level of the Overman Student Center, the Campus Activities Center develops campus-wide programs, works with campus organizations, and has leadership resources available for the campus. Contact the Campus Activities Center (ext. 4795 or [campusactivities@pittstate.edu](mailto:campusactivities@pittstate.edu)) regarding: Apple Day, Family Weekend, Welcome Back Weeks, Homecoming, Student Organizations, Fraternity/Sorority Life and Leadership Programs.

**Dining Services**
Kristina Taylor, General Manager  
Room: 212 Overman Student Center  
Telephone: 620-235-4940  
e-mail: sodexo@pittstate.edu  
[http://www.gorilladining.com](http://www.gorilladining.com)

University life can sometimes be hectic! We offer a variety of dining facilities to match your daily schedule. Our team is committed to creating the best possible dining experience. Join us to experience the comfort, convenience, outstanding food and inviting atmosphere designed especially for you.

**Gibson Dining Hall**
Gibson Dining Hall is our resident dining that offers a complete dining program with signature brands and menu selections that entail just about every item you can imagine. Gibson Dining Hall is definitely NOT a traditional cafeteria! Located west of Nation Hall and north of Dellinger Hall, it features a wide variety of fresh food designed to satisfy everyone’s taste. You will find yourself wanting to go back for more, with this “all-you-care-to-eat” dining facility.

**Gorilla Crossing**
Gorilla Crossing is the perfect place to “grab a quick bite” or join friends for a meal. It is located on the main level of the Overman Student Center. The “food court” style allows you to choose between a variety of restaurants that will definitely meet your taste and budget, including burgers, wraps, mad-to-order pasta, wrap, salads, pizzas, hot subs and much more.
University Club

The University Club (U-Club) is located in the lower level of the Overman Student Center, right in the hub of our campus. It features Wholly Habaneros and Einstein Bros. Bagels. Wholly Habaneros serves an authentic Mexican food, including a delicious selection of tacos, burritos, quesadillas, nachos and burrito bowls. On the other hand, Einstein Bros. Bagels is the perfect place for a quick and tasty meal. It offers a diverse menu ranging from to-go coffee, baked goods, innovative fresh salads, made-to-order sandwiches and delicious desserts.

KTC Café

KTC Café features hot meals, sandwiches, snacks and beverages with lounge style seating, television access, and a fantastic staff. The KTC Café is located in the Kansas Technology Center in the South East corner (near the Wood Tech Labs).

The Axe Grind

The Axe Grind features Starbucks coffee, Frappuccinos, hot and iced lattes, teas, and much more. It’s a perfect place to grab a coffee, meet with friends, work with a study group and enjoy a pleasant atmosphere. In addition, it offers freshly baked treats, sandwiches, and salads. The Axe Grind is located on the main level of the Leonard H. Axe Library.

Catering

Our catering services proudly serves Pittsburg State University and the surrounding community since 1993. Whether your occasion calls for a light breakfast, a casual luncheon, or Presidential-style four course meal, we are always delighted to cater your events. We offer fresh ingredients, creative preparations, limited time offers, elegant presentations and a fantastic staff that will impress your guests.

Overman Student Center

Jeff Steinmiller, Director
Room: 211D Student Center
Telephone: 620-235-4791
e-mail: stuc@pittstate.edu
http://www.pittstate.edu/campus-life/student-center/

The Overman Student Center provides students, faculty, staff, alumni and guests with facilities, programs and services to meet the needs of daily life on campus. Whether you are visiting the Student Center for a meeting, to relax, eat, shop, study or just talk with friends, we welcome your support and patronage.

Main Level: Information Desk, Vending Machines, Gorilla Bookstore, Student Center Administrative Offices, Gorilla Crossing – Food Court, Catering Services, Lounges, Student Government Association, Gorilla Activities Board, Campus Activities Center, Greek Life, Wellness and Prevention, and Student Legal Services.


Prevention and Wellness

Taylor Panczer, Program Coordinator/Campus Activities
Room: 109G Overman Student Center
Telephone: 620-235-4062
e-mail: campusactivities@pittstate.edu
http://www.pittstate.edu/office/activities/programs/student-wellness/

Student Prevention and Wellness, a component of Campus Activities, utilizes responsible decision making, harm reduction, social norming, environmental management and peer health education as its primary prevention models.

This area plans on-going activities and events that support prevention and wellness as it relates to issues such as nutrition, mental health, self-esteem, stress-reduction, healthy relationships, alcohol and drug abuse, eating disorders, tobacco cessation, depression and suicide.

Bryant Student Health Center

Rita Girth, Operations Director
Dr. Kathleen Sandness, Medical Director
Dr. Steve Mayhew, Counseling Services Director
Location: 1801 S. Broadway
Telephone: 620-235-4452
e-mail: rgirth@pittstate.edu
http://www.pittstate.edu/office/health/

The mission of the Student Health Services is to promote the health and well-being of students in order
to enhance their educational experience. The health center is an outpatient ambulatory care facility supported by a physician supervised medical staff designed to provide high quality, convenient, cost-effective health services. Services available include: treatment for mild to moderate illness and injuries, women’s/men’s health, immunizations/allergy injections, contraceptive counseling, pharmacy/lab services, radiology services, specialty clinics, and referral services. The Bryant Student Health Center is located at the corner of Lindburg and Broadway Streets.

Student Organizations
Breanna Tidwell, Program Coordinator/Campus Activities
Room: 109 Overman Student Center
Telephone: 620-235-4795
e-mail: btidwell@pittstate.edu
http://www.pittstate.edu/office/activities/organizations/

For a current listing of the 150-plus registered organizations on campus, visit the web site at http://www.pittstate.edu/office/activities/organizations/. Requests for additional information or questions can be directed to the Campus Activities Center located on the main level of the Overman Student Center or campusactivities@pittstate.edu.

Student Recreation Center
Vince Daino, Director
Location: 2001 S. Rouse Street
Telephone: 620-235-6565
e-mail: crec@pittstate.edu
http://www.pittstate.edu/recsports

The Student Recreation Center (SRC) is home to the Department of Campus Recreation and its programs: Intramural Sports, Fitness and Wellness, Personal Training and Aquatics. Other departments and programs residing within the SRC are: Department of Health, Human Performance and Recreation (HHPR), Department of Military Science (ROTC) and local National Guard units. This facility has three multipurpose basketball courts, a cardio/fitness center with treadmills, cross trainers, bikes, weight machines, free weights, and an elevated 1/10 of a mile walking/jogging track. The Department of Campus Recreation also oversees the daily operation and scheduling of the Garfield Weede Gymnasium swimming pool, racquetball courts, outdoor basketball courts, sand volleyball, softball fields and green space for departmental and campus activities. For more information and hours of operation, visit http://www.pittstate.edu/recsports.

University Counseling Services
Dr. Steve Mayhew, Director of University Counseling Services
Location: Bryant Student Health Center, 1801 S. Broadway
Telephone: 620-235-4452
e-mail: ucoun@pittstate.edu
http://www.pittstate.edu/office/counseling/

University students normally encounter various stresses during their college experience. These may include adjusting to new academic demands, making and maintaining new friendships, and adjusting to changing relationships with parents and other family members. However, stress can become overwhelming and negatively impact student’s college experience and academic progress.

University Counseling Services (UCS) helps students manage many of the concerns and stresses associated with college life. UCS is located at the Bryant Student Health Center and offers a range of counseling and psychological services for current students of Pittsburg State University. Services are provided in a supportive and confidential atmosphere.

Many student concerns can be addressed using a brief, solution-focused approach, often requiring only a few visits. Individual counseling sessions are usually 25 to 50 minutes in length depending on the needs of the student. The University Counseling Service works in close collaboration with the Student Health Service. Students can call the Bryant Student Health Center at 620-235-4452 for an appointment.

University Housing
Connie Malle, Director
Room: 209 Horace Mann
Telephone: 620-235-4245 or 1-800-854-PITT
e-mail: cmalle@pittstate.edu
http://www.pittstate.edu/office/housing/

The department of University Housing maintains and supervises Pittsburg State University’s residence halls and Crimson Village Apartments. University Housing provides safe, attractive and comfortable residential facilities and a well-balanced, attractive food service program. The residence halls provide an environment, which enhances students’ intellectual and social development. Each building is staffed with student-
oriented professionals and paraprofessionals. Summer programs include summer school housing along with camps and conferences requiring campus housing.

Campus Residency Policy

Pittsburg State University requires that all first-year students live in the residence halls for their first two academic semesters on campus and purchase either the unlimited access meal plan or the 14 day access $100 dining dollars meal plan. All other students may live in housing of their choice. Prior to signing the contract, exceptions to the policy will normally be granted where any of the following circumstances exist:

- The student lives at home with parents or guardians and is commuting within 50 miles of the Pittsburg State University campus.
- The student is married and living with his or her spouse.
- The student is a veteran with one or more years of active service.
- The student is 21 years or older.
- The student is a transfer student and is transferring 24 hours of credit or more. (Non-Concurrent Enrollment)

Any other exceptions must be reviewed and considered prior to submitting a contract for a residence hall assignment. First year students may not cancel their contract once it is submitted if they remain enrolled at the university.

Crimson Village Apartments

Located on the east side of the campus, the Crimson Village apartments offer convenient housing to Pittsburg State University students. The complex consists of 40 units – 24 two-bedroom apartments and 16 three-bedroom apartments. All units have private storage areas, carport, stove, refrigerator, washer and dryer. Apartments are un-furnished. The complex also includes a fenced play area. All Pittsburg State University student families, in which at least one member of the household is a full-time student for each semester and meet income eligibility requirements for Housing and Urban Development (HUD), are eligible to live in Crimson Village. Assignment preference is given to families composed of married or single parent students. Other non-traditional age students may be considered depending on qualifications, overall occupancy, and demand by the above groups.
standards of self-discipline appropriate to membership in a university community. Students are expected to consider the rights of others and to use mature and reasonable judgment concerning their actions while students at Pittsburg State University. Students, and student organizations, at Pittsburg State University are subject to the provisions of this Student Conduct Code while on University premises or University-related premises, or when involved with off-campus University activities.

The administration of the university has the inherent responsibility to protect the educational purpose through regulation of the use of university facilities, and through the setting of standards of conduct and scholarship for students.

Pittsburg State University asks students to report any person who exhibits behavior not consistent with the standard set by the Student Code of Conduct. The university’s Behavior Intervention/Threat Assessment team reviews all reports. Regardless of the report, the team considers the report to be serious in nature and maintain the highest level of confidentiality. This reporting form is accessible through the university’s webpage at www.pittstate.edu/threatassessment.

Incidents of sexual misconduct or relationship violence are encouraged to be reported to university officials. Federal regulations require Pittsburg State University to conduct an administrative process which runs parallel and independent of other civil or law enforcement investigations. The purpose of the administrative process is to determine if violations of the Student Conduct Code are present. If there is a finding of responsibility, the university will adjudicate the responsible party accordingly. The following link will provide information on how and where to report incidents of sexual misconduct or relationship violence, http://www.pittstate.edu/office/student-life/reporting-sexual-assault/.

All students are expected to abide by federal, state, and local statutes and/or university regulations as published in the Code of Student Rights & Responsibilities posted on the Web at http://www.pittstate.edu/audiences/current-students/policies/rights-and-responsibilities/.

Bicknell Family Center for the Arts
Joseph Firman, Director
Bicknell Family Center for the Arts, 1711 South Homer Street
Telephone: 620-235-4536
e-mail: jfirman@pittstate.edu

The Bicknell Family Center for the Arts (BFCFA) is your home for great performances and events. Located at 1711 S. Homer Street, on the corner of Ford Avenue and Homer Street the Center faces West with event parking located North of the Center with access to the parking lot from Homer Street. The facility hosts events in the 1100 seat Linda & Lee Scott Performance Hall, which is configurable for theatrical or musical performances and events. The 250 seat Dotty & Bill Miller Theater, which is configured primarily for theater programs, small music performances and events. The Dean Family VIP Room which hosts meetings, events and receptions with seating for 50 to 80. The Paul Bergant Family Lobby, which is used as a reception area in conjunction with other events, or host stand-alone events. The University Gallery houses art displays which change from time to time and makes a special location for limited events. The Center also contains dressing rooms for 70 people, support areas including a costume shop, laundry room, scene shop, loading dock, and more. As we look to the future, the Center will continue to develop and will become home to PSU Music’s large rehearsal space. For more information about the Center or for booking inquiries, please call 620-235-4536. For ticketing information please call the University Ticket Office at 620-235-4796 For programming information, please visit our website at www.BicknellCenter.com

Career Services
Mindy Cloninger, Director
Room: 202 & 203 Horace Mann – Student Welcoming Center
Telephone: 620-235-4140
www.pittstate.edu/careers
e-mail: careers@pittstate.edu
Social Media: Facebook, Twitter, LinkedIn, Instagram, Pinterest

The Office of Career Services provides a full range of opportunities to students and alumni. Individual career counseling and consultation is available by appointment. Online assessments are often utilized in this process. Career fairs are held each year for students of every major, including the business, government, not-for-profit, technology, education and health fields, as well as internship and summer employment.
These events provide all students the opportunity to investigate occupations and companies, and network with employers. Other services include resume assistance, on-campus interviews, mock interviews, and internship search assistance.

Graduating students and alumni can register with the Gorillas4Hire program for access to job vacancies, to sign up for on-campus interviews, and for resume referral to potential employers. Students can visit our Web Page at www.pittstate.edu/careers and click on the "Gorillas4Hire" link to register. There is no fee for a Gorillas4Hire password if an individual is currently enrolled in a course at Pittsburg State University. A minimal fee is charged for credential service for education majors.

The Career Resource Center, 202 Horace Mann, maintains an extensive collection of resources and a computer lab for individuals to access Gorillas4Hire, online assessments, information on occupations, business and government employers, school districts, job search skills and techniques, international opportunities and graduate schools. Peer advisors are available during office hours in the Career Resource Center to assist students in developing or revising resumes and job search documents. Skype is available in Career Services for remote job interviews.

The Career Clothes Closet offers donated, gently-used professional clothing for students to wear for interviews and on the job.

**Student Employment**
Mindy Cloninger, Director
Room: 202 Horace Mann – Student Welcoming Center
Telephone: 620-235-4145
www.pittstate.edu/careers/
e-mail: careers@pittstate.edu

A part-time job can be a valuable and rewarding experience. Hundreds of Pittsburg State University students work on campus. There are a wide variety of student employment positions. Some of these include: clerical assistants, photographers, tutors, lab assistants, lifeguards, research assistants, managers, reporters/writers, cashiers, custodians, intramural officials, and many more!

Students must be enrolled full-time during the academic year to be appointed to a student position. During the academic year, the full-time student is enrolled in at least six (6) credit hours. Students not enrolled in summer school may work in the summer as student employees. Students should contact student employment for eligibility requirements. Full-time status for the summer session is three (3) credit hours or more. University policy limits a student to 20 hours of on-campus employment per week when classes are in session.

Some part-time positions require students to demonstrate financial need (Federal Work Study), while others are open to all students (regular state employment). Most student employment positions are paid the federal minimum wage. Students are eligible, however, to receive a .25 cent raise for each year of service. The department has discretion to award the pay increase to eligible student employees.

In addition to the on-campus employment positions, the Student Employment office also provides information regarding job opportunities off-campus. These off-campus positions can be viewed within the Gorillas4Hire program. The program also provides students an opportunity to participate in various off-campus jobs such as childcare, clerical assistants and America Reads/YES (tutoring).

The Student Employment office is located in 202 Horace Mann. Students can visit our Web Page at www.pittstate.edu/careers and click on the "Gorillas4Hire" link to register.

**Library Services**
Randy E. Roberts Dean of Library Services and Professor
History, Philosophy and Social Sciences
Room 109- Leonard H. Axe Library
Telephone: (620) 235-4878
Website: http://axe.pittstate.edu/
E-mail: reroberts@pittstate.edu

The mission of Library Services is to provide materials and services that effectively enable individuals in the Pittsburg State University academic community to attain their learning, teaching, research, and service goals. The mission is accomplished through the creation and maintenance of collections, provision of facilities and equipment to enhance learning through the various formats, provision of skilled staff, and efficient use of resources. A further mission is to share resources by cooperating with libraries throughout the region and to be a source of specialized and/or scholarly information for area residents. As the library holds valuable collections of local and University interest, it serves as a unique resource for research in local history.
Information Technology Services

Angela Neria, Chief Information Officer
Room: 153 Kelce
Telephone: 620-235-4603
http://www.pittstate.edu/office/it/
e-mail: aneria@pittstate.edu

Information Technology Services (ITS) at Pittsburg State University furnishes the campus with information technology to assist the community’s informational needs. This is accomplished through campus-wide access and integrated education of the information, services and resources available to the campus community. ITS is committed to assisting the campus community in the appropriate use of information systems in academic and administrative environments.

Academic Computing

ITS provides professional knowledge and skills to faculty, staff and students. The focus is on access, support, training and integration of appropriate computing technology through collaboration between ITS and the campus community. Both Windows and Macintosh systems are widely supported.

Analysis and Programming Services

Pittsburg State University maintains and develops a wide array of applications for administrative and academic use. ITS analyst and systems programmers support over 20 core applications that include Web-based applications for student advising, degree audits, transcripts, and course enrollment. Each is integrated with the campus databases to provide a seamless system to students, faculty and staff.

Communications Services

Pittsburg State University communications are carried over both copper and fiber managed by ITS' professional team of technicians and managers. The phone switch services approximately 3000 phones and voicemail boxes for the campus and residence halls. The campus data network is based on 10 gigabit Ethernet with fiber to all academic and administrative buildings. Wireless access is available in all buildings and public areas across campus, including residential housing.

Gorilla Geeks Help Desk

The ITS Campus Services/Gorilla Geeks Help Desk is responsible for assisting faculty, staff and students with various technology needs. Services available include help with GUS and GusPINs, Pittsburg State University
email, assistance with campus system problems, support of the campus wireless network, and Gorilla Card production.

In addition the center is in place to help students with technology needs that are essential for successful university studies in today’s world. Student services include assistance with educational software packages used on campus including Microsoft OS, Office applications, basic Canvas support and other campus applications; basic help with computer hardware or software problems; wireless connectivity issues; and assist in configuring new computers.

The center is located in 109 Whitesitt and has extended hours during the fall and spring semesters.

**Systems Support**

The ITS infrastructure and security team provides development, maintenance and expansion for campus-wide servers using UNIX, Linux and Windows. Goals set by the Information and Security Group are those of high server reliability and fast access to ensure uninterrupted and quality services for both academic and administrative uses.

**Project Management**

The ITS project management team utilizes project tools and techniques to provide effective strategic planning, leadership and guidance for campus IT projects and processes.

To submit a project request or get more information you can email bherbert@pittstate.edu.

**Ticket Office**

Jill Minneman, Director of Ticket Operations  
Room: Room 137, Weede Building  
Telephone: 620-235-4796  
e-mail: tickets@pittstate.edu  
http://www.pittstate.edu/office/tickets/

The Pittsburg State University Ticket Office is housed in the Athletic Department (Weede Building) and handles all athletics and Bicknell Center ticket operations. The office also serves as the central box office for the university. The Ticket Office is open Monday through Friday, 8:30 a.m. to 4:00 p.m. Students receive tickets to many university sponsored events at no additional cost, including most regular season athletic events, the Performing Arts and Lecture Series, the Solo and Chamber Music Series, and the Pittsburg State University Communication Plays. Students must present a valid student ID to receive their tickets.

**Center for Teaching, Learning and Technology**

Dr. Brenda Frieden, Director  
Room: 332 Hartman Hall  
Telephone: 620-235-4840  
http://www.pittstate.edu/office/tltcenter/index.dot  
e-mail: djacobs@pittstate.edu

The mission of the Center for Teaching, Learning, and Technology is to advance teaching effectiveness and improve student learning by providing an infrastructure of support for the innovative use of both new and traditional educational methods and technology integration. The vision of the Center for Teaching, Learning, and Technology is to develop and share teaching, learning, and technology resources and offer sustainable professional development to promote faculty achievement in teaching excellence. The Center for Teaching, Learning, and Technology supports the academic mission of the University by providing opportunities for professional development, technology integration, and promoting excellence in teaching and enhancement of student learning. The Center for Teaching, Learning, and Technology also provides support for delivery of classes and programs using interactive distance learning technologies.

**Continuing Studies**

Pawan Kahol, Dean  
Room: 112 Russ Hall  
Telephone: 620-235-4223  
e-mail: pkahol@pittstate.edu  
http://www.pittstate.edu/office/graduate/

The Division of Graduate and Continuing Studies, in cooperation with university academic departments, provides courses and educational programs throughout the university’s service region. The Pittsburg State University Kansas City Metro Center serves as an outreach and extension center for academic programs and university activities in the greater Kansas City Metropolitan area.

Individuals interested in any of these services may contact one of the Graduate and Continuing Studies professional staff in Room 112 Russ Hall, telephone 620-235-4223, or visit the Graduate and Continuing Studies web page at http://www.pittstate.edu/office/graduate/. The Kansas City Metro Center is located at 12345 W. 95th Street, Suite 204, in Lenexa, telephone 913-529-4487.
The Graduate School

Dean: Pawan Kahol
Telephone: 620-235-4223
Fax: 620-235-4219
Room: 112 Russ Hall
email: pkahol@pittstate.edu

Graduate School Overview

Pittsburg State University was originally founded as the Kansas State Manual Training Normal School of Pittsburg in 1903. It became a four-year institution in 1913 and was renamed Kansas State Teachers College of Pittsburg in 1932. The Graduate Division was organized in 1929 to confer the Master of Science degree. In 1958 the College was authorized to grant the Specialist in Education degree. One year later the name was changed to Kansas State College of Pittsburg and the Graduate Division was then authorized by the Board of Regents to confer the Master of Arts degree in history, English, and mathematics in addition to the other degrees. Art and communication have been added as options under the Master of Arts degree. The Master of Music was approved in 1968, and the Master of Business Administration in 1974. In 1977 the name of the institution was changed to Pittsburg State University and in 1984 the name of the Graduate Division was changed to the Graduate School.

The Graduate School grants degrees on three levels: the master's degree and the Specialist in Education for study beyond the master's degree and the Doctor of Nursing Practice degree. The master's degree is designed to introduce the student to advanced study and research, with emphasis upon specialized, in-depth, and independent study. In the education professions, graduate study at the master's degree level is designed to increase the competence of teachers and other school personnel. For professionals in fields other than education, the degree objective is to provide additional preparation for careers in the arts and the humanities, science, business and industry, technology management and/or government service. The degree is also designed for those who wish to gain opportunities for cultural advancement in the field of general education. The master's degree is not a terminal degree. It may be a step toward the Specialist in Education degree or toward the achievement of a doctoral degree.

The Specialist in Education degree is a professional degree providing advanced study for educators. The specialist degree program is designed to build upon students' professional and academic experience. A minimum of 30 graduate hours beyond the master's degree is required.

The Doctor of Nursing Practice (DNP) is an advanced level graduate nursing degree program offering the highest level of preparation for nursing practice. The DNP program offers the major, Advanced Practice Nursing, with opportunity for specialization in the advanced practice role, Family Nurse Practitioner in two tracks, the BSN to DNP and MSN to DNP.

In addition to degree programs, the university also provides an opportunity as a non-degree seeking student for those who wish to do graduate study for personal and professional reasons without study toward a degree. Professional development opportunities to satisfy licensure/certification requirements for teachers, psychologists, counselors and other professionals are also available.

Graduate study is under the general supervision of the graduate faculty, who are appointed by the president of the university. The majority of graduate faculty members have Doctor of Philosophy or Doctor of Education degrees, although non-doctoral faculty members especially qualified in specific content fields may be appointed to the graduate faculty.

Graduate Degrees and Options

Master's Degrees Offered

Biology – MS
Business Administration (Accounting) – MBA
Business Administration (General Administration) – MBA
Business Administration (International Business) – MBA
Career & Technical Education (Family & Consumer Sciences) – MS
Career & Technical Education (College Teaching) – MS
Career & Technical Education (Technology Education) – MS
Career & Technical Education (Technical Teacher Education) – MS
Chemistry – MS
Polymer Chemistry - MS
Communication – MA
Education (School Health) - MS
Educational Leadership – MS
Educational Technology (Library Media) – MS
Educational Technology (Technology Integration Specialist) – MS
Engineering Technology- MET
Engineering Technology (Construction Technical) – MET
Engineering Technology (Electronics Technical) – MET
Engineering Technology (Manufacturing Technical) – MET
Engineering Technology (Mechanical Technical) – MET
Engineering Technology (Plastics Technical) – MET
English (Creative Writing) – MA
English (Literature) – MA
English (Professional Writing) - MA
Health, Human Performance & Recreation (General) – MS
Health, Human Performance & Recreation (Human Performance & Wellness) – MS
Health, Human Performance & Recreation (Sport & Leisure Service Management) – MS
History – MA
Human Resource Development (Management & Consulting) – MS
Human Resource Development (Program Development & Delivery) – MS
Mathematics – MS
Music (Choral Conducting) – MM
Music (Instrumental Conducting - Orchestral Emphasis) – MM
Music (Instrumental Conducting - Wind Emphasis) - MM
Music (Instrumental Education) – MM
Music (Vocal Education) – MM
Music (Performance Harpsichord) –MM
Music (Performance Organ) – MM
Music (Performance Piano) – MM
Music (Performance Percussion) – MM
Music (Performance Strings) – MM
Music (Performance Winds) – MM
Music (Vocal Performance) –MM
Nursing (Family Health Administration) – MSN
Nursing (Family Health Education) – MSN
Nursing (Family Nurse Practitioner) – MSN
Nursing (Education) - MSN
Physics – MS
Psychology (Clinical) – MS
Psychology (General) – MS
Reading (Classroom Reading Teacher) – MS
Reading (Reading Specialist Licensure) – MS
School Counseling - MS
Special Education Teaching (K-12 High Incidence/Low Incidence) – MS
Teaching - MA
Teaching (Elementary) – MS
Teaching (English for Speakers of Other Languages) –MS
Teaching (Environmental Education) - MS
Teaching (Secondary) – MS
Teaching (Secondary) – MA
Teaching (Special Education) – MA
Technology - MS
Technology (Automotive Technology) - MS
Technology (Construction Management) – MS
Technology (Graphic Design) - MS
Technology (Graphics Management) – MS
Technology (Information Technology) - MS
Technology (Innovation in Engineering) - MS
Technology (Innovation in Technology) - MS
Technology (Personnel Development) - MS
Technology (Technology Management) – MS

Specialist in Education Degrees Offered:
Advanced Studies in Leadership (General School Administration) - EdS
Advanced Studies in Leadership (Special Education) - EdS
School Psychology - EdS
Workforce Development and Education- EdS

Doctor of Nursing Practice Degrees Offered
BSN to DNP - DNP
BSN to DNP (Nursing Education emphasis) - DNP
MSN to DNP - DNP
MSN to DNP (Nursing Education emphasis) - DNP

Certificates:
Autism Spectrum Disorders (Classic, High Functioning and Early Childhood)
Career and Technical Education Administrator
Communication
District Leadership
English
Mathematics
Reading/Language Arts
School Library
Teaching English to Speakers of Other Languages (TESOL)
Technology Integration

Master’s Program Options
There are three alternative experiences at the master’s degree level. Not all departments offer all three alternatives. Students should consult their major department concerning the availability of options.

Option I: Thesis
The student must present and defend a satisfactory thesis according to the Requirements and Guidelines for the Preparation of a Master's Thesis manual. The thesis option requires a minimum of 30 credit hours, with no fewer than 15 hours in courses numbered 800-899 and
at least 24 hours in courses numbered 700-899. Enrollment in 3 to 6 hours of Research and Thesis course work is required.

Option II: Applied Research

The student will complete research related to a specific problem or will complete a specific advanced project. This option includes creative and aesthetic efforts such as performances, exhibits, or creative writing. The applied research option requires a minimum of 32 hours of coursework with no fewer than 15 credit hours in courses numbered 800-899 and at least 26 hours in courses numbered 700-899. Enrollment in 3 to 6 hours of Research Problem, Methods of Research or Research Seminar course work is required.

Option III: Course Work

The student will complete course work that demonstrates evidence of advanced work in an area of concentration. Departments will require evidence of competency through activities such as research papers, portfolios, practica, internships, comprehensive exams or other individual work. Students should check with their major department for specific requirements for the coursework option. This option requires a minimum of 32 hours of coursework, with no fewer than 15 hours in courses numbered 800-899 and at least 26 hours in courses numbered 700-899.

Specialist in Education Degrees Offered

The degree of Specialist in Education (Ed.S) is the highest degree offered by the university. A minimum of 30 graduate credit hours beyond the master's degree is required, although frequently the specialist degree program may require additional hours. The Specialist in Education degree is available with the following majors:

- Advanced Studies in Leadership (General School Administration or Special Education)
- School Psychology
- Workforce Development and Education

Specialist in Education Program Options

The Specialist in Education degree requires a minimum of 30 credit hours of graduate study, of which 21 or more credit hours shall be earned in courses open only to graduate students (800-900) level courses, with at least nine hours in 900 level courses. Other courses numbered below 800 may be taken subject to general graduate regulations, but the degree program must consist primarily of an 800 and above sequence of study and practice of research skills. Independent study in seminars and study and practice of practica are also required. No 500-600 level courses will be applicable to the program. A maximum of nine hours of graduate credit may be transferred from another institution, provided such credit is earned at an accredited institution that grants degrees above the master's level. More than 30 hours may be required for the degree.

There are two alternative experiences at the specialist degree level.

Option I: Thesis

Option I requires the completion of four to six hours in Special Research Project 990, in which students must conduct and report in written form the results of field studies or research projects in their discipline. The project is a major part of the degree program; all course work and other experiences are designed to contribute to the research. An advisory committee consisting of three members, with one member from outside the college will be appointed to evaluate the final research project for each student.

Each member of the committee shall receive copies of the reading draft of the project at least five weeks before the date of the proposed graduation. The committee, along with the major advisor, will constitute the examining committee and will determine whether the format of the examination is oral or written or both. The advisory committee must receive final copies of the research project at least one week before conducting the examination. The major advisor will schedule the examination after consulting other members of the committee and will act as chairperson of the examination. Examination sessions of the research project are open to other members of the graduate faculty.

If the committee is not unanimous in its decision to approve the research and/or their grade recommendations, the Dean of Graduate and Continuing Studies shall have final authority to accept or reject the research project.

Option II: Applied Research

Option II places less emphasis upon formal research and correspondingly more emphasis upon activities related to the professional objectives of the student. Option II requires a three hour course in some aspect of research rather than the Special Research Project 990. The nature of the research course will be determined by the
particular department involved. The student will be assigned a major advisor, who with the Dean of Graduate and Continuing Studies will formally approve the student’s total degree program. Students under either option will be given a comprehensive examination; however, under Option II, there will be no advisory committee conducting an oral examination. The comprehensive examinations are administered by the department involved.

**Doctor of Nursing Practice with a Major in Advanced Practice Nursing**

The Doctor of Nursing Practice (DNP) is an advanced level graduate nursing degree program offering the highest level of preparation for nursing practice. The DNP program offers the major, Advanced Practice Nursing, with opportunity for specialization in the advanced practice role, Family Nurse Practitioner in two tracks, the BSN to DNP and MSN to DNP. An emphasis in nursing education will be an elective option. At completion of the program, graduates will possess the terminal degree for nursing practice and will be prepared to function as expert clinicians, nurse leaders and/or clinical nursing faculty. They will be eligible to sit for national certification in their specialty and will be eligible to make application for licensure as advanced practice registered nurses (APRNs). Please consult the Irene Ransom Bradley School of Nursing for admission and other requirements.

**Graduate Admission**

Persons with the proper credentials may be admitted to the Graduate School. Admission requires a bachelor’s degree with a grade-point average of at least a 2.7 on a 4.0 scale. Applicants must complete a Graduate School Application. Also, an official transcript from a regionally accredited institution or from an international institution with equal accreditation from the appropriate government agencies must be submitted to the Pittsburg State University Graduate School. The transcript must provide a listing of the individual course titles, credit hours and assigned grade and, if completed at the time of application, the degree earned and date conferred.

Each academic area of study may also have additional requirements for admission. To determine if your program of interest has additional requirements, go to the Graduate School website (www.pittstate.edu/cgs) and click on Graduate Programs, then select the program of your choice.

**Degree Seeking Students**

Students applying for admission to a degree program must meet the standards set by the Graduate School, the academic department and the degree program. Students can be admitted conditionally or fully. Fully admitted students meet all of the application requirements and do not have any deficiencies. Conditionally admitted students are admitted on probation pending the fulfillment of deficiencies, grade point average, or incomplete application requirements. Students admitted as conditional must meet all requirements and be fully admitted by the completion of 12 graduate hours.

**Non-Degree Seeking Students**

Students who are not seeking to complete a graduate degree may request admission as a non-degree seeking student. Students admitted under this category must meet the standards set by the Graduate School. Non-degree seeking students who later want to become degree seeking may have academic work completed as non-degree seeking approved by their academic advisor to be applied towards their degree program.

**International Students**

International students must complete a Graduate International Application, submit official transcripts from previous colleges/universities attended and proof of Language Proficiency. To satisfy the proof of Language Proficiency, international students whose native language is not English must submit official, acceptable test scores for either the TOEFL or IELTS or PTE. Students can also choose to complete our Intensive English Program (IEP). Most graduate programs accept IEP to meet the language requirement. Students should review information at their department’s website to verify that they accept IEP in place of a language test. The minimum test scores required for admission are different depending on the program the student is applying to. Students can check degree program TOEFL/IELTS/PTES requirements at the Graduate School website (www.pittstate.edu/cgs) under International Graduate Student Admission then click on the TOEFL or IELTS link.

Admission requirements and procedures for international students are subject to change according to the recognized needs of students and the university. All international students are required by the U.S. Citizenship and Immigration Services (USCIS) to be full-time students.
The USCIS requires graduate students to complete at least 9 semester hours each fall and spring semester to maintain their student status.

**Senior Graduate Students**

Seniors at Pittsburg State University may apply to take graduate work and receive graduate credit during their last semester of their undergraduate program. To qualify as a Senior Graduate, students must be admitted to the Graduate School, in good academic standing in their undergraduate work, and have completed the undergraduate paperwork to graduate in the same semester as Senior Graduate status is approved. Senior Graduates cannot exceed nine hours of graduate work and 16 overall hours of credit. Students requesting to be considered as Senior Graduates must apply to the Dean of the Graduate School.

**Candidacy and Graduation**

**Candidacy**

Students must apply for candidacy to the degree they are seeking after taking twelve hours in their degree program. In order to be admitted to candidacy, students must be fully admitted and be in good academic standing. To establish their candidacy, students should meet with their advisor and agree to a schedule of courses for the remainder of the degree program. Candidacy is completed by the student's advisor in the Graduate System in GUS and approved by the advisor, student, chair, and Graduate school. Should a candidacy need to be altered, changes can also be made in the Graduate System and will require new approvals. Meeting the requirements of candidacy is the responsibility of the graduate student. Students who do not apply for candidacy at the appropriate time in their program may be required to take additional courses. Candidacy must be completed and approved by the advisor, student, chair, and Graduate school before the student will be allowed to petition for graduation.

**Additional Degree Requirements**

In addition to required coursework, most degree programs also have other requirements. Examples of the additional degree requirements include: comprehensive exam, portfolio, oral presentations, theatre and music performances, oral exams, and the completion of research resulting in writing and defending a thesis. Some of these requirements are determined by the degree option the student chooses to complete. These options and additional requirements are determined at the time the student and the academic advisor complete the student's candidacy form.

**Petition for Graduate Degree**

Each candidate for a graduate degree must petition for graduation in the Graduate System in GUS and pay graduation fees. In order to be included in the commencement program, students must petition for graduation by the date listed as the final day to apply for degrees on the university calendar each semester. All students are required to petition and pay graduation fees even if the student is not participating in graduation ceremonies.

**Awarding of Degrees**

Graduate degrees are dated and awarded at the end of the fall, spring, and summer terms. Students will not be approved for graduation until all coursework has been completed and all additional degree requirements have been fulfilled. Commencement ceremonies are held in May for students receiving degrees at the end of the spring and summer semesters and in December for students graduating at the end of the fall semester.

**Academic Honors**

Graduate students who have earned a cumulative grade point average of 4.00 in their degree program at the time of graduation will graduate with the designation Graduate Dean Academic Honors. These graduates are distinguished by wearing a double gold cord at the commencement ceremony. The Graduate Dean Academic Honors designation will appear on the student's transcript.

**Graduate Student Involvement**

Graduate Student Advisory Council (GSAC)

The mission of the GSAC is threefold: 1) To facilitate communication among graduate students, faculty, and administrators. This includes such items as graduate programs, graduate student services, and other relevant issues related to the graduate population. 2) To promote professional development and interaction among the graduate population through social events, academic events, and specialized workshops. 3) To act as a source of information and guidance for current and incoming graduate students. Any graduate student may and is encouraged to attend the GSAC meetings. The GSAC shall include one or two graduate student representatives from each graduate department at
Pittsburg State University (dependent on number of programs and students). These representatives will be the voice of their respective departments at the meeting and shall be appointed or elected by each department before the first meeting in September. Any concerns regarding the departments and the programs they offer will be brought forth by the representatives and those individuals will be responsible for reporting information back to the department. Each representative shall have one vote at Council meetings. No member may hold more than one voting position in the Council at any given time. Additional information regarding the GSAC may be found at the Graduate School web site (www.pittstate.edu/cgs) under For Students, then Graduate Student Advisory Council (GSAC).

**Graduate Assistantships**

Pittsburg State University offers graduate assistantships in most academic departments and some administrative departments. Assistantships are available as teaching, research and administrative. Students interested in applying for an assistantship must contact each department to complete an application. Every student hired as a teaching assistant will be required to have a completed Spoken English Assessment form. All International students hired as a teaching assistant will also be required to meet our language proficiency requirement by earning a specific score on the Speaking portion of the TOEFL. Students in graduate assistant positions are required to enroll in at least six hours of required graduate degree course work each semester of their appointment.

**Academic Policy**

**General Information**

**Academic Advising**

Non-degree seeking students are assigned to the Dean of Graduate and Continuing Studies for advisement. Students admitted to a degree program are assigned a departmental advisor at the time of admission to the program. It is essential that students meet early with their advisor to plan their program of study.

**Change of Major**

Students who would like to change their major must apply for admission to the new major by completing a new graduate school application. Courses previously taken will be evaluated as to appropriateness in the new program.

**Thesis Requirements & Protection of Human Research**

**Thesis Requirements**

Students choosing to pursue Option I must present and defend a satisfactory thesis according to the Requirements and Guidelines for the Preparation of a Master's Thesis manual, which may be found at the Graduate School website (www.pittstate.edu/cgs) under More Information, Thesis Information. Students should consult this manual for important information throughout the thesis process, as well as the Thesis Manual (at the same link above) for the technical aspects of writing their thesis. Important dates for submission throughout the thesis process can also be found at the above link. The forms required to complete a thesis are available online through the Graduate System in GUS. The instructions for completing these forms are found in the above mentioned Thesis Requirements and Guidelines web site.

**Protection of Human Research**

Federal policy requires that all research involving human subjects be approved by an Institutional Review Board to ensure that the rights and welfare of human subjects are properly protected.

Faculty and students conducting research involving human subject participants must have approval by the department and Pittsburg State University's Committee for the Protection of Human Research. Information regarding the types of research that will require approval can be found at the Graduate School website (www.pittstate.edu/cgs) under Research and Grants, then Research Involving Human Subjects. Application and approval must be completed prior to any research being conducted. Students completing a thesis must also seek approval from the Committee. Information and application materials can also be found at the above link.

**Course Expectations**

**Enrollment in Courses**

Courses numbered 700 to 899 are master's level graduate courses. Courses numbered 900 or above are open only to students pursuing a Specialist in Education degree or a Doctor of Nursing Practice degree. Courses at 500, 600 or 700 level may not be applied toward a graduate degree unless graduate fees have been paid.

Courses numbered 500 to 699 may be used on a master's candidacy with permission from both the
student's academic advisor and the Dean of Graduate and Continuing Studies. A department may require more of these courses in addition to the degree requirements, but no more than six hours may be used toward the degree. No courses below 500 may apply to a master's degree and no 500 to 699 courses may apply to a Specialist in Education degree or a Doctor of Nursing Practice degree.

**Accelerated Programs**

The Accelerated Master's Degree allows undergraduate students to begin taking graduate coursework in their senior year and thus combine components of the undergraduate and graduate curricula. To be in an accelerated master's program students must apply and be admitted to the program by their Department and the Graduate School before enrolling in any courses which will apply to the graduate degree.

The following limitations apply on all accelerated master's degree programs at Pittsburg State University:

1. Students must have a minimum 3.25 overall grade point average to apply for the program.

2. Students may take up to twelve (12) hours of graduate credit during the two semesters of their senior year.

3. Students may count up to nine (9) hours of graduate level coursework on both their bachelor's and master's degrees.

4. Students must obtain a minimum of a "B" for coursework counted under items 2 and 3 above.

**Definition of Hybrid Course**

Hybrid Courses provide a minimum of 50% of the instruction (course material, discussion, evaluation) on-line through the learning management system. This does not include courses that are by appointment, independent study, or do not provide a learning experience on-line. These courses must have established classroom (face-to-face) meeting dates listed in the Schedule of Classes at the time the course is listed. Courses will have the media fee charged to the student.

**Definition of On-Line Course**

On-Line Courses provide 100% of the instruction (course material, discussion, evaluation) on-line through the learning management system and do not require attendance on campus. This does not include courses that are by appointment, independent study, or do not provide a learning experience on-line. These courses will have the media fee charged to the student.

**Typical Graduate Academic Loads / Course Overload**

The typical load for full-time graduate students is twelve credit hours. A student who wishes to enroll in more than sixteen hours must receive special permission from the chair of their department. Students in graduate assistant positions are required to enroll in at least six required graduate credit hours each semester of their appointment.

**Credit Used for a Second Emphasis**

Students can earn a second emphasis within a major with approval from the academic department and by meeting all admission and conditional requirements. Students must complete the second emphasis' requirements as legislated and listed in the University Catalog. The second emphasis will be noted on the student's transcript if it is completed prior to graduating with the first emphasis.

**Credit Used for a Second Graduate Degree**

Students seeking a second graduate degree may be allowed to use a maximum of nine credit hours from a completed graduate degree for courses required in the second degree. If courses from a previous degree are being used to substitute for required courses, the department can assign other courses to be completed or can reduce the number of credit hours required for the degree.

**Credit by Transfer**

A maximum of nine hours of graduate credit may be transferred from another accredited graduate school and applied to a program of study with the approval of the student's department. Only work graded B or higher may be transferred. A course in which a grade of Pass was earned cannot be used as a transfer course. No courses used for an undergraduate degree at Pittsburg State University or from another institution may be transferred to Pittsburg State University to count towards a master's degree. Pittsburg State University does not accept graduate level credit for life/work experience as transfer graduate credit. For the Specialist in Education degree programs, course work for transfer or waiver must be from an institution offering post-master's degree study.
Validation of Previous Work

Students requesting to use Pittsburg State University course work completed more than six years from the time of the student's last semester before graduating must submit the course for review to their academic department. Departments may choose to accept the course; require validation of the course by interview, test, or other means of evaluation; require the student to re-enroll and repeat the course; or deny the course.

Grade Expectations

Course Grade Requirements

Degree-seeking graduate students are required to maintain a grade point average of 3.0. A student may earn a maximum of six hours of C grade work. Grades of D or F are considered failing grades and do not count toward a degree. The Letter P is used to indicate participation in a course, in which a passing grade was assigned. With the approval of the academic advisor, a student may use up to six hours of course work with a grade of P for their candidacy. Students are expected to make academic progress toward the completion of the required coursework. A student who has earned grades of Incomplete might not be allowed to enroll in future courses until previous coursework has been completed.

Incomplete / In-Progress Work

Incomplete grade is to be utilized in rare instances when a student is unable to complete a course due to circumstances beyond his/her control. The student must have successfully completed a majority of the course work to be eligible. The instructor must state clearly in writing what is needed to successfully complete the course. This information will be provided via GUS to both the student and the department chairperson. The plan cannot require the student to repeat the course as an option for removing an “IN” grade. Instructor must provide the grade the student would earn if no additional work is completed by entering a grade of “IB” “IC” “ID” “IF”, calculating the missing work as zero grades. The second letter supplies the default grade that will replace the “IN” grade at the end of one full subsequent fall or spring semester if no additional work is completed. If the student opts to graduate prior to the allowed deadline for removal of an incomplete, the default grade will be recorded, and the student may not complete the work to achieve a higher final grade after graduation. A grade of In Progress “IP” may be given when a student is enrolled in a course that requires the student to engage in projects that extend past the end of the semester. Such courses must be legislated and approved by the Graduate Council for use of the “IP” grade. As with incomplete grades, an In Progress not removed within one year shall be regarded as a failure and the “IP” grade will be changed to an “F” and included in the computation of the student’s GPA. Courses that do not automatically change to an F after a year will, if still Incomplete or In Progress after two years of no enrollment in graduate courses, be regarded as permanently Incomplete and will receive the designation “IX”. Once a grade of “IX” has been posted for a course, a student wishing to earn credit for that course will be required to re-enroll in it and to pay the required tuition and fees.

Academic Standing

A student who has not maintained a 3.0 grade point average, has earned six hours of C grade work, and/or has failed a course with a grade of D or F can be placed on Academic Alert status. A student who has been placed on Academic Alert can be required to enroll in fewer hours for the following semesters, be required to repeat courses, not be eligible for an assistantship and/or be dismissed from the Graduate School. Students on Academic Alert Status will be monitored each semester to confirm that they are improving their academic standing.

A student who has not maintained a 3.0 grade point average, earned more than six hours of C grade work, and/or has failed a course with a grade of D or F can be dismissed from the Graduate School by the Graduate School Dean. The Graduate School Dean, after consultation with the student’s academic advisor, may terminate a student’s graduate status because of unsatisfactory academic performance. Students who have been Academically Dismissed can not be re-admitted to a graduate degree program for a period of two years.

Academic Honesty Committee

The Academic Honesty Committee is convened under the auspices of the Provost. It is composed of nine members. The Faculty Senate Executive Committee is responsible for appointing five of these members and one member will be appointed by Dean of the Graduate School. All must be full-time members of the teaching faculty. Members chosen by the Executive Committee serve staggered two-year terms. The Faculty Senate Executive Committee and Dean of the Graduate School
will make their appointments at the beginning of the academic year. In addition to its six faculty members, the Academic Honesty Committee shall include three student members. Two (2) students of senior status shall be appointed by the Student Government Association. An additional (1) student shall be appointed by the Graduate Student Advisory Council. The students from both organizations will be appointed annually and at the beginning of the Fall semester.

**Graduate Assistantship (GA) Academic Standing**

Graduate Assistants who have not maintained a 3.0 grade point average, have earned six hours of C grade work, and/or have failed a course with a grade of D or F may be removed from any remaining GA appointment. Students removed from their GA appointment due to these reasons will not be eligible to hold a GA position again until their GPA is 3.0 or above.

**Repeated Courses**

Graduate courses in which a C or lower grade has been earned may be repeated for the purpose of raising the grade. A total of six hours may be repeated with no course repeated more than once. When a repeated course is allowed, the grade earned on the second attempt will be used in computing the GPA. The original grade will remain on the transcript, but will be marked as repeated.
College of Arts and Sciences
Dean: Mary Carol Pomatto, Dean
Room: 311 Grubbs Hall
Telephone: 620-235-4685
Fax: 620-235-4686
Email: http://www.pittstate.edu/arts-and-sciences/contact.dot

website: http://www.pittstate.edu/arts-and-sciences/

Mission

Through over fifty undergraduate major, minor, and graduate programs in eleven academic departments, the Irene Ransom Bradley School of Nursing, extensive participation in the University General Education Program, and three interdisciplinary programs, the College of Arts and Sciences prepares students for contemporary global citizenship as life-long learners and significant contributors to communities- local, regional, and global.

The College of Arts and Sciences is central to the academic mission of Pittsburg State University through our graduate and undergraduate programs, partnership with the College of Education to offer secondary teaching credentials, over 90% of the General Education Program, and foundation courses for most majors and minors across the entire University. Programs in the College span a wide variety of fields including the arts (art, music, theatre), humanities (English, history, philosophy), social sciences (geography, justice studies, political science, sociology), and natural sciences (biology, chemistry, math, and physics). Examples of our professional programs include nursing, social work, broadcasting, and advertising/public relations, along with pre-professional opportunities in medicine, other health-related fields, and law.

Arts and Sciences is the largest of four colleges at the University providing majors for more than half of all Pittsburg State students. Faculty are dedicated and student-centered teachers, active artists, performers, practitioners, and scholars, as well as major contributors to their professions and communities.

The College of Arts and Sciences provides various facilities and activities for campus and community enrichment: music and theatre programs in the new Bicknell Family Center for the Arts, the Kelce Planetarium in Yates Hall, the Museum of Art with a large gallery in the Bicknell Family Center for the Arts and the Krug as well as University galleries in Porter Hall, the Early Childhood Pre-School Lab, the Nature Research environmental education extension programs, and state-of-the-art Polymer Science research laboratories, just to name a few of the avenues where we impact the campus and region.

Departments

Art
Biology
Chemistry
Communication
English and Modern Languages
Family and Consumer Sciences
History, Philosophy, and Social Sciences
Mathematics
Military Science
Music
Irene Ransom Bradley School of Nursing
Physics
Art

Chairperson: James M. Oliver, Jr., Interim Chairperson
Professor(s): S. Portico Bowman, James M. Oliver, Jr.
Associate Professor(s): Malcolm E. Kucharski, Rhona E. McBain, Li-Lin Tseng*
Assistant Professor(s): Emmalyn R. Gennis
Instructors: Janet Lewis, Charity Woodard
*Graduate Faculty

Room 101 Porter Hall
Telephone: 620-235-4302
Fax: 620-235-4303
http://www.pittstate.edu/department/art/
E-mail: art@pittstate.edu

Undergraduate

Bachelor of Fine Arts Degree with a Major in Art
Bachelor of Fine Arts Degree with an Emphasis in Education
Minor in Art (Non-Teacher Certification Minor)
Minor in Illustration and Visual Storytelling

MISSION STATEMENT

• to provide an exceptionally high quality education for those students committed to learning in the visual arts by providing a relevant, integrated and comprehensive curriculum that expands their artistic, intellectual and professional abilities through developing knowledge and skills in art (history, theory, pedagogy, and studio),

• to instill a greater understanding and visual literacy of the arts and humanities within the Pittsburg State University general student body, PK-12 school systems and the broader community by creating opportunities to engage in the world of visual arts through curricular, interdisciplinary and campus-based programs, along with directed outreach to the four state region,

• to provide the Pittsburg State University campus and community with exhibits of contemporary art and lecture presentations in order to further the artistic understanding of all constituents in the academic setting,

• to contribute significantly to advancement of the artistic disciplines by having active professional faculty, who are established at the local, regional, state, national and international levels.

General Information

The Department of Art at Pittsburg State University specializes in the preparation of visual artists and teachers by strongly emphasizing foundational studies. Drawing and art history are at the core, media, technique, and concept have their focus at the mid level, and applications at the upper level. While our BFA includes four emphases: 2D Art, 3D Art, Illustration & Visual Storytelling, and Art Education; courses correspond with the mediums of Drawing, Painting, Photography, Ceramics, Sculpture and Jewelry. Within those broad designations you will find classes such as Concept Design, Comics, Drawing with Ink, Scientific Illustration, Tile Making, Fabrication Techniques, iPad for the Artist, Mural Painting, Small-scale Metalsmithing, along with a wealth of Art Practices courses that prepare students for the professional art world.

The BFA is considered fundamental preparation for graduate degrees in the studio arts and art history.

Individuals planning to teach art in the public schools (K-12) participate in these areas as well as a comprehensive art education curriculum.

Special Department Requirements

All Department of Art undergraduate degree programs require that a cumulative GPA of 3.00 be earned in all art courses.

All BFA students with an emphasis in a studio art area are required to take 10 credit hours of professional art practices courses. This includes Art 412 Senior Art Seminar and Art 490 Senior Exhibit. These courses and resulting exhibition is only for senior art majors.

Departmental Minors

To minor in art, students must complete 21 credit hours of art. Prospective students should request advice from the Department Chair and Faculty concerning course selections.

Art minors do not meet certification requirements to teach art in the state of Kansas. Those wanting a single course to expand their understanding of the concepts and applications of art should choose ART 311 Art Education, for three credit hours. This course is not
sufficient for the art certification at either the elementary or secondary level.

**Bachelor of Fine Arts Degree with a Major in Art**

This degree is designed for those interested in professional preparation in visual art. It is a foundation for careers in fine art, and commercial art. The basic art studio and art history experiences focus on creative visual thinking, art concepts, technical skills that are essential for entry into art related fields.

Course content and instructional strategies are organized such that aesthetic sensitivity is fostered across a variety of disciplinary platforms to allow students to translate concepts into tangible images that communicate in a continually evolving world and find purpose in a wide range of professional outlets.

**Required Art (61 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 100</td>
<td>Visual Thinking: 2D Processes</td>
<td>3</td>
</tr>
<tr>
<td>ART 178</td>
<td>Introduction to the Visual Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 200</td>
<td>Visual Thinking: 3D Processes</td>
<td>3</td>
</tr>
<tr>
<td>ART 205</td>
<td>Introduction to Visual Storytelling</td>
<td>3</td>
</tr>
<tr>
<td>ART 220</td>
<td>Art of Photography I</td>
<td>3</td>
</tr>
<tr>
<td>ART 233</td>
<td>Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 236</td>
<td>Perspective Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 250</td>
<td>Color Theory and Application</td>
<td>3</td>
</tr>
<tr>
<td>ART 266</td>
<td>Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>ART 277</td>
<td>Painting I</td>
<td>3</td>
</tr>
<tr>
<td>ART 288</td>
<td>Introduction to Art History I</td>
<td>3</td>
</tr>
<tr>
<td>ART 289</td>
<td>Introduction to Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ART 325</td>
<td>Art Practices II: Presentation of Artist Works</td>
<td>1</td>
</tr>
<tr>
<td>ART 350</td>
<td>Art Practices III: Studio Critique I (Sophomore Level)</td>
<td>1</td>
</tr>
<tr>
<td>ART 433</td>
<td>Structural Anatomy and Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 434</td>
<td>Advanced Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 450</td>
<td>Research Methods and Writing for Artists</td>
<td>3</td>
</tr>
<tr>
<td>ART 550</td>
<td>Art Practices V: Studio Critique II (Junior Level)</td>
<td>1</td>
</tr>
<tr>
<td>ART 573</td>
<td>Business and Self-Promotion for Artists</td>
<td>3</td>
</tr>
<tr>
<td>ART 650</td>
<td>Art Practices VI: Studio Critique III (Senior Level)</td>
<td>1</td>
</tr>
<tr>
<td>ART 676</td>
<td>Exhibition Design and Development</td>
<td>3</td>
</tr>
<tr>
<td>ART 688</td>
<td>History of Modern Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 689</td>
<td>Contemporary Issues in Art</td>
<td>3</td>
</tr>
</tbody>
</table>

**Other Required (6 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIT 142</td>
<td>Raster Graphics Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 240</td>
<td>Page Layout Software</td>
<td>3</td>
</tr>
</tbody>
</table>

**Choose one area of emphasis areas from the list below:**

**2D Studio Art Emphasis (18 hours should be selected from the following courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 333:</td>
<td>Drawing III</td>
<td>3</td>
</tr>
<tr>
<td>ART 336:</td>
<td>Drawing With Ink</td>
<td>3</td>
</tr>
<tr>
<td>ART 342:</td>
<td>iPad for the Artist</td>
<td>3</td>
</tr>
</tbody>
</table>

**3D Studio Art Emphasis (18 hours should be selected from the following courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 333:</td>
<td>Drawing III</td>
<td>3</td>
</tr>
<tr>
<td>ART 351:</td>
<td>Printmaking, Papermaking, Bookarts and the Letterpress</td>
<td>3</td>
</tr>
<tr>
<td>ART 363:</td>
<td>Fabrication Techniques</td>
<td>3</td>
</tr>
<tr>
<td>ART 365:</td>
<td>Ceramics: Handbuilding</td>
<td>3</td>
</tr>
<tr>
<td>ART 367:</td>
<td>Ceramics: Wheel Throwing</td>
<td>3</td>
</tr>
<tr>
<td>ART 430:</td>
<td>Automotive: Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 434:</td>
<td>Advanced Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 461:</td>
<td>Casting and Moldmaking</td>
<td>3</td>
</tr>
<tr>
<td>ART 467:</td>
<td>Ceramics: Sculptural</td>
<td>3</td>
</tr>
<tr>
<td>ART 469:</td>
<td>Soft Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 470:</td>
<td>Topics in Art (____)</td>
<td>1-3</td>
</tr>
<tr>
<td>ART 472:</td>
<td>Life Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>ART 525:</td>
<td>Internships in Studio and Creative Industry</td>
<td>1-3</td>
</tr>
<tr>
<td>ART 551:</td>
<td>Art Education in Cultural Institutions</td>
<td>3</td>
</tr>
<tr>
<td>ART 558:</td>
<td>Art for the Body</td>
<td>3</td>
</tr>
<tr>
<td>ART 561:</td>
<td>Small-Scale Metalsmithing</td>
<td>3</td>
</tr>
<tr>
<td>ART 563:</td>
<td>Toy Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 565:</td>
<td>Site Specific Installation and Public Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>MECET 121:</td>
<td>Engineering Graphics I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Illustration and Visual Storytelling Emphasis (18 hours should be selected from the following courses):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 336:</td>
<td>Drawing With Ink</td>
<td>3</td>
</tr>
<tr>
<td>ART 338:</td>
<td>Hand-Lettering for Illustration and Comics</td>
<td>3</td>
</tr>
<tr>
<td>ART 342:</td>
<td>iPad for the Artist</td>
<td>3</td>
</tr>
<tr>
<td>ART 346:</td>
<td>Traditional Watercolor</td>
<td>3</td>
</tr>
<tr>
<td>ART 351:</td>
<td>Printmaking, Papermaking, Bookarts and the Letterpress</td>
<td>3</td>
</tr>
<tr>
<td>ART 430:</td>
<td>Automotive: Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 434:</td>
<td>Advanced Figure Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 435:</td>
<td>Black and White Photographic Processes</td>
<td>3</td>
</tr>
<tr>
<td>ART 436:</td>
<td>Concept Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 448:</td>
<td>Portrait Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 470:</td>
<td>Topics in Art (____)</td>
<td>1-3</td>
</tr>
</tbody>
</table>
ART 472: Life Sculpture ................................................................. 3
ART 525: Internships in Studio and Creative Industry .................. 1-3
ART 526: Internship in Museum Studies and Gallery Practice ....... 1-3
ART 530: Editorial Illustration ....................................................... 3
ART 532: Comics: Theory and Practice ......................................... 3
ART 534: Scientific Illustration .................................................... 3
ART 563: Toy Design ................................................................. 3

**Required Art Courses (83 hours)**

**General Education Courses* (44-49 hours)**

*General Education Requirements for All Baccalaureate Degrees.* Major course work satisfies three hours of the fine arts area of the general education requirement.

Total hours for Bachelor of Fine Arts Degree with a Major in Art (127-132 hours)

**Bachelor of Fine Arts Degree with an Emphasis in Education**

This emphasis is designed for those interested in professional preparation for teaching art. The program meets the State of Kansas art teacher certification requirements for elementary and secondary levels (K-12) of public instruction. Basic art studio, history, and pedagogy courses make up one of the three components of the degree. The other two components consist of a required group of general education courses and a required group of professional education courses.

**Required Art Courses (63 hours)**

ART 100: Visual Thinking: 2D Processes ....................................... 3
ART 178: Introduction to the Visual Arts ....................................... 3
ART 200: Visual Thinking: 3D Processes ....................................... 3
ART 217: Crafts I ....................................................................... 3
ART 220: Art of Photography I ..................................................... 3
ART 222: Jewelry Design I ............................................................ 3
ART 233: Drawing I ................................................................... 3
ART 244: Ceramics I ................................................................. 3
ART 250: Color Theory and Application ....................................... 3
ART 266: Sculpture I ................................................................. 3
ART 277: Painting I ................................................................. 3
ART 288: Introduction to Art History I ......................................... 3
ART 289: Introduction to Art History II ........................................ 3
ART 379: Art Education: Elementary .......................................... 3
ART 441: Art Education: Theory and Practice ............................ 3
ART 479: Art Education: Secondary ............................................ 3
ART 688: History of Modern Art .................................................. 3
ART 689: Contemporary Issues in Art ......................................... 3

**Upper Level Elective selected from (3 hours)**

ART 322: Jewelry Design II ......................................................... 3
ART 344: Ceramics II ................................................................. 3

**Professional Education Requirements* (32 hours)**

Students must file an application for admission to teacher education before they will receive credit for pre-professional laboratory experiences in the BSED program. See appropriate section of this catalog for teacher education requirements and procedures. Clarification of requirements for teacher certification should be sought from the Director of Teacher Education, College of Education.

PSYCH 263: Developmental Psychology ...................................... 3
PSYCH 357: Educational Psychology .......................................... 3
EDUC 261: Explorations in Education ........................................... 3
SPED 510: Overview of Special Education .................................. 3
EDUC 620: Methods and Materials for Academic Literacy .......... 3

**Professional Semester**

EDUC 458: Methods and Curriculum .......................................... 3
EDUC 462: Secondary and Middle Level Education .................... 2
EDUC 464: Foundations of Measurement and Evaluation .......... 2
EDUC 475: Supervised Teaching in the Elementary School .......... 3
EDUC 482: Supervised Teaching in the Secondary School .......... 5
ART 579: Supervised Student Teaching and Follow-Up of Teachers ......................................................................................... 2

* See Admission to Professional Semester for professional education grade point requirements for admission to the professional semester.

Must be admitted to Teacher Education to enroll in PSYCH 357 and EDUC 520.

Students must request dual certification assignments (elementary and secondary) when signing up for professional semester and taking EDUC 475 and EDUC 482.

**General Education Requirements* (44-49 hours)**

* General Education Requirements for Students Preparing to Teach Secondary School. Also see scholastic achievement requirements for admission to teacher education for secondary teaching majors Scholastic Achievement in Common Core.

Two Studio Electives selected from (6 hours)

ART 155: Printmaking and Paper Arts ......................................... 3
ART 236: Perspective Drawing .................................................... 3
ART 320: Art of Photography II ................................................... 3
ART 377: Painting II ................................................................. 3
Professional Education Requirements (32 hours)

Required Art Courses (73 hours)

Total hours for Bachelor of Fine Arts Degree with an Emphasis in Education (149-154 hours)

Minor in Art (Non-Teacher Certification Minor)

Those seeking aesthetic or art historical knowledge, visual thinking and/or technical art skills to complement or expand their major courses of study should choose a minor in art.

Required Courses (21 hours)

ART 100: Visual Thinking: 2D Processes ............................................ 3
ART 200: Visual Thinking: 3D Processes ............................................ 3
ART 233: Drawing I .............................................................................. 3

Art History (6 hours)

ART 288: Introduction to Art History I .................................................. 3
and ART 289: Introduction to Art History II ......................................... 3
or ART 688: History of Modern Art ...................................................... 3
and ART 689: Contemporary Issues in Art ............................................ 3

• Electives in studio courses (6 hours)

Minor in Illustration and Visual Storytelling

Programs within graphic and imaging technology, communication, family and consumer science, interior design, technical education, and public relations will find the Illustration and Visual Storytelling minor a useful compliment.

Illustration and Visual Storytelling (21 hours)

ART 100: Visual Thinking: 2D Processes ............................................ 3
ART 205: Introduction to Visual Storytelling ......................................... 3
ART 233: Drawing I .............................................................................. 3
ART 236: Perspective Drawing ............................................................ 3
ART 250: Color Theory and Application ............................................... 3
ART 688: History of Modern Art ......................................................... 3
or ART 689: Contemporary Issues in Art ............................................ 3

One Elective selected from the following

ART 336: Drawing With Ink ................................................................. 3
ART 338: Hand-Lettering for Illustration and Comics ......................... 3
ART 342: iPad for the Artist ............................................................... 3
ART 346: Traditional Watercolor .......................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress ....... 3
ART 420: Alternative and Historical Photographic Processes ............. 3
ART 425: Photographic Illustration and Mixed Media .................... 3
ART 433: Structural Anatomy and Figure Drawing .......................... 3
ART 436: Concept Design ................................................................. 3
ART 470: Topics in Art (____) .............................................................. 1-3
ART 530: Editorial Illustration ............................................................ 3
ART 532: Comics: Theory and Practice ............................................. 3
ART 534: Scientific Illustration ........................................................... 3
Biology

Chairperson: Dixie L. Smith*
Professor(s): Joseph A. Arruda*, Peter A. Chung*, James T. Dawson*, Virginia C. Rider*,**, Daniel M. Zurek*
Associate Professor(s): Phillip A. Harries*, Hermann F. Nonnenmacher*, Mandy M. Peak*, Dixie L. Smith*, Neil Snow*
Assistant Professor(s): Christine Brodsky, Andrew George*, Anuradha Ghosh*, James E. Whitney*
Instructors: Delia Lister, Neal D. Schmidt*

*Graduate Faculty
**University Professor

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E-mail: biology@pittstate.edu

Undergraduate

Bachelor of Arts Degree with a Major in Biology
Bachelor of Science Degree with a Major in Biology
Bachelor of Science Degree with a Major in Biology: Pre-Medical and Pre-Dental Emphasis
Bachelor of Science Degree with a Major in Biology: Pre-Physical Therapy Emphasis
Bachelor of Science Degree with a Major in Biology: Cellular and Molecular Biology Emphasis
Bachelor of Science Degree with a Major in Biology: Field Biology and Environment Emphasis
Bachelor of Science Degree with a Major in Biology: Ecology and Organismic Biology Emphasis
Bachelor of Science Degree with a Major in Biology: Plant Taxonomy
Bachelor of Science Degree with a Major in Biology: Plant Physiology/Plant Molecular Biology
Bachelor of Science in Education Degree with a Major in Biology
Bachelor of Science in Medical Technology
Minor in Biology
Minor in General Science
Minor in Natural History
Minor in Cell Biology

Graduate

Master of Science Degree with a Major in Biology

Students may select study from a variety of emphasis areas in the following general program areas: health and laboratory sciences, field biology and environment, plant sciences, and biology education.

Aside from these program areas, you can graduate under the general biology curriculum and custom select courses to meet your interests. Your choices can lead to a variety of possible biology careers or graduate training based on your interests.

Bachelor of Arts Degree with a Major in Biology

A student completing a minimum of 9 hours of one foreign language is eligible for the Bachelor of Arts (Biology Major) degree.

Bachelor of Science Degree with a Major in Biology

General Requirements for the Bachelor of Science Degree Applicable to Biology

General Education courses must meet the requirements approved by the General Education Committee or approved substitutes. Check individual curricula and consult your advisor for acceptable substitutes. The eight hours of natural science requirements are satisfied by course requirements in the biology curricula (BIOL 211 Principles of Biology I, CHEM 215/216 General Chemistry I/Laboratory).

A total of 45 hours, which includes a 20-hour minor, must be taken outside of the department. Although other minors may be acceptable (check with your advisor), a chemistry or physical science minor is recommended.

At least 20 of the 45 university required upper division hours must be in biology.

Students with strong backgrounds in high school mathematics are urged to substitute MATH 150 Calculus I for MATH 113 College Algebra.

What follows are suggested curricula for areas of emphasis within the department's program areas. Always consult with the department and your advisor for current information.

General Education Requirements* (38-42 hours)

Basic Skills (12 hours)
General Education Electives (26-30 hours)
**General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).**

**Biology Core (40 hours)**
BIOL 211: Principles of Biology I ..................................................... 4
BIOL 212: Principles of Biology II ................................................. 4
BIOL 311: Cell Biology .................................................................... 3
BIOL 322: Genetics ......................................................................... 3
and BIOL 323: Genetics Laboratory .............................................. 2
BIOL 330: Principles of Ecology .................................................. 3
BIOL 371: General Microbiology ................................................ 3
and BIOL 372: General Microbiology Laboratory ..................... 2
BIOL 699: Senior Seminar and Assessment ................................ 1

**Upper Division Physiology (choose one)**
BIOL 656: Human Physiology ......................................................... 3
and BIOL 657: Human Physiology Laboratory .......................... 2
BIOL 675: Microbial Physiology ................................................. 3
and BIOL 676: Microbial Physiology Laboratory ..................... 2
BIOL 685: Plant Physiology ....................................................... 3
and BIOL 686: Plant Physiology Laboratory ............................. 2

- Biology electives (10 hours)

**Required from other departments (10 hours)**
CHEM 215: General Chemistry I .................................................. 3
and CHEM 216: General Chemistry I Laboratory ..................... 2
CHEM 320: Introductory Organic Chemistry ............................ 3
or CHEM 325: Organic Chemistry I ......................................... 3
and CHEM 326: Organic Chemistry Laboratory ...................... 2

- Minor (10 hours if chemistry or physical science is chosen) (10-20 hours)
- Other Electives (10-26 hours)

**Bachelor of Science Degree with a Major in Biology: Pre-Medical and Pre-Dental Emphasis**

**Health and Laboratory Sciences**

Pursue interests in pre-medicine (prepare for entry into medical, osteopathic, and dental schools or graduate medical research programs), pre-physical therapy (prepare for entry into further specialization in physical and occupational therapy), cell and molecular biology (prepare for graduate school or entry-level employment in biotechnology), medical technology (prepare for employment in hospitals or private labs). Notes: The department also offers pre-professional work in optometry and veterinary medicine. Consult the department chairperson for details on these programs.

General Education Requirements* (38-42 hours)

**Basic Skills (12 hours)**

**General Education Electives (26-30 hours)**

- Sciences** (0 hours)
- Social Studies (3 hours)
- Political Studies (3 hours)
- Producing and Consuming (5-6 hours)
- Fine Arts and Aesthetic Studies (2-3 hours)
- Cultural Studies (3 hours)
- Health and Well-Being (4-6 hours)
- Human Heritage (6 hours)

*Courses must be taken from the list approved by the General Education Committee. See General Education Requirements for All Baccalaureate Degrees.

**Required from other departments (10 hours)**

CHEM 215: General Chemistry I .................................................. 3
and CHEM 216: General Chemistry I Laboratory ..................... 2
CHEM 320: Introductory Organic Chemistry ............................ 3
or CHEM 325: Organic Chemistry I ......................................... 3
and CHEM 326: Organic Chemistry Laboratory ...................... 2

- Minor (10 hours if chemistry or physical science is chosen) (10-20 hours)
- Other Electives (10-26 hours)

TOTAL hours for Bachelor of Science Degree with a Major in Biology (124 hours)
BIOL 330: Principles of Ecology ............................................................... 3
BIOL 371: General Microbiology ............................................................. 3
and BIOL 372: General Microbiology Laboratory .................................. 2
BIOL 699: Senior Seminar and Assessment .............................................. 1

Upper Division Physiology (choose one)
BIOL 656: Human Physiology .................................................................... 3
and BIOL 657: Human Physiology Laboratory ........................................... 2
BIOL 675: Microbial Physiology ............................................................... 3
and BIOL 676: Microbial Physiology Laboratory ....................................... 2
BIOL 685: Plant Physiology ...................................................................... 3
and BIOL 686: Plant Physiology Laboratory .............................................. 2

Other Required Biology (3 hours)
BIOL 105: Pre-Health Orientation I ............................................................ 1
BIOL 205: Pre-Health Orientation II .......................................................... 1
BIOL 305: Pre-Health Orientation III ......................................................... 1

Biology Electives (suggested courses follow) (7 hours)
BIOL 490: Honors Research in Biology ....................................................... 1-3
BIOL 550: Advanced Cellular and Molecular Biology ............................... 3
BIOL 570: Pathogenic Bacteriology ........................................................... 3
and BIOL 571: Pathogenic Bacteriology Laboratory .................................... 2
BIOL 572: General Virology ..................................................................... 3
BIOL 660: Human Anatomy and Dissection ............................................. 5
BIOL 671: Immunology .......................................................................... 3
and BIOL 672: Immunology Laboratory ................................................... 2
  • Other electives approved by advisor

Minor (10 hours if Chemistry or Physical Science chosen) (10-20 hours)

Required from other departments (30 hours)

CHEM 215: General Chemistry I ............................................................... 3
and CHEM 216: General Chemistry I Laboratory ....................................... 2
CHEM 225: General Chemistry II .............................................................. 3
and CHEM 226: General Chemistry II Laboratory .................................... 2
CHEM 325: Organic Chemistry I ............................................................... 3
and CHEM 326: Organic Chemistry Laboratory ....................................... 2
CHEM 335: Organic Chemistry II .............................................................. 3
and CHEM 336: Organic Chemistry II Laboratory ..................................... 2

Choose from (10 hours)

Choose from College Physics I and II or Engineering Physics I and II

PHYS 100: College Physics I ................................................................. 4
and PHYS 130: Elementary Physics Laboratory I .................................... 1
PHYS 101: College Physics II ................................................................. 4
and PHYS 131: Elementary Physics Laboratory II .................................... 1
PHYS 104: Engineering Physics I ............................................................ 4
and PHYS 130: Elementary Physics Laboratory I .................................... 1
PHYS 105: Engineering Physics II .......................................................... 4
or PHYS 131: Elementary Physics Laboratory II .................................... 1

Other Electives (0-6 hours)
Total hours for Bachelor of Science Degree with a Major in Biology: Pre-Medical and Pre-Dental Emphasis (124 hours)

Bachelor of Science Degree with a Major in Biology: Pre-Physical Therapy Emphasis

Health and Laboratory Sciences

Pursue interests in pre-medicine (prepare for entry into medical, osteopathic, and dental schools or graduate medical research programs), pre-physical therapy (prepare for entry into further specialization in physical and occupational therapy), cell and molecular biology (prepare for graduate school or entry-level employment in biotechnology), medical technology (prepare for employment in hospitals or private labs). Note: The department also offers pre-professional work in optometry and veterinary medicine. Consult the department chairperson for details on these programs.

General Education Requirements * (38-42 hours)

Basic Skills** (12 hours)

General Education Electives (26-30 hours)

Sciences*** (0 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming**** (5-6 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well-Being (4-6 hours)

Human Heritage# (6 hours)

*Courses must be taken from the list approved by the General Education Committee. See General Education Requirements for All Baccalaureate Degrees.

**Use MATH 143 Elementary Statistics.

***General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

****Use CIS 130 Computer Information Systems.

#Use PHIL 105 Ethics.
Biology Core (30 hours)
BIOL 211: Principles of Biology I ................................................. 4
BIOL 212: Principles of Biology II ................................................. 4
BIOL 311: Cell Biology ................................................................. 3
BIOL 322: Genetics .................................................................. 3
and BIOL 323: Genetics Laboratory ........................................... 2
BIOL 330: Principles of Ecology ................................................... 3
BIOL 371: General Microbiology .................................................. 3
and BIOL 372: General Microbiology Laboratory ....................... 2
BIOL 656: Human Physiology ...................................................... 3
and BIOL 657: Human Physiology Laboratory ......................... 2
BIOL 699: Senior Seminar and Assessment .................................. 1

Other Required Biology (10 hours)
BIOL 660: Human Anatomy and Dissection .................................. 5
- Other Biology Electives (5 hours)

Required From Other Departments (36 hours)
CHEM 215: General Chemistry I ................................................... 3
and CHEM 216: General Chemistry I Laboratory ......................... 2
CHEM 225: General Chemistry II ................................................. 3
and CHEM 226: General Chemistry II Laboratory ..................... 2
CHEM 320: Introductory Organic Chemistry .............................. 3
and CHEM 326: Organic Chemistry Laboratory .......................... 2
HHP 260: First Aid and CPR ...................................................... 2
MATH 122: Plane Trigonometry ................................................. 3
PHYS 100: College Physics I ....................................................... 4
and PHYS 130: Elementary Physics Laboratory I ....................... 1
PHYS 101: College Physics II ...................................................... 4
and PHYS 131: Elementary Physics Laboratory II .................... 1
PSYCH 263: Developmental Psychology .................................... 3
PSYCH 571: Abnormal Psychology ............................................ 3

Minor and other electives (4-10 hours)
Physical Science minor is included in above hours. Other minors will need more hours.

TOTAL hours for Bachelor of Science Degree with a Major in Biology: Pre-Physical Therapy Emphasis (124 hours)

NOTE: This curriculum will meet the requirements at Kansas University and Wichita State University for admission to the Master of Science program.

Other professional school requirements include: three recommendations, personal interview, grade point average of 3.00+, Graduate Record Exam, and brief internship.

Additional Requirements for Wichita State University
Choose three hours after meeting Pittsburg State University general education requirements from: art, music, theatre, literature, history, foreign language, or philosophy.

Choose three hours after meeting Pittsburg State University general education requirements from: geography, women's studies, psychology, political science, or sociology.

Required to complete HHP 464 Physiology of Exercise, 3 hours.

Other recommended course areas:
- business/management, physiology/psychology, kinesiology, muscle/nerve physiology, biochemistry, embryology.

Recommended minors include: psychology, recreation, physical science (built-in), chemistry.

Bachelor of Science Degree with a Major in Biology: Cellular and Molecular Biology Emphasis

The program listed below is a suggested curriculum for students pursuing cellular and molecular biology. The program meets all of the requirements for a baccalaureate degree with a major in biology and minors in chemistry and physical science at Pittsburg State University. This program will provide training to prepare a student for employment in the biotechnology field, forensics, or pharmaceutical development upon graduation, or pursuit of further studies at the graduate level.

General Education Requirements* (38-42 hours)
Basic Skills** (12 hours)
General Education Electives (26-30 hours)
Sciences*** (0 hours)
Social Studies (3 hours)
Political Studies (3 hours)
Producing and Consuming (5-6 hours)
Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well-Being (4-6 hours)
Human Heritage (6 hours)
*Courses must be taken from the list approved by the General Education Committee. See General Education Requirements for All Baccalaureate Degrees.

**Math requirement suggested MATH 150 Calculus I.

***General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

**Biology Core (30 hours)**
BIOL 211: Principles of Biology I ......................................................... 4
BIOL 212: Principles of Biology II ......................................................... 4
BIOL 311: Cell Biology ......................................................................... 3
BIOL 322: Genetics .............................................................................. 3
and BIOL 323: Genetics Laboratory ...................................................... 2
BIOL 330: Principles of Ecology ........................................................... 3
BIOL 371: General Microbiology .......................................................... 3
and BIOL 372: General Microbiology Laboratory ............................... 2
BIOL 699: Senior Seminar and Assessment ....................................... 1

**Upper Division Physiology (choose one)**
BIOL 656: Human Physiology ............................................................. 3
and BIOL 657: Human Physiology Laboratory ...................................... 2
BIOL 675: Microbial Physiology .......................................................... 3
and BIOL 676: Microbial Physiology Laboratory ................................... 2
BIOL 685: Plant Physiology ................................................................. 3
and BIOL 686: Plant Physiology Laboratory ......................................... 2

**Other Required Biology (7-9 hours)**
BIOL 550: Advanced Cellular and Molecular Biology .......................... 3
BIOL 551: Introduction to Recombinant DNA Techniques Laboratory .......................... 3
BIOL 602: Topics in Biology (___) ...................................................... 1-3

* At least one credit hour is required for BIOL 602 and research must be done with faculty member.

**Other Biology Electives chosen from (11 hours)**
BIOL 570: Pathogenic Bacteriology ...................................................... 3
and BIOL 571: Pathogenic Bacteriology Laboratory .............................. 2
BIOL 572: General Virology ................................................................. 3
BIOL 650: Developmental Biology ....................................................... 3
BIOL 671: Immunology ..................................................................... 3
and BIOL 672: Immunology Laboratory .............................................. 2
BIOL 790: Evolution ........................................................................... 3

**Required From Other Departments (33 hours)**
CHEM 215: General Chemistry I .......................................................... 3
and CHEM 216: General Chemistry I Laboratory ................................... 2
CHEM 225: General Chemistry II ........................................................ 3
and CHEM 226: General Chemistry II Laboratory ............................... 2
CHEM 325: Organic Chemistry I .......................................................... 3
and CHEM 326: Organic Chemistry Laboratory ................................... 2
CHEM 335: Organic Chemistry II ......................................................... 3
and CHEM 336: Organic Chemistry II Laboratory ............................... 2

CHEM 575: Biochemistry I .................................................................. 3

**Choose from (10 hours)**
Choose from College Physics I and II or Engineering Physics I and II
PHYS 100: College Physics I ................................................................ 4
and PHYS 130: Elementary Physics Laboratory I ............................... 1
PHYS 101: College Physics II ............................................................. 4
and PHYS 131: Elementary Physics Laboratory II ............................... 1
PHYS 104: Engineering Physics I ......................................................... 4
and PHYS 130: Elementary Physics Laboratory I ............................... 1
PHYS 105: Engineering Physics II ....................................................... 4
or PHYS 131: Elementary Physics Laboratory II ............................... 1

**Unrestricted electives (to meet 124 hour minimum) (0-2 hours)**
TOTAL hours for Bachelor of Science Degree with a Major in Biology: Cellular and Molecular Biology Emphasis (124 hours)

**Bachelor of Science Degree with a Major in Biology: Field Biology and Environment Emphasis**

Field Biology and Environment

The Field Biology and Environment emphasis is designed for students interested in the practice of conservation, fish or wildlife management, interpretation, pollution control, and environmental protection. The successful student may apply for entry-level jobs leading to careers working for state and federal agencies, engineering consulting firms, environmental organizations, and others. Alternatively, students may apply to graduate schools in natural resources management, environmental biology, or environmental science.

General Education Requirements* (38-42 hours)

Basic Skills (12 hours)

General Education Electives (26-30 hours)

Sciences** (0 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming (5-6 hours)

Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well-Being (4-6 hours)
Human Heritage (6 hours)

*Courses must be taken from the list approved by the General Education Committee. See General Education Requirements for All Baccalaureate Degrees.

**General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

Biology- Basic (14-19 hours)
BIOL 111: General Biology ................................................................. 3
and BIOL 112: General Biology Laboratory ......................................... 2
BIOL 211: Principles of Biology I ......................................................... 4
BIOL 212: Principles of Biology II ......................................................... 4
BIOL 322: Genetics ............................................................................ 3
and BIOL 323: Genetics Laboratory ..................................................... 2
BIOL 699: Senior Seminar and Assessment ........................................ 1

BIOL 111/112 General Biology/Laboratory is waived with ACT Comprehensive > 23 or permission of department.

Biology- Intermediate (4 hours)
BIOL 330: Principles of Ecology ......................................................... 3
BIOL 331: Principles of Ecology Laboratory ........................................ 1

Required Biology Emphasis (9 hours)
BIOL 304: Soil Ecology ....................................................................... 3
BIOL 313: Principles of Conservation .................................................. 3
BIOL 548: Taxonomy of Vascular Plants ............................................. 3

Select 21 hours from the following groups (but at least 3 hours must be taken from groups 1, 2 and 3

Group 1 Animals
BIOL 533: Ichthyology ....................................................................... 4
BIOL 534: Herpetology ....................................................................... 4
BIOL 535: Ornithology ........................................................................ 4
BIOL 536: Mammalogy ..................................................................... 3
BIOL 561: General Entomology .......................................................... 3

Group 2 Ecology
BIOL 515: Stream Ecology ............................................................... 4
BIOL 633: Limnology ......................................................................... 4
BIOL 639: Terrestrial Field Ecology ................................................... 4

Group 3 Management
BIOL 615: Environmental Protection ............................................... 3
BIOL 634: Fisheries Management ..................................................... 5
BIOL 635: Wildlife Ecology and Management .................................... 4

Group 4 Plant Biology
BIOL 538: Aquatic Plants ................................................................. 2
BIOL 641: Identification of Woody Plants ........................................... 2
BIOL 781: Freshwater Algae .............................................................. 3
BIOL 788: Mycology .......................................................................... 3

Group 5 Other Field Biology and Environment
BIOL 502: Topics in Environmental Biology (____) ......................... 1-3
BIOL 537: Regional Natural History .................................................. 3
BIOL 602: Topics in Biology (____) .................................................... 1-3
BIOL 667: Animal Parasitology .......................................................... 3

Other Required (28-37 hours)
CHEM 215: General Chemistry I .......................................................... 3
and CHEM 216: General Chemistry I Laboratory .............................. 2
CHEM 320: Introductory Organic Chemistry ..................................... 3
and CHEM 326: Organic Chemistry Laboratory ................................ 2
GEOG 303: Geographic Information Systems I ................................ 4
PHYS 166: Physical Geology .............................................................. 3
and PHYS 168: Physical Geology Laboratory ..................................... 1

- Minor (Physical Science recommended) (6 hours)
- Other electives (4-13 hours)

TOTAL hours for Bachelor of Science Degree with a Major in Biology: Field Biology and Environment Emphasis (124 hours)

Bachelor of Science Degree with a Major in Biology: Ecology and Organismic Biology Emphasis

Ecology and Organismic Biology
The Ecology and Organismic Biology emphasis is designed for students interested in ecology, environment, and organismic biology (zoology, botany, mycology). The curriculum is flexible in order to meet the interests of students who wish a greater degree of specialization in ecology and organismic biology and are planning future research in these areas on the graduate level.

General Education Requirements* (38-42 hours)

Basic Skills (12 hours)
General Education Electives (26-30 hours)

Sciences** (0 hours)
Social Studies (3 hours)
Political Studies (3 hours)
Producing and Consuming (5-6 hours)
Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well-Being (4-6 hours)
Human Heritage (6 hours)

*Courses must be taken from the list approved by the General Education Committee, See General Education Requirements for All Baccalaureate Degrees.

**General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

Biology- Basic (14-19 hours)
BIOL 111: General Biology ................................................................. 3
and BIOL 112: General Biology Laboratory ...................................... 2
BIOL 211: Principles of Biology I ...................................................... 4
BIOL 212: Principles of Biology II .................................................... 4
BIOL 322: Genetics .......................................................................... 3
and BIOL 323: Genetics Laboratory ................................................ 2
BIOL 699: Senior Seminar and Assessment ..................................... 1

BIOL 111/112 General Biology/Laboratory is waived with ACT Comprehensive >23 or permission of department.

Biology- Intermediate (12 hours)
BIOL 311: Cell Biology .................................................................... 3
BIOL 330: Principles of Ecology ....................................................... 3
BIOL 331: Principles of Ecology Laboratory .................................... 1
BIOL 371: General Microbiology ..................................................... 3
and BIOL 372: General Microbiology Laboratory ......................... 2

Required Biology Emphasis (9 hours)
BIOL 304: Soil Ecology .................................................................... 3
BIOL 313: Principles of Conservation ............................................ 3
BIOL 548: Taxonomy of Vascular Plants ........................................ 3

Select one course from each of the following groups 1-3 (8-9 hours)

Group 1 Animals
BIOL 533: Ichthyology ..................................................................... 4
BIOL 534: Herpetology ..................................................................... 4
BIOL 535: Ornithology ..................................................................... 4
BIOL 536: Mammalogy ................................................................... 3
BIOL 561: General Entomology ....................................................... 3

Group 2 Plants
BIOL 538: Aquatic Plants ................................................................ 2
BIOL 641: Identification of woody Plants ....................................... 2
BIOL 781: Freshwater Algae ............................................................. 3

BIOL 788: Mycology ........................................................................ 3

Group 3 Ecology
BIOL 502: Topics in Environmental Biology (___) ....................... 1-3
BIOL 515: Stream Ecology .............................................................. 4
BIOL 633: Limnology ....................................................................... 4
BIOL 639: Terrestrial Field Ecology ................................................ 4

Other Biology Hours (9 hours)

Other Required (27-31 hours)
CHEM 215: General Chemistry I ..................................................... 3
and CHEM 216: General Chemistry I Laboratory ......................... 2
CHEM 320: Introductory Organic Chemistry .................................. 3
and CHEM 326: Organic Chemistry Laboratory ........................... 2
GEOG 303: Geographic Information Systems I ............................. 4
PHYS 160: Physical Geology ........................................................... 3
and PHYS 165: Physical Geology Laboratory ................................. 1

- Minor (Physical Science recommended) (6 hours)
- Other electives (3-7 hours)

TOTAL hours for Bachelor of Science Degree with a Major in Biology: Ecology and Organismic Biology Emphasis (124 hours)

Bachelor of Science Degree with a Major in Biology: Plant Taxonomy

Plant Sciences

Pursue interests in plant ecology or plant taxonomy (prepare for graduate studies or employment related to training) or plant physiology/plant pathology (prepare for careers in industry or for graduate research).

General Education Requirements* (38-42 hours)

Basic Skills (12 hours)

General Education Electives (26-30 hours)

Sciences** (0 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming (5-6 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well-Being (4-6 hours)
Human Heritage (6 hours)

*Courses must be taken from the list approved by the General Education Committee, See General Education Requirements for All Baccalaureate Degrees.

**General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

Biology Core (30 hours)

BIOL 211: Principles of Biology I ......................................................... 4
BIOL 212: Principles of Biology II .......................................................... 4
BIOL 311: Cell Biology ......................................................................... 3
BIOL 322: Genetics ............................................................................. 3
and BIOL 323: Genetics Laboratory .................................................. 2
BIOL 330: Principles of Ecology .......................................................... 3
BIOL 371: General Microbiology .......................................................... 3
and BIOL 372: General Microbiology Laboratory .............................. 2
BIOL 685: Plant Physiology ................................................................. 3
and BIOL 686: Plant Physiology Laboratory ....................................... 2
BIOL 699: Senior Seminar and Assessment ...................................... 1

Other Required Biology (7 hours)

BIOL 382: Plant Diversity ................................................................... 3
BIOL 639: Terrestrial Field Ecology .................................................... 4

Electives (9 hours)

Students choose a minimum of nine hours of electives in consultation with their advisor.

BIOL 404: Plant Pathology ................................................................. 3
BIOL 602: Topics in Biology (____) ..................................................... 1-3
BIOL 788: Mycology ........................................................................... 3
MATH 143: Elementary Statistics ...................................................... 3
PHYS 160: Physical Geology ............................................................... 3

Required from other departments (10 hours)

CHEM 215: General Chemistry I ......................................................... 3
and CHEM 216: General Chemistry I Laboratory .............................. 2
CHEM 320: Introductory Organic Chemistry ..................................... 3
or CHEM 325: Organic Chemistry I .................................................... 3
and CHEM 326: Organic Chemistry Laboratory ............................... 2

Minor (10-20 hours)

A student is required to minor in a field outside biology. The choice should be made in consultation with the student's major advisor (10-20 hours)

Other Electives (6-20 hours)

TOTAL hours for Bachelor of Science Degree with a Major in Biology: Plant Taxonomy (124 hours)

Bachelor of Science Degree with a Major in Biology: Plant Physiology/Plant Molecular Biology

Plant Sciences

Pursue interests in plant ecology or plant taxonomy (prepare for graduate studies or employment related to training) or plant physiology/plant pathology (prepare for careers in industry or for graduate research).

General Education Requirements* (38-42 hours)

Basic Skills (12 hours)

General Education Electives (26-30 hours)

Sciences** (0 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming (5-6 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well-Being (4-6 hours)

Human Heritage (6 hours)

*Courses must be taken from the list approved by the General Education Committee, See General Education Requirements for All Baccalaureate Degrees.

**General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

Biology Core (30 hours)

BIOL 211: Principles of Biology I ......................................................... 4
BIOL 212: Principles of Biology II .......................................................... 4
BIOL 311: Cell Biology ......................................................................... 3
BIOL 322: Genetics ............................................................................. 3
and BIOL 323: Genetics Laboratory .................................................. 2
BIOL 330: Principles of Ecology .......................................................... 3
BIOL 371: General Microbiology .......................................................... 3
and BIOL 372: General Microbiology Laboratory .............................. 2
BIOL 685: Plant Physiology ................................................................. 3
and BIOL 686: Plant Physiology Laboratory ....................................... 2
BIOL 699: Senior Seminar and Assessment ...................................... 1
Other Required Biology (12 hours)
BIOL 382: Plant Diversity ...................................................... 3
BIOL 550: Advanced Cellular and Molecular Biology .............. 3
BIOL 551: Introduction to Recombinant DNA Techniques
Laboratory .................................................................................. 3
BIOL 730: Evolution ..................................................................... 3

Required from other departments (10 hours)
CHEM 215: General Chemistry I ................................................. 3
and CHEM 216: General Chemistry I Laboratory ....................... 2
CHEM 320: Introductory Organic Chemistry ............................ 3
or CHEM 325: Organic Chemistry I ............................................ 3
and CHEM 326: Organic Chemistry Laboratory ......................... 2

Minor (10-20 hours)
A student is required to minor in a field outside biology. The choice should be made in consultation with the student's major advisor (10-20 hours)

Other Electives (5-24 hours)
TOTAL hours for Bachelor of Science Degree with a Major in Biology: Plant Physiology/Plant Molecular Biology (124 hours)

Bachelor of Science in Education Degree with a Major in Biology

Biology Education
Pursue an interest in secondary education (prepare for that all-important job of educating high school minds).

General Education Requirements for Students Preparing to Teach* (38-42 hours)

Basic Skills (12 hours)

General Education Electives (26-30 hours)

Sciences** (0 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming (5-6 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well-Being (4-6 hours)

Human Heritage (6 hours)

*Courses must be taken from the list of general education degree requirements for students preparing to teach secondary school. See General Education Requirements for Students Preparing to Teach Secondary School. Also see scholastic achievement requirements on common core courses for admission to teacher education for secondary teaching majors Scholastic Achievement in Common Core.

**General education sciences are satisfied by course requirements in biology (BIOL 211) and physical science (CHEM 215/216).

Biology Requirements (38 hours)
BIOL 211: Principles of Biology I .............................................. 4
BIOL 212: Principles of Biology II ............................................. 4
BIOL 257: Anatomy and Physiology .......................................... 3
and BIOL 258: Anatomy and Physiology Laboratory .................. 2
BIOL 300: Assisting in the Biology Laboratory .......................... 1
BIOL 322: Genetics ..................................................................... 3
and BIOL 323: Genetics Laboratory ......................................... 2
BIOL 330: Principles of Ecology ................................................ 3
BIOL 371: General Microbiology ............................................. 3
and BIOL 372: General Microbiology Laboratory ..................... 2
BIOL 479: Techniques for Teaching Biology .............................. 3

- Biology electives (including 3 hour field course) (8 hours)

BIOL 479 Techniques for Teaching Biology can only be taken after admission to Teacher education.

Professional Education Requirements* (12 hours)
EDUC 261: Explorations in Education ........................................ 3
EDUC 520: Methods and Materials for Academic Literacy .......... 3
PSYCH 263: Developmental Psychology ..................................... 3
PSYCH 357: Educational Psychology .......................................... 3
SPED 510: Overview of Special Education ................................. 3

*See Admission to Professional Semester for professional education grade point requirements.

EDUC 520 Methods and Materials for Academic Literacy and PSYCH 357 Educational Psychology must have admission to Teacher Education to enroll.

Professional Semester (17 hours)
BIOL 579: Supervised Student Teaching and Follow-Up of Teachers ............................................................................. 2
EDUC 458: Methods and Curriculum ......................................... 3
EDUC 462: Secondary and Middle Level Education .................... 2
EDUC 464: Foundations of Measurement and Evaluation ........... 2
EDUC 480: Supervised Teaching in the Secondary School .......... 3
EDUC 482: Supervised Teaching in the Secondary School .......... 5
**Minor Requirements* (20 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 215: General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 216: General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 320: Introductory Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 326: Organic Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 100: College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 130: Elementary Physics Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>or PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

- Additional hours chosen from chemistry or physics (5-11 hours)

*This curriculum assumes a physical science minor. Other minors are available. Persons interested in biology as a second teaching field should contact the Bachelor of Science in Education advisor in the Department of Biology or the Director of Teacher Education, Hughes Hall, for specific requirements.

PHYS 171/172 Physical Science/Laboratory hours do not count toward 20 hour physical science minor total.

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University. See [Admission to Professional Semester](#) for professional education grade point requirements.

TOTAL hours for Bachelor of Science in Education Degree with a Major in Biology (128-132 hours)

**Bachelor of Science in Medical Technology**

General Education Requirements* (38-42 hours)

Basic Skills (12 hours)

General Education Electives (26-30 hours)

- Sciences** (0 hours)
- Social Studies (3 hours)
- Political Studies (3 hours)
- Producing and Consuming (5-6 hours)
- Fine Arts and Aesthetic Studies (2-3 hours)
- Cultural Studies (3 hours)
- Health and Well-Being (4-6 hours)

- Human Heritage (6 hours)

*Courses must be taken from the list approved by the General Education Committee. See [General Education Requirements for All Baccalaureate Degrees](#).

**General education sciences are satisfied by course requirements in biology (BIOL 211) and chemistry (CHEM 215/216).

**Biology Core (34 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 211: Principles of Biology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 212: Principles of Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 257: Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 258: Anatomy and Physiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 322: Genetics</td>
<td>2</td>
</tr>
<tr>
<td>and BIOL 323: Genetics Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 371: General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 372: General Microbiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 570: Pathogenic Bacteriology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 571: Pathogenic Bacteriology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 671: Immunology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 672: Immunology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 699: Senior Seminar and Assessment</td>
<td>1</td>
</tr>
</tbody>
</table>

**Required From Chemistry (20 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 215: General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 216: General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 225: General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 226: General Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 325: Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 326: Organic Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 445: Analytical Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 446: Analytical Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>or CHEM 575: Biochemistry I Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 576: Biochemistry I Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

**Clinical Year (30 hours)**

At a school of medical technology affiliated with Pittsburg State University.

**Other Electives (0-2 hours)**

TOTAL (minimum hours required) for Bachelor of Science in Medical Technology (124 hours)

Note: Only four of the 94 required hours in the first three years may be in ROTC or physical education activity courses. The student should consult the medical technology advisor for the determination of additional electives.

A student must complete the first three years (94 hours) at an accredited college or university with the last 30 of these hours being in residence at Pittsburg State University. The fourth year must be completed in a NAACLS accredited school of medical technology affiliated with this university. This university is currently...
affiliated with the following schools: L. E. Cox Medical Center, Springfield, Missouri; Mercy Hospital, Joplin, Missouri; St. Luke’s, Kansas City, Missouri; North Kansas City Hospital, Kansas City, Missouri. Other clinical programs are open to PSU students. The student should consult the medical technology advisor for details.

**Minor in Biology**

**Biology (20 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 257: Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 258: Anatomy and Physiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 322: Genetics</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 323: Genetics Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 371: General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 372: General Microbiology Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

Those persons interested in biology as a second teaching option should contact the Bachelor of Science in Education advisor in the Department of Biology or the Director of Teacher Education, Hughes Hall, for specific requirements.

**Minor in Cell Biology**

**Cell Biology (24 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 311: Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 322: Genetics</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 323: Genetics Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 371: General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 372: General Microbiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 550: Advanced Cellular and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 551: Introduction to Recombinant DNA Techniques</td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

**One of the following groups of Biology electives (5 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 656: Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 657: Human Physiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 675: Microbial Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 676: Microbial Physiology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 685: Plant Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 686: Plant Physiology Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

This minor is intended to provide biology courses for students pursuing a Chemistry major with an emphasis in biochemistry. Those persons interested in this minor should contact the Department of Biology for information.

**Minor in General Science**

**General Science (21 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 215: General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 216: General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 100: College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 130: Elementary Physics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 160: Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS 175: Descriptive Astronomy</td>
<td>3</td>
</tr>
</tbody>
</table>

- Biology electives (3 hours)

Those persons interested in teaching sciences in addition to Biology may find this minor of value in preparation for licensure exams. However, licensure exams for teaching various sciences vary widely and therefore other minors should be considered as well. Students should seek advisement from the Bachelor of Science in Education advisor in the Department of Biology or the Director of Teacher Education, Hughes Hall, for more detailed recommendations.

**Minor in Natural History**

**Natural History (17 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 313: Principles of Conservation</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 330: Principles of Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 537: Regional Natural History</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Those persons interested in the above minor should contact Dr. Cynthia Ford or the Department of Biology for information.

**Master of Science Degree with a Major in Biology**

Students who begin work in biology for the degree of Master of Science must have completed a minimum of 25 hours of acceptable undergraduate courses in biology. These should include fundamental courses in botany, ecology, zoology, genetics, microbiology, and physiology. A cumulative total of 13 hours of chemistry, including organic chemistry is required. However, a student may apply certain senior-graduate or graduate level chemistry on the degree requirements upon the recommendation of the advisor. In addition, it is advisable that a student have work in physics and geology. While a knowledge of a foreign language and of computing is not required, it is strongly advised.
Admission to the department is contingent upon: (1) admission to the Pittsburg State University Graduate School and (2) admission to the department. Admission to the department requires an advisor’s acceptance of a prospective master’s student. Students must contact individual faculty to discuss degree programs and admission. Avoid generic correspondence to all faculty – focus on those whose research area is one in which you are interested and be clear about your experience and interest in that area. Take some time to learn about the faculty member’s work. Obtain admission information and application forms from the Pittsburg State University Office of Graduate and Continuing Studies and the Department of Biology.

Three options are available in biology:

**Option I: Thesis.** A minimum of 30 hours including BIOL 801 Introduction to Research, at least one hour in BIOL 800 Seminar and BIOL 890 Research and Thesis (4-6 hours) is required. All full-time graduate students are required to attend seminar. With the approval of the advisor and chairperson, up to nine hours may be taken outside the Department of Biology.

- Each student shall have a 3-person committee composed of (1) the student’s Thesis advisor, acting as Chair, (2) a member of the department, and (3) a faculty member from outside the department.
- All Full-time graduate students are required to attend graduate seminar when offered.
- A written thesis is required, with a public oral defense.
- Three paper copies of the thesis must be made available at least 10 working days (classes in session) before the final public oral defense of the thesis. The date, time, and place of the defense must be given when the thesis is made available.

**Option II: Problem.** A minimum of 32 hours including BIOL 801 Introduction to Research, at least one hour of BIOL 800 Seminar and BIOL 891 Research Problems (3 hours) is required. All full-time graduate students are required to attend seminar. With the approval of the advisor and chairperson, up to 15 hours may be taken outside the Department of Biology. This option is primarily recommended for science teachers at the secondary school level.

- Each student shall have a 3-person committee composed of (1) the student’s Problem advisor, acting as Chair, (2) a member of the department, and (3) a faculty member from outside the department.
- All full-time graduate students are required to attend graduate seminar when offered.
- The report option does not require a laboratory or field research project, rather it is an investigation, using scientific principles, of a scientific or technical problem.
- A written "problem" document analogous to a thesis is required, with a public oral defense.
- Three paper copies of the "problem" report must be made available at least 10 working days before a public oral presentation of the report. The date, time and place of the presentation must be given when the report is made available.

**Option III: Professional.** A minimum of 36 hours is required. This option is intended for science professionals (e.g. those entering or currently serving as in-service teachers, and those in environmental/ecological/biotechnological careers) who need more experience in their areas of biological science and more focused preparation for work outside of their academic advancement. A minimum of 36 hours. BIOL 800 Seminar (1 hour), BIOL 801 Introduction to Research (3 hours) with a grade of B or better, BIOL 803 Biometry (3 hours) is required. With the approval of the advisor and chairperson, up to nine hours may be taken outside the Department of Biology. Only six of the 36 hours can be numbered below 700, and 21 of the 36 hours must be numbered 800-899.

Professional Experience: The experience will be arranged by the student, and may be voluntary or a paid position, as long as it is deemed “professional” by the student’s committee. Examples of professional experience might include (1) for a classroom teacher, developing, and/or implementing a curriculum, (2) for an environmental scientist, designing and/or implementing an environmental mitigation project, (3) for a biotechnologist, developing and or implementing a new process or product.

Final Presentation: Each graduate student in this option will provide a capstone report which synthesizes their professional experiences with their academic work. For
example, the student should be able to explain and illustrate the way that the academic coursework and the experience complement each other. The end result should be a cohesive body of work that clearly states to the committee, departmental faculty and students how this work (1) addressed the goals and objectives, and (2) will enhance the professional life. The final professional presentation will be viewed by the student’s committee and open to the public, with a written manuscript offered for perusal at least two weeks prior to the presentation date.
Chemistry
Chairperson: Petar Dvornic*, Chairperson
Professor(s): Petar Dvornic*, James McAfee*, Dilip K. Paul*, **William Shirley*, Khamsi S. Siam*, **
Associate Professor(s): Charles Neef*, Irene Zegar*
Assistant Professor(s): Ram Gupta*, Santimukul Santra*
Instructors: Kristopher Mijares*
Research Faculty: Mihail Ionescu*, Ivan Javni*
*Graduate Faculty
**University Professor

Room 101 Heckert-Wells
Telephone: 620-235-4748
Fax: 620-235-4003
http://www.pittstate.edu/department/chemistry/
E-mail: chem@pittstate.edu

Undergraduate

Bachelor of Science Degree with a Major in Chemistry
Bachelor of Science Degree with a Major in Polymer Chemistry
Bachelor of Science in Education Degree with a Major in Chemistry
Minor in Chemistry
Minor in Physical Science
Second Teaching Option in Chemistry
Five-Year Bachelor of Science and Master of Science Degree with a Major in Chemistry
Five-Year Bachelor of Science and Master of Science Degree with a Major in Polymer Chemistry

Graduate

Master of Science Degree with a Major in Chemistry
Master of Science Degree with a Major in Polymer Chemistry

Baccalaureate Degrees

The Bachelor of Science degree with a major in chemistry is available in six areas of emphasis: Professional (ACS approved); Biochemistry; Polymer Chemistry; Pre-Medicine; Environmental Chemistry; and Pharmaceutical Chemistry. The Professional emphasis is an American Chemical Society approved degree plan. This degree plan is designed to prepare students for professional careers.

The Bachelor of Science in Polymer Chemistry is designed for the student desiring to prepare for high level positions in polymer related industry or research and/or for successful application to graduate programs nationally or world-wide.

The Bachelor of Science in Education with a major in chemistry is designed for the student desiring to prepare for secondary level chemistry teaching.

The University's requirements for all baccalaureate degrees can be found at General Education Requirements for All Baccalaureate Degrees and for the master's degree at Graduate Degrees and Options.

Other Professional Programs

The Department of Chemistry offers pre-professional work in health sciences. Baccalaureate degrees leading to medical or pharmacy careers are described below. Details concerning these programs can be obtained from the department.

Minor Sequences

Are applicable to Bachelor of Arts, Bachelor of Science and Bachelor of Science in Education degrees.

Bachelor of Science Degree with a Major in Chemistry

The Bachelor of Science degree with a major in chemistry requires a minimum of 124 semester hours. A minor is required for all emphases except Pharmaceutical Chemistry.

General Education Component* (47-54 hours)

Basic Skills** (12-14 hours)

General Education Electives (35-40 hours)

Sciences** (9-10 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming (5-6 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well Being (4-6 hours)

Human Heritage (6 hours)
**See General Education Requirements for All Baccalaureate Degrees** for specific areas and courses.

**MATH 150 and core chemistry courses required in the major will fulfill a part of each of these requirements.**

### Core Chemistry Courses (25 hours)

Chem courses:
- CHEM 215: General Chemistry I .............................................. 3
- and CHEM 216: General Chemistry I Laboratory ...................... 2
- CHEM 225: General Chemistry II ............................................ 3
- and CHEM 226: General Chemistry II Laboratory ...................... 2
- CHEM 325: Organic Chemistry I ............................................. 3
- and CHEM 326: Organic Chemistry Laboratory ......................... 2
- CHEM 335: Organic Chemistry II .......................................... 3
- and CHEM 336: Organic Chemistry II Laboratory ...................... 2
- MATH 150: Calculus I .............................................................. 5

Choose one area of emphasis

### A. Bachelor of Science Degree with a Major in Chemistry: Professional Emphasis (ACS approved)

Chemistry Courses (31 hours)

- CHEM 445: Analytical Chemistry ........................................... 3
- and CHEM 446: Analytical Chemistry Laboratory ...................... 2
- CHEM 575: Biochemistry I ................................................... 3
- CHEM 593: Physical Chemistry I ............................................ 3
- and CHEM 594: Physical Chemistry I Laboratory ..................... 2
- CHEM 595: Physical Chemistry II .......................................... 3
- and CHEM 596: Advanced Inorganic-Physical Chemistry Laboratory .................................................. 2
- CHEM 601: Chemistry Colloquium ......................................... 0-1
- CHEM 611: Senior Review and Assessment .............................. 1
- CHEM 723: Inorganic Chemistry ............................................ 3
- CHEM 745: Instrumental Analysis ........................................... 3
- and CHEM 746: Instrumental Analysis Laboratory ...................... 2

Chemistry electives chosen from (3 hours)

- CHEM 399: Junior Research in Chemistry ................................. 1-3
- CHEM 576: Biochemistry I Laboratory ................................. 2
- CHEM 625: Polymer Synthesis and Characterizations ................ 3
- and CHEM 626: Polymer Synthesis and Characterizations Laboratory .................................................. 2
- CHEM 699: Senior Research in Chemistry ................................ 1-3
- CHEM 773: Biochemistry II .................................................. 3
- and CHEM 774: Biochemistry II Laboratory ......................... 2
- CHEM 793: Advanced Chemical Kinetics ............................... 3

One hour CHEM 601 Chemistry Colloquium is required.

**Other (18 hours)**

- PHYS 104: Engineering Physics I .......................................... 4
- and PHYS 130: Elementary Physics Laboratory ..................... 1
- PHYS 105: Engineering Physics II ......................................... 4
- and PHYS 131: Elementary Physics Laboratory ..................... 1
- MATH 155: Calculus II .............................................................. 5

- MATH 253: Calculus III ........................................................ 3

A minor in Mathematics is recommended.

### B. Bachelor of Science Degree with a Major in Chemistry: Biochemistry Emphasis

Chemistry Courses (17 hours)

- CHEM 575: Biochemistry I ................................................... 3
- and CHEM 576: Biochemistry I Laboratory ............................. 2
- CHEM 593: Physical Chemistry I ............................................ 3
- and CHEM 594: Physical Chemistry I Laboratory ..................... 2
- CHEM 601: Chemistry Colloquium ......................................... 0-1
- CHEM 611: Senior Review and Assessment .............................. 1
- CHEM 773: Biochemistry II .................................................. 3
- and CHEM 774: Biochemistry II Laboratory ......................... 2

One hour CHEM 601 Chemistry Colloquium is required.

**Other (10 hours)**

- PHYS 104: Engineering Physics I .......................................... 4
- or PHYS 100: College Physics I ............................................. 4
- and PHYS 130: Elementary Physics Laboratory ..................... 1
- PHYS 105: Engineering Physics II ......................................... 4
- or PHYS 101: College Physics II ............................................. 4
- and PHYS 131: Elementary Physics Laboratory ..................... 1

A minor is required. A biology minor designed to complement this major should be selected or is highly recommended. An undergraduate research experience in this area is highly recommended.

### C. Bachelor of Science Degree with a Major in Chemistry: Polymer Chemistry Emphasis

Chemistry Courses (23 hours)

- CHEM 445: Analytical Chemistry ........................................... 3
- and CHEM 446: Analytical Chemistry Laboratory ...................... 2
- CHEM 575: Physical Chemistry I ............................................ 3
- and CHEM 594: Physical Chemistry I Laboratory ..................... 2
- CHEM 601: Chemistry Colloquium ......................................... 0-1
- CHEM 611: Senior Review and Assessment .............................. 1
- CHEM 625: Polymer Synthesis and Characterizations ................ 3
- and CHEM 626: Polymer Synthesis and Characterizations Laboratory .................................................. 2
- CHEM 680: Physical Properties of Polymers ........................... 3

Select one course from:

- CHEM 640: Polyurethanes and Their Applications ....................... 3
- CHEM 650: Conducting Polymers and Their Applications ........... 3
- CHEM 683: Biopolymers ......................................................... 3
- CHEM 687: Polymers in Nanotechnology ................................... 3

One hour CHEM 601 Chemistry Colloquium is required.

### Other (10 hours)

- PHYS 104: Engineering Physics I .......................................... 4
- or PHYS 100: College Physics I ............................................. 4
and PHYS 130: Elementary Physics Laboratory I ............................ 1
PHYS 105: Engineering Physics II ................................................ 4
or PHYS 101: College Physics II ................................................... 4
and PHYS 131: Elementary Physics Laboratory II ......................... 1

A minor or second major in Plastics Engineering Technology is an ideal complement to this emphasis area.

D. Bachelor of Science Degree with a Major in Chemistry: Pre-Medicine/Pre-Medical Profession Emphasis

Chemistry Courses (17 hours)

CHEM 575: Biochemistry I ............................................................. 3
and CHEM 576: Biochemistry I Laboratory ...................................... 2
CHEM 593: Physical Chemistry I .................................................... 3
and CHEM 594: Physical Chemistry I Laboratory ......................... 2
CHEM 601: Chemistry Colloquium ................................................. 0-1
CHEM 611: Senior Review and Assessment .................................. 1
CHEM 773: Biochemistry II ........................................................... 3
and CHEM 774: Biochemistry II Laboratory ................................. 2

One hour CHEM 601 Chemistry Colloquium is required.

Other (10 hours)

PHYS 104: Engineering Physics I .................................................. 4
or PHYS 100: College Physics I ...................................................... 4
and PHYS 130: Elementary Physics Laboratory I ......................... 1
PHYS 105: Engineering Physics II ................................................ 4
or PHYS 101: College Physics II ................................................... 4
and PHYS 131: Elementary Physics Laboratory II ......................... 1

An appropriate minor or second major should be chosen from Engineering Technology or Biology. A course in statistics is highly recommended. An undergraduate research experience in analytical chemistry is highly recommended.

F. Bachelor of Science Degree with a Major in Chemistry: Pharmaceutical Chemistry Emphasis

GENERAL EDUCATION DEGREE REQUIREMENTS*

Courses meeting general education requirements may also satisfy major, minor, emphasis or program requirements.

Basic Skills (14 hours)

COMM 207: Speech Communication ............................................. 3
ENGL 101: English Composition .................................................. 3
ENGL 190: Honors English Composition ....................................... 3
or ENGL 299: Introduction to Research Writing .......................... 3
MATH 150: Calculus I ............................................................... 5

*General Education Electives (25-26 hours)

Sciences (9-10 hours)

Natural Sciences (Select one)

BIOL 111: General Biology ......................................................... 3
and BIOL 112: General Biology Laboratory ................................. 2
BIOL 211: Principles of Biology I .................................................. 4

Physical Science

Satisfied by the Major

Social Studies

SOC 100: Introduction to Sociology ............................................. 3

Political Studies

POLS 101: U.S. Politics ............................................................... 3

Fine Arts and Aesthetic Studies

MUSIC 120: Music Appreciation (___) ......................................... 3

Health and Well Being

PSYCH 155: General Psychology .................................................. 3
Human Heritage (Select one)
HIST 101: World History to 1500 .......................... 3
HIST 102: World History from 1500 ...................... 3
HIST 201: American History to 1865 ..................... 3
HIST 202: American History from 1865 .................. 3

Chemistry Courses (20 hours)
CHEM 215: General Chemistry I ............................. 3
and CHEM 216: General Chemistry I Laboratory ........... 2
CHEM 225: General Chemistry II ............................ 3
and CHEM 226: General Chemistry II Laboratory .......... 2
CHEM 325: Organic Chemistry I ............................. 3
and CHEM 326: Organic Chemistry Laboratory .............. 2
CHEM 335: Organic Chemistry II ........................... 3
and CHEM 336: Organic Chemistry II Laboratory .......... 2

Biology Courses (10 hours)
BIOL 257: Anatomy and Physiology ....................... 3
and BIOL 258: Anatomy and Physiology Laboratory ...... 2
BIOL 371: General Microbiology .......................... 3
and BIOL 372: General Microbiology Laboratory .......... 2

Mathematics Courses
MATH 150 Calculus I (5 hours) (Satisfied by General Education)

*Approved by the General Education Committee

A minor is not required for the pharmaceutical chemistry emphasis.

Remaining requirements for the baccalaureate degree are fulfilled upon satisfactory completion of the first two years of any accredited pharmacy school curriculum. An official transcript will need to be sent directly from the pharmacy school to Pittsburg State University, Registrar’s office. Restrictions on credit hours earned on campus and in the final semester are waived.

Sample Professional Curriculum* (A minimum of 56 hours to be transferred from an accredited School of Pharmacy).

P&TX 630 Pharmacology I (4 hours)
MDCM 601 Medicinal Biochemistry I (4 hours)
MDCM 602 Medicinal Biochemistry Laboratory (1 hour)
PHPR 500 Early Pharmacy Practice Experience (1 hour)
PHCH 517 Calculations (2 hour)
PHPR 620 Ethics & Intro to Law (1 hour)

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PHAR 507 Dean’s Orientation & Introduction to Pharmacy (1 hour)
MDCM 603 Medicinal Biochemistry II (3 hours)
PHCH 518 Principles of Solution/Dosage Forms (3 hours)
P&TX 631 Pharmacology II (4 hours)
PHAR 502 Pharmacy Practice II (3 hours)
PHAR 510 Laboratories (1 hour)
PHAR 505 Immunization Theory and Practice (1 hour)
MDCM 625 Medicinal Chemistry I (3 hours)
P&TX 632 Pharmacology III (4 hours)
PHCH 625 Pharmacokinetics (3 hours)
PHPR 503 Pharmacy Practice III (4 hours)
PHAR 515 Laboratories (1 hour)
MDCM 626 Medicinal Chemistry II (3 hours)
P&TX 640 Toxicology (2 hours)
PHPR 646 Pharmacotherapy I (4 hours)
PHCH 626 Biopharmaceutics & Drug Delivery (3 hours)
PHPR 619 Health Care Systems (3 hours)
PHAR 520 Laboratories (2 hours)

*The Sample Professional Curriculum indicated reflects the University of Kansas Pharmacy Curriculum but the Curriculum is representative of all Pharmacy Schools in the United States.

Bachelor of Science Degree with a Major in Polymer Chemistry

The Bachelor of Science degree with a major in Polymer Chemistry requires a minimum of 124 semester hours. Students also must complete a minor.

General Education Component* (47-54 hours)

Basic Skills** (12-14 hours)
General Education Electives (35-40 hours)

Sciences** (9-10 hours)
Social Studies (3 hours)
Political Studies (3 hours)
Production and Consuming (5-6 hours)
Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well Being (4-6 hours)
Human Heritage (6 hours)

*See General Education Requirements for All Baccalaureate Degrees for specific areas and courses.

**MATH 150 and core chemistry courses required in the major will fulfill a part of each of these requirements.

**Core Science Courses (36 hours)**

CHEM 215: General Chemistry I ............................................................ 3
and CHEM 216: General Chemistry I Laboratory ................................... 2
CHEM 225: General Chemistry II .......................................................... 3
and CHEM 226: General Chemistry II Laboratory ............................... 2
CHEM 235: Laboratory Safety and Compliance ................................... 1
CHEM 325: Organic Chemistry I ........................................................... 3
and CHEM 326: Organic Chemistry Laboratory ................................... 2
CHEM 335: Organic Chemistry II .......................................................... 3
and CHEM 336: Organic Chemistry II Laboratory ............................... 2
MATH 150: Calculus I ................................................................. 5
PHYS 104: Engineering Physics I ........................................................ 4
and PHYS 130: Elementary Physics Laboratory I ............................... 1
PHYS 105: Engineering Physics II ...................................................... 4
and PHYS 131: Elementary Physics Laboratory II ............................... 1

CHEM 215 and CHEM 216 satisfies the Physical Sciences general education requirement.

MATH 150 satisfies the Mathematics general education requirement.

**Polymer Chemistry Core Courses (22-24 hours)**

CHEM 360: Introduction to Polymer Science and Technology ............. 3
CHEM 611: Senior Review and Assessment ......................................... 1
CHEM 625: Polymer Synthesis and Characterizations ........................ 3
and CHEM 626: Polymer Synthesis and Characterizations Laboratory .......................................................... 2
CHEM 680: Physical Properties of Polymers ...................................... 3
CHEM 681: Polymer Chemistry Colloquium ...................................... 1
CHEM 690: Selected Research Projects in Polymer Chemistry ............ 1-3
PET 370: Thermoplastic Resins Laboratory ........................................ 1
and PET 371: Thermoplastic Resins .................................................. 3
PET 374: Thermoset Resins Laboratory .............................................. 1
and PET 375: Thermoset Resins ......................................................... 3

**Elective Polymer Courses (select 6 hours)**

CHEM 270: Sophomore Research in Polymer Chemistry ................. 1
CHEM 370: Junior Research in Polymer Chemistry .............................. 1
CHEM 640: Polyurethanes and Their Applications ......................... 3
CHEM 650: Conducting Polymers and Their Applications ................. 3
CHEM 660: Polymer Chemistry ........................................................... 3
CHEM 665: Selected Topics in Polymer Chemistry (___) ................. 1-3
CHEM 667: Polymers in Nanotechnology .......................................... 3
PET 273: Plastics Processing I ............................................................ 3
and PET 272: Plastics Processing I Laboratory ................................. 1

**Bachelor of Science in Education Degree with a Major in Chemistry**

*General Education Component* (47-54 hours)

All students preparing to teach must meet the general education requirements for all baccalaureate degrees as well as the requirements for teacher certification. The following plan will satisfy both requirements.

Basic Skills** (12-14 hours)

General Education Electives (35-40 hours)

Sciences** (9-10 hours)
Social Studies (3 hours)
Political Studies (3 hours)
Producing and Consuming** (5-6 hours)
Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well Being (4-6 hours)
Human Heritage (6 hours)

*See General Education Requirements for Students Preparing to Teach Secondary School for specific areas and courses.

**MATH 150 and PHYS 104/130 required in the professional components will partially fulfill these requirements.

**Professional Studies Component**

In addition to the professional education courses listed in (1), the student must complete the courses for the teaching specialty listed in (2).

(1) Teaching and learning theory with laboratory and clinical experience*

EDUC 261: Explorations in Education ................................................. 3
PSYCH 263: Developmental Psychology ........................................... 3
PSYCH 267: Educational Psychology ............................................. 3
CHEM 479: Techniques for Teaching Chemistry ............................... 3
Professional Semester (SR. year)

EDUC 458: Methods and Curriculum .................................................. 3  
EDUC 462: Secondary and Middle Level Education ............................ 2  
EDUC 464: Foundations of Measurement and Evaluation .................... 2  
EDUC 480: Supervised Teaching in the Secondary School .................... 3  
EDUC 482: Supervised Teaching in the Secondary School ................. 5  
CHEM 579: Supervised Student Teaching and Follow-Up of Teachers  ................................................................. 2  

*See Admission to Professional Semester for professional education grade point requirements.

(2) Content for the teaching specialty

Chemistry (36 hours)

CHEM 215: General Chemistry I ......................................................... 3  
and CHEM 216: General Chemistry I Laboratory .............................. 2  
CHEM 225: General Chemistry II ...................................................... 3  
and CHEM 226: General Chemistry II Laboratory ............................ 2  
CHEM 325: Organic Chemistry I ....................................................... 3  
and CHEM 326: Organic Chemistry Laboratory ................................ 2  
CHEM 335: Organic Chemistry II .................................................... 3  
and CHEM 336: Organic Chemistry II Laboratory ............................ 2  
CHEM 369: Laboratory Assistant Practicum I .................................. 3  
CHEM 445: Analytical Chemistry .................................................... 3  
and CHEM 446: Analytical Chemistry Laboratory ............................ 2  
CHEM 469: Laboratory Assistant Practicum II .................................. 3  
CHEM 569: Laboratory Assistant Practicum III ............................... 3  
CHEM 601: Chemistry Colloquium .................................................... 0-1  
CHEM 611: Senior Review and Assessment ................................. 1  

One hour CHEM 601 Chemistry Colloquium is required.

Other (15 hours)

MATH 150: Calculus I ................................................................. 5  
PHYS 104: Engineering Physics I ..................................................... 4  
or PHYS 100: College Physics I ..................................................... 4  
and PHYS 130: Elementary Physics Laboratory I .......................... 1  
PHYS 105: Engineering Physics II ............................................... 4  
or PHYS 101: College Physics II .................................................. 4  
and PHYS 131: Elementary Physics Laboratory II ........................ 1  

*Engineering Physics is recommended and required for physics certification or additional study in chemistry.

A minor is required. Either biology or mathematics is recommended.

The Bachelor of Science in Education degree requires a minimum of 124 semester hours.

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University. See Admission to Professional Semester for professional education grade point requirements.

Minor in Chemistry

At least 20 semester hours in chemistry. Students may not count both CHEM 320/326 Introductory Organic Chemistry/Laboratory and CHEM 325/326 Organic Chemistry I/Laboratory. No geology courses, CHEM 105/106 Introductory Chemistry/Laboratory, CHEM 107/108 Chemistry for the Life Sciences/Laboratory or CHEM 112/113 Essentials of Chemistry/Laboratory may be used toward the 20 semester hours.

Minor in Physical Science

See Physics Minor in Physical Science for requirements.

Second Teaching Option in Chemistry

Those persons interested in chemistry as a second teaching option should contact the chairperson of the Department of Chemistry or the Licensure Officer in the College of Education, 110 Hughes Hall, for specific requirements.

Five-Year Bachelor of Science and Master of Science Degree with a Major in Chemistry

For students interested in advanced preparation and training in chemistry for work in industry or further study in graduate school, the Department of Chemistry at Pittsburg State University offers an accelerated program to combine the Bachelor of Science degree with a Major in Chemistry and the Master of Science degree with a Major in Chemistry into a five-year program. Students participating in this program can save one year of study and can either proceed directly into the workforce or into a doctoral program at another university.

To complete the required study of both the Bachelor of Science and Master of Science degrees in five years, students must:

- Begin their undergraduate coursework in Chemistry in one of three emphases that prepare them for graduate school: Professional, Biochemistry, or Environmental.
• Must have completed CHEM 215, 216, 225, 226, 325, 326, 335, and 336 prior to applying to the accelerated Master of Science degree.

• Students are required to have six credit hours of research for their Bachelor of Science degree.

• Maintain a minimum of 3.00 GPA in the Chemistry courses required for the Bachelor of Science and a minimum of 3.25 GPA overall, and,

• Apply for the accelerated Masters in Chemistry by December 1 of their junior year or at the discretion of the department.

1. Upon acceptance to the accelerated program, detailed planning for the 4th and 5th years will be completed including a master's program candidacy plan.

2. The coursework will include up to nine credit hours at the 700 level to be counted toward both the BS and MS degrees (i.e., "double-counted").*

3. Students must obtain a grade of A or B in all of the aforementioned coursework.

4. Candidates will be strongly recommended to choose the research option for their masters (Option 1).

*Courses that can count for Bachelor of Science and Master of Science

CHEM 705: Modern Concepts of Chemistry .............................................. 1-5
CHEM 723: Inorganic Chemistry ............................................................... 3
CHEM 745: Instrumental Analysis .............................................................. 3
CHEM 746: Instrumental Analysis Laboratory ............................................. 2
CHEM 773: Biochemistry II ............................................................. 3
CHEM 774: Biochemistry II Laboratory .................................................. 2
CHEM 790: Advanced Research in Polymer Chemistry ......................... 3
CHEM 793: Advanced Chemical Kinetics .............................................. 3

Five-Year Bachelor of Science and Master of Science Degree with a Major in Polymer Chemistry

For students interested in advanced preparation and training in polymer chemistry for work in industry or further study in graduate school, the Department of Chemistry at Pittsburg State University offers an accelerated program to combine the Bachelor of Science degree with a Major in Polymer Chemistry and the Master of Science degree with a Major in Polymer Chemistry into a five-year program. Students participating in this program can save one year of study and can either proceed directly into the workforce or into a doctoral program at another university.

To complete the required study of both the Bachelor of Science and Master of Science degrees in five years, students must:

• Begin their undergraduate coursework towards the Bachelor of Science degree with a major in Polymer Chemistry.

• Must have completed CHEM 215, 216, 225, 226, 325, 326, 335, and 336 prior to applying to the accelerated Master of Science degree.

• Students are required to have six credit hours of research for their Bachelor of Science degree.

• Maintain a minimum of 3.00 GPA in the Chemistry courses required for the Bachelor of Science and a minimum of 3.25 GPA overall, and,

• Apply for the accelerated Masters in Chemistry by December 1 of their junior year or at the discretion of the department.

1. Upon acceptance to the accelerated program, detailed planning for the 4th and 5th years will be completed including a master's program candidacy plan.

2. The coursework will include up to nine credit hours at the 700 level courses to be counted toward both the BS and MS degrees (i.e., "double-counted").* At this time (November 2014) the following two 600 level courses can be substituted by the corresponding 700 level courses:

(a) CHEM 625 Polymer Synthesis and Characterization (3 credit hours) can be substituted with CHEM 730 Advanced Polymer Chemistry (3 credit hours)

(b) CHEM 680 Physical Properties of Polymers (3 credit hours) can be substituted with CHEM 785 Physical Chemistry of Polymers (3 credit hours)

3. Students must obtain a grade of A or B in all of the aforementioned coursework.

4. Candidates will be strongly recommended to choose the research option for their masters (Option 1).
*Courses that can count for Bachelor of Science and Master of Science*

CHEM 705: Modern Concepts of Chemistry ................................................. 1-5
CHEM 730: Advanced Polymer Synthesis .................................................. 3
CHEM 785: Physical Chemistry of Polymers ............................................. 3
CHEM 790: Advanced Research in Polymer Chemistry .......................... 3

Master of Science Degree with a Major in Chemistry

The Master of Science degree with a major in chemistry is available in two options. Option I, a thesis program, is designed to prepare students for advanced professional careers. The Option II program is designed to prepare students for advanced technical positions in chemistry, chemical technology or chemical related industry.

Candidates for the master's degree should have completed college programs comparable to the Bachelor of Science degree with a major in Chemistry and either the professional, biochemistry, polymer, or environmental emphases offered by this department. Only senior-graduate and graduate courses in chemistry may be used to meet the degree requirements; however, credit in senior-graduate and graduate courses in other disciplines may be substituted if approved by the chemistry department's graduate faculty.

CHEM 825 Graduate Review (3 hours) must be completed and CHEM 735 Laboratory Safety and Compliance (1 hour) must be completed unless the student has undergraduate credit for the course. CHEM 801 Chemistry Colloquium (1 hour) must be completed twice for credit. Full-time chemistry graduate students are required to attend all departmental colloquia.

**One of the following physical chemistry courses must be completed:**

CHEM 793: Advanced Chemical Kinetics ............................................... 3
CHEM 883: Chemical Thermodynamics .................................................. 3
CHEM 885: Quantum Chemistry ................................................................. 3

**One of the following organic chemistry courses must be completed:**

CHEM 861: Advanced Organic Synthesis ............................................... 3
CHEM 863: Physical Organic Chemistry ................................................ 3

**One of the following courses must be completed:**

CHEM 723: Inorganic Chemistry ................................................................. 3
CHEM 745: Instrumental Analysis ............................................................. 3
CHEM 773: Biochemistry II ................................................................. 3

CHEM 823: Advanced Inorganic Chemistry .............................................. 3
CHEM 875: Advanced Biochemistry .......................................................... 3

**Option I: Thesis**

Graduates from this program are prepared for professional careers as chemists in research or industrial settings, or to continue graduate study at PhD granting universities.

The degree requires the completion of a minimum of 30 semester hours, including at least six hours of CHEM 890 Research and Thesis as determined to be necessary by the department to successfully complete approved thesis research and a formal oral defense.

**Option II: Research Problem**

*(Technical Emphasis)*

This program is designed to prepare the graduate for a position in a chemical or chemistry related industry. The degree requires the completion of a minimum of 33 semester hours, including at least six hours of CHEM 891 Research Problems, as determined by the department to be necessary to successfully complete the required research with a written report and oral presentation.

*(Teaching Emphasis)*

Secondary school science teachers electing this program will complete a minimum of 33 semester hours including at least six hours of CHEM 891 Research Problems, as determined by the department to be necessary to successfully complete the required research with a written report.

Master of Science Degree with a Major in Polymer Chemistry

The Master of Science Degree with a Major in Polymer Chemistry provides graduate students access to cutting-edge knowledge, research, and laboratory-based experience in the field of polymer chemistry. Students completing this program will be prepared for careers in high-tech polymers-based industries as well as laboratories in academic institutions, government, and private research settings. Further, this program prepares students for advanced academic study pursuing a doctorate in polymer science in major U.S. and world universities.

The curriculum is a 31 credit hour graduate degree program consisting of 9 hours of core polymer courses,
an additional 10 credit hours of research work and colloquium and 12 credit hours of elective polymer courses selected in consultation with the academic advisor. All polymer science master's candidates will be required to complete and defend a research thesis.

Students entering this academic program and career field should prepare themselves with a strong undergraduate coursework in science, preferably in chemistry, chemical engineering, plastics technology, biology or physics. Students will be admitted to the polymer chemistry master's program if they meet the Pittsburg State University admission criteria.

**Core Polymer Science Courses (9 hours)**

CHEM 730: Advanced Polymer Synthesis ........................................... 3
CHEM 785: Physical Chemistry of Polymers ....................................... 3
PET 883: Polymeric Materials Rheology and Processing .................... 3

**Polymer Core Research and Colloquium (10 hours)**

CHEM 790: Advanced Research in Polymer Chemistry ...................... 3
CHEM 801: Chemistry Colloquium ...................................................... 1
CHEM 890: Research and Thesis ..................................................... 1-6

CHEM 890 should be taken for six hours.

**Electives (Select appropriate number of courses to fulfill the total credit requirement)**

CHEM 840: Advanced Polymers for Electrical and Electronic Applications ...................................................... 3
CHEM 850: Inorganic and Architecturally Unusual Polymers .............. 3
CHEM 887: Advanced Biopolymers and Nanotechnology .................. 3
CHEM 889: Introduction to Chemical Research ............................... 1-9
ETECH 888: Design of Experiments .................................................... 3
PET 673: Advanced Injection Molding ............................................... 3
PET 885: Composite Materials and Testing ...................................... 3

- Other qualifying elective courses may be selected by special permission of the advisor and polymer faculty.

CHEM 889 should be taken for three hours.

Total credit requirement (31 hours)
Communication

Chairperson: Cynthia L. Allan*
Professor(s): Cynthia L. Allan*, Troy Comeau*, Shirley K. Drew*, Michael Gullett
Associate Professor(s): Mark Arbuckle*, Alicia Mason Collins*, Leo Hudson, Trent Kling*, Joey Pogue*
Assistant Professor(s):
Instructors: Gil Cooper, Linden Little, Kristen Livingston, Megan Westhoff
Costume Designer/Wardrobe Supervisor: Lisa G. Quinteros
* Graduate Faculty
** University Professor

Room 215 Grubbs Hall
Telephone: 620-235-4716
Fax: 620-235-4686
http://www.pittstate.edu/department/communication/
E-mail: callan@pittstate.edu

Undergraduate

Bachelor of Science Degree with a Major in Communication
Bachelor of Science in Education Degree with a Major in Communication
Minor in Communication (Teaching)
Minor in Communication

Graduate

"Jump Start" Master of Arts Program
Master of Arts Degree with a Major in Communication
Graduate Certificate in Communication

The Department of Communication offers a curriculum designed to provide variety and flexibility in meeting a broad range of academic and professional interests in human communication, mass media and the theatre arts. Courses and emphasis offered are supportive of occupational preparation in a variety of areas, particularly education, law, politics, personnel management, public relations, print and broadcast journalism, mass media, advertising, arts management and the entertainment services. Consult the department for recommended courses.

BACCALAUREATE DEGREES

The Department of Communication offers work leading to the degrees of Bachelor of Science and Bachelor of Science in Education. Both degrees require the completion of 124 hours and the completion of a minor. See General Education Requirements for All Baccalaureate Degrees.

The Department of Communication considers a grade of “D” or “F” in a major course insufficient to gain the necessary knowledge and/or skills provided by our classes. Students who do not earn a grade of “C” or better will not get credit for those courses in their major.

If a student does not earn at least a “C” in a department core requirement he/she must retake the course and earn a “C” or better in order to continue as a communication major.

If a student does not earn at least a “C” in an emphasis requirement he/she must retake the course and earn a “C” or better in order to continue as a communication major with that selected emphasis area.

Students who do not earn at least a “C” in an elective course may retake the course and if they earn a “C” or better then that course would be counted toward the major.

Students who do earn at least a “C” in an elective course may elect to take an alternate course to fulfill the elective requirements for the communication major.

Bachelor of Science Degree with a Major in Communication

A student seeking a Bachelor of Science degree with a major in communication will choose one area of professional emphasis from the following: advertising, broadcasting, news editorial, photojournalism, public relations or theatre. The degree requires the completion of a minor.

Communication majors are expected to take either COMM 105 Performance Appreciation or COMM 205 Performance Studies to fulfill the General Education requirement for the Fine Arts and Aesthetic Studies area. Refer to General Education Requirements for All Baccalaureate Degrees.

I. Core Requirements (18 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 199</td>
<td>Introduction to Communication Careers</td>
<td>1</td>
</tr>
<tr>
<td>COMM 200</td>
<td>Introduction to Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 399</td>
<td>Communication Career Development</td>
<td>1</td>
</tr>
<tr>
<td>COMM 629</td>
<td>Theories of Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 699</td>
<td>Communication Careers in Society</td>
<td>1</td>
</tr>
</tbody>
</table>
(Select two of the following three) (6 hours)*
COMM 307: Advanced Speech Communication ....................... 3
COMM 450: Small Group Communication .............................. 3
COMM 530: Interpersonal Communication .......................... 3

* Courses chosen here cannot be used in the Communication in Society and Management section IV listed below.

(Select one from the following five) (3 hours)
COMM 274: Introduction to Audio and Video Production .......... 3
COMM 276: Photojournalism I .......................................... 3
COMM 537: Integrated Electronic Communication ............... 3
or COMM 731: Advertising Campaigns ........................... 3
COMM 717: Research Procedures in Communication ............. 3

II. Professional Career Emphasis (12 hours)
Select one group of courses from the following six areas.

Advertising Emphasis
COMM 230: Principles of Advertising ................................... 3
COMM 330: Advertising Copywriting .................................. 3
COMM 674: Media Buying and Selling .................................. 3
or COMM 731: Advertising Campaigns ........................... 3
COMM 717: Research Procedures in Communication ............. 3

Broadcasting Emphasis
COMM 274: Introduction to Audio and Video Production .......... 3
COMM 374: Broadcast Writing .......................................... 3
COMM 475: Audio Production .......................................... 3
or COMM 733: Television Producing and Directing ............... 3
COMM 575: Television Production .................................... 3

Journalism - News Editorial Emphasis
COMM 225: Reporting .................................................. 3
COMM 340: Publications Practice ...................................... 3
or COMM 350: Editing .................................................. 3
COMM 415: Advanced Reporting ...................................... 3
COMM 626: Law of Mass Communication .......................... 3

Journalism - Photojournalism Emphasis
COMM 276: Photojournalism I .......................................... 3
COMM 435: Photojournalism II ......................................... 3
COMM 638: Professional Photojournalism/Picture Editing ...... 3
COMM 642: Documentary Photojournalism/Electronic Imaging .. 3

Public Relations Emphasis
COMM 277: Introduction to Public Relations ........................ 3
COMM 576: Writing for Public Relations .............................. 3
COMM 717: Research Procedures in Communication ............. 3
COMM 775: Case Studies in Strategic Communication .......... 3
or COMM 765: Strategic Planning for Communication Campaigns .................................................... 3

III. Applied Communication (6 hours)
Select two courses from the following list.

COMM 225: Reporting .................................................. 3
COMM 254: Acting Studies ............................................. 3
COMM 274: Introduction to Audio and Video Production .......... 3
COMM 276: Photojournalism I .......................................... 3
COMM 309: Forensic Practices (____) .................................. 1-3
COMM 330: Advertising Copywriting ................................... 3
COMM 335: Feature Writing ............................................ 3
COMM 350: Editing .................................................. 3
COMM 363: Technical Production I .................................... 3
COMM 374: Broadcast Writing ........................................ 3
COMM 390: Sports Broadcasting I .................................... 3
COMM 415: Advanced Reporting ...................................... 3
COMM 435: Photojournalism II ......................................... 3
COMM 463: Technical Production II .................................... 3
COMM 474: Promotional Video ......................................... 3
COMM 475: Audio Production .......................................... 3
COMM 490: Sports Broadcasting II .................................... 3
COMM 537: Integrated Electronic Communication ............... 3
COMM 575: Television Production .................................... 3
COMM 576: Writing for Public Relations .............................. 3
COMM 637: Online Publishing ......................................... 3
COMM 638: Professional Photojournalism/Picture Editing ...... 3
COMM 642: Documentary Photojournalism/Electronic Imaging .. 3
COMM 663: Design Studies for Performance (____) ............... 3
COMM 703: Public Relations/Advertising Production ............. 3
COMM 733: Television Producing and Directing .................. 3

COMM 309 Forensic Practices has a limit of 3 hours.

IV. Communication in Society and Management (Select 9 credit hours with 6 of them in courses numbered 300 and above) (9 hours)

COMM 295: Theatre History (____) ..................................... 3
COMM 367: Oral Interpretation of Literature ........................ 3
COMM 405: Drama Studies (____) ..................................... 3
COMM 450: Small Group Communication ............................ 3
COMM 479: Techniques for Teaching Speech and Theatre ....... 3
COMM 480: Exploration in Communication (____) ............... 3
COMM 511: School Publications ....................................... 3
COMM 530: Interpersonal Communication .......................... 3
COMM 544: Stage Direction ............................................ 3
COMM 590: Sports, Media and Society ................................ 3
COMM 601: Intercultural Communication ............................ 3
COMM 623: History of Mass Communication ....................... 3
COMM 625: Advanced Performance (____) ......................... 3
COMM 626: Law of Mass Communication ............................ 3
COMM 674: Media Buying and Selling ................................ 3
COMM 702: Mass Media Management ................................ 3
COMM 715: Documentary Filmmaking ................................ 3
COMM 717: Research Procedures in Communication ............. 3
COMM 721: Philosophy and Ethics in Mass Communication ...... 3

COMMUNICATION
COMM 724: Editorial Writing ................................................................. 3
COMM 726: Media Analysis and Criticism (____) .............................. 3
COMM 731: Advertising Campaigns ................................................... 3
COMM 755: Organizational Communication .................................... 3
COMM 765: Strategic Planning for Communication Campaigns ........ 3
COMM 775: Case Studies in Strategic Communication ..................... 3
COMM 785: International Communication ....................................... 3
COMM 795: Issues in Communication (____) ................................... 3

V. Communication Practices (3 hours)
COMM 340: Publications Practice .................................................... 3
COMM 410: Activity ............................................................. 1-3
COMM 440: Topics in Theatre (____) ................................................. 1-3
COMM 441: Topics in Communication (____) .................................... 1-3
or COMM 640: Topics in Communication (____) .............................. 1-3
or COMM 740: Topics in Communication (____) .............................. 1-3
COMM 460: Project in Theatre (____) ................................................ 1-3
or COMM 660: Project in Theatre (____) .......................................... 1-3
COMM 690: Internship in Applied Communication (____) .............. 1-3

One course in the Department of Communication numbered 300 or above (3 hours)

Total for Core (48 hours)

Bachelor of Science in Education Degree with a Major in Communication

The Bachelor of Science in Education degree is designed for students preparing to teach speech communication and drama in grades 6-12 and is designed to meet state licensure requirements.

The student majoring in communication may earn the Bachelor of Science in Education degree by completing the Communication: Teaching sequence detailed below. The degree requires the completion of an approved minor.

Students should consult the appropriate sections of this catalog for the general requirements for the degree and for the specific regulations concerning admission to teacher education, required professional courses and the professional semester.

Communication majors take COMM 205 Performance Studies to fulfill the General Education requirement for the Fine Arts and Aesthetic Studies area. Refer to General Education Requirements for Students Preparing to Teach Secondary School. Also see Scholastic Achievement in Common Core.

Communication: Teaching (grades 6-12)

I. Communication Core Requirements (43 hours)
COMM 199: Introduction to Communication Careers ...................... 1
COMM 200: Introduction to Mass Communication ............................. 3
COMM 205: Performance Studies ..................................................... 3
COMM 254: Acting Studies ............................................................ 3
COMM 274: Introduction to Audio and Video Production .................. 3
COMM 295: Theatre History (____) .................................................. 3
COMM 307: Advanced Speech Communication ............................... 3
COMM 309: Forensic Practices (____) .............................................. 1-3
COMM 363: Technical Production I ................................................. 3
COMM 367: Oral Interpretation of Literature ..................................... 3
COMM 399: Communication Career Development ........................... 1
COMM 450: Small Group Communication ....................................... 3
COMM 530: Interpersonal Communication ....................................... 3
COMM 544: Stage Direction ........................................................... 3
COMM 629: Theories of Human Communication ............................. 3
COMM 699: Communication Careers in Society .............................. 1

COMM 309 Forensic Practices is split between Debate Theory (2 hours) and Field Experience (2 hours).

II. Professional Education Requirements* (35 hours)

Admission to Teacher Education (2nd semester sophomore, 1st semester junior)

Admission to Professional Semester (senior semester)
EDUC 261: Explorations in Education .............................................. 3
PSYCH 263: Developmental Psychology ......................................... 3
PSYCH 357: Educational Psychology ............................................. 3
COMM 479: Techniques for Teaching Speech and Theatre ................ 3
SPED 510: Overview of Special Education ...................................... 3
EDUC 520: Methods and Materials for Academic Literacy ............... 3

Professional Semester (senior)
EDUC 458: Methods and Curriculum ............................................. 3
EDUC 462: Secondary and Middle Level Education ......................... 2
EDUC 464: Foundations of Measurement and Evaluation ................ 2
EDUC 480: Supervised Teaching in the Secondary School ............... 3
EDUC 482: Supervised Teaching in the Secondary School .............. 5
COMM 579: Supervised Student Teaching and Follow-Up of Teachers ......................................................... 2
Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University.

*See Admission to Professional Semester for professional education grade point requirements
*Must be admitted to Teacher Education to enroll in these courses: PSYCH 357 Educational Psychology, COMM 479 Techniques for Teaching Speech and Theatre, EDUC 520 Methods and Materials for Academic Literacy.

**Minor in Communication (Teaching)**

The teaching minor in Communication is only available in conjunction with a Bachelor of Science in Education degree.

**Minor in Communication (Teaching) (36 hours)**

- COMM 200: Introduction to Mass Communication ................................ 3
- COMM 205: Performance Studies .......................................................... 3
- COMM 254: Acting Studies ................................................................. 3
- COMM 274: Introduction to Audio and Video Production ..................... 3
- COMM 295: Theatre History (____) ..................................................... 3
- COMM 307: Advanced Speech Communication .................................... 3
- COMM 309: Forensic Practices (____) ................................................. 1-3
- COMM 363: Technical Production I ...................................................... 3
- COMM 367: Oral Interpretation of Literature ........................................ 3
- COMM 450: Small Group Communication ........................................... 3
- COMM 479: Techniques for Teaching Speech and Theatre .................. 3
- COMM 544: Stage Direction ............................................................... 3

COMM 309 Forensic Practices is split between Debate Theory (2 hours) and Field Experience (1 hour).

**Minor in Communication**

A communication minor requires completion of 24 hours, as follows.

**Minor in Communication (24 hours)**

- COMM 200: Introduction to Mass Communication ................................ 3
- COMM 629: Theories of Human Communication ................................... 3

- Remaining 18 hours to be selected with approval of a Department of Communication faculty member (18 hours)

"Jump Start" Master of Arts Program

This program is an expansion of the existing Pittsburg State University program that permits students to have conditional acceptance to the master's program in their final undergraduate semester. With the "Jump Start" program, Communication majors have the chance to earn hours during their full senior year in order to have nine hours of graduate work completed prior to their undergraduate graduation.

Students meeting the eligibility requirements* may take up to nine credit hours (total) of senior/graduate or graduate level courses from an approved list (see below) during the final two semesters as an undergraduate and have them count on the graduate candidacy if students apply for and are granted conditional acceptance into the master's degree program. This would allow students to reduce the credit hours needed to earn post-baccalaureate from 30-32 down to 21-23.

*Communication majors with senior standing are eligible if a minimum GPA of 3.5 is earned, less than 30 credit hours are needed to complete requirements for the undergraduate degree, and conditional acceptance into the Pittsburg State University Department of Communication graduate program is received.

**Approved Courses for “Jump Start” Eligible Students:**

- Courses may NOT count for both undergraduate and graduate degree
- A grade of "B" or higher must be earned in designated "Jump Start" courses

- COMM 702: Mass Media Management .................................................. 3
- COMM 717: Research Procedures in Communication ............................ 3
- COMM 721: Philosophy and Ethics in Mass Communication .................. 3
- COMM 724: Editorial Writing .............................................................. 3
- COMM 726: Media Analysis and Criticism (____) ................................. 3
- COMM 755: Organizational Communication ....................................... 3
- COMM 785: International Communication ......................................... 3
- COMM 795: Issues in Communication (____) ....................................... 3
- COMM 815: Introduction to Graduate Study ........................................ 3

**Master of Arts Degree with a Major in Communication**

The applicant for admission to study for the degree of Master of Arts with a major in communication shall present evidence of completion of sufficient work in undergraduate courses, or professional experience, to furnish adequate background for graduate study in the field. If the graduate faculty determine that a student does not have sufficient background to pursue the Master of Arts with a major in communication, then up to 15 credits of undergraduate work may be required.

The minimum TOEFL score for students who did not earn a baccalaureate degree in an English speaking university and who wish to major in communication is 550. Applicants must have an undergraduate cumulative GPA of 3.00 for admission to the Master of Arts Program.
The Master of Arts with a major in communication is designed to meet the individual needs of each student. Students work with their advisor to structure a degree within the regulations of Pittsburg State University. Degrees can be designed to meet pre-doctoral preparation, professional preparation or the intellectual needs of the student.

The minimum course requirement for the master's degree Option I (which includes up to six credits of COMM 890 Research and Thesis) is 30 hours; Option II (which includes up to six hours of COMM 891 Research Problem) is 32 hours; Option III (which includes six hours of research seminars) is 32 hours.

Required courses for all options include COMM 815 Introduction to Graduate Study; COMM 870 Seminar in Mass Communication Theory or COMM 871 Seminar in Human Communication; one additional 800 level seminar course. The remaining courses may be elected with the approval of the advisor, in accordance with the student's particular educational background and experience and his or her degree objective: employment in a teaching or a nonteaching field, additional graduate study, or personal enrichment.

**Graduate Certificate in Communication**

A student may satisfy the Higher Learning Commission (HLC) requirement of 18 hours in the field by enrolling in the master’s program as a non-degree seeking student and taking the prescribed 18 hours of graduate certificate courses. Upon completion, they will receive the Graduate Certificate. The student may also, should they choose to do so, enroll in the PSU Department of Communication Master of Arts degree program and then complete the remainder of the MA curriculum. All courses included in the Graduate Certificate are transferable to the degree-seeking MA curriculum.

**Application Procedure**

Applicants follow the standard procedures for applying to the PSU Communication Graduate Program and must meet the same requirements for acceptance into the Graduate Certificate program.

**Curriculum (with suggested semester of enrollment for completion within 12 months)**

*COMM 740 Topics in Communication (Fall - independent study on specific communication topic/requires approval of instructor) - may be taken instead of COMM 775 Case Studies in Strategic Communication under special circumstances in order to facilitate the 12-month completion deadline.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 601</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 629</td>
<td>Theories of Human Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 712</td>
<td>Philosophy and Ethics in Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 755</td>
<td>Organizational Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Grades**

No grade lower than a B may be counted toward the 18-hour Graduate Certificate program requirements.

**Time-Limit**

The Graduate Certificate in Communication is designed to be completed within a 12-month period with courses taught online. However, students may choose to take the courses in an order other than suggested. At present there is no time limit for completion of the Graduate Certificate program. There is a 6-year time limit for completion of the Master of Arts degree.
English and Modern Languages

Chairperson: Celia Patterson*
Professor(s): Susan A. Carlson*, Casie Hermansson*, Donald P. Judd*, Paul McCallum*, Lyle W. Morgan II*, Celia Patterson*, Bert Patrick*, Laura Washburn**
Associate Professor(s): Christopher T. Anderson*, John T.I. Franklin*, Myriam Krepps*, Grant Moss*, Eric Rojas*, Philip W. Rudd*, Janet S. Zepernick*
Assistant Professor(s): Sandra M. Cox*, Chase Dearinger*, James M. Greene*, Jessica Jorgenson*, Lori Martin, Brian Moots*, Yasmina Vallejos*
Instructors: Lynn Caldwell, Glenn Storey, Tamara G. Tsybizova, Lora Winters
*Graduate Faculty
**University Professor

Room 434 Grubbs (English) 428 Grubbs (Modern Languages)
Telephone: 620-235-4689 (English) 620-235-4709 (Modern Languages)
Fax: 620-235-4686
http://www.pittstate.edu/department/english-languages/
E-mail: engl@pittstate.edu; capatterson@pittstate.edu

Undergraduate

Bachelor of Arts Degree with a Major in English
Bachelor of Arts Degree with a Major in Modern Languages
Bachelor of Science in Education Degree with a Major in English
Minor in Creative Writing
Minor in English
Minor in English (Teaching)
Minor in French
Minor in Spanish
Minor in Professional Writing

Graduate

Master of Arts Degree with a Major in English
Graduate Certificate in English

BACCALAUREATE DEGREES
The Department of English and Modern Languages offers work leading to the degrees Bachelor of Arts and Bachelor of Science in Education in English and the Bachelor of Arts in Modern Languages.

Honors Courses
Any courses numbered 300-799 in the Description of Courses may be taken for departmental honors, except

ENGL 506 General English Internship, ENGL 579 Supervised Student Teaching and Follow-Up of Teachers, ENGL 695 Professional Writing Internship and ENGL 699 Senior Seminar in English.

General Education
Bachelor of Arts in English Traditional emphasis majors, Bachelor of Science in Education majors, and English (Teaching) minors may substitute ENGL 304 Introduction to Writing About Literature for the literature option under the Human Heritage category in the General Education program. Students who do so must take additional upper division literature elective to meet total credit hour requirements for their major emphasis or minor. First and second year Modern Languages courses offered by the department can be used by non-majors to fulfill the general education requirements in the languages and cultures or electives areas.

Directed Study Policy for Undergraduate Students
The English faculty believe that classroom experience is an important part of its courses. Therefore, the English program does not offer directed/independent study courses to individual students on the undergraduate level. In exceptional circumstances involving demonstrated hardship, a student may apply to take a course vital to his/her academic program by independent study. Such applications must be approved by the departmental chairperson and the departmental Curriculum Committee. Application forms may be obtained from the English and Modern Languages Department office.

Credit-by-Exam Policy
The English program normally offers credit-by-examination in freshman composition only. Applications to attempt credit-by-exam for other departmental courses must be approved by the departmental chairperson and the departmental Curriculum Committee. In general, the faculty believe that classroom experience is an important part of its courses; therefore, applications to attempt credit-by-exam will be approved only under special circumstances. Application forms may be obtained from the English and Modern Languages Department office.

Required Writing Courses
Students must successfully complete ENGL 101 English Composition before they can enroll in ENGL 299 Introduction to Research Writing, which they should complete by the end of their sophomore year. Students must also complete two Writing to Learn (WL) courses.
These WL courses may be taken as General Education courses or as upper-level courses. Students with English ACT scores of 28 or higher (or certain other examination scores) and Honors College students enroll in ENGL 101-40 plus a WL class in the fall semester of their freshman year and in ENGL 190 Honors English Composition during the spring semester. These students complete the composition sequence by taking a second WL class after they successfully complete ENGL 190. Students who take ENGL 190 do not take ENGL 299 Introduction to Research Writing.

Study Abroad

The department strongly recommends that all Modern Languages majors and minors participate in an accredited study abroad program. Pittsburg State University offers study abroad scholarships as well as assistance with other financial aid. To learn about accredited programs, contact Pittsburg State University’s Study Abroad Coordinator at 235-4221. For information on transfer credits, consult with the Chair of English and Modern Languages.

Retro-Credits Program

The department strongly supports the recommendation made in the report A Nation At Risk that high school students in a college-track program study a foreign language for two years at the high school level. A departmental retro-credits program allows students with significant prior experience studying French or Spanish to benefit in several ways. It is designed to reward deserving students who have already spent years studying languages in high school and to encourage those students to seek university-level courses in order to complete a minor or major. Students desiring credit for language proficiency acquired before coming to Pittsburg State University should consult any member of the Modern Languages faculty.

Native Speakers

Native speakers are encouraged to take courses in French or Spanish. Students who graduated from high school in a French- or Spanish-speaking country may fulfill coursework for a major in Modern Languages by completing 15 hours of upper-division courses in the native language, French or Spanish. Native speakers of any language taught in the department are not allowed to enroll in lower-division courses in that language. Consult with the chairperson of the department or the Modern Languages Program coordinator.

Graduate Studies

The department offers work leading to the Master of Arts in English degree.

Although the department offers no master's degree in Modern Languages, it does offer, in cooperation with the College of Education, a 15-hour foreign language emphasis for the candidate for a Master of Science degree with a major in secondary teaching granted by the Department of Teaching and Leadership. Students involved in this program should be jointly advised by the Department of Teaching and Leadership and the Department of English and Modern Languages.

Bachelor of Arts Degree with a Major in English

A student seeking a Bachelor of Arts with a major in English will choose one of the four emphases described below. All candidates for this degree must complete a minor. All students seeking this degree should see Requirements for All Baccalaureate Degrees and General Education Requirements for All Baccalaureate Degrees. Persons completing this degree who plan to teach must also complete licensure requirements.

Core Requirements (18 hours)

Core for Traditional, Creative Writing, Technical/Professional Writing, and Language emphases of the Bachelor of Arts in English:

ENGL 199: Introduction to English Studies ...........................................2
ENGL 202: English Grammar and Usage ............................................3
ENGL 220: World Masterpieces ..........................................................3
ENGL 699: Senior Seminar in English ..............................................1

Select three of the following four courses:

ENGL 231: American Literature I .......................................................3
ENGL 232: American Literature II ......................................................3
ENGL 241: British Literature I ..............................................................3
ENGL 242: British Literature II ...........................................................3

I. Traditional Emphasis (24 hours)

ENGL 304: Introduction to Writing About Literature .......................3

Writing elective selected from (3 hours)

ENGL 250: Introduction to Creative Writing ........................................3
ENGL 302: Advanced Composition ....................................................3
ENGL 306: Theories and Technologies of Writing ............................3
ENGL 351: Fiction Writing .................................................................3
ENGL 352: Poetry Writing .................................................................3
ENGL 556: Topics in Writing (___) ....................................................3
ENGL 756: Topics in Writing (___) .................................................1-3
Language elective selected from (3 hours)
ENGL 308: English Linguistics ....................................................... 3
or ENGL 603: History of the English Language .......................... 3

- Literature electives* (9 hours)
- English electives (6 hours)

English majors and minors counting ENGL 304 Introduction to Writing About Literature for general education credit must take additional upper division literature electives to meet total hour requirements.

* Selected from literature courses numbered above 500; at least three credit hours must be American.

II. Creative Writing Emphasis (Poetry or Fiction) (24 hours)

Poetry
ENGL 250: Introduction to Creative Writing ................................. 3
ENGL 346: The Craft of Poetry ...................................................... 3
ENGL 347: The Craft of Fiction ..................................................... 3
or ENGL 351: Fiction Writing ......................................................... 3
ENGL 352: Poetry Writing ............................................................ 3
ENGL 452: Advanced Poetry Writing .......................................... 3
ENGL 347: The Craft of Fiction ..................................................... 3
or ENGL 351: Fiction Writing ......................................................... 3
or ENGL 752: Senior Poetry Writing ............................................ 3
or ENGL 753: Multi-Genre Writing .............................................. 3

- Literature electives* (6 hours)

Fiction
ENGL 250: Introduction to Creative Writing ................................. 3
ENGL 346: The Craft of Poetry ...................................................... 3
or ENGL 352: Poetry Writing ........................................................ 3
ENGL 347: The Craft of Fiction ..................................................... 3
ENGL 351: Fiction Writing ......................................................... 3
ENGL 451: Advanced Fiction Writing .......................................... 3
ENGL 346: The Craft of Poetry ...................................................... 3
or ENGL 352: Poetry Writing ........................................................ 3
or ENGL 751: Senior Fiction Writing ............................................ 3
or ENGL 753: Multi-Genre Writing .............................................. 3

- Literature electives* (6 hours)

III. Professional Writing Emphasis (24 hours)
ENGL 302: Advanced Composition .............................................. 3
ENGL 306: Theories and Technologies of Writing ......................... 3
ENGL 308: English Linguistics ..................................................... 3
or ENGL 603: History of the English Language .......................... 3
ENGL 695: Professional Writing Internship .................................. 1-3

Writing Electives (select four)
(Other support courses approved by the Director of Professional Writing)
ENGL 526: Writing in Electronic Environments I (___) ............... 3
ENGL 527: Writing for the Public I (___) ....................................... 3
ENGL 528: Writing for Publication I (___) .................................... 3
ENGL 529: The Art of Discourse I (___) ....................................... 3
ENGL 626: Writing in Electronic Environments II (___) ............... 3
ENGL 627: Writing for the Public II (___) ..................................... 3
ENGL 628: Writing for Publication II (___) ................................ 3
ENGL 695: Professional Writing Internship .................................. 1-3
ENGL 729: The Art of Discourse II (___) ....................................... 3

ENGL 695 Professional Writing Internship should be taken for 3 hours.

IV. Language Emphasis (24 hours)
ENGL 301: Technical/Professional Writing ................................ 3
ENGL 302: Advanced Composition .............................................. 3
ENGL 308: English Linguistics ..................................................... 3
ENGL 478: Literature for Middle and Secondary Schools ............ 3
ENGL 479: Techniques for Teaching English in Middle and Secondary Schools .................................................... 3
ENGL 603: History of the English Language .......................... 3

- Electives in English (numbered 500+) (6 hours)

A minor in English for Speakers of Other Languages is strongly recommended

ESOL Minor (15 hours)
EDUC 551: Diversity in the Classroom ........................................ 3
EDUC 552: Culture and Language Acquisition for English Language Learners ......................................................... 3
EDUC 553: Assessment and the English Language Learner ........ 3
EDUC 554: Methods and Instructional Materials for English Language Learners ......................................................... 3
EDUC 555: Practicum with English Language Learners ............. 3

(Note that ENGL 308 English Linguistics is also required for the ESOL minor; those hours are included above in the Language Emphasis instead of here in the minor)

(Prerequisites or co-requisites for EDUC 555 are EDUC 551, 552, 553, 554, and ENGL 308)
Bachelor of Arts Degree with a Major in Modern Languages

Language and Culture - Spanish

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLL 154: Spanish Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 158: Spanish Language and Culture II</td>
<td>3</td>
</tr>
<tr>
<td>MLL 251: Spanish Language and Culture III</td>
<td>3</td>
</tr>
</tbody>
</table>

At least two courses from Group 1* (6 hours)
Eight courses from Group 2** (24 hours)
Total (39 hours)

*Group 1

(Prerequisite: MLL 251 Spanish Language and Culture III)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MLL 253: Spanish Conversation</td>
<td>3</td>
</tr>
<tr>
<td>MLL 254: Spanish Grammar and Composition I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 358: Readings in Hispanic Literature and Civilization I</td>
<td>3</td>
</tr>
</tbody>
</table>

**Group 2

(Prerequisites: one 300-level course before any 400-level course, one 400-level course before any 500-level course)

Eight approved upper-division electives (24 hours)

Language and Culture - French

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLL 124: French Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 128: French Language and Culture II</td>
<td>3</td>
</tr>
<tr>
<td>MLL 221: French Language and Culture III</td>
<td>3</td>
</tr>
<tr>
<td>MLL 225: French Grammar and Conversation I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 328: Readings in French Literature and Civilization I</td>
<td>3</td>
</tr>
</tbody>
</table>

Six approved upper-division electives* (18 hours)
Total (33 hours)

*Prerequisites: One 300-level course before any 400-level course; one 400-level course before any 500-level course.

Teacher Certification - Spanish

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MLL 154: Spanish Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 158: Spanish Language and Culture II</td>
<td>3</td>
</tr>
<tr>
<td>MLL 251: Spanish Language and Culture III</td>
<td>3</td>
</tr>
</tbody>
</table>

At least 2 courses from Group 1* (6 hours)
Eight courses from Group 2** (24 hours)
Total (39 hours)

*Prerequisites: One 300-level course before any 400-level course; one 400-level course before any 500-level course.

Courses required for teacher certification (substitute for a minor) (35 hours)

Admission to Teacher Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 261: Explorations in Education</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 263: Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 357: Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MLL 479: The Teaching of Languages</td>
<td>3</td>
</tr>
<tr>
<td>SPED 510: Overview of Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 520: Methods and Materials for Academic Literacy</td>
<td>3</td>
</tr>
</tbody>
</table>

Admission to Professional Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 458: Methods and Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 462: Secondary and Middle Level Education</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 464: Foundations of Measurement and Evaluation</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 480: Supervised Teaching in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 482: Supervised Teaching in the Secondary School</td>
<td>5</td>
</tr>
<tr>
<td>MLL 579: Supervised Student Teaching and Follow-Up of Teachers</td>
<td>2</td>
</tr>
</tbody>
</table>

Total (74 hours)

Teacher Certification - French

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLL 124: French Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 128: French Language and Culture II</td>
<td>3</td>
</tr>
<tr>
<td>MLL 221: French Language and Culture III</td>
<td>3</td>
</tr>
<tr>
<td>MLL 225: French Grammar and Conversation I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 328: Readings in French Language and Civilization I</td>
<td>3</td>
</tr>
</tbody>
</table>

Six approved upper-division electives* (18 hours)
Total (33 hours)

*Prerequisites: One 300-level course before any 400-level course; one 400-level course before any 500-level course.
Courses required for teacher certification (substitute for a minor) (35 hours)

Admission to Teacher Education
EDUC 261: Explorations in Education ................................................. 3
PSYCH 263: Developmental Psychology ............................................. 3
PSYCH 357: Educational Psychology .................................................. 3
MLL 479: The Teaching of Languages ................................................ 3
SPED 510: Overview of Special Education ........................................ 3
EDUC 520: Methods and Materials for Academic Literacy ............... 3

Admission to Professional Semester
EDUC 458: Methods and Curriculum ............................................... 3
EDUC 462: Secondary and Middle Level Education ........................... 2
EDUC 464: Foundations of Measurement and Evaluation ................. 2
EDUC 480: Supervised Teaching in the Secondary School ............... 3
EDUC 482: Supervised Teaching in the Secondary School ............... 5
MLL 579: Supervised Student Teaching and Follow-Up of Teachers .... 2

Total (68 hours)

Bachelor of Science in Education Degree with a Major in English

The Bachelor of Science in Education degree with a major in English is designed primarily to train prospective English teachers. A student pursuing the degree will follow the program outlined below. A minor is not required.

Persons seeking the Bachelor of Science in Education degree should consult the appropriate sections of the University Catalog. For the specific regulations concerning admission to teacher education, see Admission to Teacher Education; for general education degree requirements for students preparing to teach secondary school, see General Education Requirements for Students Preparing to Teach Secondary School. Also see scholastic achievement requirements for admission to teacher education for secondary teaching majors, Scholastic Achievement in Common Core. Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University. See Admission to Professional Semester for professional education grade point requirements.

Requirements in English (49 hours)
ENGL 199: Introduction to English Studies ........................................2
ENGL 202: English Grammar and Usage ........................................... 3
ENGL 220: World Masterpieces ....................................................... 3
ENGL 231: American Literature I ..................................................... 3
ENGL 232: American Literature II .................................................... 3
ENGL 241: British Literature I .......................................................... 3
ENGL 242: British Literature II ......................................................... 3
ENGL 302: Advanced Composition .................................................. 3
ENGL 304: Introduction to Writing About Literature ...................... 3
ENGL 308: English Linguistics ....................................................... 3
ENGL 478: Literature for Middle and Secondary Schools ............... 3
ENGL 480: Internship in Teaching English ...................................... 1
ENGL 603: History of the English Language ................................... 3
ENGL 619: Shakespeare .................................................................. 1
ENGL 699: Senior Seminar in English .............................................1

- Electives in English* (9 hours)

English majors and minors counting ENGL 304 for general education credit must take additional upper division literature electives to meet total credit hour requirements.

ENGL 480 Internship in Teaching English requires concurrent enrollment in ENGL 478 Literature for Middle and Secondary Schools or ENGL 479 Techniques for Teaching English in Middle and Secondary Schools.

* Six credit hours must be selected from literature courses numbered above 500; at least three hours must be American.

See General Education Requirements for Students Preparing to Teach Secondary School for general education for the English teaching major.

The following courses must be completed before admission to teacher education (6 hours)
PSYCH 263: Developmental Psychology ........................................... 3
EDUC 261: Explorations in Education .............................................. 3

The following courses must be completed before admission to professional semester (13 hours)
EDUC 307: Clinical Experience ....................................................... 1
PSYCH 357: Educational Psychology ................................................ 3
ENGL 479: Techniques for Teaching English in Middle and Secondary Schools ......................................................... 3
SPED 510: Overview of Special Education ...................................... 3
EDUC 520: Methods and Materials for Academic Literacy ............ 3

See Admission to Professional Semester for professional education grade point requirements.

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Must be admitted to Teacher Education to enroll in PSYCH 357 Educational Psychology, ENGL 479 Techniques for Teaching English in Middle and Secondary Schools and EDUC 520 Methods and Materials for Academic Literacy.

Professional Semester (17 hours)
EDUC 458: Methods and Curriculum .................................................. 3
EDUC 462: Secondary and Middle Level Education ........................... 2
EDUC 464: Foundations of Measurement and Evaluation ............... 2
EDUC 480: Supervised Teaching in the Secondary School ............. 3
EDUC 482: Supervised Teaching in the Secondary School ............. 5
ENGL 579: Supervised Student Teaching and Follow-Up of Teachers ................................................................. 2

Minor in Creative Writing

Creative Writing (21 hours)
ENGL 232: American Literature II ...................................................... 3
ENGL 250: Introduction to Creative Writing .................................... 3
ENGL 346: The Craft of Poetry ......................................................... 3
or ENGL 347: The Craft of Fiction ................................................. 3

- Creative Writing electives* (9 hours)
- Literature elective** (3 hours)

*Creative Writing Electives (select three)
ENGL 346: The Craft of Poetry ......................................................... 3
or ENGL 347: The Craft of Fiction ................................................. 3
ENGL 351: Fiction Writing ............................................................... 3
ENGL 352: Poetry Writing ............................................................... 3
ENGL 451: Advanced Fiction Writing ............................................ 3
ENGL 452: Advanced Poetry Writing ............................................ 3
ENGL 751: Senior Fiction Writing .................................................. 3
ENGL 752: Senior Poetry Writing .................................................. 3
ENGL 753: Multi-Genre Writing ....................................................... 3

**Selected from literature courses numbered 500 and above; American literature recommended; approval by Director of Creative Writing required.

ENGL 753 Multi-Genre Writing requires completion of ENGL 351 Fiction Writing or ENGL 352 Poetry Writing or permission of the Director of Creative Writing.

Minor in English

Standard Minor in English (21 hours)
ENGL 202: English Grammar and Usage ....................................... 3

Writing electives selected from (6 hours)
ENGL 302: Advanced Composition ................................................. 3
ENGL 304: Introduction to Writing About Literature .................... 3
ENGL 306: Theories and Technologies of Writing ......................... 3
- English electives* (12 hours)

* Electives must include 6 hours of upper-division courses and at least 3 hours in American and 3 hours in British literature.

Minor in English (Teaching)

Second Teaching Option for Secondary or Middle Level Education Licensure (35 hours)

English (Teaching)
ENGL 202: English Grammar and Usage ....................................... 3
ENGL 220: World Masterpieces ..................................................... 3
ENGL 232: American Literature II .............................................. 3
ENGL 241: British Literature I ..................................................... 3
ENGL 242: British Literature II ..................................................... 3
ENGL 302: Advanced Composition .............................................. 3
ENGL 304: Introduction to Writing About Literature .................. 3
ENGL 308: English Linguistics ..................................................... 3
ENGL 478: Literature for Middle and Secondary Schools .......... 3
ENGL 479: Techniques for Teaching English in Middle and Secondary Schools ......................................................... 3
ENGL 480: Internship in Teaching English .................................. 1
ENGL 603: History of the English Language .................................. 3
EDUC 307: Clinical Experience .................................................... 1

English majors and minors counting ENGL 304 for general education credit must take additional upper division literature electives to meet total credit hour requirements.

ENGL 480 Internship in Teaching English requires concurrent enrollment in ENGL 478 Literature for Middle and Secondary Schools or ENGL 479 Techniques for Teaching English in Middle and Secondary Schools.

Minor in French

Core Requirements for French Minor (24 hours)
MLL 124: French Language and Culture I .................................... 3
MLL 128: French Language and Culture II .................................. 3
MLL 221: French Language and Culture III ................................. 3
MLL 225: French Grammar and Conversation I ......................... 3
MLL 328: Readings in French Literature and Civilization I .......... 3

- Three approved upper division electives (9 hours)*

*Prerequisites: One 300-level course before any 400-level course; one 400-level course before any 500-level course.
Minor in Spanish

Core Requirements for Spanish Minor (24 hours)

- Three electives from Groups 1* and 2** (9 hours)
  MLL 154: Spanish Language and Culture I ........................................... 3
  MLL 158: Spanish Language and Culture II .......................................... 3
  MLL 251: Spanish Language and Culture III ........................................ 3
  MLL 253: Spanish Conversation .......................................................... 3
  MLL 254: Spanish Grammar and Composition I ................................. 3

*Group 1

(Prerequisite: MLL 254 Spanish Grammar and Composition I; one 300-level course before any 400-level course)

  MLL 351: Spanish Grammar and Composition II .................................. 3
  MLL 358: Readings in Hispanic Literature and Civilization I ............... 3

**Group 2

(Prerequisites: one 300-level course before any 400-level course; one 400-level course before any 500-level course)

  MLL 450: Readings in Hispanic Literature and Civilization II .............. 3
  MLL 457: Hispanic Culture and Civilization ....................................... 3
  MLL 475: Directed Studies in Spanish (___) ...................................... 1-3
  MLL 555: Spanish Phonetics and Oral Practice ................................... 3

Minor in Professional Writing

Professional Writing Minor (21 hours)

ENGL 202: English Grammar and Usage .............................................. 3
ENGL 302: Advanced Composition ...................................................... 3
ENGL 306: Theories and Technologies of Writing ............................... 3
ENGL 695: Professional Writing Internship ......................................... 1-3

Writing Electives (select three)

(Other elective courses approved by the Director of Professional Writing)

ENGL 526: Writing in Electronic Environments I (___) .............................. 3
ENGL 527: Writing for the Public I (___) ............................................ 3
ENGL 528: Writing for Publication I (___) ......................................... 3
ENGL 529: The Art of Discourse I (___) ............................................. 3
ENGL 626: Writing in Electronic Environments II (___) ....................... 3
ENGL 627: Writing for the Public II (___) ........................................ 3
ENGL 628: Writing for Publication II (___) ........................................ 3
ENGL 695: Professional Writing Internship .................................... 1-3
ENGL 729: The Art of Discourse II (___) ........................................... 3

ENGL 695 Professional Writing Internship should be taken for 3 hours.

Master of Arts Degree with a Major in English

The applicant for admission to study for the degree Master of Arts with a major in English shall present evidence of successful completion of at least 24 semester hours of undergraduate English above the freshman level, including survey courses in both English and American literature; one course in linguistics, modern grammar, or the history of the English language; and one upper division writing course. Students not presenting evidence of sufficient background in the above areas shall be required to complete one or more undergraduate courses as a condition of acceptance.

For regulations concerning the required placement and comprehensive examinations see the graduate advisor in English. For regulations which pertain to all candidates for the degree see Master's Degree: General Regulations in this catalog.

Time Limit for Degree Completion

Students in the English Department Master of Arts program must finish their degrees within six years from the date they first enrolled as degree seeking students.

Validation of Courses

Credits earned more than six years before the date for granting the degree cannot be counted to meet degree requirements unless they are validated by special examination. Required courses more than six years old must be repeated unless they are validated. Examinations and grades for validated courses are given by the course instructor or departmental faculty and must be filed in the English and Modern Languages Department Office. Courses are eligible for validation only if they have been taken within a ten year period from when the candidate’s degree will be completed. Courses from other institutions may not be validated; therefore, transferred courses must be no more than six years old at the time the degree is granted.

Master of Arts Degree Programs

Literature Emphasis (Option I, II, III)* (36 hours)

ENGL 810: Research Methods .......................................................... 3
ENGL 820: Theory (___) ................................................................. 3
ENGL 875: Seminar (___) .............................................................. 3
**Two writing courses (select 2)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 526: Writing in Electronic Environments I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 527: Writing for the Public I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 528: Writing for Publication I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 529: The Art of Discourse I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 626: Writing in Electronic Environments II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 627: Writing for the Public II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 628: Writing for Publication II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 716: Topics in Teaching Writing (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ENGL 729: The Art of Discourse II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 756: Topics in Writing (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ENGL 815: Writing for the Profession (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 875: Seminar (___)</td>
<td>3</td>
</tr>
</tbody>
</table>

- Five required literature courses** (15 hours)
- Electives** (6 hours)

ENGL 756 may be taken if topic is not Creative Writing.

ENGL 875 may be taken if topic is Writing but not Creative Writing.

*Literature Emphasis requires two seminars; at least one must be literary; if a second literary seminar is selected, it must be from a different literary area (British Literature before 1789, British Literature after 1789, or American Literature).

**Selected from courses at the 500-800 levels. May include seminars, but not directed study, research problem, thesis, or internship.

**Creative Writing Emphasis (Option I) (36 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 810: Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 820: Theory (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 850: Creative Writing Workshop (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 875: Seminar (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 890: Research and Thesis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Three literature courses***

**Writing elective (select one)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 716: Topics in Teaching Writing (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ENGL 753: Multi-Genre Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 756: Topics in Writing (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ENGL 850: Creative Writing Workshop (___)</td>
<td>3</td>
</tr>
</tbody>
</table>

**English elective**

ENGL 820 and ENGL 875 topics must be creative writing.

ENGL 850 Creative Writing Workshop - Six hours of workshop must be taken in the student’s major genre.

ENGL 716 Topics in Teaching Writing and ENGL 756 Topics in Writing - Only if the topic is creative writing.

Under the Writing elective, ENGL 850 Creative Writing Workshop can be taken only if the genre is different from the student’s major genre.

ENGL 890 Research and Thesis - Six hours are required.

*Selected from courses at the 500-800 levels. At least one course must be American literature. At least one course must be modern or contemporary literature (approved by the Director of Graduate Studies). May include seminars, but not directed study, research problem, thesis, or internship.

**Selected from courses at the 500-800 levels.

**Professional Writing Emphasis (Option I, II)* (36 hours)**

**Three literature courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 810: Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 820: Theory (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 875: Seminar (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 890: Research and Thesis</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 891: Research Problem</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 895: Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

**Four of the following**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 526: Writing in Electronic Environments I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 527: Writing for the Public I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 528: Writing for Publication I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 529: The Art of Discourse I (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 603: History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 626: Writing in Electronic Environments II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 627: Writing for the Public II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 628: Writing for Publication II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 726: Advanced Writing in Electronic Environments</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 727: Advanced Writing for the Public (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 728: Advanced Writing for Publication (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 729: The Art of Discourse II (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 895: Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

ENGL 820 Theory (___) should be taken as Professional Writing.

ENGL 875 Seminar (___) should be taken as Professional Writing.

*Professional Writing Emphasis requires at least two seminars; one must be Professional Writing and one must be literary; if a third seminar is selected and that seminar is literary, it must be from a different literary area than the first literary seminar.
“Jump Start” Master of Arts Pathway for Professional Writing Emphasis

This program is an expansion of the existing Pittsburg State University program that permits students to have conditional acceptance to the master’s program in their final undergraduate semester. With the “Jump Start” program, English majors in the Professional Writing Emphasis have the chance to earn hours during their full senior year in order to have nine hours of graduate work completed prior to their undergraduate graduation.

Students meeting the eligibility requirements* may take up to nine credit hours (total) of senior/graduate or graduate level courses from an approved list (see below) during the final two semesters as an undergraduate and have them count on the graduate candidacy if students apply for and are granted conditional acceptance into the master’s degree program. This would allow students to reduce the credit hours needed to earn post-baccalaureate from 36 down to 27.

*English majors in the Professional Writing Emphasis with senior standing are eligible if a minimum GPA of 3.25 is earned, less than 30 credit hours are needed to complete requirements for the undergraduate degree, and conditional acceptance into the Pittsburg State University English program graduate program is received. Students currently in their junior or senior years will be grandfathered into the program on a case-by-case basis.

Approved Courses for “Jump Start” Eligible Students

- Courses may NOT count for both undergraduate and graduate degree
- A grade of "B" or higher must be earned in designated "Jump Start" courses

ENGL 526: Writing in Electronic Environments I (__) .......................... 3
ENGL 527: Writing for the Public I (__) ........................................... 3
ENGL 528: Writing for Publication I (__) ............................................ 3
ENGL 529: The Art of Discourse I (__) ................................................ 3
ENGL 603: History of the English Language ........................................ 3
ENGL 626: Writing in Electronic Environments II (__) ......................... 3
ENGL 627: Writing for the Public II (__) .............................................. 3
ENGL 628: Writing for Publication II (__) .......................................... 3
ENGL 726: Advanced Writing in Electronic Environments (__) ............ 3
ENGL 727: Advanced Writing for the Public (__) ................................. 3
ENGL 728: Advanced Writing for Publication (__) ............................... 3
ENGL 729: The Art of Discourse II (__) .............................................. 3

Other literature or professional writing courses approved by the Director of Graduate Studies in English and the Director of Professional Writing.

Graduate Certificate in English

Options:

1) A student may satisfy the Higher Learning Commission (HLC) requirement of 18 hours in the field by enrolling as a non-degree-seeking student and taking 18 hours of graduate classes.

2) A student may enroll in the Pittsburg State University Graduate Certificate Program (which entails enrolling in the Pittsburg State University master’s program, with no intention of earning the master's degree), follow the prescribed course of study, and receive the Certificate.

3) A student may enroll in the Pittsburg State University Graduate Certificate Program (which entails enrolling in the Pittsburg State University master's program), follow the prescribed course of study, receive the Certificate, and complete the remainder of the MA curriculum.

Application Procedures

Applicants follow the standard procedures for applying to the Pittsburg State University English Graduate Program.

Requirements for Admission

Candidates for the Graduate Certificate in English should have earned at least a 2.75 overall grade-point average or a 3.0 in the major.

Time Limit

At present, there is no time limit for completion of the Certificate program. There is a 6-year time limit for completion of the master’s degree.

Curriculum

Courses must be at the 700 level or above and must include the following:

Literature courses: 6 hours
Writing courses: 6 hours
English electives: 6 hours

Grades

No grade lower than a B may be counted toward the 18-hour Certificate program requirement.
**Transfer Credit**

Up to six (6) hours of English credit may be transferred from an approved/accredited institution of recognized standing if a grade of B or higher was earned in those credits and if the credit was applicable toward a graduate degree at the university at which the course was taken.

**Post-Certificate Master’s Work**

For those who wish to continue, the 18 hours of coursework for the Certificate will be automatically credited toward the MA requirement. Non-degree-seeking participants who decide to seek a master’s may apply toward that degree only 12 hours of credit earned before acceptance, so the full MA application should be completed by that point.
Family and Consumer Sciences

Chairperson: Duane A. Whitbeck*
Professor(s): Lynette J. Olson*, Duane A. Whitbeck*
Associate Professor(s): Amber Tankersley*
Assistant Professor(s): Kalari Flotree, Shawnee Hendershot*
Instructors: Sheila Cook, Kari Cronister (Preschool Supervising Teacher), Goldie Prelogar

*Graduate Faculty

Room 101 Family & Consumer Sciences Building
Telephone: 620-235-4457
Fax: 620-235-4686
http://www.pittstate.edu/department/family/
E-mail: dwhitbeck@pittstate.edu

Undergraduate

Bachelor of Science in Education Degree with a Major in Family and Consumer Sciences Education
Bachelor of Science in Education Degree with a Major in Early Childhood Unified (ECU): Birth through Third Grade Licensure
Bachelor of Science Degree with a Major in Family and Consumer Sciences

Undergraduate Minors

Minor in Family and Consumer Sciences
Minor in Childhood Development
Minor in Fashion Merchandising
Minor in Human Ecology
Minor in Youth and Adolescence

The Department of Family and Consumer Sciences provides programs that prepare educators in family and consumer sciences and professionals in the areas of early childhood development, fashion merchandising, community and family services, and interior merchandising. These programs as well as other course offerings reflect the department mission “to provide educational programs and experiences that develop professional and life skills that help people function more effectively in their daily living and working environments”.

Facilities and Resources

The Family and Consumer Sciences department operates the Pittsburg State University Early Childhood Preschool Laboratory where all early childhood development and education students apply the knowledge and skills they gain in classes to real environments. The department also houses the Family and Consumer Sciences Historic Clothing collection which includes items representing clothing from 1870 to the present.

Bachelor of Science in Education Degree with a Major in Family and Consumer Sciences Education

The Department of Family and Consumer Sciences offers a curriculum designed to prepare the student to obtain teacher licensure in the area of Family and Consumer Sciences Education, grades 6-12. Students completing this curriculum are not required to complete a minor field; however, they may consider a second concentration in an area such as health or a variety of minors in education. Students may take additional course work in any of the areas of Family and Consumer Sciences. Recent graduates with this major can be found in these challenging positions: teaching secondary schools, food services, school counseling, social services, community services, family and consumer sciences extension work and graduate studies.

Professional Development School Opportunity

Beyond Family and Consumer Sciences course requirements for teacher education, students may choose to participate in the professional development school opportunity. These students will have the advantage of working in a professional laboratory experience through cooperative arrangements with area public schools. Supervised laboratory experiences will include observation in Family and Consumer Sciences classrooms, teacher assistance and classroom teaching experiences.

Field experience in a cooperative high school setting will include observation of Family and Consumer Sciences classes, interviews with school administration, and other activities that will prepare students for a teaching career.

Additional field experience in a cooperative high school will include working with a Family and Consumer Sciences teacher to gain experience in the classroom. Students will spend a minimum of five hours per week in the school setting. Participation in this will satisfy FCS 570 Professional Internship (____).
**General Education Degree Requirements** *(45-49 hours)*

Basic Skills *(12-13 hours)*

General Education Electives *(33-36 hours)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciences** <em>(8-9 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Social Studies <em>(3 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Political Studies <em>(3 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Producing and Consuming# <em>(2-3 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Fine Arts and Aesthetic Studies <em>(2-3 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Cultural Studies <em>(3 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Health and Well Being@ <em>(6 hours)</em></td>
<td></td>
</tr>
<tr>
<td>Human Heritage <em>(6 hours)</em></td>
<td></td>
</tr>
</tbody>
</table>

* See [General Education Requirements for Students Preparing to Teach Secondary School](#).

**CHEM 105/106 is strongly encouraged for all FCS Teacher Education majors.**

#Three hours of general education producing and consuming are satisfied by the required course FCS 230 Consumer Education and Personal Finance.

@ Counts as both General Education and major requirement: FCS 203 Nutrition and Health and FCS 301 Nutrition.

**NOTE:** Students are required to complete Writing to Learn courses. See [Writing to Learn Requirement](#).

**Family and Consumer Sciences Course Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 100: Career Management in Family and Consumer Sciences</td>
<td>1-2</td>
</tr>
<tr>
<td>IND 110: Interior Design Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>FCS 150: Introduction to Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FCS 230: Consumer Education and Personal Finance</td>
<td>3</td>
</tr>
<tr>
<td>FCS 301: Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>or FCS 203: Nutrition and Health</td>
<td>3</td>
</tr>
<tr>
<td>FCS 355: Construction Techniques</td>
<td>3</td>
</tr>
<tr>
<td>FCS 401: Food Science and Preparation Techniques</td>
<td>3</td>
</tr>
<tr>
<td>FCS 409: Demonstration Techniques and Instructional Technology</td>
<td>3</td>
</tr>
<tr>
<td>FCS 430: Family Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>FCS 479: Techniques for Teaching Family and Consumer Sciences</td>
<td>3</td>
</tr>
<tr>
<td>FCS 480: Dynamics of Family Relationships</td>
<td>3</td>
</tr>
<tr>
<td>FCS 572: Senior Seminar in Family and Consumer Sciences</td>
<td>1</td>
</tr>
<tr>
<td>FCS 590: Development of the Child: Birth Through Age Eight</td>
<td>3</td>
</tr>
<tr>
<td>FCS 690: Parent/Professional Relationships</td>
<td>3</td>
</tr>
</tbody>
</table>

Must be admitted to Teacher Education for enrollment in FCS 479.

Sophomore Year: Admission to Teacher Education  
Junior Year: Admission to Professional Semester

**Professional Course Requirements** *(21 hours)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 261: Explorations in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 520: Methods and Materials for Academic Literacy</td>
<td>3</td>
</tr>
<tr>
<td>FCS 370: Introduction to Career-Technical Education FCS</td>
<td>3</td>
</tr>
<tr>
<td>FCS 429: Career and Technical Education in the FACS Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 263: Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 357: Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SPED 510: Overview of Special Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**See grade point requirements for professional education courses for [Admission to Professional Semester](#).**

Must be admitted to Teacher Education for enrollment in these classes: EDUC 520 and PSYCH 357.

**Senior Year**

**Professional Semester (17 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 458: Methods and Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 462: Secondary and Middle Level Education</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 464: Foundations of Measurement and Evaluation</td>
<td>2</td>
</tr>
<tr>
<td>EDUC 480: Supervised Teaching in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 482: Supervised Teaching in the Secondary School</td>
<td>5</td>
</tr>
<tr>
<td>FCS 579: Supervised Student Teaching and Follow-Up of Teachers</td>
<td>2</td>
</tr>
</tbody>
</table>

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University.

- Electives *(0-3 hours)*

Total hours for Bachelor of Science in Education Degree with a Major in Family and Consumer Sciences *(124-126 hours)*
Bachelor of Science in Education Degree with a Major in Early Childhood Unified (ECU): Birth through Third Grade Licensure

The Bachelor of Science in Education, Early Childhood Unified (ECU)-Birth Through Third Grade Licensure program, is an inter-disciplinary undergraduate major offered by the Departments of Teaching and Leadership and Family and Consumer Sciences. The ECU degree prepares participants for working/teaching in infant-toddler programs, preschool programs, and primary grades in public schools. It leads to eligibility for teaching licensure from the Kansas State Department of Education for both general and special education birth through grade three. Students in this program must meet all requirements of Teacher Education programs. See the Department of Teaching and Leadership (Bachelor of Science in Education- Early Childhood Unified (ECU) Birth through Third Grade) for complete information, curriculum, and Teacher Education requirements.

Bachelor of Science Degree with a Major in Family and Consumer Sciences

This major is designed as preparation for the many family and consumer sciences positions requiring special emphasis in a subject area. The student must complete 14 hours of core requirements plus hours specified for the chosen emphasis. The Bachelor of Science degree with a major in family and consumer sciences requires a minimum of 124 semester hours. This includes selection of a minor outside the department.

General Education Degree Requirements* (45-49 hours)

Basic Skills (12-13 hours)

General Education Electives (33-36 hours)

Sciences (8-9 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming** (2-3 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well Being*** (6 hours)

Human Heritage (6 hours)

* See General Education Requirements for All Baccalaureate Degrees specific general education degree requirements.

NOTE: Students are required to complete Writing to Learn courses. See Writing to Learn Requirement for specific requirements.

**Three hours of general education Producing and Consuming are met by the required course FCS 230 Consumer Education and Personal Finance.

***Three hours of general education Health and Well Being are met by the required course FCS 203 Nutrition and Health.

Core Requirements (14 hours)

FCS 100: Career Management in Family and Consumer Sciences .............................................. 1-2
FCS 203: Nutrition and Health ................................................. 3
FCS 230: Consumer Education and Personal Finance ................................. 3
FCS 470: Professional and Social Skills ........................................... 3
FCS 480: Dynamics of Family Relationships ........................................ 3
FCS 572: Senior Seminar in Family and Consumer Sciences ............... 1

Childhood Development Emphasis (47-51 hours)

Emphasis Requirements (21-25 hours)

EDUC 440: Early Childhood Program Organization and Management ........................................... 3
FCS 285: Lifespan Human Development ................................................ 3
FCS 390: Interacting with Children .................................................. 3
FCS 391: Practicum in Early Childhood ............................................... 1
FCS 490: Developmental Planning: Preschool and Kindergarten .............. 3
FCS 491: Preschool Laboratory ......................................................... 1-2
FCS 570: Professional Internship .................................................... 2-4
or FCS 591: Supervised Teaching in the Early Childhood Lab .......... 5
FCS 590: Development of the Child: Birth Through Age Eight .......... 3
HHP 260: First Aid and CPR ......................................................... 2

No credit will be given for outside certification for HHP 260 or if currently certified.

Students must receive special permission to select FCS 570.

Restricted Electives (select 12 hours)

MUSIC 140: Children's Music ............................................................ 3
EDUC 322: Early Literacy and Language Development ........................... 2
and EDUC 323: Literature for Young Children Birth-3rd ...................... 1
FCS 392: Infant and Toddler Development ...................................... 3
FCS 430: Family Resource Management ..................................... 3
HHP 466: Motor Development ....................................................... 3
FCS 571: Directed Readings in Family and Consumer Sciences ............ 1-3
Recommended Minors: Accounting, Art, Business Administration, Music, Recreation, Sociology, Psychology, and Special Education for Family and Consumer Sciences.

Potential Careers: Child care center director, social services, preschool teacher, child care provider, licensing specialist, county extension and college instructor.

Career information found at: http://www.pittstate.edu/department/family/students/career-planning/

Application to student teach in Early Childhood must be completed and turned in to the Early Childhood Program Coordinator by October 1st for spring student teaching and by April 1st for fall.

Fashion Merchandising Emphasis (52-54 hours)

Emphasis Requirements (32-34 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 150: Introduction to Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FCS 154: Dress and Culture</td>
<td>3</td>
</tr>
<tr>
<td>FCS 285: Lifespan Human Development</td>
<td>3</td>
</tr>
<tr>
<td>FCS 351: Apparel Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>FCS 352: The Fashion Industry</td>
<td>3</td>
</tr>
<tr>
<td>FCS 355: Construction Techniques</td>
<td>3</td>
</tr>
<tr>
<td>FCS 356: Textiles</td>
<td>3</td>
</tr>
<tr>
<td>FCS 440: Visual Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FCS 452: Fashion Buying and Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>FCS 455: History of Costume</td>
<td>3</td>
</tr>
<tr>
<td>FCS 570: Professional Internship</td>
<td>2-4</td>
</tr>
</tbody>
</table>

Restricted Electives (select 6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 188: The Designed World</td>
<td>3</td>
</tr>
<tr>
<td>ART 222: Jewelry Design I</td>
<td>3</td>
</tr>
<tr>
<td>ART 233: Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 288: Introduction to Art History I</td>
<td>3</td>
</tr>
<tr>
<td>ART 289: Introduction to Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ART 688: History of Modern Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 689: Contemporary Issues in Art</td>
<td>3</td>
</tr>
<tr>
<td>COMM 200: Introduction to Mass Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 230: Principles of Advertising</td>
<td>3</td>
</tr>
<tr>
<td>COMM 277: Introduction to Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 301: Technical/Professional Writing</td>
<td>3</td>
</tr>
<tr>
<td>FCS 740: Special Topics: (____)</td>
<td>1-4</td>
</tr>
<tr>
<td>GIT 230: Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>GIT 310: Photography</td>
<td>3</td>
</tr>
<tr>
<td>MGT 330: Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 330: Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

FCS 740 Special Topics: Intensive study in special areas of the fashion industry including, but not limited to, study tours to fashion centers in the U.S. and abroad.

Recommended Minors: Business Administration, Women’s and Gender Studies, Marketing, Communication, Art, Psychology, Foreign Language, or Industrial Management and Supervision, Graphic Design or Human Resources.

Potential Careers: Fashion coordinator, fashion editor, buyer, merchandise or sales manager, visual merchandiser and internet marketing.

Career information found at: http://www.pittstate.edu/department/family/students/career-planning/

Community and Family Services Emphasis (40-42 hours)

Community and Family Services (8-10 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 270: Practicum in Family and Consumer Sciences (____)</td>
<td>1</td>
</tr>
<tr>
<td>FCS 285: Lifespan Human Development</td>
<td>3</td>
</tr>
<tr>
<td>FCS 430: Family Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>FCS 571: Directed Readings in Family and Consumer Sciences</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Restricted Electives (18 hours)

- Any six courses in the Family and Consumer Sciences area as approved by your advisor (nine credit hours must be 300 or above) (18 hours)

Recommended Minors: Communication, Psychology, Recreation, Business Administration, Marketing, Sociology, Human Resources.

Potential emphasis areas within this concentration are: General Community and Family Services, Aging and the Family, Human Resources, and Public Health.


Career information found at: http://www.pittstate.edu/department/family/students/career-planning/
Interior Merchandising Emphasis (57 hours)

Emphasis Requirements (43 hours)
IND 110: Interior Design Fundamentals ........................................ 3
IND 120: Interior Design Studio Fundamentals .............................. 3
FCS 214: Space Planning and Programming ................................ 3
FCS 285: Lifespan Human Development ...................................... 3
IND 313: History of Design II .................................................... 3
IND 315: Interior Design: Studio I .............................................. 3
IND 323: Interior Design Materials and Resources ....................... 3
IND 325: Interior Design: Studio II .......................................... 3
FCS 352: The Fashion Industry ................................................. 3
FCS 356: Textiles ..................................................................... 3
FCS 440: Visual Merchandising .................................................. 3
IND 570: Professional Internship Preparation ............................ 1
MGT 330: Management and Organizational Behavior .................. 3
MKTG 330: Principles of Marketing ........................................... 3
MKTG 510: Consumer Behavior ................................................ 3

Recommended Minors: Graphic Design, Photography and Marketing. For students interested in working specifically in business and merchandising environments it is suggested that a minor in Accounting, Business Administration, Human Resources or Spanish be considered.

Students are encouraged to take additional courses in a variety of program areas to round out their preparation if the opportunity is there.

Potential Careers: Merchandise Buyer, Merchandise or Sales Manager, Visual Merchandiser, Product Representative.

Minor in Family and Consumer Sciences
A minor in family and consumer sciences shall consist of at least twenty-one semester hours approved by the Department of Family and Consumer Sciences. These hours may be chosen by the student to meet her or his particular needs. A minimum of nine hours must be numbered 300 or above. The minor will not meet the requirements for state certification for teaching family and consumer sciences.

Minor in Childhood Development
Childhood Development (10 hours)
FCS 285: Lifespan Human Development .................................... 3
FCS 390: Interacting with Children ......................................... 3
FCS 391: Practicum in Early Childhood .................................... 1
FCS 590: Development of the Child: Birth Through Age Eight ...... 3

Restricted Electives (Students must choose at least four courses) (11-12 hours)
EDUC 322: Early Literacy and Language Development .............. 2
and EDUC 323: Literature for Young Children Birth-3rd ............ 1
FCS 392: Infant and Toddler Development ............................... 3
FCS 480: Dynamics of Family Relationships ............................ 3
FCS 580: Family Violence and Child Abuse ............................ 3
or FCS 780: Family Violence and Child Abuse ........................ 3
FCS 690: Parent/Professional Relationships ........................... 3

Minor in Fashion Merchandising
Fashion Merchandising (15 hours)
FCS 150: Introduction to Merchandising .................................... 3
FCS 351: Apparel Evaluation .................................................... 3
FCS 352: The Fashion Industry ................................................. 3
FCS 356: Textiles ..................................................................... 3
FCS 452: Fashion Buying and Merchandising ............................ 3

Select two of the following courses (6 hours)
FCS 154: Dress and Culture .................................................... 3
FCS 355: Construction Techniques .......................................... 3
FCS 455: History of Costume ................................................... 3

Minor in Human Ecology
Human Ecology (21 hours)
FCS 230: Consumer Education and Personal Finance ............... 3
FCS 285: Lifespan Human Development .................................... 3
FCS 430: Family Resource Management ................................... 3
FCS 480: Dynamics of Family Relationships ............................ 3

• Electives (credit hours chosen from departmental courses in consultation with minor advisor) (9 hours)

Minor in Youth and Adolescence
Youth and Adolescence (7-9 hours)
FCS 285: Lifespan Human Development ..................................... 3
or PSYCH 263: Developmental Psychology .............................. 3
FCS 571: Directed Readings in Family and Consumer Sciences .................................................... 1-3
or FCS 771: Directed Readings in Family and Consumer Sciences ..................................................... 1-3
FCS 592: Study of Youth and Adolescence ............................. 3
Restricted Electives (Select five courses)
(14-15 hours)

MIL 100: Military Science I ................................................................. 1
and MIL 102: Military Science I .......................................................... 1
and MIL 103: Military Science I Laboratory ....................................... 1
SOC 220: Social Problems ................................................................. 3
FCS 340: Topics in (____) .................................................................. 1-6
or FCS 740: Special Topics: (____) ................................................... 1-4
FCS 390: Interacting with Children .................................................... 3
PSYCH 430: Positive Psychology ....................................................... 3
SOC 440: Personality and Social Structure ....................................... 3
SOC 536: The Family and Society ..................................................... 3
SOC 548: Juvenile Delinquency .......................................................... 3
FCS 570: Professional Internship ..................................................... 2-4
FCS 580: Family Violence and Child Abuse .................................... 3
or FCS 780: Family Violence and Child Abuse .................................. 3
PSYCH 616: Introduction to Group Processes .................................. 3
FCS 690: Parent/Professional Relationships ................................... 3
History, Philosophy, and Social Sciences

Chairperson: Barbara Bonnekessen*
Associate Professor(s): Darren Botello-Samson*, Kathleen Cameron*, Marjorie Donovan*, Jonathan F. Dresner*, Kristen Humphrey*, Harry L. Humphries*, Roy Janisch*, James McBain*
Assistant Professor(s): Chris Childers*, Kirstin Lawson*, Kayce Mobley*, Mark J. Peterson*, Kyle Thompson*, Hyejoon Park*, Dory Quinn*, Gary Wilson*
Instructors: Adam Bilinski, Michelle Barnaby, Patty Magee
*Graduate Faculty
**University Professor

Room 412 Russ Hall
Telephone: 620-235-4325
Fax: 620-235-4338
http://www.pittstate.edu/department/social_science/
E-mail: bbonnekessen@pittstate.edu

Undergraduate

Bachelor of Science Degree with a Major in Geography: No Emphasis
Bachelor of Science Degree with a Major in Geography: Environmental Geography and Sustainability Emphasis
Bachelor of Science Degree with a Major in Geography: Geographic Information Systems Emphasis
Bachelor of Science Degree with a Major in Geography: Urban Development Emphasis
Bachelor of Arts Degree with a Major in History
Bachelor of Science in Education Degree with a Major in History/Government
Middle School Endorsement for History Comprehensive
Bachelor of Arts with a Major in International Studies
Bachelor of Science Degree with a Major in Justice Studies: No Emphasis
Bachelor of Science Degree with a Major in Justice Studies: Criminal Justice Emphasis
Bachelor of Science Degree with a Major in Justice Studies: Military Police Transfer Track Emphasis
Bachelor of Arts Degree with a Major in Political Science: No Emphasis

Bachelor of Arts Degree with a Major in Political Science: Pre-Law Emphasis
Bachelor of Science Degree with a Major in Social Work
Bachelor of Science Degree with a Major in Sociology: No Emphasis
Bachelor of Science Degree with a Major in Sociology: Criminology Emphasis
Bachelor of Science Degree with a Major in Sociology: Diversity Studies Emphasis

Undergraduate Minors

Minor in Fraud Examination
Minor in Geography
Minor in History (Non-Teaching)
Minor International Studies
Minor in Justice Studies
Minor in Multicultural Studies
Minor in Philosophy
Minor in Political Science
Minor in Psychology for Justice Studies Majors
Minor in Sociology

Undergraduate Certificate

Certificate in Geographic Information Systems

Graduate

Master of Arts Degree with a Major in History

BACCALAUREATE DEGREES

The Department of History, Philosophy, and Social Sciences offers work leading to the degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Science in Education, with a major in History/Government.

Bachelor of Arts

Typically, the Bachelor of Arts degree is for students seeking a liberal arts foundation to support professional education and careers in law or business or advanced degrees in their respective disciplines.

Bachelor of Science

The Bachelor of Science is for students who intend to pursue a career immediately upon graduation, utilizing their discipline specific skill sets and knowledge base or to pursue advanced education or licensure in a specific field of study.
Bachelor of Science in Education with a major in History/Government

Students interested in a secondary education career teaching history and government, along with other social sciences, generally elect the Bachelor of Science in Education degree. Bachelor of Science in Education students should consult the History section of the department listing for a more complete description of the degree program and also become familiar with the sections of the catalog governing admission to teacher education, required courses, and the professional semester.

Undergraduate Majors and Assessment

Consistent with university policy and a departmental commitment to a process of continuing self-examination and improvement, the Department of History, Philosophy, and Social Sciences requires that all of its majors participate in disciplinary specific outcomes assessment. The assessment of individual student learning outcomes is completed by the end of the senior year. Programs employ a variety of instruments to evaluate learning outcomes.

Undergraduate Minors

The Department of History, Philosophy, and Social Sciences offers a variety of minors allowing students to explore areas of academic or vocational interest and develop discipline based skill sets and knowledge, as well as interdisciplinary minors. The specific requirements for the minors are located under each program’s description.

Department Honors

The department participates in the university-wide department honors program. Honors programs exist in the fields of geography, history, justice studies, political science, social work, and sociology. Requirements for the honors program are summarized below and in the general description of the university honors program. The Departmental Academic Honors Program is designed to challenge students with superior academic abilities. The program provides an opportunity to develop a deeper understanding of an academic area through independent study and close faculty-student association. Students who complete the requirements outlined below graduate with the distinction "With Departmental Academic Honors" noted on their transcript.

Departmental Academic Honors are awarded to students who:

a. Maintain a cumulative 3.50 GPA.

b. Complete a minimum of nine semester hours of credit designated as taken for honors in the student’s major department. (Must be at least two courses).

c. The student and instructor will develop a statement that will define the work to be completed beyond that normally associated with the class.

d. Students are limited to one honors course per semester or summer session.

e. No project/paper shall be accepted for honors with less than a grade of B.

f. Students must elect to take a course for honors within the first one-fourth of the length of the course.

g. All incompletes must be finished no later than four weeks after the completion of the semester they are given. Students are not allowed to submit an application for another Departmental Honors Project until any previous incomplete has been finished.

h. Any exceptions to the above guidelines, must be approved by the Honors Committee of the Pittsburg State University Faculty Senate.

Department Scholarships

Thanks to the generosity of past graduates and those interested in history, philosophy, and social sciences, the department is able to offer a number of scholarships for its various academic programs. Consistent with donor criteria, the faculty in philosophy and social sciences award scholarships with the following conditions: (1) the student must have completed a minimum of one semester as a full-time student at Pittsburg State University prior to applying; and (2) the student must enroll and remain enrolled as a full-time major in one of the social sciences programs.

In general, students interested in applying for a department scholarship should contact Financial Assistance, 103 Horace Mann, 620-235-4240 (Toll Free: 1-800-854-PITT), or http://www.pittstate.edu/office/financial_aid/ to access the universal application form. (Hint: at the Financial Assistance website, click on “Scholarships” and look for departmental scholarships and follow the instructions as you surf through the website.)
Graduate Degrees

History offers students the opportunity to expand on their knowledge and appreciation of the past through a Master of Arts degree. (See the history section of the department’s catalog listing for a description of the purpose and degree requirements).

Bachelor of Science Degree with a Major in Geography: No Emphasis
Program Coordinator: Catherine A. Hooey
Professors: Timothy J. Bailey, Catherine A. Hooey
Instructor: Michele Barnaby

Geography is a spatial science that explores the interactions between the human and environmental dimensions of our ever-changing world. The Bachelor of Science degree with a major in geography provides students with a foundation in geographic knowledge, spatial theory and applied analytical skills, providing a solid background for students in pursuit of careers in a variety of fields and for those who wish to pursue graduate work.

The program focuses on those elements of geography that are most critical in today's society: environmental geography, which concentrates on the interaction of people and the environment; urban planning, an applied science that involves decision-making about city growth; community development, which focuses on locally-driven social and economic development; Geographic Information Systems (GIS), a computer-based technological application that combines data management and modeling with the explanatory powers of maps and digital display. Students who demonstrate competency in GIS upon completion of the introductory level GIS course may apply to participate in a paid internship program.

Geography majors choose a variety of minors depending on their interests. Minors in political science, economics, history, business or a modern language are common.

The traditional geography major requires a total of 38 hours, at least 29 of which must be upper division geography courses, with no emphasis, distributed as follows:

I. Required Courses (32 hours)
GEOG 106: World Regional Geography .................................................. 3
GEOG 301: Introduction to Urban Geography .......................................... 3
GEOG 302: Introduction to Environmental Geography .......................... 3
GEOG 303: Geographic Information Systems I ...................................... 4
GEOG 305: Cartography ....................................................................... 3

II. Geography electives from courses numbered 300-799 (6 hours)
GEOG 300: Elements of Geography ....................................................... 3
GEOG 304: Human Geography ............................................................... 3
GEOG 307: East Asia: China, Japan, and Korea ...................................... 3
GEOG 395: Topics in Geography (____) ................................................ 1-3
GEOG 403: Geographic Information Systems II .................................... 4
GEOG 507: Geography of the Global Economy .................................... 3
GEOG 594: Directed Readings in Geography ......................................... 1-3
GEOG 596: Individual Study in Geography ............................................ 1-3
GEOG 600: Service Learning in Community Development Laboratory .................................................. 3
GEOG 602: Service Learning in Sustainability Laboratory ..................... 3
GEOG 603: Service Learning in GIS Laboratory .................................... 3
GEOG 795: Seminar: Special Topics in Geography (____) .................... 1-3

Bachelor of Science Degree with a Major in Geography: Environmental Geography and Sustainability Emphasis

I. Required Courses (29 hours)
COMM 450: Small Group Communication ............................................. 3
ECON 201: Principles of Macroeconomics ............................................. 3
ENGL 301: Technical/Professional Writing ............................................. 3
GEOG 106: World Regional Geography ................................................ 3
GEOG 303: Geographic Information Systems I ...................................... 4
GEOG 305: Cartography ....................................................................... 3
GEOG 601: Senior Seminar in Geography ............................................. 3
MGT 101: Introduction to Business ....................................................... 3
SOSCI 388: Social Research Analysis ................................................... 4

Environmental Geography and Sustainability Emphasis (24 hours)
BIOL 313: Principles of Conservation ................................................... 3
GEOG 301: Introduction to Urban Geography ......................................... 3
or GEOG 401: Urban and Regional Planning ......................................... 3
GEOG 302: Introduction to Environmental Geography .......................... 3
GEOG 501: Urban and Rural Sustainability ............................................ 3
GEOG 502: Global Environmental Change .......................................... 3
GEOG 508: Geography of Hazards and Disasters .................................. 3
PHIL 114: Environmental Ethics ......................................................... 3
POLS 512: Environmental Politics ....................................................... 3
or POLS 609: Administrative Law ....................................................... 3

Electives (Recommended, not required)
GEOG 300: Elements of Geography ....................................................... 3
GEOG 301: Introduction to Urban Geography ......................................... 3
GEOG 304: Human Geography ............................................................... 3
GEOG 307: East Asia: China, Japan, and Korea ...................................... 3
GEOG 395: Topics in Geography (____) ................................................ 1-3
GEOG 401: Urban and Regional Planning ............................................. 3
GEOG 403: Geographic Information Systems II .................................... 4
GEOG 507: Geography of the Global Economy .................................... 3
GEOG 594: Directed Readings in Geography ......................................... 1-3
Bachelor of Science Degree with a Major in Geography: Geographic Information Systems Emphasis

I. Required Courses (29 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>COMM 450</td>
<td>Small Group Communication</td>
<td>3</td>
</tr>
<tr>
<td>ECON 201</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
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<td>ENGL 301</td>
<td>Technical/Professional Writing</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 106</td>
<td>World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 303</td>
<td>Geographic Information Systems I</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 305</td>
<td>Cartography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 601</td>
<td>Senior Seminar in Geography</td>
<td>3</td>
</tr>
<tr>
<td>MGT 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>SOSCI 388</td>
<td>Social Research Analysis</td>
<td>4</td>
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</tbody>
</table>

Geographic Information Systems Emphasis (25 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIOL 313</td>
<td>Principles of Conservation</td>
<td>3</td>
</tr>
<tr>
<td>or BIOL 330</td>
<td>Principles of Ecology</td>
<td>3</td>
</tr>
<tr>
<td>CIS 230</td>
<td>Visual Basic Programming</td>
<td>3</td>
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<tr>
<td>CIS 420</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 133</td>
<td>Construction Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 301</td>
<td>Introduction to Urban Geography</td>
<td>3</td>
</tr>
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<td>or GEOG 401</td>
<td>Urban and Regional Planning</td>
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<td>or GEOG 501</td>
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<td>GEOG 302</td>
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<td>Geography of Hazards and Disasters</td>
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<td>GEOG 403</td>
<td>Geographic Information Systems II</td>
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<td>GEOG 600</td>
<td>Service Learning in Community Development Laboratory</td>
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<td>or GEOG 602</td>
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Electives (Recommended, not required)

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<td>GEOG 596</td>
<td>Individual Study in Geography</td>
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<td>Service Learning in GIS Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 795</td>
<td>Seminar: Special Topics in Geography (____)</td>
<td>1-3</td>
</tr>
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Bachelor of Science Degree with a Major in Geography: Urban Development Emphasis

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Urban Development Emphasis (24 hours)

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<tr>
<td>CMCET 133</td>
<td>Construction Graphics</td>
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<tr>
<td>CMCET 336</td>
<td>Residential Land Development</td>
<td>3</td>
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<td>ENGL 527</td>
<td>Writing for the Public I (____)</td>
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<tr>
<td>GEOG 301</td>
<td>Introduction to Urban Geography</td>
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Bachelor of Arts Degree with a Major in History

Program Coordinator: Kirstin L. Lawson
Professors: John L.S. Daley, Stephen A. Harmon, Kelly A. Woestman
Associate Professor: Jonathan F. Dresner
Assistant Professor: Chris Childers, Kirstin L. Lawson, Kyle Thompson

This degree program is designed to provide students with a solid and varied experience in history, suitable for a liberal arts education as well as an adequate preparation for advanced professional study, in law for
example. The requirements for the Bachelor of Arts degree follow. The student seeking a Bachelor of Arts degree in History must meet the requirements for a major in history as shown below, complete a minor from the list of approved minor fields in the general statement on this degree elsewhere in this catalog, and fulfill the university’s general education requirements. All candidates for this degree should consult the appropriate sections of this catalog for the general requirements for the degree.

A Bachelor of Arts in history shall consist of at least 39 semester hours including 12 in American History, 12 in World History, 3 in HIST 430 History: Theory and Practice, 3 in HIST 695 History as Profession, and nine elective hours in history. A minimum of 27 hours shall be in courses numbered 300-799.

I. General Education Requirements (46-52 hours)

Some general education courses may apply toward major or minor requirements listed below.

II. Major (History) Requirements (27 hours must be upper division) (39 hours)*

American History (12 hours)

Recommended:
HIST 201: American History to 1865 ..................................................... 3
HIST 202: American History from 1865 ................................................ 3

World History (12 hours)

Recommended:
HIST 101: World History to 1500 ......................................................... 3
HIST 102: World History from 1500 ..................................................... 3

Required Courses:
HIST 430: History: Theory and Practice .............................................. 3
HIST 695: History as Profession ......................................................... 3
  • History electives (9 hours)

* Three of these hours can be met by General Education requirement.

III. Minor Field Requirements (20-27 hours)

Suggested appropriate minor fields include: art, biology, business administration, chemistry, communication, computing, multicultural studies, economics, English, family and consumer sciences, geography, international studies, mathematics, military science, modern language and literatures, music, philosophy, physics, political science, psychology and sociology.

IV. Electives sufficient to total a minimum of 124 hours

Hours of electives based on hours taken to complete general education and minor areas.

NOTE: It is easily possible for a Bachelor of Arts candidate to select and accomplish a double major by meeting appropriate requirements instead of filling his program with free electives.

Bachelor of Science in Education Degree with a Major in History/Government

Program Coordinator: Kirstin L. Lawson
Professors: John L.S. Daley, Stephen A. Harmon, Kelly A. Woestman
Associate Professor: Jonathan F. Dresner
Assistant Professors: Chris Childers, Kirstin L. Lawson, Kyle Thompson

To conform to current Kansas State Department of Education guidelines, the student seeking a Bachelor of Science in Education degree in the Department of History, Philosophy and Social Sciences must complete the requirements for History/Government licensure as shown below. Alternatives to HIST 540 English History to 1660, HIST 546 The Age of Empire, HIST 656 Sectional Crisis and Civil War and HIST 665 Modern America since 1968, as listed in Section II, may be taken. This degree meets current Kansas requirements for the licensure of secondary school teachers in world history, American history, political science, geography, sociology, and economics. All students seeking this degree should consult the appropriate sections of this catalog for the general requirements for the degree and for the specific regulations governing admission to teacher education, required courses, and the professional semester. The major includes 60 hours of history, social science courses and an economics course. It does not require a minor.
I. General education degree requirements for secondary students preparing to teach (31-36 hours)

Some general education courses are met by major or certification requirements listed below.

II. History/Government Requirements (57 hours)

History (36 hours)

HIST 101: World History to 1500 ................................................... 3
HIST 102: World History from 1500 ............................................... 3
HIST 201: American History to 1865 ......................................... 3
HIST 202: American History from 1865 .................................... 3
HIST 430: History: Theory and Practice ................................... 3
HIST 619: Kansas and the West ................................................. 3

One from the following:

HIST 650: Colonial America .................................................. 3
or HIST 652: American Revolution, 1789-1848 ................. 3
or HIST 655: Early American Republic .................................... 3

One from the following:

HIST 620: History of the South .............................................. 3
or HIST 636: Native Americans ................................................. 3
or HIST 656: Sectional Crisis and Civil War ......................... 3
or HIST 657: Reconstruction and New South ...................... 3
or HIST 660: Industrial America, 1865-1914 ....................... 3

One from the following:

HIST 515: World War I ......................................................... 3
or HIST 518: Nazi Germany and the Holocaust .................. 3
or HIST 520: World War II .................................................... 3
or HIST 522: Korean and Vietnam Wars .............................. 3
or HIST 540: English History to 1660 .................................. 3
or HIST 545: English History since 1660 ............................... 3
or HIST 546: The Age of Empire ............................................ 3
or HIST 548: The French Revolution and Napoleon ............ 3
or HIST 610: Modern Europe, 1500 to 1815 ...................... 3
or HIST 644: The Tudor Age ................................................. 3
or HIST 535: Medieval Civilization .......................................... 3

One from the following:

HIST 505: African Civilizations ............................................ 3
or HIST 507: Modern Africa .................................................. 3
or HIST 510: Modern Middle East ......................................... 3
or HIST 547: Radical Islam ..................................................... 3
or HIST 626: U.S. Iraq and Afghanistan ................................. 3

One from the following:

HIST 625: Mexico and the US Southwest ......................... 3
or HIST 662: Modern America, 1912-1941 ....................... 3
or HIST 664: Modern America, 1941-1968 ......................... 3
or HIST 665: Modern America Since 1968 .......................... 3
or HIST 668: U.S. as a Superpower ....................................... 3

One from the following:

HIST 523: Early China ............................................................. 3
or HIST 524: Early Japan ............................................................ 3
or HIST 526: Japan Since 1700 ............................................... 3
or HIST 527: China Since 1700 ............................................... 3
or HIST 529: History of South Asia ........................................ 3
or HIST 531: Samurai: History, Literature, Myth ................ 3
or HIST 532: History of Japanese Women ............................. 3
or HIST 533: US-East Asia Relations ................................. 3
or HIST 534: Korea Since 1700 .............................................. 3

Social Science (18 hours)

GEOG 106: World Regional Geography ........................................ 3
GEOG 300: Elements of Geography ........................................... 3
or GEOG 304: Human Geography ............................................. 3
POLS 101: U.S. Politics ............................................................. 3
POLS 103: Comparative Political Institutions ....................... 3
POLS 661: Constitutional Law I ............................................... 3
or POLS 662: Constitutional Law II ......................................... 3
SOC 100: Introduction to Sociology ......................................... 3

Economics (3 hours)

ECON 191: Issues in Today's Economy ........................................ 3

III. Electives (12 hours)

- History (any course numbered 300 and above) (3 hours)
- Political Science (any two courses numbered 300 and above for which they have the prerequisites or permission of instructor) (6 hours)
- HIST/SOC/GEOG/ECON/POL (any course numbered 300 and above for which they have the prerequisites or permission of instructor) (3 hours)

IV. Professional Education*

PSYCH 263: Developmental Psychology ........................................... 3
PSYCH 357: Educational Psychology ........................................... 3
EDUC 261: Explorations in Education .......................................... 3
EDUC 307: Clinical Experience .................................................. 1
EDUC 520: Methods and Materials for Academic Literacy ........ 3
HIST 479: Techniques for Teaching Middle and Secondary Social Studies ......................................................... 3
SPED 510: Overview of Special Education .................................. 3

Professional Semester (17 hours) ##

EDUC 458: Methods and Curriculum ............................................. 3
EDUC 462: Secondary and Middle Level Education .................. 2
EDUC 464: Foundations of Measurement and Evaluation ........ 2
EDUC 480: Supervised Teaching in the Secondary School .......... 3
EDUC 482: Supervised Teaching in the Secondary School .......... 5
HIST 579: Supervised Student Teaching and Follow-Up of Teachers .......................................................... 2
Choose two from the following (US History)*

- HIST 650: Colonial America .................................................. 3
- HIST 656: Sectional Crisis and Civil War .................................. 3
- HIST 665: Modern America Since 1968 ................................. 3

*The History, Philosophy and Social Sciences Department Chair may approve appropriate content substitutions for history electives.

Choose two from the following (World History)*

- HIST 540: English History to 1660 ......................................... 3
- HIST 546: The Age of Empire .................................................. 3

*The History, Philosophy and Social Sciences Department Chair may approve appropriate content substitutions for history electives.

Social Science (21 hours)

- GEOG 106: World Regional Geography ................................. 3
- GEOG 300: Elements of Geography ....................................... 3
- POLS 101: U.S. Politics .......................................................... 3
- POLS 301: State and Local Government and Politics ............... 3
- POLS 324: Introduction to Comparative Politics ..................... 3
- SOC 100: Introduction to Sociology ....................................... 3

- POLS 661: Constitutional Law I ............................................. 3
- or POLS 662: Constitutional Law II ....................................... 3

- GEOG 106, POLS 101, SOC 100 are accepted for General Education Hours and Program Hours.

Economics (3 hours)

- ECON 191: Issues in Today’s Economy .................................... 3

ECON 191 is accepted for General Education Hours and Program Hours.

Professional Education Requirements++

- HIST 479: Techniques for Teaching Middle and Secondary Social Studies ......................................................... 3
- EDUC 511: Methods and Materials in Middle Level Education ......................................................... 3
- EDUC 520: Methods and Materials for Academic Literacy ......................................................... 3

Admission to Teacher Education is required prior to enrollment in HIST 479 and EDUC 520

++These are requirements beyond those required in the teacher education program for all middle level endorsements.

Second Teaching Option for Secondary Education Majors

(MIDDLE SCHOOL ENDORSEMENT ONLY)
Same requirements as listed for Elementary Education Majors above.

**Bachelor of Arts with a Major in International Studies**

Program Coordinator: Darren Botello-Samson

The International Studies major, Bachelor of Arts degree, is a multi-disciplinary major, incorporating a variety of disciplines across colleges and departments within the Pittsburg State University community. Its core is Political Science, History, Geography and Sociology with substantial contributions made by Economics, Management and Marketing, and Communication. In addition, a variety of other disciplines, such as Family and Consumer Sciences, English and the Fine Arts provide important contributions. The major is designed to give students a core body of knowledge and basic skills necessary to live and work successfully in an increasingly interconnected world. The development of students' foreign language skills is a key component of the program. Students are encouraged to enroll in internships and practica.

Students who wish to complete the International Studies major with Departmental Academic Honors can complete a total of nine hours of courses designated “may be taken for honors” from the 33 hours of required courses for the major.

**Core Requirements (24 hours)**

**HIST 102: World History from 1500** ......................................................... 3  
**POLS 103: Comparative Political Institutions** .................................................. 3  
**POLS 530: International Relations** ................................................................. 3  
**INT 699: Senior Seminar in International Studies** ........................................... 3

**Comparative Politics (Choose one):**

**POLS 524: European Politics** ................................................................. 3  
**POLS 525: Middle Eastern Politics** .............................................................. 3  
**POLS 526: Latin American Politics** .............................................................. 3  
**POLS 527: African Politics** ................................................................. 3

**Environmental Issues (Choose one):**

**BIOL 330: Principles of Ecology** ......................................................... 3  
**GEOG 302: Introduction to Environmental Geography** ................................. 3  
**GEOG 502: Global Environmental Change** .................................................. 3  
**POLS 512: Environmental Politics** ............................................................... 3

**Elective Courses**

**Core Requirements (24 hours)**

**HIST 102: World History from 1500** ......................................................... 3  
**POLS 103: Comparative Political Institutions** .................................................. 3  
**POLS 530: International Relations** ................................................................. 3  
**INT 699: Senior Seminar in International Studies** ........................................... 3

**Comparative Politics (Choose one):**

**POLS 524: European Politics** ................................................................. 3  
**POLS 525: Middle Eastern Politics** .............................................................. 3  
**POLS 526: Latin American Politics** .............................................................. 3  
**POLS 527: African Politics** ................................................................. 3

**Environmental Issues (Choose one):**

**BIOL 330: Principles of Ecology** ......................................................... 3  
**GEOG 302: Introduction to Environmental Geography** ................................. 3  
**GEOG 502: Global Environmental Change** .................................................. 3  
**POLS 512: Environmental Politics** ............................................................... 3

**BIOL 330 Principles of Ecology recommended for science majors/minors only. POLS 512 Environmental Politics when research/individual project is international or comparative in scope.**

**Economic Issues (Choose one):**

**GEOG 507: Geography of the Global Economy** .......................................... 3  
**POLS 630: International Political Economy** ................................................... 3

**Cultural Issues (Choose one):**

**ANTH 101: Introduction to Cultural Anthropology** ...................................... 3  
**SOC 200: Introduction to Anthropology** ....................................................... 3  
**PHIL 231: World Religions** ................................................................. 3  
**GEOG 304: Human Geography** .............................................................. 3  
**COMM 601: Intercultural Communication** .................................................... 3  
**SOC 676: Global Sociology** ................................................................. 3

**Modern Language Requirements (12 hours in same language - or equivalent/proficiency)**

**Spanish**

**MLL 154: Spanish Language and Culture I** ................................................. 3  
**MLL 158: Spanish Language and Culture II** ............................................... 3  
**MLL 251: Spanish Language and Culture III** .............................................. 3  
**MLL 253: Spanish Conversation** .............................................................. 3  
or **MLL 254: Spanish Grammar and Composition I** ...................................... 3

**French**

**MLL 124: French Language and Culture I** ................................................... 3  
**MLL 128: French Language and Culture II** ............................................... 3  
**MLL 221: French Language and Culture III** .............................................. 3  
**MLL 225: French Grammar and Conversation I** .......................................... 3

**Elective Courses* (12 hours)**

**History**

**HIST 501: Special Topics in World History (____) (Choose one):** ............ 1-3  
**HIST 505: African Civilizations** .............................................................. 3  
**HIST 507: Modern Africa** ................................................................. 3  
**HIST 510: Modern Middle East** .............................................................. 3  
**HIST 522: Korean and Vietnam Wars** ....................................................... 3  
**HIST 523: Early China** ................................................................. 3  
**HIST 524: Early Japan** ................................................................. 3  
**HIST 526: Japan Since 1700** ................................................................. 3  
**HIST 527: China Since 1700** ................................................................. 3  
**HIST 529: History of South Asia** .............................................................. 3  
**HIST 531: Samurai: History, Literature, Myth** ........................................... 3  
**HIST 532: History of Japanese Women** .................................................... 3  
**HIST 533: US-East Asia Relations** .............................................................. 3  
**HIST 534: Korea Since 1700** ................................................................. 3  
**HIST 546: The Age of Empire** ............................................................... 3  
**HIST 547: Radical Islam** ................................................................. 3  
**HIST 626: U.S. Iraq and Afghanistan** ......................................................... 3  
**HIST 646: Modern Scotland** ................................................................. 3  
**HIST 648: Modern Britain 1846-Present** .................................................... 3  
**HIST 668: U.S. as a Superpower** .............................................................. 3  
**HIST 700: History: Selected Subjects (____) .................................................. 1-3  
**HIST 501 Special Topics in World History (when a contemporary topic). HIST 700 History: Selected Subjects (when a contemporary, international topic).**
**Business, Economics and Technology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 665</td>
<td>Medical Entomology</td>
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<tr>
<td>FIN 625</td>
<td>International Finance</td>
<td>3</td>
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<tr>
<td>ECON 440</td>
<td>International Economics</td>
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<td>GT 350</td>
<td>Technology and Civilization</td>
<td>3</td>
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<tr>
<td>IB 330</td>
<td>International Business</td>
<td>3</td>
</tr>
<tr>
<td>IB 340</td>
<td>International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>IB 520</td>
<td>Emerging Markets</td>
<td>3</td>
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<td>IB 530</td>
<td>Cross Cultural Analysis</td>
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**Comparative and International Institutions**

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<tr>
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<tr>
<td>ANTH 301</td>
<td>Food and Culture</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 106</td>
<td>World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 307</td>
<td>East Asia: China, Japan, and Korea</td>
<td>3</td>
</tr>
<tr>
<td>POLS 524</td>
<td>European Politics</td>
<td>3</td>
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<tr>
<td>POLS 525</td>
<td>Middle Eastern Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 526</td>
<td>Latin American Politics</td>
<td>3</td>
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<tr>
<td>POLS 527</td>
<td>African Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 587</td>
<td>U.S. Foreign Policy</td>
<td>3</td>
</tr>
<tr>
<td>POLS 680</td>
<td>War: The Politics of Violence</td>
<td>3</td>
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<tr>
<td>SOC 534</td>
<td>Political Sociology</td>
<td>3</td>
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<tr>
<td>SOC 676</td>
<td>Global Sociology</td>
<td>3</td>
</tr>
<tr>
<td>WGS 399</td>
<td>Global Women’s Issues</td>
<td>3</td>
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**Literature, Fine Arts and Design**

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<th>Course Code</th>
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<tr>
<td>ART 178</td>
<td>Introduction to the Visual Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 288</td>
<td>Introduction to Art History I</td>
<td>3</td>
</tr>
<tr>
<td>ART 289</td>
<td>Introduction to Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ART 688</td>
<td>History of Modern Art</td>
<td>3</td>
</tr>
<tr>
<td>ART 689</td>
<td>Contemporary Issues in Art</td>
<td>3</td>
</tr>
<tr>
<td>COMM 405</td>
<td>Drama Studies (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 220</td>
<td>World Masterpieces</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 555</td>
<td>Topics in Literature (___)</td>
<td>1-3</td>
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<tr>
<td>ENGL 556</td>
<td>Topics in Writing (___)</td>
<td>1-3</td>
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<tr>
<td>or ENGL 756</td>
<td>Topics in Writing (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ENGL 560</td>
<td>British Genre (___)</td>
<td>3</td>
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<tr>
<td>ENGL 561</td>
<td>British Theme (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 570</td>
<td>International Literatures Genre (___)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 571</td>
<td>International Literatures Theme (___)</td>
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</tr>
<tr>
<td>FCS 154</td>
<td>Dress and Culture</td>
<td>3</td>
</tr>
<tr>
<td>IND 312</td>
<td>History of Design I</td>
<td>3</td>
</tr>
<tr>
<td>IND 313</td>
<td>History of Design II</td>
<td>3</td>
</tr>
<tr>
<td>FCS 455</td>
<td>History of Costume</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 120</td>
<td>Music Appreciation (___)</td>
<td>3</td>
</tr>
<tr>
<td>MLL</td>
<td>All upper-division courses covering topics of literature, culture, art, civilization, history, or contemporary affairs.</td>
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</table>

COMM 405 Drama Studies (when an international topic). ENGL 555 Topics in Literature (when an international topic).

**General**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INT 505</td>
<td>Topics in International Studies (___)</td>
<td>3</td>
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<tr>
<td>INT 510</td>
<td>Readings in International Studies</td>
<td>1-3</td>
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<tr>
<td>INT 690</td>
<td>Study Abroad (___)</td>
<td>3-6</td>
</tr>
<tr>
<td>INT 695</td>
<td>Internship/Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

Total (48 hours)

INT 505 Topics in International Studies - maximum of two if topics are different. INT 510 Readings in International Studies - maximum of two.

**Additional Requirements**

1. At least 18 hours within the major must be completed with courses numbered 300 or above.

2. Minimum four weeks study abroad.

3. International Studies Majors must also major or minor in a second discipline. Suggested Majors/Minors: Biology, Communication, English, History, Justice Studies, Modern Languages, Political Science, and Sociology. (See the Pittsbug State University Catalog for course prerequisites).

*Courses from the Core may also be used as electives if they are not used to meet core requirements. (Note: The list of elective courses published here is not exhaustive. Additional offerings will be available as electives when departments add new courses appropriate to International Studies to their own curricula and when appropriate “special topics” classes are offered. Students should refer to the International Studies section in the on-line class schedule to see what electives courses are available for the current semester. Majors and minors can also consult their International Studies adviser.)*

**Bachelor of Science Degree with a Major in Justice Studies: No Emphasis**

Program Coordinator: Roy F. Janisch
Associate Professor: Kathleen Cameron, Roy F. Janisch

The Bachelor of Science degree with a major in justice studies is an interdisciplinary liberal arts degree with a foundation in social science inquiry. With an emphasis on law and the social sciences, this unique contemporary degree represents the current state-of-the-art setting for studying justice and provides a comprehensive degree. Students develop an understanding of the nature of justice and analyze controversial justice issues through critical inquiry and social science investigation. While primary focus is placed on theories of justice; legal studies; social and economic justice, students may elect a Criminal Justice emphasis (see below) that will allow them to pursue their interests in law enforcement, corrections, and other legal careers.

It is required that justice studies students choose a minor that complements and supports the major area.
of study. Students interested in law enforcement careers would find that such minors as sociology, political science, psychology, accounting, modern language and literatures, communication, and technical education are among those that would best contribute to success in their careers. Students interested in the legal profession would find that such minors as philosophy, political science, sociology, and psychology would best contribute to success in their careers. Students interested in the field of forensics would find that minors such as biology and chemistry would best contribute to success in their careers. These are a few examples of how related areas of study can supplement the justice studies degree.

The curriculum for the Bachelor of Science degree in justice studies provides interdisciplinary courses in the social science department relevant to law and justice for students interested in studying justice issues, those anticipating justice related careers (including the legal profession), and interested non-majors. The justice studies degree requires a minimum of 49-50 semester hours, with no more than 12 lower division hours, distributed as follows:

I. Required courses (22-23 hours)
JUST 104: Introduction to the Justice System .................................. 3
JUST 109: Principles of Justice Studies .................................. 3
JUST 322: Ethics and Justice Policy .................................. 3
SOSCI 387: Social Research Design .................................. 4
SOSCI 388: Social Research Analysis .................................. 4
or PSYCH 389: Research Methods in Psychology I ................. 3
JUST 501: Criminal Procedure .................................. 3
or POLS 662: Constitutional Law II .................................. 3
JUST 695: Senior Seminar in Justice Issues ......................... 3

PSYCH 389 Research Methods in Psychology I may be substituted for SOSCI 388 Social Research Analysis or vice versa to meet a research statistics/methods requirement in either program. Students can use no more than 6 hours of Psychology in their Justice Studies major.

II. Complete a 3-hour course from each of the following groups for a total of 9 hours

A. Society and Justice Issues (3 hours)
SOC 360: Community Sociology .................................. 3
SOC 443: Race and Ethnic Relations .................................. 3
JUST 480: Women, Crime, and Justice .................................. 3
JUST 485: Crime and Public Policy .................................. 3
SOC 512: Social Stratification .................................. 3
JUST 521: Special Topics in Justice Studies (___) ................. 1-3
SOC 534: Political Sociology .................................. 3
SOC 549: Social Deviance .................................. 3
SOC 569: Society and Sexuality .................................. 3

SOC 663: Women, Men and Society .................................. 3

B. Theories and Philosophy of Justice (3 hours)
POLS 412: Law in Film and Literature .................................. 3
POLS 450: Political Philosophy .................................. 3
JUST 500: Criminal Law and Society .................................. 3
JUST 521: Special Topics in Justice Studies (___) ................. 1-3
JUST 538: Philosophy of Law .................................. 3
POLS 578: Democratic Theory and Public Opinion ................. 3
JUST 591: Native American Sovereignty and the Law .............. 3
POLS 609: Administrative Law .................................. 3

C. Criminal Justice (3 hours)
JUST 223: Basic Interviewing and Counseling Skills .............. 3
JUST 328: Police and Justice .................................. 3
SWK 401: Social Work in the Criminal Justice System .............. 3
PSYCH 456: Introduction to Social Psychology .................. 3
JUST 475: Community Policing .................................. 3
JUST 501: Criminal Procedure .................................. 3
JUST 502: Criminal Profiling .................................. 3
JUST 518: Serial Killers .................................. 3
JUST 521: Special Topics in Justice Studies (___) ................. 1-3
JUST 522: Crime Scenes and the Law of Evidence .................. 3
SOC 527: Correctional Systems .................................. 3
JUST 528: White Collar Crime .................................. 3
SOC 547: Criminology .................................. 3
SOC 548: Juvenile Delinquency .................................. 3
POLS 562: Law and Politics .................................. 3
PSYCH 571: Abnormal Psychology .................................. 3
SWK 599: Social Work and the Law .................................. 3
POLS 662: Constitutional Law II .................................. 3
JUST 671: Internship .................................. 3
PSYCH 771: Psychology and the Law .................................. 3
PSYCH 773: Criminal Psychopathology .................................. 3

III. Electives (18 hours)

Students will take at least an additional 18 hours of upper division electives from the lists noted above.

IV. Total required for Bachelor of Science-Justice Studies (49-50 hours)

Bachelor of Science Degree with a Major in Justice Studies: Criminal Justice Emphasis

The Criminal Justice emphasis allows students who are more interested in law enforcement, corrections, and other law related careers to pursue their interests within the Justice Studies major. Our Criminal Justice emphasis gives students a substantive base of criminal justice experience such as interviewing and interrogation while building on the Justice Studies major that emphasizes critical thinking skills, ability to handle statistical data, and student understanding of the
broader meanings and practice of justice. This emphasis is not designed to be the equivalent of police academy training rather it will allow students whose career interests are oriented toward law related careers to pursue their goal within a broad liberal arts approach to justice.

**Justice Studies (Criminal Justice Emphasis)** (18 hours)

JUST 223: Basic Interviewing and Counseling Skills ........................... 3

- Elective hours from the Criminal Justice list of classes (9 hours)
- Electives from any of the above areas A, B or C listed under the Bachelor of Science- Justice Studies (6 hours)

**Replaces 18 hour electives under the Bachelor of Science- Justice Studies**

**Justice Studies (Military Police Transfer Track Emphasis)** (18 hours)

Transfer up to 18 credit hours from Fort Leonard Wood Military Police School:

- CID Special Agent ALC (3 hours)
- Corrections/Detention ALC (3 hours)
- Military Police Advanced Leaders Course (3 hours)
- Advanced Crime Scene (1 hour)
- Behavioral Sciences Education and Training Division courses (1 hour each)
- (Child Abuse Prevention Investigative Techniques, Critical Incident Peer Support, Domestic Violence Intervention Training, Sexual Assault Senior Leader Seminar, or Special Victims Capability)

Criminal Intelligence Course (1 hour)
Crime and Criminal Intelligence Analysts course (1 hour)
Law Enforcement Senior Leader Course (1 hour)
Military Police Investigator (1 hour)

If less than 18 credit hours transferred, add electives from areas A, B, or C from the Bachelor of Science Degree with a Major in Justice Studies.

**Replaces 18 hour electives under the Bachelor of Science with a Major in Justice Studies.**

**Bachelor of Arts Degree with a Major in Political Science: No Emphasis**

Program Coordinator: Darren Botello-Samson
Associate Professor: Darren Botello-Samson
Assistant Professor: Kayce Mobley, Mark J. Peterson

The political science major is an excellent liberal arts background for students preparing for careers in which critical thinking and writing skills as well as an understanding of politics and government is either essential or desirable.

To promote their career goals, students often combine their political science major with a minor or major in business, international studies, justice studies, communication, biology, geography, economics or modern language and literatures. Political Science provides valuable insights into the functioning of government and politics (locally, nationally and globally) which also serve as excellent preparation for further graduate or professional education.

The Political Science program at Pittsburg State University offers courses in American Politics and Government, Constitutional Law and Judicial Process, Political Philosophy, International Relations, and Comparative Politics.

The political science major must (1) complete the university’s General Education requirements; (2) meet the distribution and hour requirements (33) in political science; (3) take either MATH 143 Elementary Statistics (substitutes for MATH 113 College Algebra in the university’s General Education requirements) or SOSCI 388 Social Research Analysis; (4) elect a minor; and (5) take at least 45 upper division hours of classes listed at the 300 level or above; and (6) complete at least 27 hours of upper division political science classes.
Core (12 hours)
POLS 101: U.S. Politics ................................................................. 3
POLS 103: Comparative Political Institutions .................................... 3
POLS 320: Introduction to Political Science ..................................... 3
POLS 686: Senior Seminar in Political Science ............................... 3

American Government (3 hours)
POLS 516: Political Parties and Elections ........................................ 3
or POLS 517: U.S. Congress ............................................................. 3
or POLS 604: The American Presidency ........................................... 3
or POLS 609: Administrative Law .................................................. 3
or POLS 616: Interest Groups and Social Movements ....................... 3

International (3 hours)
POLS 530: International Relations .................................................. 3
or POLS 630: International Political Economy ............................... 3

Political Philosophy (3 hours)
POLS 450: Political Philosophy .......................................................... 3
or POLS 578: Democratic Theory and Public Opinion ...................... 3

Regional Politics (3 hours)
POLS 524: European Politics ............................................................ 3
or POLS 525: Middle Eastern Politics ............................................... 3
or POLS 526: Latin American Politics .............................................. 3
or POLS 527: African Politics ........................................................... 3

Political Science electives (12 hours)
POLS 301: State and Local Government and Politics ....................... 3
POLS 412: Law in Film and Literature .............................................. 3
POLS 450: Political Philosophy .......................................................... 3
POLS 492: Directed Readings in Political Science ............................ 1-3
POLS 512: Environmental Politics .................................................... 3
POLS 516: Political Parties and Elections ......................................... 3
POLS 517: U.S. Congress ................................................................. 3
POLS 524: European Politics ............................................................ 3
POLS 525: Middle Eastern Politics .................................................... 3
POLS 526: Latin American Politics ................................................. 3
POLS 527: African Politics ............................................................... 3
POLS 530: International Relations ..................................................... 3
SOC 534: Political Sociology ............................................................. 3
JUST 538: Philosophy of Law ............................................................ 3
POLS 562: Law and Politics ............................................................... 3
POLS 571: Political Studies-Selected Topics (____) ........................... 1-3
POLS 578: Democratic Theory and Public Opinion ......................... 3
POLS 587: U.S. Foreign Policy .......................................................... 3
POLS 604: The American Presidency ................................................ 3
POLS 609: Administrative Law ......................................................... 3
POLS 616: Interest Groups and Social Movements ............................ 3
POLS 630: International Political Economy ...................................... 3
POLS 660: Political Science Internship (____) .................................... 1-3
POLS 661: Constitutional Law I ......................................................... 3
POLS 662: Constitutional Law II ....................................................... 3
POLS 680: War: The Politics of Violence ......................................... 3

Statistics Requirement (3-4 hours)
MATH 143: Elementary Statistics .................................................... 3
or SOSCI 388: Social Research Analysis .......................................... 4

All Political Science majors (including those in the pre-law emphasis area) are required to take MATH 143 Elementary Statistics, 3 hours, or SOSCI 388 Social Research Analysis, 4 hours.

MATH 143 can be used as a General Education substitute for MATH 113 College Algebra.

Bachelor of Arts Degree with a Major in Political Science: Pre-Law Emphasis

The Pre-Law emphasis within the political science major offers excellent preparation for students considering future legal training. Both the requirements of the Pre-Law emphasis and the advice given by the students’ academic advisors are shaped by the recommendations of the Law School Admissions Council. Pre-Law students develop the knowledge base and critical thinking, writing and speaking skills essential for success in law school. As with the general Political Science degree, the Pre-Law emphasis opens the door to a wide variety of opportunities besides the legal profession. Combining of Pre-Law with Justice Studies is a valuable choice for Political Science (Pre-Law emphasis) majors. Beyond academic course work, the program provides counseling on how to apply for law school as well as an array of activities that enhance the students' chances of success in securing law school admission.

Political Science/Pre-Law Requirements

Political Science (Pre-Law emphasis) majors meet all the requirements for the general Political Science degree.

Pre-Law students take the following:
POLS 661: Constitutional Law I ....................................................... 3
POLS 662: Constitutional Law II ...................................................... 3

One of the following courses:
POLS 412: Law in Film and Literature .............................................. 3
JUST 538: Philosophy of Law ........................................................... 3
POLS 562: Law and Politics ............................................................. 3

Bachelor of Science Degree with a Major in Social Work

Program Director: Kristen Humphrey
Professor: Bradley Cameron
Associate Professor: Kristen Humphrey
Assistant Professors: Hyejoon Park, Dory Quinn
Instructor: Patty Magee

The primary objective of this program is to prepare students to enter social work practice at the beginning
professional level upon graduation. The program is accredited by the Council on Social Work Education and graduates from it are eligible to be licensed social workers in Kansas. Completion of this program will also provide students with the foundation for advanced education in social work at graduate schools of social work. Finally, this program will prepare students for informed, responsible citizenship in a society in which social welfare plays a major role.

To this end, the program provides content in the areas of (a) social work practice, (b) social welfare policy and services, (c) human behavior in the social environment, (d) social research, and (e) includes 480 clock hours of educationally directed practicum in social work.

The social work program builds on and is integrated with the liberal arts 46-54 hour general education base common to all Bachelor of Science degrees at this institution.

**Admission:** Students may apply for admission to the Social Work Program when they meet the following criteria:

(a) have not less than an overall grade point average of 2.5.

(b) completion of SWK 201 Introduction to Social Work, SWK 221 Basic Helping Skills and SWK 222 Basic Helping Skills Experience. *(A grade of not less than "C" must have been earned in each of the above courses.)*

Students may apply for admission to the social work program during the semester that will result in their eligibility for admission under the above criteria. Admission will be contingent upon successful completion of that semester’s enrollment. Transfer students may apply for provisional admission if they meet the criteria outlined under (a) above. They will be expected to satisfactorily complete the criteria outlined under (b) above during their first year of provisional admission status, following which they will be granted full admission to the social work program.

The admission process includes (1) the submission of an application for admission to the social work program, (2) a written self-evaluation dealing with motivation for and commitment to professional social work education, (3) two letters of reference, and (4) a personal interview with the Admissions Committee after the committee has reviewed the applicant's written materials. The Admissions Committee is composed of at least two full-time social work faculty members and a representative from the Social Work Advisory Committee. (Application forms may be obtained from the practicum coordinator or the director of the social work program.)

An applicant who has been denied admission to the program may request an appearance before the Admissions Committee in order to show cause why the application should not be rejected. Only students possessing full admission or provisional admission status may enroll in advanced practice social work courses.

A grade of "C" or above in all required courses for the social work major is required for continuation in the program and an overall 2.5 GPA in social work classes is required to graduate.

**Additional Considerations**

Social work majors must include a minimum of 4 hours in the area of human biological sciences when meeting the natural science general education requirement (BIOL 113 Environmental Life Science meets this requirement). *(In this and in other areas of general education requirements, certain courses are more relevant to the social work major than others; hence, it is urged that students consult carefully with social work faculty advisors in the choice of all general education courses.)*

Specialization in certain fields is being increasingly emphasized in social work practice, and students may wish to gain some insight into and greater knowledge in specific fields that are of particular interest to them, such as group and recreational work, family services, child welfare, probation and correctional work, medical and mental health services, school social work and aging services. Approximately 21 hours of general electives available to the student with a social work major may be used for this purpose through careful selection of courses in the appropriate disciplines in consultation with social work faculty advisors. It should be emphasized, however, that the primary objective of the social work program is the preparation of generalist practitioners, and specialty preparation is secondary to the above objective.

**Major Requirements (61-64 hours)**

The social work major consists of not less than 61 hours distributed as follows:

**Pre-Admission Courses (7 hours)**

SWK 201: Introduction to Social Work .............................................. 3
SWK 221: Basic Helping Skills ......................................................... 3  
SWK 222: Basic Helping Skills Experience ....................................... 1

Post-Admission Courses

SWK 344: Mental Health Theory and Practice .................................. 3  
SWK 365: Social Process and Social Policy ....................................... 3  
SWK 375: Multiculturalism and Diversity in Social Work  
Practice ......................................................................................... 3  
or SOC 443: Race and Ethnic Relations ......................................... 3  
or PSYCH 720: Multicultural Issues in Psychology and  
Counseling .................................................................................... 3  
or SOSCI 387: Social Research Design ........................................... 4  
or PSYCH 389: Research Methods in Psychology I .......................... 3  
and PSYCH 392: Research Methods in Psychology II .................... 3  
SWK 385: Human Behavior Social Environment: Individual and  
Family Functioning ........................................................................ 3  
SWK 420: Advanced Social Work Practice I .................................... 3  
SWK 465: Social Welfare Policy Analysis ......................................... 3  
SWK 485: Human Behavior in the Social Environment: Groups  
and Communities ........................................................................... 3  
SWK 598: Introduction to Addiction .................................................. 3  
SWK 599: Social Work and the Law .................................................. 3  
SWK 600: Advanced Social Work Practice II: Mezzo ....................... 3  
SWK 601: Advanced Social Work Practice III: Macro ....................... 3  
SWK 621: Practicum in Social Work ................................................ 9  
SWK 622: Integrative Seminar in Social Work ................................... 3

SWK 621 Practicum in Social Work is part of the  
Professional Semester.

SWK 622 Integrative Seminar in Social Work is part of the  
Professional Semester.

Electives (6 hours - all social work electives  
must be 300 level or above)

Choose two courses from the following list:

SWK 341: Social Work and the Aged ............................................... 3  
SWK 342: Health Care and Social Work ......................................... 3  
SWK 343: Social Work with Families Affected by Disability .......... 3  
SWK 345: Topics in Social Work (____) ......................................... 1-3  
SOSCI 388: Social Research Analysis .............................................. 4  
SWK 399: Social Work and the Court Process ................................. 3  
SWK 400: Social Work Case Management ...................................... 3  
GEOG 401: Urban and Regional Planning ...................................... 3  
SOC 443: Race and Ethnic Relations .............................................. 3  
JUST 500: Criminal Law and Society ............................................. 3  
JUST 501: Criminal Procedure ...................................................... 3  
SOC 527: Correctional Systems ..................................................... 3  
SOC 548: Juvenile Delinquency ..................................................... 3  
PSYCH 571: Abnormal Psychology ................................................ 3

Bachelor of Science Degree with a Major  
in Sociology: No Emphasis

Program Coordinators: Marjorie Donovan and Gary Wilson  
Professor: Browyn Conrad  
Associate Professors: Marjorie Donovan, Harry L.  
Humphries  
Assistant Professor: Gary Wilson

Sociology is the scientific study of human social behavior, as well as the structure, organization, and processes that define contemporary society. As the foundation of many fields of study, including social work, gerontology, demography, and criminal justice, sociology serves as a valuable liberal arts major for students planning careers in a wide variety of fields, including law, law enforcement, criminology, social services, public administration, community planning, international relations, and market research. Sociology's concentration on such social factors as race, ethnicity, gender, age, education, and social class also make it an excellent foundation for working in today's multiethnic, multinational business world. The major is organized to reflect the rationale and recommendations of the American Sociological Association and requires the completion of a minimum of 38 semester hours in sociology. Majors in sociology must complete 45 upper-division credit hours to graduate and must take at least one minor or second major with a minimum of 16 upper-division semester credit hours. Suggested minors and/or second majors include: history, geography, psychology, multicultural studies, international studies, or women's and gender studies. Majors may also choose to pursue a recognized emphasis in one of the following two specializations: 1) Criminology or 2) Diversity Studies.

An undergraduate major in sociology provides the student with an understanding of the intellectual tradition focusing on the description, understanding, and evaluation of human society, its structure, organization, and processes. Organized around a central core of knowledge and skills that characterize the discipline and reflect the recommendations of the American Sociological Association on teaching the discipline in the 21st century, the program requires an appreciation of sociological theory; quantitative methods and analysis; technical knowledge of how to deal with data; issues of gender, race, culture, and class; and the areas of socialization, stratification, and social structures. The program not only provides knowledge of the central disciplinary themes, but, also allows
students to explore their interests and advance career aspirations. Students may elect to take a general major in sociology or pursue one of two degree emphases: Criminology and Diversity Studies.

The Sociology degree requires 38 hours of sociology classes, with no more than 9 lower division sociology hours, distributed as follows:

I. Required courses (17 hours)
SOC 100: Introduction to Sociology .............................................. 3
SOSCI 387: Social Research Design ............................................. 4
SOSCI 388: Social Research Analysis ............................................ 4
SOC 675: Sociological Theory ....................................................... 3
SOC 691: Senior Seminar in Sociology ......................................... 3

II. Complete one 3-hour course from each of the following groups for a total of 9 hours

A. Crime/Deviance
SOC 220: Social Problems .............................................................. 3
SOC 527: Correctional Systems ....................................................... 3
SOC 547: Criminology ................................................................. 3
SOC 548: Juvenile Delinquency ...................................................... 3
SOC 549: Social Deviance .............................................................. 3

B. Social Institutions and Organizations
SOC 200: Introduction to Anthropology ........................................ 3
SOC 360: Community Sociology .................................................... 3
SOC 410: Sociology of Sport .......................................................... 3
SOC 440: Personality and Social Structure .................................... 3
SOC 534: Political Sociology .......................................................... 3
SOC 536: The Family and Society .................................................. 3
SOC 584: Medical Sociology .......................................................... 3

C. Social Inequality
SOC 443: Race and Ethnic Relations ............................................. 3
SOC 512: Social Stratification .......................................................... 3
SOC 569: Society and Sexuality ..................................................... 3
SOC 663: Women, Men and Society .............................................. 3
SOC 676: Global Sociology ............................................................ 3

III. Complete 12 hours of electives in sociology

IV. Total required for Bachelor of Science-Sociology (38 hours)

Bachelor of Science Degree with a Major in Sociology: Criminology Emphasis

In addition to the other requirements for the Bachelor of Science degree, sociology majors pursuing an emphasis in Criminology must complete six hours of electives in sociology from among the courses listed under group A (Crime and Deviance).

Bachelor of Science Degree with a Major in Sociology: Diversity Studies Emphasis

In addition to the other requirements for the Bachelor of Science degree, sociology majors pursuing an emphasis in Diversity Studies must complete six hours of electives in sociology from among the courses listed under group C (Social Inequality).

Minor in Fraud Examination

The Justice Studies program, in conjunction with the Department of Accounting, offers a Minor in fraud examination. Administered in the Department of Accounting and Computer Information Systems, the curriculum is patterned after the requirements found in the nationally recognized Certificate in Fraud Examination, providing coverage of the Certificate areas of: Criminology and Ethics; Legal Elements of Fraud; Financial Transactions; and Fraud Investigation. The demand for persons in this field is expected to increase and the minor represents a significant opportunity for justice studies majors who are interested in fraud and other instances of white collar crime. [Note: Prerequisites for the specified accounting classes have been waived for justice studies students taking this minor.]

Core Classes (15 hours)
ACCTG 201: Financial Accounting .................................................. 3
ACCTG 422: Internal Auditing .......................................................... 3
ACCTG 625: Fraud Examination ...................................................... 3
JUST 223: Basic Interviewing and Counseling Skills ......................... 3
JUST 522: Crime Scenes and the Law of Evidence ............................. 3

Select one (3 hours)
JUST 528: White Collar Crime ...................................................... 3
SOC 547: Criminology ................................................................. 3

Select one (3 hours)
JUST 500: Criminal Law and Society ........................................... 3
JUST 501: Criminal Procedure ...................................................... 3
POLS 609: Administrative Law ..................................................... 3

NOTE: Currently, the Internal Revenue Service allows persons who have had a total of 15 hours of accounting and nine hours of other business related classes to apply for "Special Agent" positions. Justice Studies classes add to the qualifications of persons who are interested in such a career.
Minor in Geography

A minor in geography requires the following (21 hours)

GEOG 106: World Regional Geography ................................................. 3
GEOG 300: Elements of Geography ...................................................... 3
GEOG 301: Introduction to Urban Geography ........................................ 3
GEOG 302: Introduction to Environmental Geography ......................... 3

- Geography electives from courses numbered 300-799 (9 hours)

Minor in History (Non-Teaching)

A minor in history shall consist of at least 24 semester hours of which nine hours shall be in American history, nine hours in World history; the remaining six hours shall be electives in history. A minimum of 12 hours must be in courses numbered 300-799.

Minor International Studies

The International Studies minor serves as an excellent complement to majors in Business, Communication, Economics, English, History, Justice Studies, Marketing, Modern Languages, Social Sciences as well as other degree programs. The minor consists of the twenty-four hour core requirement of the International Studies major listed above plus six hours from one modern language.

For more information contact Dr. Darren Botello-Samson, Director of International Studies, 327D Russ Hall, or the Department of History, Philosophy, and Social Sciences, 412 Russ Hall.

Minor in Justice Studies

A minor in justice studies requires the following (21 hours)

JUST 104: Introduction to the Justice System ....................................... 3
JUST 109: Principles of Justice Studies ................................................. 3

- A minimum of three hours from each category in secondary categories A, B, and C listed under the major (15 hours)

Minor in Multicultural Studies

We are experiencing a changing academic and cultural environment. The minor in multicultural studies is designed to satisfy the student's desire for a more flexible academic course preparation track, while answering calls from the Kansas Board of Regents for more multicultural academic programs.

The minor in multicultural studies can enrich the student’s learning experience and strengthen the student's credentials in search for employment in our increasingly diverse economic and cultural environment. The minor in Multicultural Studies can complement a number of majors, such as, English, communication, history, social sciences, economics, modern language and literatures, business, psychology and education.

For more information contact Dr. Harry L. Humphries, Coordinator of Multicultural Studies, hhumphries@pittstate.edu, 317 Russ Hall, or the Department of Social Sciences, 412 Russ Hall.

A minor in multicultural studies requires the following (21 hours)

At least one course must be taken from four of the departments listed below

ART 178: Introduction to the Visual Arts ............................................. 3
COMM 601: Intercultural Communication ............................................ 3
COMM 785: International Communication ........................................... 3
EDUC 551: Diversity in the Classroom ............................................... 3
ENGL 220: World Masterpieces ......................................................... 3
ENGL 315: Mythology ................................................................. 3
ENGL 566: American Theme (___) .................................................... 3
FCS 154: Dress and Culture ........................................................... 3
FCS 455: History of Costume ............................................................ 3
GEOG 304: Human Geography .......................................................... 3
GEOG 507: Geography of the Global Economy ................................. 3
HIST 101: World History to 1500 ...................................................... 3
or HIST 102: World History from 1500 ............................................ 3
HIST 505: African Civilizations ......................................................... 3
HIST 510: Modern Middle East ....................................................... 3
NURS 745: Transcultural Health Care ............................................. 1-3
PHIL 231: World Religions .............................................................. 3
POLS 527: African Politics ............................................................. 3
PSYCH 720: Multicultural Issues in Psychology and Counseling ........ 3
SOC 200: Introduction to Anthropology ............................................. 3
SOC 443: Race and Ethnic Relations ................................................. 3
SOC 569: Society and Sexuality ....................................................... 3
SOC 676: Global Sociology .............................................................. 3
SWK 341: Social Work and the Aged ............................................... 3
WGS 200: Introduction to Women's Studies ..................................... 3
WGS 399: Global Women's Issues .................................................. 3

Minor in Philosophy

Professor: Donald W. Viney
Associate Professor: James McBain

Pythagoras is said to have coined the word philosophy which to the Greeks meant being a friend of wisdom. While wisdom is intrinsically valuable and philosophy
has traditionally been a central element in a liberal education, a philosophy minor also can provide students with transferable skills relevant to vocational success. Students not only can be exposed to the nature of ethics and aesthetics but also to logic and how one comes to understand the limits of truth, knowledge, and intellectual justification. Philosophy trains the individual to think rigorously and precisely, traits which are an especially good preparation for law school, as well as those professions in which the identification and solving of problems are important components of vocational success.

A minor in philosophy requires the following (21 hours)

**Required Courses:**
- PHIL 103: Introduction to Philosophy .............................................. 3
- PHIL 208: Logic ........................................................................ 3

**Three hours chosen from**
- PHIL 105: Ethics ........................................................................ 3
- PHIL 112: Biomedical Ethics .......................................................... 3
- PHIL 113: Business Ethics ................................................................ 3
- PHIL 114: Environmental Ethics ....................................................... 3

**Electives in philosophy (12 hours)**
- PHIL 207: Critical Thinking .......................................................... 3
- PHIL 231: World Religions ................................................................ 3
- PHIL 310: History of Ancient Philosophy ......................................... 3
- PHIL 311: History of Modern Philosophy .......................................... 3
- PHIL 313: Topics in Philosophy ....................................................... 3
- PHIL 314: Medieval Philosophy ....................................................... 3
- PHIL 315: Nineteenth Century Philosophy ......................................... 3
- PHIL 316: American Philosophy ...................................................... 3
- PHIL 317: Analytic Philosophy ......................................................... 3
- PHIL 318: Continental Philosophy .................................................... 3
- PHIL 320: Philosophy of Religion ..................................................... 3
- JUST 322: Ethics and Justice Policy .................................................. 3
- POLS 450: Political Philosophy ........................................................ 3
- JUST 538: Philosophy of Law .......................................................... 3
- PHIL 645: Directed Readings in Philosophy ...................................... 1-3

- Or other approved elective courses

**Minor in Political Science**

A minor in political science shall consist of not less than 21 semester hours in political science. Students are urged to include courses required for the major in the minor.

**Minor in Psychology for Justice Studies Majors**

The Department of Psychology, in consultation with the Department of History, Philosophy and Social Sciences, has developed a 21-22 hour minor for Justice Studies majors that compliments the skill and knowledge bases developed in the Justice Studies major. [Note: Psychology classes at the 700 level are offered only during summer sessions and it will take two summers to complete 770, 771 and 773, which are offered alternatively.]

**Required Courses (21-22 hours)**
- PSYCH 389: Research Methods in Psychology I .............................. 3
- or SOSCI 388: Social Research Analysis ......................................... 4
- PSYCH 392: Research Methods in Psychology II .............................. 3
- PSYCH 456: Introduction to Social Psychology ................................. 3
- PSYCH 571: Abnormal Psychology .................................................. 3
- PSYCH 771: Psychology and the Law .............................................. 3
- PSYCH 773: Criminal Psychopathology .......................................... 3

**Minor in Sociology**

A minor in sociology shall consist of not less than 21 semester hours in sociology. Required course: SOC 100 Introduction to Sociology. At least 12 semester hours must be in upper division sociology courses.

**Certificate in Geographic Information Systems (18 hours)**
- CIS 230: Visual Basic Programming ................................................ 3
- CIS 420: Management Information Systems ..................................... 3
- GEOG 303: Geographic Information Systems I ................................. 4
- GEOG 403: Geographic Information Systems II ............................... 4
- SOSCI 388: Social Research Analysis .............................................. 4

**Master of Arts Degree with a Major in History**
Program Director: Jonathan F. Dresner

**Statement of Purpose**

The decision to seek an advanced degree in the History Program reflects an interest in and an appreciation for the historical past. The History Program’s purpose is threefold: to prepare individuals well qualified to teach the subject of history; to provide students with research and investigative skills applicable to academic and professional situations; and to encourage the thoughtful and continuing study of history throughout the lifetime of the individual. The History Program is committed to excellence in the education of teachers and to completeness in the preparation of students for the many History-related career opportunities beyond teaching now open. There are a few absolute requirements for each degree path, but otherwise students have great freedom in terms of topics and pace of study. Many courses are available as online offerings, though students who wish to pursue the
degree mostly or entirely online may find the course offerings limited.

Applications to the program will be evaluated by a committee of the History Graduate Faculty. In addition to the Graduate School application and transcript, applicants must submit a personal essay. Students with a strong undergraduate background in history may be admitted unconditionally, or the committee may set conditions including minimum GPA performance to demonstrate fitness or completion of additional undergraduate coursework. Students with fewer than 24 undergraduate hours of history or with a GPA in history courses below 3.00 will not be admitted unconditionally, but may be admitted conditionally, as above. After reviewing the application, the program will assign the student a major professor to advise on matters of enrollment.

Students interested in further information about the Master of Arts program in history should write or consult with the Graduate Program Coordinator for History (Associate Professor Jonathan Dresner; jdresner@pittstate.edu).

TOEFL

The minimum TOEFL score required for international students with a graduate major in history is 550/79 (paper-based/internet-based) for the Test of English as a Foreign Language (TOEFL) or 6.5 (overall and in all bands) for the IELTS.

There are two options available for the Master of Arts degree, both of which require that a minimum of 15 semester hours of history courses numbered 800 and above. A maximum of six semester hours of approved courses below the 700 level may also be included in the degree program. At least 21 credit hours counted toward the Master in Arts in History at Pittsburg State University must be taken from Pittsburg State University History faculty or those admitted to Graduate Service status at Pittsburg State University. See the requirements in the full graduate program guidelines for additional information. Both options require successful completion of HIST 807 Historical Research and Historiography and at least one graduate seminar (HIST 813 Seminar in American History (___) or HIST 820 Seminar in World History (___).

**OPTION I: Thesis** This option requires, in addition to regular coursework, enrollment in HIST 890 Research and Thesis. The History program strongly recommends a thesis for any student planning to go on for a PhD degree as preparation for researching and writing a dissertation. **OPTION I requires a minimum of 30 semester hours.**

**OPTION II: Problem** This option is not available at this time.

**OPTION III: Seminar** This option requires enrollment in and passing two graduate seminars in history. This option involves three tracks to the degree. 1) Students may offer a substantial curricular project including annotated bibliography and classroom materials. 2) Students may present two revised and substantially expanded seminar papers. 3) Students may take a comprehensive examination over a broad historical field. This option requires, in addition to regular coursework, enrollment in HIST 892 Final Assessment. **OPTION III requires 32 semester hours.**

**Note:** Graduate students can count a maximum of six credits of 500-600 level coursework on their graduate program. Usually, 500 and 600 level courses are taken for graduate credit as History-Selected Subjects (___) 700-xx, 701-xx, or 703-xx. In most cases, additional work, in the form of a paper, additional book reviews, and the like, will be required beyond the undergraduate requirements in order to obtain the advanced credit. You must have at least 15 credit hours of 800-899 classes to graduate. Historiography, seminars, and readings classes are in this category.

The current Graduate Program Guidelines offer the most complete information on specific requirements for this degree. A copy can be obtained through the department web page or by contacting the department.
Mathematics

Chairperson: Timothy Flood*
Professor(s): Hazel Coltharp*, Tadeusz Dobrowolski*,
Timothy Flood*, Cynthia Huffman*, **, Ananda
Jayawardhana*, Yaping Liu*, Bobby Neal Winters*, **
Associate Professor(s): Karla Childs*
Assistant Professor(s): Leah Childers*, Scott Thuong*
Instructors: Terry Martin, David Newcomb
Lecturer: Brenda K. Thenikl
*Graduate Faculty
**University Professor

Room 224 Yates Hall
Telephone: 620-235-4400
Fax: 620-235-4429
http://www.pittstate.edu/department/math/
E-mail: tflood@pittstate.edu

Undergraduate

Bachelor of Science Degree with a Major in Mathematics
Bachelor of Science Degree with a Major in Mathematics: Actuarial Science
Bachelor of Science in Education Degree with a Major in Mathematics Emphasis: Teaching Grades 6-12
Bachelor of Science in Education Degree with a Major in Mathematics Emphasis: Teaching Grades 5-8
Minor in Mathematics
Minor in Mathematics (Teaching Grades 5-8)

Graduate

Master of Science Degree with a Major in Mathematics
Graduate Certificate in Mathematics

The Department of Mathematics offers courses leading to the degrees of Bachelor of Science and Bachelor of Science in Education.

Programs are planned to meet the current recommendations of the undergraduate curriculum in mathematical sciences proposed by the Mathematical Association of America, and the guidelines for the preparation of teachers adopted by the National Council of Teachers of Mathematics.

The Bachelor of Science degree is recommended for students who plan to pursue work in industry immediately after graduation or who plan to pursue further mathematical study.

The Bachelor of Science in Education is recommended for most students who plan to become secondary or middle school teachers of mathematics.

Note: Students who have completed intermediate or college algebra in high school may not enroll in the same courses for college credit. They may attend any of these classes for review purposes. Trigonometry may be repeated in college for full credit if approved by the student's major adviser. Students with strong preparation in high school trigonometry and two years of algebra may begin their college mathematics with MATH 150 Calculus I. A curriculum requirement of college algebra may be met by completing MATH 113 College Algebra, MATH 110 College Algebra with Review, MATH 126 Pre-Calculus, MATH 150 Calculus I, or MATH 153 Introduction to Analytic Processes. The department cooperates with other departments and with the students in an effort to insure that they enroll in the courses that are most appropriate for them.

Bachelor of Science Degree with a Major in Mathematics

General Education Requirements* (40-45 hours)
Basic Skills** (9 hours)
General Education Electives (31-36 hours)
Sciences (8-9 hours)
Social Studies (3 hours)
Political Studies (3 hours)
Producing and Consuming** (2-3 hours)
Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well-Being (4-6 hours)
Human Heritage (6 hours)

* Courses must be taken from the list approved by the General Education Committee. See General Education Requirements for All Baccalaureate Degrees.

**Three hours of general education basic skills are satisfied by the requirements in Mathematics. Three hours of general education electives are satisfied by the required programming course in Computer Science.
Major (Mathematics) Core Requirements (49 hours)

MATH 150: Calculus I ................................................................. 5
MATH 155: Calculus II ............................................................... 5
MATH 212: Matrix Algebra ........................................................ 2
MATH 253: Calculus III ............................................................. 3
MATH 413: Introduction to Mathematical Thought .................... 3
MATH 513: Discrete Structures .................................................. 3
MATH 543: Probability and Statistics ........................................ 3
MATH 553: Differential Equations ............................................. 3
MATH 557: Introduction to Analysis .......................................... 3
MATH 613: Abstract Algebra .................................................... 3
MATH 617: Linear Algebra ....................................................... 3
MATH 699: Senior Seminar ...................................................... 1
CIS 230: Visual Basic Programming ........................................ 3

or A computer programming course approved by the mathematics department

- Electives, minimum of (9 hours)
- Electives must be selected from courses numbered above 253, exclusive of courses listed for elementary education majors MATH 304, MATH 307, MATH 503, MATH 705.

An appropriate minor is required. The degree requirements for a B.S. major in mathematics requires a minimum of 124 semester hours.

Bachelor of Science Degree with a Major in Mathematics: Actuarial Science

An actuary is a person who works for insurance or investment companies and is primarily responsible for determining rates and benefits for insurance policies and retirement instruments. The profession of actuary regularly ranks near the top in surveys of job satisfaction of all professions. One becomes an actuary, and progresses in the profession, by passing tests administered by the Society of Actuaries and the Casualty Actuarial Society, which govern the profession. The actuarial emphasis program at Pittsburg State University is designed to help a student pass the first two of these exams before graduation and to give the student an adequate foundation to begin work as an actuary and to progress in the exam sequence.

General Education Requirements* (38-42 hours)

Basic Skills** (9 hours)

General Education Electives (29-33 hours)

Sciences (8-9 hours)

Social Studies (3 hours)
Political Studies (3 hours)
Producing and Consuming** (0 hours)
Fine Arts and Aesthetic Studies (2-3 hours)
Cultural Studies (3 hours)
Health and Well-Being (4-6 hours)
Human Heritage (6 hours)

*Courses must be taken for the list approved by the General Education Committee. See General Education Requirements for All Baccalaureate Degrees.

**Three hours of general education basic skills are satisfied by the requirements in Mathematics. Six hours of general education electives are satisfied by the required programming course in Computer Science and ECON 200 Principles of Microeconomics.

Major (Mathematics) Core Requirements (50 hours)

MATH 150: Calculus I ................................................................. 5
MATH 155: Calculus II ............................................................... 5
MATH 212: Matrix Algebra ........................................................ 2
MATH 253: Calculus III ............................................................. 3
MATH 413: Introduction to Mathematical Thought .................... 3
MATH 543: Probability and Statistics ........................................ 3
MATH 553: Differential Equations ............................................. 3
MATH 613: Abstract Algebra .................................................... 3
MATH 617: Linear Algebra ....................................................... 3
MATH 699: Senior Seminar ...................................................... 1
CIS 230: Visual Basic Programming ........................................ 3

or MATH 727: Linear Optimization Models .............................. 3
MATH 658: Financial Mathematics .......................................... 3
MATH 673: Seminar: Actuarial Exam Number I ....................... 1
or MATH 674: Seminar: Actuarial Exam Number 2 ................... 1
MATH 699: Senior Seminar ...................................................... 1
MATH 726: Introduction to Stochastic Processes ....................... 3
MATH 743: Mathematical Statistics ......................................... 3
MATH 746: Statistical Methods I ............................................. 3

- Electives, minimum of 6 hours

Electives must be selected from courses numbered above 253, exclusive of courses listed for elementary education majors MATH 304, MATH 307, MATH 503, MATH 705.

Major (Business) Requirements (21 hours)

- A computer programming course approved by the mathematics department or

CIS 230: Visual Basic Programming ........................................... 3
ACCTG 201: Financial Accounting ............................................ 3
ECON 200: Principles of Microeconomics ................................. 3
ECON 201: Principles of Macroeconomics ................................. 3
ECON 318: Intermediate Microeconomics ........................................ 3
or ECON 319: Intermediate Macroeconomics ................................ 3
FIN 326: Business Finance ............................................................ 3
FIN 627: Advanced Business Finance ............................................ 3

**Bachelor of Science in Education Degree with a Major in Mathematics Emphasis: Teaching Grades 6-12**

All students preparing to teach must meet the general education requirements for all baccalaureate degrees as well as the requirements for teacher licensure. The following plan will satisfy both requirements.

**General Education Degree Requirements for students preparing to teach** *(40-45 hours)*

Basic Skills**, # (9 hours)

General Education Electives *(31-36 hours)*

- Sciences (8-9 hours)
- Social Studies (3 hours)
- Political Studies (3 hours)
- Producing and Consuming** (2-3 hours)
- Fine Arts and Aesthetic Studies (2-3 hours)
- Cultural Studies (3 hours)
- Health and Well-Being (4-6 hours)
- Human Heritage (6 hours)

* See [General Education Requirements for Students Preparing to Teach Secondary School](#).

** Three hours of general education basic skills are satisfied by the requirements in Mathematics. Three hours of general education basic skills are satisfied by the required programming course in Computer Science.

# Must have a “C” or better in each of the Basic Skills courses.

**Major (Mathematics) Core Requirements (46 hours)**

MATH 150: Calculus I ................................................................. 5
MATH 155: Calculus II ............................................................... 5
MATH 212: Matrix Algebra ......................................................... 2
MATH 253: Calculus III .............................................................. 3
MATH 304: Mathematics for Education II .................................. 3
MATH 343: Introductory Applied Statistics ................................ 3
MATH 413: Introduction to Mathematical Thought ...................... 3
MATH 471: Manipulatives for Teaching Mathematics .................. 1
MATH 472: Technology for Teaching Secondary Mathematics .......... 2
MATH 513: Discrete Structures .................................................. 3
MATH 607: History of Mathematics ........................................... 3
MATH 613: Abstract Algebra ..................................................... 3
MATH 636: Basic Concepts of Geometry ...................................... 3
MATH 656: Mathematical Modeling ........................................... 3
MATH 699: Senior Seminar ....................................................... 1
CIS 230: Visual Basic Programming .......................................... 3
or CIS 240: C++ Programming .................................................. 3
or a computer programming course approved by the mathematics department

**Professional Education**** (37 hours)**

EDUC 261: Explorations in Education .......................................... 3
PSYCH 263: Developmental Psychology ...................................... 3
PSYCH 357: Educational Psychology ........................................ 3
MATH 479: Techniques for Teaching Mathematics ....................... 3
MATH 480: Internship in Secondary Mathematics ....................... 1
SPED 510: Overview of Special Education .................................. 3
EDUC 520: Methods and Materials for Academic Literacy ............ 3
MATH 679: Mathematics Education Seminar ............................. 1

**Professional Semester (17 hours)**

EDUC 458: Methods and Curriculum ......................................... 3
EDUC 462: Secondary and Middle Level Education ..................... 2
EDUC 464: Foundations of Measurement and Evaluation ............. 2
EDUC 480: Supervised Teaching in the Secondary School ............ 3
EDUC 482: Supervised Teaching in the Secondary School ............ 5
MATH 579: Supervised Student Teaching and Follow-Up of Teachers ......................................................... 2

****See [Admission to Professional Semester](#) for professional education grade point requirements.

The degree requirements for a Bachelor of Science in Education with a major in mathematics requires a minimum of 124 semester hours.

PSYCH 357 Education Psychology, MATH 479
Techniques for Teaching Mathematics, EDUC 520
Methods and Materials for Academic Literacy require admission to Teacher Education to enroll in the class.

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University.

**Bachelor of Science in Education Degree with a Major in Mathematics Emphasis: Teaching Grades 5-8**

General Education Degree Requirements for students preparing to teach *(40-45 hours)*
Major (Mathematics) Core Requirements (31 hours)

MATH 150: Calculus I ............................................................. 5
MATH 212: Matrix Algebra .................................................. 2
MATH 304: Mathematics for Education II ............................... 3
MATH 307: Geometry for Education ....................................... 3
MATH 343: Introductory Applied Statistics ............................... 3
MATH 413: Introduction to Mathematical Thought ...................... 3
MATH 471: Manipulatives for Teaching Mathematics ................. 1
MATH 472: Technology for Teaching Secondary Mathematics ....... 2
MATH 513: Discrete Structures ............................................... 3
MATH 607: History of Mathematics ....................................... 3
CIS 230: Visual Basic Programming ...................................... 3
or CIS 240: C ++ Programming ............................................. 3

or a computer programming course approved by the mathematics department

Professional Education**** (37 hours)

EDUC 281: Explorations in Education ..................................... 3
PSYCH 263: Developmental Psychology .................................. 3
PSYCH 357: Educational Psychology ..................................... 3
MATH 479: Techniques for Teaching Mathematics .................... 3
MATH 480: Internship in Secondary Mathematics ..................... 1
SPED 510: Overview of Special Education ............................... 3
EDUC 520: Methods and Materials for Academic Literacy ........... 3
MATH 679: Mathematics Education Seminar ........................... 1

Professional Semester (17 hours)

EDUC 458: Methods and Curriculum ...................................... 3
EDUC 462: Secondary and Middle Level Education .................... 2
EDUC 464: Foundations of Measurement and Evaluation ............. 2
EDUC 480: Supervised Teaching in the Secondary School ............ 3
EDUC 482: Supervised Teaching in the Secondary School ............ 5
MATH 579: Supervised Student Teaching and Follow-Up of
Teachers ............................................................................... 2

****See Admission to Professional Semester for professional education grade point requirements.

The degree requirements for a B.S. in Education with a major in mathematics requires a minimum of 124 semester hours.

PSYCH 357 Education Psychology, MATH 479
Techniques for Teaching Mathematics, EDUC 520
Methods and Materials for Academic Literacy require admission to Teacher Education to enroll in the class.

Students planning to teach should become familiar with the current Regulations for Certifying School personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University.

Minor in Mathematics

A minor in mathematics is supportive of various areas, particularly the biological, physical, computer, managerial, and social sciences. Consult the department for recommended courses.

Required Courses (20 hours)

MATH 150: Calculus I ............................................................. 5
MATH 212: Matrix Algebra .................................................. 2
MATH 143: Elementary Statistics ......................................... 3
or MATH 543: Probability and Statistics ......................... 3
or CIS 230: Visual Basic Programming ................................... 3
or CIS 240: C ++ Programming ............................................. 3
or A computer programming course approved by the mathematics department

- Electives from approved mathematics courses numbered 143 or above (10 hours)

Minor in Mathematics (Teaching Grades 5-8)

This minor in mathematics has been designed to satisfy mathematics teacher licensure requirements for Late Childhood/Early Adolescence (5-8). This minor is only available in conjunction with a Bachelor of Science in Education degree.

Mathematics for Grades 5-8

MATH 126: Pre-Calculus ..................................................... 4
MATH 143: Elementary Statistics ......................................... 3
MATH 304: Mathematics for Education II .............................. 3
MATH 307: Geometry for Education ..................................... 3
MATH 471: Manipulatives for Teaching Mathematics ............... 1
MATH 472: Technology for Teaching Secondary Mathematics .... 2
MATH 479: Techniques for Teaching Mathematics ................... 3
MATH 480: Clinical Experience in Secondary Mathematics
Teaching ......................................................................... 1
MATH 503: Introduction to Advanced Mathematical Concepts
for Education ..................................................................... 3
MATH 679: Mathematics Education Seminar .......................... 1
CIS 230: Visual Basic Programming ...................................... 3
or CIS 240: C ++ Programming ............................................. 3
or A computer programming course approved by the mathematics department

MATH 479 Techniques for Teaching Mathematics
requires admission to Teacher Education prior to enrolling in the course.
Master of Science Degree with a Major in Mathematics

Community College Teaching Emphasis
Secondary Teaching Emphasis

The Department of Mathematics offers courses leading to the degree of Master of Science. Candidates for this degree must meet the requirements for Option I or Option II as described at Graduate Degrees and Options of this catalog. The prerequisite for starting a major is eight hours of acceptable courses in mathematics beyond MATH 253 Calculus III.

A minimum of 20 hours of acceptable courses in mathematics is required. MATH 890 Research and Thesis or MATH 891 Research Problem, and other 800-level courses for a minimum of 15 hours credit should be included. A program with an applied or theoretical emphasis is available.

Graduate Certificate in Mathematics

The Certificate in Graduate Mathematics is an 18 hour non-degree and non-licensure program designed to certify that participants have a knowledge base in graduate mathematics. All of the courses may be applied to a Master's Degree in Mathematics. Undergraduate students may begin the Certificate program in their final semester with approval from their advisor and mathematics department chair. In order to meet the expectation for college-level teaching an individual must also hold a master's degree or higher in some area of study.

Admission Requirements:

- The candidate must hold a Bachelor's degree in mathematics, mathematics education or the equivalent, or be in their final semester of a Pittsburg State University undergraduate mathematics program.
- Undergraduate degree; 3.0 GPA or admitted with condition.

Procedural Steps for Certificate:

1. Apply through the Graduate and Continuing Studies Office for the Certificate in Graduate Mathematics.
2. Submit an official transcript.

3. The student must petition for completion of the Certificate program during their last semester.

Students may enter the program in any semester.

Program Completion

Multiple classes are offered each semester so that the certificate can be earned in one calendar year.

Required coursework (3 hours chosen from)

- MATH 813: Algebra I .................................................................3
- MATH 853: Functions of a Complex Variable ...........................3
- MATH 856: Analysis I .................................................................3

Electives (15 hours chosen from)

- MATH 705: Topics in Elementary Mathematics (___) ..............1-3
- MATH 707: History of Mathematics ...........................................3
- MATH 717: Linear Algebra .......................................................3
- MATH 726: Introduction to Stochastic Processes .......................3
- MATH 727: Linear Optimization Models .................................3
- MATH 728: Mathematics of Financial Derivatives .....................3
- MATH 733: Topology .................................................................3
- MATH 735: The Geometry of Space-Time .................................3
- MATH 743: Mathematical Statistics .........................................3
- MATH 746: Statistical Methods I .............................................3
- MATH 749: Time Series Analysis .............................................3
- MATH 755: Elementary Partial Differential Equations ............3
- MATH 758: Vector Calculus .....................................................3
- MATH 763: Numerical Linear Algebra .....................................3
- MATH 770: Topics in Mathematics: (___) .........................1-3
- MATH 773: Expository Mathematics: (___) .......................0.5-6
- MATH 813: Algebra I .................................................................3
- MATH 836: Advanced Geometry .............................................3
- MATH 840: Topics in Statistics (___) .................................1-3
- MATH 853: Functions of a Complex Variable ..........................3
- MATH 856: Analysis I .................................................................3
- MATH 859: Analysis II ..............................................................3
- MATH 863: Seminar in Mathematics (___) .......................1-6
- MATH 870: Topics in Mathematics: (___) .........................1-3
- MATH 871: Seminar: Teaching of Mathematics ....................1-3
- MATH 880: Advanced Reading in Mathematics ....................1-3

- Up to six hours of graduate credit in mathematics may be transferred from another accredited institution

MATH 707, 727, 813, 856 and 871 offered in the fall semesters. MATH 746 offered in the fall semesters, odd years. MATH 749 offered in the fall semester, even years. MATH 717, 726, 743, 763 and 853 offered in the spring semesters.
Military Science

Chairperson: Lieutenant Colonel Kenneth Hutchison
Professor(s): LTC Kenneth Hutchison
Assistant Professor(s): SFC Ronald Truax, CPT Timothy Wilkins, MSG Michael Deatherage
Instructors: MSG(R) Sam Haskins

Room Student Recreation Center
Telephone: 620-235-4859
Fax: 620-235-4862
http://www.pittstate.edu/department/military/
E-mail: khutchison@pittstate.edu

Undergraduate

Minor in Military Science

Army Reserve Officers' Training Corps (ROTC)

Army ROTC is a program open to all students that provides an introduction to the military and its role in our society. It provides training and laboratory experiences in leadership, goal orientations, time management, communications, survival and group dynamics. Extracurricular activities available for enrolled students include paintball, rappelling, parachute jumping and military skills competition. For students who progress through the program, it provides the opportunity to earn a commission as an officer in the Army, Army Reserve or Army National Guard.

The program is divided into two parts. The basic course is open to all students regardless of age or physical condition and may be taken at any point in the student's college career. The focus is on introducing the student to the Army and providing skills to enhance performance in whatever career path is chosen. The advanced course is open only to juniors, seniors and graduate students who desire a commission and the opportunity to serve as an officer in the armed forces.

Basic Course

The basic course consists of five courses: three (3) one-hour credit courses and two (2) three-hour credit courses. These classes are open to all students and like any other course, may be dropped with no obligation. Students receive instruction and laboratory opportunities in leadership, communications, and confidence building.

Leaders Training Course

This is not basic training. It is a fully paid four week summer camp attended by potential ROTC students who have 55 or more college credit hours, but who do not have the requisite 10 semester hours of the basic course ROTC classes or prior military service. Students will learn basic military skills through hands-on practice such as first-aid, weapons familiarity, land navigation, drill and ceremony and many other subjects. You may compete, if eligible, for scholarships that can pay for tuition, books and fees. The opportunity to attend this camp is limited. If interested, students should talk to a military science representative starting in January through April. Students can also earn up to 10 (free) credit hours for attending this camp.

Leadership Assessment and Development Course

The advanced course is open by permission only to juniors, seniors and graduate students pursuing a commission in the Army, Army Reserve or National Guard. Students accepted into the advanced course must agree to meet the curriculum requirements including attendance at a five-week summer leadership development and assessment course between the junior and senior year. They also agree to accept a commission as a second lieutenant upon graduation. All advanced course students receive a $450 to $500 per month allowance during the academic year.

Scholarships

The military science department provides extensive scholarship opportunities. Available scholarships range from programs that cover all tuition and fees plus provide a book and monthly living allowance, to programs that cover just tuition. Special scholarship consideration is provided for nursing and engineering students. Information on all scholarships may be obtained from military science faculty.

Army Nurse Corps

The military science department offers a special program for nursing students designed to complement and enhance Pittsburg State University nursing instruction. Nursing students completing this program will earn a commission as a second lieutenant in the Army Nurse Corps. The classes provide instruction and laboratory opportunities in leadership, supervisory, organizational and sensitivity skills. It also provides a unique opportunity to practice clinical skills under the
mentorship of an army nurse. Special scholarship opportunities are available to all nursing students.

Veterans

Veterans from all branches including members of the Reserve and National Guard receive special consideration in the military science program. This includes credit for military experience and special leadership and scholarship opportunities.

Student Organizations

Students are organized into cadet led units that provide the framework for laboratory and extracurricular activities and offer leadership opportunities for all students. The Ranger Challenge Team is a voluntary organization that emphasizes cohesion, esprit de corp and military skills. This group travels to compete with other colleges and universities throughout the Midwest. Students also participate in the unit’s color guard and cannon crew that perform at Pittsburg State University sporting events and other community events.

Minor in Military Science

Students who complete at least 28 hours in military science fulfill the requirement for a minor for any baccalaureate degree. Students not desiring a minor in military science may apply up to 10 hours of military science credit to general electives towards a degree.

Military Science

MIL 100: Military Science I ................................................................. 1
MIL 102: Military Science I ................................................................. 1
MIL 103: Military Science I Laboratory .............................................. 1
MIL 200: Military Science II ............................................................... 3
MIL 202: Military Science II ............................................................... 3
MIL 300: Advanced Military Science III ......................................... 3
MIL 302: Advanced Military Science III ......................................... 3
MIL 303: Leadership Assessment and Development Course .......... 4
MIL 400: Advanced Military Science IV ......................................... 3
MIL 402: Advanced Military Science IV ......................................... 3

Professional Military Education history course chosen from:

HIST 510: Modern Middle East ....................................................... 3
HIST 515: World War I ................................................................. 3
HIST 520: World War II ................................................................. 3
HIST 522: Korean and Vietnam Wars .............................................. 3
HIST 533: US-East Asia Relations .................................................. 3
HIST 547: Radical Islam ................................................................. 3
HIST 626: U.S. Iraq and Afghanistan .............................................. 3
HIST 656: Sectional Crisis and Civil War ....................................... 3
HIST 673: American Military Experience, 1607-1898 .................... 3
HIST 674: American Military Experience, 1898 to Present ............ 3

Upon approval of the chairperson, another upper-level history course may be considered.
Music

Chairperson: Susan Marchant*
Associate Professor(s): James Clanton*, Carol Deats*, Matthew G. Montague*
Assistant Professor(s): Raul Munguia*
Instructors: Andrew Chybowski, T. Patrick Howle
Lecturers: Loretta M. Kehle
*Graduate Faculty
**University Professor

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Undergraduate

Bachelor of Arts Degree with a Major in Music
Bachelor of Music Degree with an Emphasis in Instrumental Performance
Bachelor of Music Degree with an Emphasis in Vocal Performance
Bachelor of Music Education Degree with an Instrumental Emphasis
Bachelor of Music Education Degree with a Vocal Emphasis
Minor in Music

Graduate

Master of Music

Mission Statement

In consonance with the mission, vision, and core values of Pittsburg State University, the Mission of the Department of Music is to

- instruct and inspire those whose professional goals including the creation, performance, critical assessment, and teaching of music;
- offer courses to the general student body that will enhance their understanding as well as appreciation of all music;
- provide leadership within the University and the four-state region in all matters pertaining to the musical art and to music;
- make available to the university community and to area residents opportunities to participate in musical activities. These include individual and group study and performance for pre-college and college students, as well as continuing music learning and performance experiences for the music faculty and those in the surrounding region;
- maintain and enhance our outreach and program of service and assistance to area public schools and other educational/professional organizations by acting as adjudicators, clinicians, guest conductors, consultants, and performers; and
- contribute to the enhancement of the cultural life of the University and the region through the performance and sponsorship of frequent and varied concerts and recitals.

General Information

Admission - Students who wish to major in music must successfully pass an audition and be admitted to the university. Auditions are required of entering students as well as transfer students. Entering students are also required to take a theory placement test, although freshmen may opt out and enroll in Music Fundamentals. In some cases a student may be admitted with conditional acceptance status, for a period of no more than two semesters. The student who is not accepted into the program will not be allowed to enroll in applied lessons without special permission of the instructor. Students who wish to minor must demonstrate a satisfactory level of competence in applied music. Minors need special permission of the instructor to enroll in applied music.

The Department of Music is a member of the National Association of Schools of Music.

In order to fulfill its educational and cultural responsibilities, the department combines the broader aspects of music as an important part of past and present human experience with the artistic and professional requirements necessary for a successful career in music. The department prepares students for elementary and secondary music teaching, and it serves students pursuing objectives leading to college teaching
and professional performance. The department attempts to provide optimum opportunity for achievement of excellence in both applied and academic music subjects in all degree programs.

The department sponsors numerous ensembles: Chorale, University Choir, and Jazz Choir; the Wind Ensemble and Symphonic Band, Marching Band, Basketball Pep Band, and Jazz Ensembles; the Symphony Orchestra, Chamber Orchestra, and the Opera Workshop. These organizations, along with soloists and small ensembles from the students and faculty of the Department of Music, provide numerous concerts throughout the school year. In addition, the university sponsors two outstanding concert series by national and international guest artists, the Performing Arts and Lecture Series and the Solo and Chamber Music Series. The annual Pittsburg State University Jazz Festival brings in national jazz artists and groups each year.

Participation in appropriate organizations is considered an important part of the training of those majoring and minoring in music. Each full-time undergraduate music major is required to participate in one or more large organization each enrollment period. Each voice major must enroll in a choral organization, each string major in orchestra, each wind or percussion major in band. Keyboard majors will be placed in an ensemble after consultation with their academic advisors. Wind and percussion majors will be offered additional performance opportunities in Orchestra and Jazz Ensemble on the basis of audition. Voice students will be offered additional performance opportunities in Opera Workshop, Chorale and Jazz Choir on the basis of audition. Piano performance majors must complete seven semesters of a required ensemble.

Details for all programs are available from the departmental office.

**BACCALAUREATE DEGREES**

Three degrees are available at the undergraduate level for students majoring in music: The Bachelor of Music Education, the Bachelor of Music, and the Bachelor of Arts with a major in Music.

The Bachelor of Music Education prepares students for Kindergarten through 12th grade licensure as a public school music teacher. Because this degree program is a composite of music and education, it attracts many outstanding musical performers who wish to share with others the meaningful musical and educational experiences they have enjoyed. Graduates in Music Education may obtain a teaching position, pursue graduate work, or use the degree as professional training for other areas of specialization. The degree requires more than the minimum hours for graduation. Depending upon their academic and music preparation for college, students will take between four and five years to complete the degree.

The program leading to the professional degree Bachelor of Music in performance is designed for the gifted musical performer who aspires to a career in college teaching, private teaching, or professional performance. The student chooses piano, organ, harpsichord, voice, or a member of the string, wind, or percussion families of instruments as the performance medium. This degree should be considered as preparation for study at the master's level and beyond.

The Bachelor of Arts degree follows the broadest aspect of a college education with an emphasis in Music. In contrast to the Bachelor of Music or Bachelor of Music Education programs, the Bachelor of Arts students will complete a minor area of study and many will choose to declare a double major. The degree can prepare one for graduate study leading to the Master of Arts and Doctor of Philosophy degrees, as well as careers based on cultural concerns or in music-related fields. This degree can also be oriented toward pre-professional or social and/or business opportunities.

Both the Bachelor of Music Education and the Bachelor of Music degree programs may be pursued concurrently and may be completed in approximately five years, depending upon a student's academic and musical preparation before matriculating at Pittsburg State University. Both degrees must be awarded simultaneously.

Each full-time major must also enroll in Recital Hour during each enrollment period or for seven semesters, whichever is less.

**GRADUATE DEGREES**

The Department of Music offers courses leading to the degree of Master of Music with emphases in the following areas: performance (voice, keyboard, strings, wind, percussion), instrumental music education, vocal music education, choral conducting and instrumental conducting. The prerequisite to work on the degree is the completion of a four-year degree program comparable to the Bachelor of Music or Bachelor of Music Education granted by this institution.
Admission to the graduate program in music is based upon satisfactory completion of the Graduate Entrance Examination, along with an evaluation of the undergraduate transcripts and personal interview. The departmental entrance exam is given prior to the first week of classes of each semester to entering degree and non-degree seeking graduate students. For all potential graduate majors, the exam consists of music theory, music history and music literature. Performance majors must audition.

The Master’s degree is designed to provide advanced training to prepare students for enhanced career opportunities as well as for further study at the doctoral level. Although the training varies according to the emphasis, this preparation includes, for all students, improving interpretive and technical skills in performance and/or conducting, as well as the ability to analyze and write about music.

A minimum of twenty-eight hours of acceptable courses in music with four hours of thesis, totaling a minimum of thirty-two hours, satisfies the degree requirement. Full-time graduate students receiving departmental financial assistance through a scholarship or Graduate Teaching Assistant position, as well as part-time graduate students who are not actively engaged in music making activities may be required to enroll in a major ensemble each semester of enrollment. These hours may or may not count towards the 32 candidacy hours for the degree, depending on the area of emphasis.

**Bachelor of Arts Degree with a Major in Music**

**Applied Music (17 hours)**

MUSIC 250: Applied Music (___) ................................. 1/2-3
and MUSIC 450: Applied Music (___) ................................. 1/2-3
MUSIC 131: Piano Class ......................................................... 1
and MUSIC 132: Piano Class ......................................................... 1
MUSIC 231: Intermediate Piano Class ............................................. 1
and MUSIC 232: Intermediate Piano Class ............................................. 1
MUSIC 191: Recital Hour ............................................................... 0
and MUSIC 391: Recital Hour ......................................................... 0
MUSIC 492: Senior Recital (___) ................................................... 1
or MUSIC 493: Senior Project ......................................................... 1

MUSIC 250/450 (six semesters of two credit lessons) (12 hours)

Students must pass MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class with a "C" or better or pass the piano proficiency examination.

MUSIC 191/391 each semester for seven semesters

**Music Theory (16 hours)**

MUSIC 111: Aural Skills and Theory I ........................................... 4
MUSIC 113: Aural Skills and Theory II ......................................... 4
MUSIC 211: Aural Skills and Theory III ......................................... 4
MUSIC 213: Aural Skills and Theory IV ......................................... 4

A grade of “C” or better is required in all courses listed above.

New freshmen are given a placement test in music theory to determine whether they have sufficient background to enter MUSIC 111 Aural Skills and Theory I. Those lacking this background are advised to elect MUSIC 109 Aural Skills and Theory Fundamentals, 4 hours.

**Music History and Literature (8 hours)**

MUSIC 121: Introduction to Music Literature ................................. 2
MUSIC 321: History of Music ....................................................... 3
MUSIC 322: History of Music ....................................................... 3

**Music Ensembles (8 hours)**

**Instrumental**

Wind or percussion majors take MUSIC 156, 356 Band (___), string majors take MUSIC 176, 376 Orchestra, keyboard majors choose between MUSIC 156, 356 Band, MUSIC 176, 376 Orchestra or MUSIC 187, 387 University Choir (minimum requirement 8 hours). Required each semester for each full-time student.

**Vocal**

MUSIC 187/387 University Choir (minimum requirement) (8 hours)

Required each semester for each full-time student.

**Foreign Language (9 hours)**

9 hours in one language required for BA degree

**General Education (41-46 hours)**

Some general education courses are met by major requirements listed above.

**Required Minor (20 hours)**

- Each student must select one minor of at least 20 semester hours
- Electives (0-5 hours)

**TOTAL MINIMUM HOURS REQUIRED (124 hours)**
Bachelor of Music Degree with an Emphasis in Instrumental Performance

The student chooses piano, organ, harpsichord, or a member of the string, wind or percussion families of instruments as the performance medium.

Applied Music (34 hours)

- Applied Major (courses at the 200 and 400 levels) (24 hours)
- Secondary Applied (4 hours)

Those students having wind, string or percussion instrument as their applied major must enroll in MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class and/or applied piano (this may exceed 4 hours). Students must pass MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class with a “C” or better and/or pass the piano proficiency examination. The piano proficiency examination may be taken any semester. Those who pass will be excused from further piano requirements.

Keyboard majors, later in the program, substitute MUSIC 377 Accompanying Techniques, 2 hours, and MUSIC 723 Piano Literature (___), 3 hours, or MUSIC 710 Organ Seminar (___), 2 hours. They should take the piano proficiency examination early in their program.

MUSIC 131: Piano Class ................................................................. 1
and MUSIC 132: Piano Class ........................................................... 1
MUSIC 231: Intermediate Piano Class .................................................. 1
and MUSIC 232: Intermediate Piano Class ........................................... 1
MUSIC 377: Accompanying Techniques ............................................. 2
and MUSIC 723: Piano Literature (___) ............................................. 3
or MUSIC 710: Organ Seminar (___) .............................................. 2
MUSIC 191: Recital Hour ............................................................... 0
and MUSIC 391: Recital Hour ......................................................... 0
MUSIC 326: Pedagogy/Literature (___) ............................................. 1-3
or MUSIC 379: Piano Pedagogy I ................................................... 3
MUSIC 378: Chamber Music (___) (subject such as Brass,
Strings, etc) ................................................................. 1
MUSIC 392: Junior Recital (___) .................................................... 1
MUSIC 492: Senior Recital (___) .................................................... 1

MUSIC 191/391 each semester for seven semesters.

MUSIC 326 must be taken for 3 hours.

Keyboard Majors elect MUSIC 379

MUSIC 378 repeat for 2 hours

Music Theory (27 hours)

MUSIC 111: Aural Skills and Theory I .............................................. 4
MUSIC 113: Aural Skills and Theory II .............................................. 4
MUSIC 211: Aural Skills and Theory III .......................................... 4
MUSIC 213: Aural Skills and Theory IV .......................................... 4
MUSIC 311: Composition .............................................................. 3
MUSIC 413: Orchestration .............................................................. 3
MUSIC 414: Forms and Analysis .................................................... 2
MUSIC 511: Counterpoint .............................................................. 3

A grade of "C" or better is required in MUSIC 111, MUSIC 113, MUSIC 211, and MUSIC 213.

Music Education (4 hours)

MUSIC 238: Basic Conducting ....................................................... 2
MUSIC 338: Instrumental Conducting ............................................. 2
or MUSIC 337: Choral Conducting ............................................... 2

Keyboard majors may substitute MUSIC 337

Music History and Literature (8 hours)

MUSIC 121: Introduction to Music Literature .................................... 2
MUSIC 321: History of Music ........................................................ 3
and MUSIC 322: History of Music ................................................. 3

Music Ensembles (8 hours)

Wind or percussion majors take MUSIC 156, 356 Band (___), string majors take MUSIC 176, 376 Orchestra, keyboard majors choose between MUSIC 156, 356 Band (___), MUSIC 176, 376 Orchestra or MUSIC 187, 387 University Choir (minimum requirement). Required each semester for each full-time student. Piano majors enroll in four semesters of major ensemble at the 100-level, and three semesters of major ensemble at the 300-level, for a total of seven semesters of major ensemble participation.

Foreign Language (3 hours)

MLL 124: French Language and Culture I ...................................... 3
or MLL 154: Spanish Language and Culture I .............................. 3

MLL 124 French Language and Culture I will satisfy the Languages and Cultures (3 hours) section of the general education requirement for the music major with an Instrumental Performance emphasis.

General Education Requirement (41-46 hours)

TOTAL hours for Bachelor of Music Degree with an Instrumental Performance Emphasis (124-130 hours)
Bachelor of Music Degree with an Emphasis in Vocal Performance

Applied Music (40 hours)

- Applied Major (courses at 200 and 400 levels) (24 hours)
- Secondary Applied (4 hours)

MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class and/or applied piano (this may exceed 4 hours). Students must enroll in and pass MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class with a “C” or better and/or pass the piano proficiency examination. The piano proficiency examination may be taken any semester; those who pass will be excused from further secondary piano requirements.

MUSIC 131: Piano Class .................................................. 1
and MUSIC 132: Piano Class ............................................. 1
MUSIC 231: Intermediate Piano Class ................................ 1
and MUSIC 232: Intermediate Piano Class ......................... 1
MUSIC 191: Recital Hour ................................................... 0
and MUSIC 391: Recital Hour ............................................. 0
MUSIC 288: Applied Diction for Singers I .............................. 1
and MUSIC 289: Applied Diction for Singers II ...................... 1
MUSIC 279: Opera Workshop ............................................. 1-3
and MUSIC 479: Opera Workshop ..................................... 1-3
MUSIC 326: Pedagogy/Literature (___) ................................. 1-3
MUSIC 392: Junior Recital (___) ......................................... 1
MUSIC 492: Senior Recital (___) ......................................... 1

MUSIC 191/391 each semester for seven semesters.

MUSIC 279/479 must be taken for six hours.

MUSIC 326 must be taken for 3 hours.

Music Theory (21 hours)

MUSIC 111: Aural Skills and Theory I .................................. 4
MUSIC 113: Aural Skills and Theory II ................................. 4
MUSIC 211: Aural Skills and Theory III ................................ 4
MUSIC 213: Aural Skills and Theory IV ............................... 4
MUSIC 414: Forms and Analysis ........................................... 2
MUSIC 511: Counterpoint ..................................................... 3

A grade of "C" or better is required in MUSIC 111, MUSIC 113, MUSIC 211, and MUSIC 213.

Music Education (4 hours)

MUSIC 238: Basic Conducting .............................................. 2
MUSIC 337: Choral Conducting ............................................. 2

Music History and Literature (11 hours)

MUSIC 121: Introduction to Music Literature .......................... 2
MUSIC 321: History of Music ............................................... 3
and MUSIC 322: History of Music ......................................... 3

Music Organization (8 hours)

MUSIC 187: University Choir ............................................. 1
and MUSIC 387: University Choir ......................................... 1

Minimum requirement is eight hours. Required each semester for each full-time student.

Foreign Language (6 hours)

MLL 124: French Language and Culture I ......................... 3
and MLL 128: French Language and Culture II .................. 3
or MLL 154: Spanish Language and Culture I .................. 3
and MLL 158: Spanish Language and Culture II ............. 3

MLL 124 French Language and Culture I or MLL 154 Spanish Language and Culture I will satisfy the Languages and Cultures (3 hours) section of the general education requirement for the music major with a Vocal Performance emphasis.

General Education Requirement (35-40 hours)

TOTAL hours required for Bachelor of Music Degree with a Vocal Performance Emphasis (129-133 hours)

Bachelor of Music Education Degree with an Instrumental Emphasis

Applied Music (19 hours)

- Applied Major (courses at the 200 and 400 levels) (14 hours)
- Secondary Applied (4 hours)

Those students having wind, string or percussion instrument as applied major enroll in MUSIC 131,132 Piano Class and MUSIC 231, 232 Intermediate Piano Class and/or applied piano (this may exceed 4 hours). Students must pass MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class with a “C” or better and/or pass the piano proficiency examination. The piano proficiency examination may be taken any semester; those who pass will be excused from further piano requirements. All students, including keyboard majors, must meet piano proficiency requirements before admission to the professional semester.

MUSIC 131: Piano Class .................................................. 1
and MUSIC 132: Piano Class ............................................. 1
MUSIC 231: Intermediate Piano Class ................................. 1
and MUSIC 232: Intermediate Piano Class ......................... 1
MUSIC 191: Recital Hour ................................................... 0
and MUSIC 391: Recital Hour ............................................. 0
MUSIC 492: Senior Recital (___) ................................................................. 1

MUSIC 191/391 each semester for seven semesters.

Music Theory (19 hours)
- MUSIC 111: Aural Skills and Theory I ................................................... 4
- MUSIC 113: Aural Skills and Theory II .................................................. 4
- MUSIC 211: Aural Skills and Theory III ................................................ 4
- MUSIC 213: Aural Skills and Theory IV ................................................ 4
- MUSIC 413: Orchestration ................................................................. 3

A grade of "C" or better is required in MUSIC 111, MUSIC 113, MUSIC 211, and MUSIC 213.

Music Education (24 hours)
- MUSIC 238: Basic Conducting ............................................................ 2
- MUSIC 241: Introduction to Music Education ........................................... 1
- MUSIC 330: Woodwind Techniques ................................................... 2
- MUSIC 331: Brass Techniques ............................................................. 1
- MUSIC 333: Percussion Techniques ................................................... 1
- MUSIC 336: Vocal Techniques ............................................................. 1
- MUSIC 337: Choral Conducting ........................................................... 2
- MUSIC 338: Instrumental Conducting .................................................. 2
- MUSIC 341: Teaching Music in the Schools, Pre-K-8 ............................ 3
- MUSIC 412: Aural Skills and Theory II .................................................. 1

Music History and Literature (8 hours)
- MUSIC 121: Introduction to Music Literature ........................................... 2
- MUSIC 321: History of Music .............................................................. 3
- MUSIC 322: History of Music .............................................................. 3

Music Ensembles (7 hours)
Wind or percussion majors take MUSIC 156, 356 Band (___), string majors take MUSIC 176, 376 Orchestra; keyboard majors choose between MUSIC 156, 356 Band, MUSIC 176, 376 Orchestra or MUSIC 187, 387 University Choir (minimum requirement). Required each semester for each full-time student.

General Education Requirement (38-45 hours)

Professional Education* (12 hours)
- PSYCH 263: Developmental Psychology ............................................. 3
- PSYCH 357: Educational Psychology ................................................... 3
- SPED 510: Overview of Special Education ........................................... 3
- EDUC 520: Methods and Materials for Academic Literacy ................... 3

* See Admission to Professional Semester for professional education grade point requirements.

MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class and/or applied piano (this may exceed 4 hours). Students must pass MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class with a "C" or better and/or pass the piano proficiency examination. The piano proficiency examination may be taken any semester; those who pass will be excused from further piano requirements. All students, including keyboard majors, must meet piano proficiency requirements before admission to the professional semester.

MUSIC 191/391 each semester for seven semesters

PSYCH 357 Educational Psychology and EDUC 520 Methods and Materials for Academic Literacy require admission to Teacher Education prior to enrollment.

Professional Semester (17 hours)
- EDUC 458: Methods and Curriculum .................................................... 3
- EDUC 462: Secondary and Middle Level Education ............................. 2
- EDUC 464: Foundations of Measurement and Evaluation .................... 2
- EDUC 475: Supervised Teaching in the Elementary School .................. 3
- EDUC 482: Supervised Teaching in the Secondary School .................... 5
- MUSIC 597: Supervised Student Teaching and Follow-Up of Teachers ... 2

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University.

TOTAL hours for Bachelor of Music Education (144-151 hours)

Bachelor of Music Education Degree with a Vocal Emphasis

Applied Music (21 hours)
- Applied Major (courses at the 200 and 400 levels)* (14 hours)
- Secondary Applied**

Students must enroll in MUSIC 131,132 Piano Class and MUSIC 231, 232 Intermediate Piano Class and/or applied piano (this may exceed 4 hours). Students must pass MUSIC 131, 132 Piano Class and MUSIC 231, 232 Intermediate Piano Class with a "C" or better and/or pass the piano proficiency examination. The piano proficiency examination may be taken any semester; those who pass will be excused from further piano requirements. All students, including keyboard majors, must meet piano proficiency requirements before admission to the professional semester.

MUSIC 191/391 each semester for seven semesters

* Select either Voice or Piano.
**If Piano is selected for Applied Music area, Secondary Applied area must be Voice.

**Music Theory (16 hours)**

MUSIC 111: Aural Skills and Theory I ................................................. 4
MUSIC 113: Aural Skills and Theory II ................................................. 4
MUSIC 211: Aural Skills and Theory III ............................................... 4
MUSIC 213: Aural Skills and Theory IV ................................................ 4

A grade of "C" or better is required.

**Music Education (25 hours)**

MUSIC 238: Basic Conducting ............................................................. 2
MUSIC 241: Introduction to Music Education ....................................... 1
MUSIC 326: Pedagogy/Literature (____) .............................................. 1-3
MUSIC 330: Woodwind Techniques .................................................... 2
MUSIC 331: Brass Techniques .............................................................. 1
MUSIC 333: Percussion Techniques ..................................................... 1
MUSIC 337: Choral Conducting ............................................................ 2
MUSIC 338: Instrumental Conducting .................................................. 2
MUSIC 340: Organization of the Instrumental Music Program ............... 3
MUSIC 342: String Techniques ............................................................. 1
MUSIC 344: Marching Band Techniques ............................................... 1
MUSIC 345: Jazz Ensemble Techniques ............................................... 1
MUSIC 431: Teaching Music in the Schools, Pre-K-8 ............................. 3
MUSIC 432: Secondary Choral Methods .............................................. 3

MUSIC 326 must be taken for two hours.

**Music History and Literature (8 hours)**

MUSIC 121: Introduction to Music Literature ..................................... 2
MUSIC 321: History of Music ............................................................... 3
and MUSIC 322: History of Music ....................................................... 3

**Music Ensembles (7 hours)**

MUSIC 187: University Choir ............................................................ 1
and MUSIC 387: University Choir ....................................................... 1

Minimum requirement is seven hours. Required each semester for each full-time student.

**General Education Requirement (38-45 hours)**

**Professional Education* (12 hours)**

PSYCH 263: Developmental Psychology ............................................. 3
PSYCH 357: Educational Psychology .................................................. 3
SPED 510: Overview of Special Education ......................................... 3
EDUC 520: Methods and Materials for Academic Literacy .................. 3

* See Admission to Professional Semester for professional education grade point requirements.

PSYCH 357 Educational Psychology and EDUC 520 Methods and Materials for Academic Literacy require admission to Teacher Education prior to enrollment.

**Professional Semester (17 hours)**

EDUC 458: Methods and Curriculum .................................................. 3
EDUC 462: Secondary and Middle Level Education ........................... 2
EDUC 464: Foundations of Measurement and Evaluation ................... 2
EDUC 475: Supervised Teaching in the Elementary School ................. 3
EDUC 482: Supervised Teaching in the Secondary School ................. 5
MUSIC 579: Supervised Student Teaching and Follow-Up of Teachers . 2

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TOTAL hours for Bachelor of Music Education (144-151 hours)

**Minor in Music**

A minor in music (non-teaching, 20 hours minimum) is available in the various baccalaureate degrees. Hours earned at other institutions may count towards the minor if they fulfill the requirements. In some instances, adjustments may be made to the requirements. Details of the minor should be planned in consultation with a Department of Music faculty member and the approval of the Chairperson of the Department of Music early in the student’s academic program.

**Music Theory (4-8 hours)**

Students must complete MUSIC 111 Aural Skills and Theory I with a grade of C or better. Students may be required to pass MUSIC 109 Aural Skills and Theory Fundamentals as a pre-requisite to MUSIC 111 Aural Skills and Theory I. Additional hours, including MUSIC 109 Aural Skills and Theory Fundamentals, may be counted as electives if needed.

MUSIC 111: Aural Skills and Theory I ................................................ 4
MUSIC 109: Aural Skills and Theory Fundamentals ............................. 4

**Music History and Literature (5-6 hours)**

Students must complete two enrollments in this area, with a few possible combinations of courses available.

**Option 1 (5 hours)**

MUSIC 120: Music Appreciation (____) .............................................. 3
MUSIC 121: Introduction to Music Literature ..................................... 2

MUSIC 120 Music Appreciation should be a non-classical section.
Option 2 (6 hours)
MUSIC 321: History of Music ......................................................... 3
MUSIC 322: History of Music ......................................................... 3

Option 3 (6 hours)
MUSIC 120: Music Appreciation (____) ............................................. 3
MUSIC 321: History of Music ......................................................... 3
or MUSIC 322: History of Music ..................................................... 3

Music 120 Music Appreciation should be a non-classical section.

Option 4 (6 hours)
MUSIC 120: Music Appreciation (____) ............................................. 3
MUSIC 120: Music Appreciation (____) ............................................. 3
MUSIC 120 Music Appreciation should be a classical section for 3 hours and also a non-classical section for 3 hours.

Applied Music (4 hours minimum)

Students must complete four enrollments of applied lessons (1 credit each) with a grade of C or better in their primary performance area. Additional hours may be taken and counted as electives if needed.

Music Ensemble (4 hours)

Students must complete 4 credit hours of ensemble enrollments (1 credit each) with a grade of C or better. Additional hours may be taken and counted as electives if needed.

Music Electives (2-3 hours)

Students may select from any of the Department of Music course offerings to meet the required 20 hour minimum to achieve the Minor in Music.

Master of Music

Core (Required of all graduate students in Music) (9 hours)
MUSIC 810: Analytical Techniques .................................................. 3
MUSIC 822: Introduction to Graduate Study in Music ......................... 2
MUSIC 890: Thesis ........................................................................ 1-6

Performance- Orchestral Instrument Emphasis (32 hours)

(Winds, Strings, Percussion)

- Core (9 hours)
- Major performance instrument (800 level) (4 hours)

MUSIC 756: Band (____) ................................................................. 1
or MUSIC 776: Orchestra ............................................................... 1
MUSIC 728: Pedagogy/Literature (____) ........................................... 3
MUSIC 738: Advanced Instrumental Conducting I .............................. 3
MUSIC 778: Advanced Chamber Music (____) (subject, such as Brass, Strings, etc) ......................................................... 1

- Guided Music Electives² (9 hours)

MUSIC 756 or 776 repeat for 2 hours

MUSIC 778 repeat for 2 hours

Performance- Emphasis in Organ, Piano or Harpsichord (32 hours)

- Core (9 hours)
- Major performance instrument (800 level)³ (4 hours)

MUSIC 710: Organ Seminar (____) .................................................... 2
or MUSIC 723: Piano Literature (____) ............................................. 3
MUSIC 736: Advanced Choral Conducting ........................................ 3
or MUSIC 747: Piano Pedagogy I .................................................... 2
MUSIC 777: Art of Accompanying ................................................... 2
MUSIC 778: Advanced Chamber Music (____) (subject, such as Brass, Strings, etc) ......................................................... 1

- Guided Music electives² (9-11 hours)

MUSIC 778 repeat for 2 hours

At the end of the first two semesters of study, a solo recital of 30 minutes minimum is required for piano emphasis.

Vocal Performance Emphasis (32 hours)

Conducting and Voice majors must complete an audition/interview.

- Core (9 hours)

MUSIC 722: History of Solo Vocal Repertoire .................................. 3
MUSIC 779: Opera Workshop ....................................................... 1-3
MUSIC 819: History of Opera ....................................................... 1-3
MUSIC 828: Advanced Vocal Pedagogy ......................................... 3
MUSIC 850: Applied Music (____) .................................................. 1-4
Guided Music electives\(^2\) (7 hours)

MUSIC 779 Opera Workshop must be taken for 3 hours.

MUSIC 850 Applied Music requires audition for Graduate Committee to enroll and must be taken for four hours.

**Instrumental Music Education Emphasis (32 hours)**

- Core (9 hours)
  
  MUSIC 738: Advanced Instrumental Conducting I ................................. 3  
  MUSIC 750: Applied Music (____) .................................................. 1/2-3  
  MUSIC 832: Directed Study in Music Education (____) ....................... 3  
  MUSIC 835: Foundations of Music Education ................................... 3  
  MUSIC 836: Psychology of Music Teaching ...................................... 3  
  
  - Guided Music electives\(^2\) (8 hours)

MUSIC 750 should be taken for 3 hours.

**Vocal Music Education Emphasis (32 hours)**

- Core (9 hours)
  
  MUSIC 731: Choral Techniques .......................................................... 3  
  MUSIC 736: Advanced Choral Conducting .......................................... 3  
  MUSIC 832: Directed Study in Music Education (____) ....................... 3  
  MUSIC 835: Foundations of Music Education ................................... 3  
  MUSIC 836: Psychology of Music Teaching ...................................... 3  
  
  - Guided Music electives\(^2\) (8 hours)

**Choral Conducting Emphasis (32 hours)**

Conducting and Voice majors must complete an audition/interview.

- Core (9 hours)
  
  MUSIC 731: Choral Techniques .......................................................... 3  
  MUSIC 736: Advanced Choral Conducting .......................................... 3  
  MUSIC 831: Choral Literature (____) ............................................... 3  
  MUSIC 837: Advanced Choral Conducting II .................................... 3  
  
  - Music Theory, History, and Performance electives\(^2\) (6 hours)
  
  - Music Education electives (2 hours)
  
  - Guided Music electives (3 hours)

**Instrumental Conducting Emphasis (32 hours)**

- Core (9 hours)

MUSIC 738: Advanced Instrumental Conducting I ................................. 3  
MUSIC 741: Instrumental Methods and Literature .................................... 3  
MUSIC 750: Applied Music (____) .................................................. 1/2-3  
MUSIC 750: Applied Music (____) .................................................. 1/2-3  
MUSIC 838: Advanced Instrumental Conducting II .............................. 3  

**Music History Course (3 hours)**

(Wind Conducting emphasis needs MUSIC 829 The History of the Wind Band - 3 hours)

**Music electives (1 hour)**

MUSIC 738 and MUSIC 838 must include two enrollments for a total of six hours each.

MUSIC 750 Applied Music: Candidates must take a semester of lessons in their primary area as well as a secondary area. For example, a woodwind person would take one semester of applied on his/her primary instrument, as well as a semester of applied percussion or applied brass. Additional enrollments of applied instruction are encouraged. A total of four hours is required.

1. For performance emphases, a one hour (50 minutes of music) graduate recital(s) and supporting document fulfill requirements for MUSIC 890 Thesis. For all others, a written thesis is required.

2. At least one three hour course in Music History is required in the electives.

3. Audition for Graduate Committee required to enroll.

4. Part-time students are required to participate in at least one enrollment of an ensemble. The Pittsburg Community Band or other community/professional ensembles can be accepted upon consultation with the advisor.
Irene Ransom Bradley School of Nursing

Chairperson: Cheryl Giefer*, Director
Professor(s): Cheryl Giefer*,**, Barbara R. McClaskey*,**, Mary Carol Pomatto*,**, Janis Schiefelbein*
Associate Professor(s): Amy Hite*
Assistant Professor(s): Kristi Frisbee*, Jennifer Harris*, Ashleigh Heter*, Karen Johnson*, Trina Larery*
Instructors: Judith Coltharp, Gena Coomes, Marsha Faubion, Deborah Fischer, Anna Beth Gilmore, Sandra McChristy, Dolores Pruitt, Donald Shull, Tracy Stahl
Learning Resource Center Coordinator: Teresa L. Johnson
Lecturer: Jessica R. Dalton
*Graduate Faculty
**University Professor

Room 101 McPherson
Telephone: 620-235-4431
Fax: 620-235-4449
http://www.pittstate.edu/department/nursing/
E-mail: nurs@pittstate.edu

Undergraduate

Bachelor of Science in Nursing

Graduate

Master of Science in Nursing

Doctor of Nursing Practice with a Major in Advanced Practice Nursing

Bachelor of Science in Nursing

The Irene Ransom Bradley School of Nursing offers a program leading to the degree Bachelor of Science in Nursing with a major in nursing, in two tracks, the Pre-RN Licensure Track and the RN to BSN Track. (RN refers to Registered Nurse and BSN refers to Bachelor of Science in Nursing.)

The baccalaureate degree in nursing/master's degree in nursing at Pittsburg State University is approved by the Kansas State Board of Nursing and is accredited by the Commission on Collegiate Nursing Education, One Dupont Circle, NW, Suite 530, Washington, DC 20036-1120, phone 202-887-6791.

Pre-RN Licensure Track

Graduates are eligible to write the NCLEX-RN examination in any state. After initial licensure, the nurse may be licensed by endorsement in other states.

Students seeking the Bachelor of Science in Nursing degree must meet all requirements for baccalaureate degrees from this institution including general education (see General Education Requirements for All Baccalaureate Degrees). School requirements for the degree include prescribed background courses and a 62-66 hour major in nursing. (RN to BSN Track students complete a 62-66 hour major in nursing).

Students are admitted to the upper division clinical nursing courses following satisfactory completion of 62-66 semester hours including the following required background courses: PSYCH 155 General Psychology, SOC 100 Introduction to Sociology, MATH 110 College Algebra with Review or MATH 113 College Algebra or MATH 126 Pre-Calculus, BIOL 257/258 Anatomy and Physiology/Laboratory, BIOL 371/372 General Microbiology/Laboratory, CHEM 105/106 Introductory Chemistry/Laboratory or CHEM 107/108 Chemistry for Life Sciences/Laboratory, PSYCH 263 Developmental Psychology or FCS 285 Lifespan Human Development, and FCS 301 Nutrition or FCS 203 Nutrition and Health. An overall grade point average of 2.75 or above, as well as a 2.50 or above grade point average for BIOL 111/112 General Biology/Laboratory, BIOL 257/258 Anatomy and Physiology/Laboratory, BIOL 371/372 General Microbiology/Laboratory, CHEM 105/106 Introductory Chemistry/Laboratory or CHEM 107/108 Chemistry for Life Sciences/Laboratory, and MATH 110 College Algebra with Review or MATH 113 College Algebra or MATH 126 Pre-Calculus, and a grade of “C” or above for all nursing prerequisite courses is necessary for an applicant to be considered. No more than two of these may be repeated to remove a “D” or “F” grade. Additional requirements include documentation of immunizations, current CPR, current state certification as a nurse aid (CNA), three professional references, transcripts, application form, application fee, and consent and fees for a state and national background check, and Social and Rehabilitation Services Child Abuse background check. Applicants with a criminal history (includes diversions, misdemeanors and felonies) as well as arrests for which action is still pending will be evaluated on an individual basis, with no guarantee of admission. There are specific requirements for reporting criminal history on the application for admission. A student who is born
outside of the United States is required to submit proof that he or she has taken and passed the TOEFL iBT (Test of English as a Foreign Language-Internet Based Test). Minimum scores for the TOEFL iBT are as follows: Writing-20; Speaking-20; Reading-19; Listening-20, for a total of 79. Each area must meet the minimum requirement. A personal interview may be required.

The Pittsburg State University nursing program requires applicants and admitted clinical nursing students to:

Notify the School of Nursing in writing of any disciplinary action against ALL licenses, certifications and/or registrations as well as disciplinary action by a state board or governmental agency. (Some examples are): Driver’s License; Fishing License; Hunting License; Day Care License; Nursing Home Administrator License; Nursing License in Kansas or another state; CNA/CMA/HHA certification; School Teacher certification; Dishonorable discharge and/or other than honorable discharge from any branch of the military, disciplinary sanction from any branch of the military.

If disciplinary action has ever been taken against your driver’s license or other license, registration or certification, in Kansas or any other state, (for any reason), you are required to provide an explanatory letter regarding the disciplinary action(s) taken against your driver’s license or other license, registration or certification. Your letter should include the following for each disciplinary action: Circumstances leading up to the disciplinary action; date of the disciplinary action; actual disciplinary action; and current status of the disciplinary action. The applicant may be required to provide certified/dated copies of disciplinary documents.

Failure to notify the school on the application or within one day after admission, if a new action since application, may result in dismissal or suspension until the legal issue is resolved. Continuance in the major will be individually evaluated and will be at the sole discretion of the Irene Ransom Bradley School of Nursing. NOTE: The Kansas State Board of Nursing and other state nursing boards have specific procedures for reporting disciplinary action on nursing applications (initial, reinstatement and endorsement). The procedures are accessible by contacting the respective boards.

Class sizes in clinical nursing courses are restricted; therefore, admission to the Irene Ransom Bradley School of Nursing is competitive. All pre-nursing students must file an application with the Irene Ransom Bradley School of Nursing for admission to upper division clinical nursing courses. The application should be submitted by December 15 prior to the intended fall enrollment in the nursing program. Qualified late applicants will be accepted if spaces are available.

Any student request for exception or waiver of any published admission requirement including but not limited to specific course requirements must be made in writing in formal letter and addressed to the Director of the Irene Ransom Bradley School of Nursing. Written requests will only be accepted per registered mail. The request must be accompanied by a written explanation to assist in arriving at a fair decision. Granted or denied waivers or exceptions will be made in writing in formal letter from the Director of the Irene Ransom Bradley School of Nursing and will be sent per registered mail. The Irene Ransom Bradley School of Nursing assumes no responsibility to grant waivers or exceptions that are not made according to this protocol. Students are responsible for obtaining the information that they need in order to know, understand, and meet admission requirements.

Supervised experience in health agencies is an integral part of every clinical nursing course. The clinical assignments are in a variety of settings off-campus. Students are responsible for their own transportation, current certification in cardiopulmonary resuscitation (CPR), current certification as a state certified nurse aide (CNA), and liability insurance. Students can expect to spend 12-18 hours per week in the clinical areas in addition to class time. ACT exam results must be provided. All students will participate in a standardized testing program. Testing costs are the responsibility of the student. For full admission status, the national benchmark must be met on the Test of Essential Academic Skills (TEAS). The TEAS must be taken at Pittsburg State University at applicant’s cost. One retake is acceptable. TEAS test dates will be posted on the school website with program applications.

It is recommended that all clinical nursing majors have health insurance.

A grade below "C" represents work of insufficient quality, not adequate to pursue subsequent courses. For this reason, a student making a "D" or "F" grade in a required course will not be permitted to continue in the nursing major or to graduate. (No credit is allowed toward graduation for "Ds" or "Fs" in nursing courses.)
Unprofessional and/or unethical behavior is considered grounds for immediate dismissal from the nursing program.

The Irene Ransom Bradley School of Nursing reserves the right to make changes if necessary. Please consult the Irene Ransom Bradley School of Nursing website www.pittstate.edu/nurs and current BSN program booklet for any recent changes.

Time Limit to Complete Degree

Nursing credits toward the upper division major in nursing at Pittsburg State University which have been earned more than ten years prior to the time the candidate receives the degree cannot be counted to meet requirements for the degree unless validated by repeating coursework or by special examination.

RN to BSN Track

The Irene Ransom Bradley School of Nursing offers licensed Registered Nurses the opportunity to achieve the baccalaureate degree in an accelerated time frame. RN-BSN students who have completed all university general education and additional required nursing prerequisite courses for the nursing major can complete the upper division nursing courses in one year of full-time study. Completion of the RN-BSN courses in one year is NOT recommended for the registered nurse who is working full-time. Part-time study is an option for nurses who desire to complete the nursing courses over several years.

All RN-BSN courses are offered as hybrid (on-campus and on-line attendance required) or on-line. RN students do have the option of enrolling in on-campus only classes. NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing, a hybrid course, meets on-campus two times during the fall semester. As part of this course students orient to the Pittsburg State University on-line CANVAS platform, the nursing school and the university, obtain parking permits, and network with faculty and other students.

NURS 670 Family Health Care Nursing, a hybrid course, meets three to four times during the summer semester for the on-campus portion of the course. This is the last nursing course taken before graduation. It is required that students complete all course work for the BSN degree before taking NURS 670 Family Health Care Nursing.

Clinical requirements for the RN-BSN student are met through validation of current nursing practice as a registered nurse and through completion of integrated practicum assignments and activities which meet the clinical objectives for the BSN degree.

Pittsburg State University Policy Pertaining to the Last Thirty Hours

A maximum of six semester hours of credit completed at another college or university may be applied on the last 30 hours prior to graduation.

Students seeking admission to the RN to BSN courses must make application for admission to the Irene Ransom Bradley School of Nursing and make application for admission to the University. The application packet may be obtained from the Irene Ransom Bradley School of Nursing or be printed from nursing’s website. The application, with submitted fees, is applicable for only one academic year. If a student is considered to be an International Student, please contact the Admissions Office for applications and fee amounts.

RN to BSN students considering admission to the nursing program should send all official transcripts to the Pittsburg State University Registrar for evaluation of previously earned credit. Following completion of the transcript evaluation, RN to BSN students should make an appointment for advisement for determination of a program plan of study with a member of the School of Nursing faculty.

RN to BSN applications are considered once per year. Application materials, with deadlines, are posted on the School of Nursing website.

Completed applications must include the following:

Applicants are required to purchase a background check through CertifiedBackground.com. This is a National Background Check in current state of residence. Also required is a signed consent for background check form for the nursing school, Social and Rehabilitation Services Child Abuse check form, and if NOT a resident of Kansas, completion of a Kansas Bureau of Investigation background check form. The application packet specifies fee amounts to be remitted. Applicants with a criminal history (includes diversions, misdemeanors and felonies) as well as arrests for which action is still pending will be evaluated on an individual basis, with no guarantee of admission. There are specific requirements for reporting criminal history on the application for admission. Three satisfactory professional references from academic advisors, employers or teachers (references from friends,
relatives and ministers are not acceptable references) are required. Additional requirements include, proof of current RN licensure, documentation of three months current nursing practice - as a registered nurse documented by letter from current employer, documentation of a cumulative grade point average of 2.50 or better on a 4.00 scale (all transcripts on file with the university) and payment of all fees (application and fees are applicable for only one academic year). All students participate in the standardized testing program that includes a critical thinking pre test and post test. Testing costs are the responsibility of the student. A personal interview may be required.

A grade of “C” or above is required in all of the following courses and their laboratories: BIOL 257/258 Anatomy and Physiology and Laboratory, CHEM 105/106 Introductory Chemistry and Laboratory or CHEM 107/108 Chemistry for the Life Sciences and Laboratory, MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus, PSYCH 155 General Psychology, PSYCH 263 Developmental Psychology or FCS 285 Lifespan Human Development, BIOL 371/372 General Microbiology and Laboratory, FCS 301 Nutrition or FCS 203 Nutrition and Health and SOC 100 Introduction to Sociology.

Any student request for exception or waiver of any published admission requirement including but not limited to specific course requirements must be made in writing in formal letter and addressed to the Director of the Irene Ransom Bradley School of Nursing. Written requests will only be accepted per registered mail. The request must be accompanied by a written explanation to assist in arriving at a fair decision. Granted or denied waivers or exceptions will be made in writing in formal letter from the Director of the Irene Ransom Bradley School of Nursing and will be sent per registered mail. The Irene Ransom Bradley School of Nursing assumes no responsibility to grant waivers or exceptions that are not made according to this protocol. Students are responsible for obtaining the information that they need in order to know, understand, and meet admission requirements.

The Pittsburg State University nursing program requires applicants and admitted clinical nursing students to:

Notify the School of Nursing in writing of any disciplinary action against ALL licenses, certifications and/or registrations as well as disciplinary action by a state board or governmental agency. (Some examples are): Driver’s License; Fishing License; Hunting License; Day Care License; Nursing Home Administrator License; Nursing License in Kansas or another state; CNA/CMA/HHA certification; School Teacher certification; Dishonorable discharge and/or other than honorable discharge from any branch of the military, disciplinary sanction from any branch of the military.

If disciplinary action has ever been taken against your driver’s license or other license, registration or certification, in Kansas or any other state, (for any reason), you are required to provide an explanatory letter regarding the disciplinary action(s) taken against your driver’s license or other license, registration or certification. Your letter should include the following for each disciplinary action:

Circumstances leading up to the disciplinary action; date of the disciplinary action; actual disciplinary action; current status of the disciplinary action. The applicant may be required to provide certified/dated copies of disciplinary documents.

Failure to notify the department on the application or within one day after admission, if a new action since application, may result in dismissal or suspension until the legal issue is resolved. Continuance in the major will be individually evaluated and will be at the sole discretion of the Pittsburg State University School of Nursing. NOTE: The Kansas State Board of Nursing and other state nursing boards have specific procedures for reporting disciplinary action on nursing applications (initial, reinstatement and endorsement). The procedures are accessible by contacting the respective boards.

Time Limit to Complete Degree

Nursing credits earned toward the upper division major in nursing at Pittsburg State University which have been earned more than ten years prior to the time the candidate receives the degree cannot be counted to meet requirements for the degree unless validated by repeating coursework or by special examination.

The Irene Ransom Bradley School of Nursing reserves the right to make changes if necessary. Please consult the School of Nursing website www.pittstate.edu/nurs and current RN to BSN program booklet for any recent changes.
Basic Skills (12-13 hours)
COMM 207: Speech Communication ........................................... 3
ENGL 101: English Composition .................................................. 3
ENGL 190: Honors English Composition ..................................... 3
or ENGL 299: Introduction to Research Writing .......................... 3
MATH 110: College Algebra with Review .................................... 5
or MATH 113: College Algebra ................................................... 3
or MATH 126: Pre-Calculus ......................................................... 4

General Education Electives (37-39 hours)

Sciences (9 hours)
BIOL 111: General Biology ......................................................... 3
and BIOL 112: General Biology Laboratory .................................. 2
CHEM 105: Introductory Chemistry ............................................ 3
and CHEM 106: Introductory Chemistry Laboratory .................... 1
or CHEM 107: Chemistry for the Life Sciences ............................ 3
and CHEM 108: Chemistry for the Life Sciences Laboratory ........ 1

Social Studies
SOC 100: Introduction to Sociology .............................................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ............................................................... 3
POLS 103: Comparative Political Institutions ................................ 3

Producing and Consuming (Select one from two of the following three categories)

Economy
ECON 191: Issues in Today's Economy ....................................... 3
FCS 230: Consumer Education and Personal Finance ............... 3

Technology
EET 247: Computer Programming for Electronic Systems .......... 3
GT 190: Introduction to Technological Systems ......................... 2
GT 350: Technology and Civilization .................................... 3
EDTH 330: Technology for the Classroom ................................ 3
TE 551: Integrated Technology for Educators .......................... 3
TM 350: Societal Influence of Technology ................................ 3

Business
ACCTG 201: Financial Accounting ........................................... 3
CIS 130: Computer Information Systems .................................. 3
MGT 101: Introduction to Business ............................................ 3
MGT 106: Introduction to Entrepreneurship ................................ 3

Fine Arts and Aesthetic Studies (select one)
ART 155: Printmaking and Paper Arts ...................................... 3
ART 178: Introduction to the Visual Arts ................................... 3
ART 188: The Designed World .................................................. 3
ART 217: Crafts I .................................................................. 3
ART 222: Jewelry Design I ....................................................... 3
ART 233: Drawing I .................................................................. 3
ART 244: Ceramics I ............................................................... 3
ART 266: Sculpture I .............................................................. 3
ART 277: Painting I ............................................................... 3
ART 288: Introduction to Art History I ...................................... 3

Cultural Studies (Select one)
ANTH 101: Introduction to Cultural Anthropology .................... 3
GEOG 106: World Regional Geography .................................... 3
GEOG 300: Elements of Geography ........................................ 3
GEOG 304: Human Geography ................................................ 3
WGS 399: Global Women's Issues ............................................. 3
MLL 114: Chinese Language and Culture I ............................... 3
MLL 124: French Language and Culture I ............................... 3
MLL 154: Spanish Language and Culture I ............................... 3
MLL 184: Russian Language and Culture I .............................. 3
MLL 194: Korean Language and Culture I .............................. 3

Health and Well-Being
FCS 203: Nutrition and Health ................................................ 3
or FCS 301: Nutrition ............................................................. 3
PSYCH 155: General Psychology .............................................. 3

Human Heritage (Select one from two of the following three categories)

History
HIST 101: World History to 1500 ............................................. 3
HIST 102: World History from 1500 ........................................ 3
HIST 201: American History to 1865 ....................................... 3
HIST 202: American History from 1865 ................................... 3

Literature
ENGL 113: General Literature ................................................ 3
ENGL 114: General Literature (Genre) ..................................... 3
ENGL 116: General Literature (Theme) ................................... 3
ENGL 120: Literature and Film ................................................. 3
ENGL 315: Mythology ............................................................. 3
ENGL 320: Literature and Film ................................................. 3

Philosophy
PHIL 103: Introduction to Philosophy ....................................... 3
PHIL 105: Ethics .................................................................. 3
PHIL 112: Biomedical Ethics .................................................... 3
PHIL 113: Business Ethics ........................................................ 3
PHIL 114: Environmental Ethics .............................................. 3
PHIL 207: Critical Thinking .................................................... 3
PHIL 208: Logic .................................................................. 3
PHIL 231: World Religions ..................................................... 3
Nursing Prerequisite Requirements (Additional)

Nursing Prerequisites (13 hours)

BIOL 257: Anatomy and Physiology ........................................... 3
and BIOL 258: Anatomy and Physiology Laboratory ..................... 2
BIOL 371: General Microbiology ............................................... 3
and BIOL 372: General Microbiology Laboratory .......................... 2
PSYCH 263: Developmental Psychology ..................................... 3
or FCS 285: Lifespan Human Development ................................. 3

Professional Nursing Degree Requirements

Required Hours (62-71 hours)

NURS 265: Health Promotion and Disease Prevention ..................... 2
NURS 318: Nursing Fundamentals .............................................. 5
NURS 320: Health Assessment ................................................... 3
NURS 322: Professional Nursing ................................................. 3
NURS 390: Pathophysiologic Bases of Nursing ............................. 3
NURS 405: Gerontological Nursing ............................................. 3
NURS 410: Nursing the Adult Medical-Surgical Client .................... 7
NURS 442: Pharmacology in Nursing .......................................... 3
NURS 452: Nursing the Childbearing Family .................................. 4
NURS 462: Nursing the Child and Family ...................................... 4
NURS 470: Nursing the Psychiatric/Mental Health Client ................ 4
NURS 484: Evidence-based Research for the Registered Nurse .. 2
NURS 503: Population-based Health Care .................................... 4
NURS 505: Leadership and Management for the Registered Nurse .. 4
NURS 507: Gerontology for the Registered Nurse .......................... 2
NURS 525: Advanced Care of the Medical Surgical Client ............... 6
NURS 600: Transitions in Nursing Practice .................................. 2
NURS 601: Internship in Nursing Practice ................................... 1

- Upper Division Nursing Electives (1-10 hours)

Total hours for Bachelor of Science in Nursing (124-136 hours)

MATH 110 or MATH 113 or MATH 126, CHEM 105 and 106 or CHEM 107 and 108, SOC 100, FCS 203 or FCS 301, PSYCH 155, BIOL 257 and 258, BIOL 371 and 372, PSYCH 263 or FCS 285 are all nursing pre-requisites and must be completed prior to enrollment in upper division nursing courses.

Nursing Articulation in Kansas

The Pittsburg State University Nursing Program participates in the Kansas Statewide Articulation Plan to promote educational mobility for nurses. As a participant of this program, Registered Nurses (RN’s) must validate learning in order to receive credit for Bachelor of Science in Nursing courses:

NURS 318: Nursing Fundamentals .............................................. 5
NURS 410: Nursing the Adult Medical-Surgical Client .................... 7
NURS 452: Nursing the Childbearing Family .................................. 4
NURS 462: Nursing the Child and Family ...................................... 4

NURS 470: Nursing the Psychiatric/Mental Health Client ................ 4
NURS 525: Advanced Care of the Medical Surgical Client ............... 6
NURS 600: Transitions in Nursing Practice .................................. 2

Validation (32 hours) is accomplished by:

1. Achieving a passing score on the National Council’s Licensing Examination for Registered Nurses (NCLEX-RN), as evidenced by a current license to practice as a Registered Nurse.

2. Validation letter of a minimum of three months current nursing practice.

3. Successful completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing with a “C” or above.

4. Successful completion of NURS 670 Family Health Care Nursing (capstone) with a “C” or above.

Upper Division Courses

NURS 304: Advancing Careers: Transitioning to Baccalaureate Nursing ................................................................. 3
NURS 321: Health Assessment for the Registered Nurse .................. 4
NURS 340: Nurse’s Role in Health Promotion ............................... 2
NURS 407: Gerontology for the Registered Nurse ......................... 2
NURS 484: Evidence-based Research for the Registered Nurse .. 2
NURS 503: Population-based Health Care .................................... 4
NURS 505: Leadership and Management for the Registered Nurse .. 4
NURS 665: Pathophysiology and Pharmacology for the Registered Nurse ................................................................. 3
NURS 668: Health Care Policy Today and in the Future for the Registered Nurse ................................................................. 2
NURS 670: Family Health Care Nursing ....................................... 4

The Bachelor of Science in Nursing degree at Pittsburg State University requires a minimum of 124 hours for graduation.

Nursing Credit Hours Taken at Pittsburg State University (30 hours)

Validated Nursing Credit Hours (32 hours)

Total Credit Hours for Upper Division Nursing Major (62-68 hours)

Total Credit Hours General Education and Nursing Prerequisites (62-65 hours)

Master of Science in Nursing

The Irene Ransom Bradley School of Nursing offers the Master of Science in Nursing (MSN) degree with a major in nursing and an emphasis in family health. The Master of Science in Nursing program is designed to
prepare students for careers as family nurse practitioners.

**Graduate Admission Requirements**

Applicants must be fully admitted to the Master of Science in Nursing degree program before taking nursing courses. Applicants for unconditional admission to the Master of Science in Nursing degree program must present evidence of: a baccalaureate degree from a nationally accredited nursing school; an undergraduate GPA of 3.00 (based on a 4.00 scale); completion of prerequisite courses (undergraduate research, physical assessment content, and graduate level statistics, students may be allowed to take graduate level statistics concurrently with enrollment in their first nursing courses in the program); evidence of current Kansas RN license and RN license in any state where clinical occurs; three references, resume and documentation of current nursing practice. Critical thinking testing and a proctored writing sample will be required as part of the application process. Applicants must submit the School of Nursing Health Form and documentation of immunizations, departmental application form with an application fee and sign a consent form for a state and national background check, and SRS Child Abuse background check. Applicants with a criminal history (includes diversions, misdemeanors, and felonies) as well as arrests for which action is still pending will be evaluated on an individual basis with no guarantee of admission. There are specific requirements for reporting criminal history on the application for admission. The number of admissions is limited; therefore, acceptance into the program is competitive. Application deadlines for first consideration: March 15th for fall enrollment in the program. Admission may be granted to applicants with an undergraduate GPA of 2.70 to 2.999 on a space available basis. A student who is born outside of the United States is required to submit proof that he or she has taken and passed the TOEFL iBT (Test of English as a Foreign Language-Internet Based Test). Minimum scores for the TOEFL iBT are as follows: Writing-20; Speaking-20; Reading-19; Listening-20, for a total of 79. Each area must meet the minimum requirement. At completion of common core courses, students must have: current ACLS, minimum two years previous clinical experience, unconditional admission to graduate study at Pittsburg State University, and unconditional admission to Pittsburg State University graduate nursing school (and completed graduate folder). A personal interview may be required.

All students will participate in the standardized testing program that includes a critical thinking post test. Testing costs are the responsibility of the student.

**The Pittsburg State University nursing program requires applicants and admitted clinical nursing students to:**

Notify the School of Nursing in writing of any disciplinary action against ALL licenses, certifications and/or registrations as well as disciplinary action by a state board or governmental agency. (Some examples are): Driver’s License; Fishing License; Hunting License; Day Care License; Nursing Home Administrator License; Nursing License in Kansas or another state; CNA/CMA/HHA certification; School Teacher certification; Dishonorable discharge and/or other than honorable discharge from any branch of the military, disciplinary sanction from any branch of the military.

If disciplinary action has ever been taken against your driver’s license or other license, registration or certification, in Kansas or any other state, (for any reason), you are required to provide an explanatory letter regarding the disciplinary action(s) taken against your driver’s license or other license, registration or certification. Your letter should include the following for each disciplinary action:

Circumstances leading up to the disciplinary action; date of the disciplinary action; actual disciplinary action; current status of the disciplinary action. The applicant may be required to provide certified/dated copies of disciplinary documents.

**Failure to notify the school on the application or within one day after admission, if a new action since application, may result in dismissal or suspension until the legal issue is resolved.** Continuance in the major will be individually evaluated and will be at the sole discretion of the Irene Ransom Bradley School of Nursing. **NOTE: The Kansas State Board of Nursing and other state nursing boards have specific procedures for reporting disciplinary action on nursing applications (initial, reinstatement and endorsement.) The procedures are accessible by contacting the respective boards.**

Any student request for exception or waiver of any published admission requirement including but not limited to specific course requirements must be made in writing in formal letter and addressed to the Director of the Irene Ransom Bradley School of Nursing. Written requests will only be accepted per registered mail. The
request must be accompanied by a written explanation to assist in arriving at a fair decision. Granted or denied waivers or exceptions will be made in writing in formal letter from the Director of the Irene Ransom Bradley School of Nursing and will be sent per registered mail. The Irene Ransom Bradley School of Nursing assumes no responsibility to grant waivers or exceptions that are not made according to this protocol. Students are responsible for obtaining the information that they need in order to know, understand, and meet admission requirements.

Degree Requirements

Students must complete 45-47 hours of coursework for the Master of Science in Nursing degree with a 3.00 GPA and no more than two “C’s” in 700 level and above course work in nursing taken as part of the BSN or MSN programs. According to Pittsburg State University policy, only six hours may be repeated with no course repeated more than once. After completing nine hours of graduate coursework, each student is required to submit a program (plan) of study in consultation with the major advisor. All graduate students are required to pass a comprehensive examination in their last semester of enrollment.

Time Limit to Complete Degree

Credits earned more than six years before the date for granting the degree cannot be counted to meet requirements for the degree unless they are validated by special examination. Required courses more than six years old must be repeated unless they are validated. Examinations and grades for validated courses are given by the course instructor or departmental faculty.

Courses are eligible for validation only if they have been taken within a ten year period from when the candidate's degree will be completed. Courses from other institutions may not be validated; therefore, transferable courses must be no more than six years old at the time of granting the degree.

The Irene Ransom Bradley School of Nursing reserves the right to make changes if necessary. Please consult the Irene Ransom Bradley School of Nursing website www.pittstate.edu/nurs and current MSN program booklet for any recent changes.

A. Education Track

This program will serve as a non-advanced practice option for BSN prepared nurses to obtain their MSN and function as nurse educators in academics or healthcare settings. Graduates of this program will be eligible to sit for Nurse Educator Certification Examination, through the National League for Nursing. (Applied Research and Coursework options available).

Nursing Education and Core Courses (21 hours)

NURS 803: Advanced Health Assessment ........................................ 2
NURS 804: Advanced Health Assessment Practicum ..................... 2
NURS 809: Advanced Pathophysiology ........................................... 3
NURS 817: Pharmacokinetics and Pharmacodynamics for
Advanced Practice Nursing ......................................................... 1
NURS 818: Applied Drug Therapy .................................................. 3
NURS 885: Informatics for Healthcare ........................................... 2
NURS 888: Health Policy ............................................................. 2
TCHL 891: Methods of Research .................................................... 3
NURS 891: Research Problem ....................................................... 1-6

Education Track (12 hours)

EDTH 805: Design and Production of Instructional Materials ........... 3
NURS 850: Curriculum Development ........................................... 3
NURS 853: Evaluation for Nurse Educators ................................... 1
NURS 854: Teaching Strategies: Practicum .................................... 1
NURS 855: Teaching Strategies .................................................... 2
NURS 856: Education Practicum (____) ........................................... 2

General Requirements for Nurse Practitioner and Clinical Nurse Specialty Track

Students must satisfactorily complete 45-47 hours of approved coursework beyond the bachelor's degree. No fewer than 35 hours must be in courses numbered 700 to 899. At least 15 hours must be in courses numbered 800 to 899.

Option I Thesis: (NURS 890) includes six hours of thesis credit.

Option II Applied Research: (NURS 891) includes six hours of research problem credit.

Option III Course Work: Successful completion of the functional area of Education or Administration (8 credit hours), which is not part of the student’s program plan of study.
The graduate program for the Master of Science in Nursing degree includes 45-47 hours from the following list of courses:

I. Common Core (18 hours)
NURS 712: Issues and Roles in Advanced Practice Nursing ............... 2
NURS 800: Theories Related to Nursing ........................................... 2
NURS 892: Health Care Research .................................................... 4
NURS 893: Nursing Research Seminar .......................................... 1
NURS 890: Research and Thesis .................................................. 1-6
or NURS 891: Research Problem ............................................... 1-6

• or Option III Functional Area (8 hours)

II. Advanced Practice Core (9 hours)
NURS 803: Advanced Health Assessment ...................................... 2
NURS 804: Advanced Health Assessment Practicum ...................... 2
NURS 809: Advanced Pathophysiology ........................................... 3
NURS 818: Applied Drug Therapy .................................................. 3

III. Area of Emphasis (from one of the following two curriculum tracks) (18 hours)

B. Nurse Practitioner Track
Family Nurse Practitioner Specialty*
NURS 806: Primary Care I: Family Health ........................................ 3
NURS 807: Primary Care I Practicum: Family Nurse Practitioner .......... 3
NURS 812: Primary Care II: Family Health ........................................... 3
NURS 813: Primary Care II Practicum: Family Nurse Practitioner .......... 3
NURS 828: Primary Care III Practicum: Family Nurse Practitioner .......... 3
NURS 829: Nurse Practitioner Preceptorship II .................................. 3

C. Clinical Nurse Specialty Track
1. Family Specialty
NURS 830: Family Process/Management of Acute Emergent Illness (____) ................................................................. 1
NURS 831: Family Process/Management of Acute Emergent Illness: Practicum (____) ......................................................... 3
NURS 835: Family Process/Management of Chronic Illness (____) ................................................................. 1
NURS 836: Family Process/Management of Chronic Illness: Practicum (____) ......................................................... 3
NURS 840: Management of Clients/Families Within the Health Care System Practicum (____) ......................................................... 2

The Clinical Nurse Specialty Track includes a choice of one of the following functional areas:

Administration Functional Area
NURS 760: Nursing and Health Care System Management .............. 2
NURS 761: Nursing and Health Care System Management: Practicum ......................................................... 1
NURS 865: Strategic Development .................................................. 3
NURS 866: Administration Practicum (____) ....................................... 2

Educational Functional Area
NURS 850: Curriculum Development .................................................. 3
NURS 854: Teaching Strategies: Practicum ........................................... 1
NURS 855: Teaching Strategies ....................................................... 2
NURS 856: Education Practicum (____) ............................................. 2

*Pittsburg State University cooperates with the University of Kansas and Fort Hays State University to offer a joint advanced practice curriculum.

Doctor of Nursing Practice with a Major in Advanced Practice Nursing

The Doctor of Nursing Practice (DNP) is an advanced level graduate nursing degree program offering the highest level of preparation for nursing practice. The DNP program offers the major, Advanced Practice Nursing, with opportunity for specialization in the advanced practice role, Family Nurse Practitioner in two tracks, the BSN to DNP and MSN to DNP. An emphasis in nursing education will be an elective option. At completion of the program, graduates will possess the terminal degree for nursing practice and will be prepared to function as expert clinicians, nurse leaders and/or clinical nursing faculty. They will be eligible to sit for national certification in their specialty and will be eligible to make application for licensure as advanced practice registered nurses (APRNs).

Applicants must be fully admitted to the BSN to DNP degree program before taking nursing courses.
Applicants for unconditional admission to the BSN to DNP degree program must present evidence of: a baccalaureate degree from a nationally accredited nursing school; an undergraduate GPA of 3.00 (based on a 4.00 scale); completion of prerequisite courses (undergraduate research, physical health assessment content, and graduate level statistics; evidence of current Kansas RN license and RN license in any state where clinical occurs; three references, resume and documentation of current nursing practice. Critical thinking testing and a proctored writing sample will be required as part of the application process. Applicants
must submit the School of Nursing Health Form and documentation of immunizations, departmental application form with an application fee and sign a consent form for a state and national background check, and SRS Child Abuse background check. Applicants with a criminal history (includes diversions, misdemeanors, and felonies) as well as arrests for which action is still pending will be evaluated on an individual basis with no guarantee of admission. There are specific requirements for reporting criminal history on the application for admission. The number of admissions is limited; therefore, acceptance into the program is competitive. Admission may be granted to applicants with an undergraduate GPA of 2.70 to 2.999 on a space available basis. A student who is born outside of the United States is required to submit proof that he or she has taken and passed the TOEFL iBT (Test of English as a Foreign Language-Internet Based Test). Minimum scores for the TOEFL iBT are as follows: Writing-20; Speaking-20; Reading-19; Listening-20, for a total of 79. Each area must meet the minimum requirement. Students must have: current ACLS, unconditional admission to graduate study at Pittsburg State University, and unconditional admission to Pittsburg State University graduate nursing school (and completed graduate folder). A personal interview may be required. All students will participate in the standardized testing program that includes a critical thinking post test. Testing costs are the responsibility of the student.

BSN to DNP applications are considered once per year. Application materials, with deadlines, are posted on the School of Nursing website.

Applicants must be fully admitted to the MSN to DNP degree program before taking nursing courses. Applicants for unconditional admission to the MSN to DNP degree program must present documentation of graduation from a nursing program at the undergraduate and graduate level that is nationally accredited by the National League for Nursing and/or Commission on Collegiate Nursing Education; confirmation of all undergraduate and graduate coursework. Preference is given to those with 3.5 or above cumulative GPA in graduate coursework; evidence of completion of separate graduate level nursing physical health assessment, pharmacology and pathophysiology courses; proof of a current Kansas licensure as an Advanced Practice Registered Nurse, proof of evidence of national certification as a Family Nurse Practitioner; all students must be licensed in States where clinical occurs; three references, resume and documentation of current nursing practice. Critical thinking testing and a proctored writing sample will be required as part of the application process. Applicants must submit the School of Nursing Health Form and documentation of immunizations, departmental application form with an application fee and sign a consent form for a state and national background check, and SRS Child Abuse background check. Applicants with a criminal history (includes diversions, misdemeanors, and felonies) as well as arrests for which action is still pending will be evaluated on an individual basis with no guarantee of admission. There are specific requirements for reporting criminal history on the application for admission. The number of admissions is limited; therefore, acceptance into the program is competitive. A student who is born outside of the United States is required to submit proof that he or she has taken and passed the TOEFL iBT (Test of English as a Foreign Language-Internet Based Test). Minimum scores for the TOEFL iBT are as follows: Writing-20; Speaking-20; Reading-19; Listening-20, for a total of 79. Each area must meet the minimum requirement. Students must have: current Advanced Cardiac Life Support, unconditional admission to graduate study at Pittsburg State University, and unconditional admission to Pittsburg State University graduate nursing school (and completed graduate folder). A personal interview may be required. All students will participate in the standardized testing program that includes a critical thinking post test. Testing costs are the responsibility of the student.

MSN to DNP applications are considered once per year. Application materials, with deadlines, are posted on the School of Nursing website.

The Pittsburg State University nursing program requires applicants and admitted clinical nursing students to:

Notify the School of Nursing in writing of any disciplinary action against ALL licenses, certifications and/or registrations as well as disciplinary action by a state board or governmental agency. (Some examples are): Driver’s License; Fishing License; Hunting License; Day Care License; Nursing Home Administrator License; Nursing License in Kansas or another state; CNA/CMA/HHA certification; School Teacher certification; Dishonorable discharge and/or other than honorable discharge from any branch of the military, disciplinary sanction from any branch of the military.
If disciplinary action has ever been taken against your driver’s license or other license, registration or certification, in Kansas or any other state, (for any reason), you are required to provide an explanatory letter regarding the disciplinary action(s) taken against your driver’s license or other license, registration or certification. Your letter should include the following for each disciplinary action:

Circumstances leading up to the disciplinary action; date of the disciplinary action; actual disciplinary action; current status of the disciplinary action. The applicant may be required to provide certified/dated copies of disciplinary documents.

Failure to notify the school on the application or within one day after admission, if a new action since application, may result in dismissal or suspension until the legal issue is resolved. Continuance in the major will be individually evaluated and will be at the sole discretion of the Irene Ransom Bradley School of Nursing. NOTE: The Kansas State Board of Nursing and other state nursing boards have specific procedures for reporting disciplinary action on nursing applications (initial, reinstatement and endorsement.) The procedures are accessible by contacting the respective boards.

Any student request for exception or waiver of any published admission requirement including but not limited to specific course requirements must be made in writing in formal letter and addressed to the Director of the Irene Ransom Bradley School of Nursing. Written requests will only be accepted per registered mail. The request must be accompanied by a written explanation to assist in arriving at a fair decision. Granted or denied waivers or exceptions will be made in writing in formal letter from the Director of the Irene Ransom Bradley School of Nursing and will be sent per registered mail. The Irene Ransom Bradley School of Nursing assumes no responsibility to grant waivers or exceptions that are not made according to this protocol. Students are responsible for obtaining the information that they need in order to know, understand, and meet admission requirements.

Time Limit to Complete Degree

Credits earned more than six years before the date for granting the degree cannot be counted to meet requirements for the degree unless they are validated by special examination. Required courses more than six years old must be repeated unless they are validated.

Examinations and grades for validated courses are given by the course instructor or departmental faculty.

Courses are eligible for validation only if they have been taken within a ten year period from when the candidate's degree will be completed. Courses from other institutions may not be validated; therefore, transferable courses must be no more than six years old at the time of granting the degree.

The Irene Ransom Bradley School of Nursing reserves the right to make changes if necessary. Please consult the Irene Ransom Bradley School of Nursing website www.pittstate.edu/nurs and current BSN to DNP or MSN to DNP program booklet for any recent changes.

Bachelor of Science in Nursing (BSN) to Doctor of Nursing Practice (DNP) track:

Core Courses

- Prerequisite course: Graduate level statistics (3 hours)

NURS 712: Issues and Roles in Advanced Practice Nursing ............2
NURS 713: Leadership in Advanced Practice Nursing ..................3
NURS 730: Advanced Health Promotion: Individual, Family and Community ..................................................3
NURS 800: Theories Related to Nursing .......................................2
NURS 801: DNP Intensive Seminar ...........................................1
NURS 803: Advanced Health Assessment .................................2
NURS 806: Primary Care I: Family Health .................................3
NURS 809: Advanced Pathophysiology ......................................3
NURS 812: Primary Care II: Family Health .................................3
NURS 817: Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing ........................................1
NURS 818: Applied Drug Therapy .............................................3
NURS 885: Informatics for Healthcare ........................................2
NURS 888: Health Policy .........................................................2
NURS 889: Impact of Health Determinants .................................3
NURS 894: Principles of Epidemiology ........................................2
NURS 900: Quality, Safety and Practice Outcomes ......................3

NURS 806, 812 and 818 are courses currently being co‐taught as part of the Kansas Advanced Practice Collaborative with the University of Kansas, Ft. Hays State University and Pittsburg State University.

Electives

- Required electives* (3-6 hours)

*Required electives are to be selected either from the following optional emphasis in Nursing Education courses or from other PSU graduate courses (to be determined and approved by the student, their DNP advisor, and the faculty teaching the course).

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Optional Emphasis (9 hours) in Nursing Education includes:

NURS 850: Curriculum Development .................................................. 3
NURS 853: Evaluation for Nurse Educators ........................................... 1
NURS 854: Teaching Strategies: Practicum ........................................... 1
NURS 855: Teaching Strategies .............................................................. 2
NURS 856: Education Practicum (____) ............................................... 2

Research
NURS 892: Health Care Research ......................................................... 4
NURS 895: Interpreting Research for Evidence-Based Nursing Practice ......................................................... 2
NURS 911: Tools for Practice Scholarship ............................................ 2-3

Practica
NURS 804: Advanced Health Assessment Practicum .................................. 2
NURS 807: Primary Care I Practicum: Family Nurse Practitioner .............. 3
NURS 813: Primary Care II Practicum: Family Nurse Practitioner ............... 3
NURS 828: Primary Care III Practicum: Family Nurse Practitioner ............. 3
NURS 910: DNP Clinical Residency ....................................................... 1-10
NURS 920: DNP Scholarly Project ......................................................... 1-6

Under the Practica area NURS 804 would consist of 96 practicum hours, NURS 807 144 practicum hours, NURS 813 144 practicum hours, NURS 828 144 practicum hours, NURS 910 144-288 practicum hours and NURS 920 288 practicum hours.

The number of credit hours required for the BSN to DNP degree is 74. With the optional emphasis, Nursing Education, the BSN to DNP degree is 77 credit hours.

NURS 920 is 6 total credits.

Master of Science in Nursing (MSN) to Doctor of Nursing Practice (DNP) track:

Core Courses

- Prerequisite course: Graduate level statistics (3 hours)

NURS 801: DNP Intensive Seminar ....................................................... 1
NURS 808: Translation to Doctoral Leadership and Theory ...................... 3
NURS 885: Informatics for Healthcare .................................................. 2
NURS 888: Health Policy ................................................................. 2
NURS 889: Impact of Health Determinants ........................................... 3
NURS 894: Principles of Epidemiology ................................................ 2
NURS 900: Quality, Safety and Practice Outcomes ................................ 3

Electives

- Required Electives* (3 hours)

*The required elective is to be selected either from the following optional emphasis in Nursing Education courses or from other PSU graduate courses (to be determined and approved by the student, their DNP advisor, and the faculty teaching the course).

Optional Emphasis (9 hours) in Nursing Education includes:

NURS 850: Curriculum Development .................................................. 3
NURS 853: Evaluation for Nurse Educators ........................................... 1
NURS 854: Teaching Strategies: Practicum ........................................... 1
NURS 855: Teaching Strategies .............................................................. 2
NURS 856: Education Practicum (____) ............................................... 2

Research
NURS 895: Interpreting Research for Evidence-Based Nursing Practice ......................................................... 2
NURS 911: Tools for Practice Scholarship ............................................ 2-3

Practica
NURS 910: DNP Clinical Residency ....................................................... 1-10
NURS 920: DNP Scholarly Project ......................................................... 1-6

Under the Practica area NURS 910 would consist of 96 practicum hours and NURS 920 would consist of 288 practicum hours.

The number of credit hours required for the MSN to DNP degree is 32. With the optional emphasis, Nursing Education, the MSN to DNP degree is 38 credit hours.

NURS 920 is 6 total credits.
Physics

Chairperson: Bobby N. Winters* (Acting Chairperson)
Professor(s): Charles Blatchley*, Rebecca Butler*, Pawan Kahol*, Serif Uran*
Assistant Professor(s): Benjamin Tayo*
Instructors: Kyla Scarborough
*Graduate Faculty

Room 307 Yates Hall
Telephone: 620-235-4391
Fax: 620-235-4050
http://www.pittstate.edu/department/physics
E-mail: phys@pittstate.edu

Undergraduate

Bachelor of Science Degree with a Major in Physics
Bachelor of Science in Education Degree with a Major in Physics
Minor in Earth and Space Science
Minor in Physics
Minor in Physical Science
Second Teaching Options
Accelerated Program

Graduate

Master of Science Degree with a Major in Physics

The Department of Physics offers bachelor's degrees and master's degrees with a variety of emphasis areas to prepare students for technically-oriented careers. We offer bachelor's degrees in the following emphasis areas: professional sequence, astrophysics, solid state, polymer physics, engineering technology, and a customized sequence. At the master's level, we offer professional, applied and teaching options. We also offer an accelerated, five-year combination of the Bachelor of Science and Master of Science degrees.

Special Facilities for Undergraduate and Graduate Research

We are proud to offer our undergraduate and graduate students a wide variety of research opportunities. Faculty research areas include thin film deposition, experimental analysis, computational and theoretical modeling of nanomaterials; computational and imaging applications in planetary science; computational modeling of molecular spectra and accelerator applications in tribology. We have a wide variety of scientific apparatus using vacuum systems, scanning electron microscope (SEM), a UV-visible spectrometer and a dedicated computer lab. The department operates the Pittsburg State University-Greenbush Astrophysical Observatory located at the Southeast Kansas Educational Service Center at Greenbush, Kansas. The observatory's location and imaging instrumentation package make it ideal for spectroscopic or observational studies of stars, planets, comets, and asteroids.

Pre-Engineering Programs

The Department of Physics offers pre-professional work in mechanical engineering, electrical engineering, engineering physics, agricultural engineering, aeronautical engineering, general engineering, and industrial engineering. Details concerning these programs can be obtained from the Department of Physics.

Bachelor of Science Degree with a Major in Physics

General Education Component*(36-41 hours)

Basic Skills** (9 hours)

General Education Electives (27-32 hours)

Sciences** (4-5 hours)

Social Studies (3 hours)

Political Studies (3 hours)

Producing and Consuming** (2-3 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Cultural Studies (3 hours)

Health and Well-Being (4-6 hours)

Human Heritage (6 hours)

* See General Education Requirements for All Baccalaureate Degrees for details and a list of specific course requirements.

** MATH 150, CIS 230 or CIS 240 and PHYS 104/130 or PHYS 100/130 required in the major partially fulfill General Education requirements.
Core Physics Courses (39 hours)

(a) Physics

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PHYS 500: Mathematical Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 510: Analytical Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 512: Electricity and Magnetism I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 516: Modern Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 530: Intermediate Physics Laboratory (___)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 699: Senior Review and Assessment</td>
<td>1</td>
</tr>
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</table>

(b) Other

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 215: General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 216: General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 225: General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 226: General Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MATH 150: Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 155: Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>CIS 230: Visual Basic Programming</td>
<td>3</td>
</tr>
<tr>
<td>or CIS 240: C ++ Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one area of emphasis from the list below.

Bachelor of Science Degree with a Major in Physics: Professional Emphasis (33 hours)

(a) Physics

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 104: Engineering Physics I</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 130: Elementary Physics Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 105: Engineering Physics II</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 131: Elementary Physics Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 532: Electronic Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 612: Electricity and Magnetism II</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 691: Senior Research Project</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 714: Statistical Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 716: Introductory Quantum Mechanics</td>
<td>3</td>
</tr>
</tbody>
</table>

(b) Electives

Choose three hours of upper-division electives from physics, mathematics, chemistry or technology subject to the approval of the Physics Department.

(c) Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 253: Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 553: Differential Equations</td>
<td>3</td>
</tr>
</tbody>
</table>

The Professional Physics emphasis area is for students seeking further study in graduate school. A minor in Mathematics is recommended.

Bachelor of Science Degree with a Major in Physics: Solid State Physics Emphasis (33 hours)

(a) Physics

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 104: Engineering Physics I</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 130: Elementary Physics Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 105: Engineering Physics II</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 131: Elementary Physics Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 504: Solid State Electronic Devices</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS 532: Electronic Circuits I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 691: Senior Research Project</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 714: Statistical Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 716: Introductory Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 742: Solid State Physics</td>
<td>3</td>
</tr>
</tbody>
</table>

(b) Electives

Choose three hours of upper-division electives from physics, mathematics, chemistry or technology subject to the approval of the Physics Department.

(c) Mathematics

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 253: Calculus III</td>
<td>3</td>
</tr>
<tr>
<td>MATH 553: Differential Equations</td>
<td>3</td>
</tr>
</tbody>
</table>
The Astrophysics emphasis area is for students seeking further study in graduate school. A minor in Mathematics is recommended.

**Bachelor of Science Degree with a Major in Physics: Polymer Physics Emphasis (27 hours)**

**(a) Physics**

PHYS 104: Engineering Physics I .................................................. 4
or PHYS 100: College Physics I ..................................................... 4
and PHYS 130: Elementary Physics Laboratory I ............................ 1

PHYS 105: Engineering Physics II ................................................ 4
or PHYS 101: College Physics II ................................................... 4
and PHYS 131: Elementary Physics Laboratory II .......................... 1

**(b) Physics Electives**

Six hours of physics electives with course numbers greater than 500 subject to the approval of the Physics Department.

**(c) Other**

CHEM 630: Introduction to Polymer Science and Technology .......... 3
CHEM 625: Polymer Synthesis and Characterizations .................. 3
CHEM 626: Polymer Synthesis and Characterizations
Laboratory ................................................................. 2
CHEM 680: Physical Properties of Polymers ................................. 3

The BS in Physics with an Emphasis in Polymer Physics is an ideal double major with a BS in Polymer Chemistry or with a BSET in Plastics Engineering Technology.

**Bachelor of Science Degree with a Major in Physics: Engineering Technology Emphasis (21-22 hours)**

**(a) Physics**

PHYS 104: Engineering Physics I .................................................. 4
or PHYS 100: College Physics I ..................................................... 4
and PHYS 130: Elementary Physics Laboratory I ............................ 1

PHYS 105: Engineering Physics II ................................................ 4
or PHYS 101: College Physics II ................................................... 4
and PHYS 131: Elementary Physics Laboratory II .......................... 1

**(b) Physics Electives**

Six hours of physics electives with course numbers greater than 500 subject to the approval of the Physics Department.

**(c) Other (Choose two from the following)**

EET 349: Analog Integrated Circuits ............................................ 3
EET 447: Communications Theory and Circuits .......................... 3
EET 449: Programmable Logic Devices ................................. 3
EET 546: Electronic Controls ...................................................... 3
MECET 420: Kinematics .......................................................... 2
MECET 423: Mechanics of Materials ......................................... 3
MECET 524: Fluid Mechanics ..................................................... 3
MECET 682: Heat Transfer .......................................................... 3

The BS in Physics with an Emphasis in Engineering Technology is an ideal double major with a BSET in either Electronics Engineering Technology or Mechanical Engineering Technology.

**Bachelor of Science Degree with a Major in Physics: Customized Emphasis (22 hours)**

**(a) Physics**

PHYS 104: Engineering Physics I .................................................. 4
or PHYS 100: College Physics I ..................................................... 4
and PHYS 130: Elementary Physics Laboratory I ............................ 1

PHYS 105: Engineering Physics II ................................................ 4
or PHYS 101: College Physics II ................................................... 4
and PHYS 131: Elementary Physics Laboratory II .......................... 1

**(b) Physics Electives**

Six hours of physics electives with course numbers greater than 500 subject to the approval of the Physics Department.

**(c) Other**

Six hours of upper-division electives from physics, mathematics, chemistry, or technology subject to the approval of the Physics Department.

The BS in Physics with a Customized Emphasis is an ideal double major with a Bachelor of Science in Mathematics or Chemistry; a BBA in Computer Information Systems or a BSET in Technology. This emphasis area also fits well for pre-Medical and Health-related study areas.

**Minor Requirements**

A minor consists of 20 hours of course work in a field different from the major field of study. Physics students customarily minor in chemistry or mathematics, but may want to select other minors as a way to improve employment options.
Bachelor of Science in Education Degree with a Major in Physics

Basic Skills (9 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 190: Honors English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

MATH 113 is satisfied by MATH 150 and 155 requirement listed in content area of the BSEd in Physics.

A grade of "C" or better in each of the basic skills courses is required.

General Education Electives (23-29 hours)

Sciences** (0 hours)

**Sciences satisfied by BIOL 111/112 and PHYS 104/130 courses listed in content area.

Social Studies (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>WGS 200: Introduction to Women’s Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Political Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 101: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 103: Comparative Political Institutions</td>
<td>3</td>
</tr>
</tbody>
</table>

Producing and Consuming (Select CIS and one from the remaining two categories)

Economy

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 191: Issues in Today's Economy</td>
<td>3</td>
</tr>
<tr>
<td>FCS 230: Consumer Education and Personal Finance</td>
<td>3</td>
</tr>
</tbody>
</table>

Technology

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EET 247: Computer Programming for Electronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>GT 190: Introduction to Technological Systems</td>
<td>2</td>
</tr>
<tr>
<td>GT 350: Technology and Civilization</td>
<td>3</td>
</tr>
<tr>
<td>EDTH 330: Technology for the Classroom</td>
<td>3</td>
</tr>
<tr>
<td>TE 551: Integrated Technology for Educators</td>
<td>3</td>
</tr>
<tr>
<td>TM 350: Societal Influence of Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

Business

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS (satisfied by CIS 230 requirement listed in content area)</td>
<td>3</td>
</tr>
</tbody>
</table>

Fine Arts and Aesthetic Studies (select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 155: Printmaking and Paper Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 178: Introduction to the Visual Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 188: The Designed World</td>
<td>3</td>
</tr>
<tr>
<td>ART 217: Crafts I</td>
<td>3</td>
</tr>
<tr>
<td>ART 222: Jewelry Design I</td>
<td>3</td>
</tr>
<tr>
<td>ART 233: Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 244: Ceramics I</td>
<td>3</td>
</tr>
<tr>
<td>ART 266: Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>ART 277: Painting I</td>
<td>3</td>
</tr>
<tr>
<td>ART 288: Introduction to Art History I</td>
<td>3</td>
</tr>
<tr>
<td>ART 289: Introduction to Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ART 311: Art Education</td>
<td>3</td>
</tr>
<tr>
<td>ART 351: Printmaking, Papermaking, Bookarts and the Letterpress</td>
<td>3</td>
</tr>
<tr>
<td>ART 430: Automotive: Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>COMM 105: Performance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>COMM 205: Performance Studies</td>
<td>3</td>
</tr>
<tr>
<td>COMM 295: Theatre History (____)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 250: Introduction to Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>HHP 151: Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 120: Music Appreciation (____)</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 121: Introduction to Music Literature</td>
<td>3</td>
</tr>
</tbody>
</table>

Cultural Studies (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101: Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>MLL 114: Chinese Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 124: French Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 154: Spanish Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 184: Russian Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 194: Korean Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 106: World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 300: Elements of Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 304: Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>WGS 399: Global Women's Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

Health and Well Being (4-6 hours)

Psychological

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Physical (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 203: Nutrition and Health</td>
<td>3</td>
</tr>
<tr>
<td>FCS 301: Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HHP 150: Lifetime Fitness Concepts</td>
<td>1</td>
</tr>
<tr>
<td>NURS 303: Introduction to Public Health</td>
<td>3</td>
</tr>
</tbody>
</table>

Human Heritage (Select one from two of the following three categories)

History

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101: World History to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102: World History from 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 201: American History to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 202: American History from 1865</td>
<td>3</td>
</tr>
</tbody>
</table>

Literature

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 113: General Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 114: General Literature (Genre)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 116: General Literature (Theme)</td>
<td>3</td>
</tr>
</tbody>
</table>
ENGL 120: Literature and Film ................................................................. 3
ENGL 315: Mythology .............................................................................. 3
ENGL 320: Literature and Film ................................................................. 3

**Philosophy**
PHIL 103: Introduction to Philosophy .................................................. 3
PHIL 105: Ethics ....................................................................................... 3
PHIL 112: Biomedical Ethics ................................................................ 3
PHIL 113: Business Ethics ..................................................................... 3
PHIL 114: Environmental Ethics ............................................................. 3
PHIL 207: Critical Thinking ................................................................. 3
PHIL 208: Logic ....................................................................................... 3
PHIL 231: World Religions .................................................................... 3

**Professional Studies Component***

In addition to the professional education courses listed below, the student must complete the courses for the teaching specialty for physics.

**Teaching and Learning Theory with Laboratory and Clinical Experience**
EDUC 261: Explorations in Education .................................................. 3
PSYCH 263: Developmental Psychology ............................................... 3
PSYCH 357: Educational Psychology .................................................... 3
PHYS 479: Techniques for Teaching Physics ........................................... 3
SPED 510: Overview of Special Education ........................................... 3
EDUC 520: Methods and Materials for Academic Literacy ............... 3

*See [Admission to Professional Semester](#) for professional education grade point requirements.

PSYCH 357, PHYS 479, and EDUC 520 require admission to Teacher Education prior to enrollment in the courses.

**Professional Semester (17 hours)**
EDUC 458: Methods and Curriculum .................................................. 3
EDUC 462: Secondary and Middle Level Education ............................. 2
EDUC 464: Foundations of Measurement and Evaluation .................... 2
EDUC 480: Supervised Teaching in the Secondary School .................... 3
EDUC 482: Supervised Teaching in the Secondary School .................... 5
PHYS 579: Supervised Student Teaching and Follow-Up of Teachers .......................... 2

**Content for the Teaching Specialty: Physics (61 hours)**
PHYS 104: Engineering Physics I .......................................................... 4
and PHYS 130: Elementary Physics Laboratory I .................................. 1
PHYS 105: Engineering Physics II ....................................................... 4
and PHYS 131: Elementary Physics Laboratory II ............................... 1
PHYS 160: Physical Geology ................................................................. 3
PHYS 375: Solar System Astronomy ..................................................... 3
or PHYS 575: Introductory Astrophysics ............................................. 3
PHYS 516: Modern Physics I ................................................................. 3
PHYS 530: Intermediate Physics Laboratory (___) ............................... 3
PHYS 532: Electronic Circuits I .............................................................. 3
PHYS 569: Laboratory Assistant Practicum ......................................... 2
PHYS 691: Senior Research Project ..................................................... 2
PHYS 699: Senior Review and Assessment .......................................... 1

CHEM 215: General Chemistry I .......................................................... 3
and CHEM 216: General Chemistry I Laboratory ................................. 2
CHEM 225: General Chemistry II ........................................................ 3
and CHEM 226: General Chemistry II Laboratory ............................... 2
MATH 150: Calculus I ........................................................................... 5
MATH 155: Calculus II .......................................................................... 5
Biol 111: General Biology ................................................................ 3
and BIOL 112: General Biology Laboratory ....................................... 2
CIS 230: Visual Basic Programming ................................................... 3

- One additional upper-division physics course (3 hours)

Students planning to teach should become familiar with the current regulations for licensure of school personnel prepared by the State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburgh State University.

**Minor Requirements**

Students preparing to teach physics must select a minor. The Earth and Space Science Minor is recommended for students wishing to obtain Earth and Space Science Licensure.

**Minor in Earth and Space Science**

**Earth and Space Science Minor (22 hours)**
PHYS 160: Physical Geology ............................................................... 3
and PHYS 165: Physical Geology Laboratory ....................................... 1
PHYS 166: Meteorology ................................................................. 3
and PHYS 167: Meteorology Laboratory .......................................... 1
PHYS 175: Descriptive Astronomy ....................................................... 3
or PHYS 375: Solar System Astronomy ............................................. 3
and PHYS 176: Astronomy Laboratory ............................................ 1

An additional 10 hours from any of the following courses (when not used as part of the core)

BIOL 304: Soil Ecology ................................................................. 3
BIOL 330: Principles of Ecology ..................................................... 3
BIOL 515: Stream Ecology ............................................................. 4
BIOL 537: Regional Natural History .................................................. 3
PHYS 175: Descriptive Astronomy ....................................................... 3
PHYS 375: Solar System Astronomy .................................................. 3
PHYS 540: Topics in Physics (___) ................................................... 1-3
PHYS 541: Topics in Astronomy (___) ............................................. 1-3
PHYS 542: Topics in Earth Science (___) ......................................... 1-3
PHYS 575: Introductory Astrophysics ................................................... 3
GEOG 302: Introduction to Environmental Geography .................... 3
GEOG 303: Geographic Information Systems I .......................... 4
GEOG 403: Geographic Information Systems II .......................... 4
GEOG 502: Global Environmental Change ..................................... 3
GEOG 508: Geography of Hazards and Disasters ......................... 3
Topics courses: PHYS 540, PHYS 541 and PHYS 542 may be repeated if topic is different.

### Minor in Physics

#### Physics Minor (22 hours)

This minor does not qualify students for licensure to teach physics. Students interested in physics as a second teaching option should refer to "Second Teaching Options" under the department information.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 100: College Physics</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 104: Engineering Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 130: Elementary Physics Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 101: College Physics II</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 105: Engineering Physics II</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 131: Elementary Physics Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 516: Modern Physics I</td>
<td>3</td>
</tr>
</tbody>
</table>

- Electives in physics* (9 hours)

*The following courses cannot be used to satisfy electives in physics: PHYS 171 Physical Science, PHYS 172 Physical Science Laboratory, PHYS 114 Physical Science Laboratory for Teachers, PHYS 160/165 Physical Geology/Laboratory, PHYS 166/167 Meteorology/Laboratory, PHYS 479 Techniques for Teaching Physics, PHYS 542 Topics in Earth Science (___), PHYS 579 Supervised Student Teaching and Follow-up of Teachers and PHYS 741 Special Topics (___).

### Minor in Physical Science

Twenty hours selected from both physics* and chemistry**. The physical science minor is not available to students who major in physics or chemistry.

*The following courses in physics cannot be applied toward the physical science minor: PHYS 114 Physical Science Laboratory for Teachers, PHYS 171 Physical Science, PHYS 172 Physical Science Laboratory, PHYS 479 Techniques for Teaching Physics, PHYS 569 Laboratory Assistant Practicum, PHYS 579 Supervised Student Teaching and Follow-up of Teachers and all 700 level courses.

**200 level and above.

### Second Teaching Options

Those persons interested in physics, middle school science or earth and space science as a second teaching option should contact the Department of Physics or the Certification Officer in the College of Education, 115 Hughes Hall, for specific requirements.

### Accelerated Program

For students interested in advanced preparation and training in physics for work in industry or further study in graduate school, the Department of Physics at Pittsburg State University offers an accelerated program to combine the Bachelor of Science degree in Physics and the Masters of Science degree in Physics into a five-year program. Students participating in this program can save one year of study and can either proceed directly into the workforce or into a doctoral program at another university.

To complete the required study of both the Bachelor of Science and Master of Science degree in five years, students must:

- Begin their undergraduate coursework in physics in one of three emphases that prepare for graduate school: Professional, Astrophysics, or Solid State;
- Maintain a minimum of 3.5 GPA in the physics and mathematics courses required for the Bachelor of Science and a minimum of 3.25 GPA overall, and,
- Apply for the accelerated masters in physics program by March 1 of their junior year.

Upon acceptance to the accelerated program, detailed planning for the 4th and 5th years will be completed including a master's program candidacy plan. The coursework will include taking up to nine (9) credit hours of graduate-level courses during the senior year that are counted toward the masters degree and up to six (6) credit hours of senior-graduate courses at the 700-level to be counted toward both the Bachelor of Science and Master of Science degrees (i.e., "double-counted"); selected from the following: PHYS 714 Statistical Thermodynamics, PHYS 716 Introductory Quantum Mechanics, PHYS 742 Solid State Physics, or PHYS 775 Advanced Astrophysics. Students must obtain a grade of A or B in all of the aforementioned coursework.
Master of Science Degree with a Major in Physics

The Master of Science degree program in physics consists of a core of three courses, PHYS 810 Classical Mechanics, PHYS 812 Electromagnetic Theory, and PHYS 816 Quantum Mechanics, plus electives appropriate to the student’s plans for employment in physics or related fields, further graduate study, or teaching physics or the physical sciences.

Elective courses, subject to approval of the department, are usually selected from physics, chemistry, mathematics, or biology. Incoming students must take a diagnostic examination on undergraduate physics no later than the first semester of enrollment without course deficiencies. Students must pass all components or department approved alternatives for full acceptance into the program.

Option I: Thesis

Professional Physics Emphasis

For students preparing for further graduate study or for physics or physics-related employment. A minimum of thirty semester hours, including the three core courses, PHYS 810 Classical Mechanics, PHYS 812 Electromagnetic Theory, and PHYS 816 Quantum Mechanics, and at least six hours PHYS 890 Research and Thesis, as determined by the department as necessary to complete the thesis research and an oral defense. Concentration on a selected physics or interdisciplinary specialty is possible through a combination of listed courses and PHYS 890 Research and Thesis, which may cover areas as diverse as solid state chemistry, materials science, surface physics, or radiation effects.

Option II: Research Problem

Applied Physics Emphasis

For students preparing for physics or physics-related employment. A minimum of thirty-two semester hours, including the three core courses, PHYS 810 Classical Mechanics, PHYS 812 Electromagnetic Theory, and PHYS 816 Quantum Mechanics, and at least three hours of PHYS 891 Research Problem, as determined by the department as necessary to complete the problem research and both a written and oral report, are required.

Pre-Service Teaching Emphasis

For students preparing to teach physics or physical science at high school or junior college level. Elective courses may include up to nine hours professional education, which may substitute for one of the core courses, with department approval. A minimum of thirty-two semester hours including at least three hours of PHYS 891 Research Problem, as determined by the department as necessary to complete the problem research and both a written and oral report, are required.

In-Service Teaching Emphasis

For current teachers of high school physics seeking advanced physics-teacher training in conjunction with either Kansas licensure in physics or certification in another state. A minimum of 36 hours is required, including PHYS 760 History and Philosophy of Science, PHYS 832 Experimental Design in the Physical Sciences, PHYS 893 Research Grant Proposal Writing, and PHYS 882 Guided Inquiry for Science Fairs and Demonstrations. These four courses may replace some or all of the three core courses. Instead of writing a thesis or problem report, the student must submit a grant proposal for external funding. With permission of the student’s advisor and department chairman, up to 12 hours may be taken outside the department, including a maximum of six in education. A minimum of 15 hours should be in courses numbered 800-899, and 30 hours must be in courses numbered 700-899.
Gladys A. Kelce College of Business

Dean: Paul W. Grimes; Associate Dean/MBA Director:
Bienvenido S. Cortes

Room: 101 Kelce Center
Telephone: 620-235-4598
Email: cob@pittstate.edu

Departments

Accounting and Computer Information Systems
Economics, Finance, and Banking
Management and Marketing

A Named College

In 1977, the Kansas Board of Regents approved the formation of a business school at Pittsburg State University and named it after benefactor Gladys A. Kelce. An alumnus and long-time supporter of the university, Mrs. Kelce provided the financial resources to renovate the old College High School building into what is known today as Kelce Center. Over the years, the Kelce College of Business has evolved from relatively small programs in business administration into a modern and progressive business school offering undergraduate degrees in seven majors and a comprehensive Master of Business Administration program.

Degree Programs

The Kelce College of Business offers seven undergraduate degree programs to prepare students for exciting and rewarding careers. Students may earn a Bachelor of Business Administration (BBA) degree in the following majors:

Accounting
Computer Information Systems
Economics
Finance
International Business
Management
Marketing

In addition, the Kelce College of Business provides undergraduate students from any bachelor degree program on campus the opportunity to earn minors in the following areas:

Accounting
Business Administration

In cooperation with the College of Technology, the Kelce College of Business offers undergraduate business majors the opportunity to earn one of following three technology minors as part of their BBA degree program.

Manufacturing Management Minor
Construction Management Minor
Automotive Technology Minor

At the graduate level, the Kelce College of Business offers three options for the Master of Business Administration (MBA) degree:

Master of Business Administration Emphases:

Accounting
General Administration
International Business

More information about the MBA Program can be found at:
http://www.pittstate.edu/business/departments-programs/mba

College Mission Statement

The Kelce College of Business prepares future business professionals within a student-focused environment by empowering students from diverse backgrounds to succeed within the global business community. We provide a foundation for life-long learning and a spirit of engagement by delivering high-quality, affordable, undergraduate and graduate business education programs through small classes, committed faculty, scholarship, and community outreach.

Accreditation and Rankings

All degree programs offered through the Kelce College of Business are accredited by the Association to Advance Collegiate Schools of Business. The college is consistently ranked as one of the best business schools by The Princeton Review and other publications. Further information about accreditation and rankings can be found on the college's homepages:
http://www.pittstate.edu/business/about/accreditation-s-recognition-awards.dot
Kelce Board of Advisors

The college is supported by an external board of advisors composed of regional and national business leaders, as well as prominent college alumni. The board meets several times each year and provides advice to the college administration concerning curriculum, professional engagement, and service activities. The board works to develop and promote the college across the Pittsburg State University service area and worldwide. A complete listing of the current board membership can be found here: http://www.pittstate.edu/business/about/board-of-advisors.dot

Scholarships

Numerous individuals, businesses, and organizations provide financial support each year through the Pittsburg State University Foundation for students majoring in business. Scholarships are available for both BBA and MBA students. For further information about scholarships and the application process, visit the following webpage: http://www.pittstate.edu/affordability/scholarships/ A detailed listing of available scholarships can be found by clicking on Departmental Scholarships.

Student Organizations

The Kelce College of Business provides numerous experiential learning and leadership opportunities through a variety of student organizations and honor societies. Current student organizations include: Accounting and Computer Information Student Association, Association of Certified Fraud Examiners Student Chapter, Beta Alpha Psi (Accounting Honorary), Beta Gamma Sigma (Business Honorary), Enactus (formerly Students in Free Enterprise), Finance Club, Institute of Internal Auditors Student Chapter, MBA Association, Omicron Delta Epsilon (Economics Honorary), and the Marketing Association. The presidents of the student organizations comprise the Kelce Student Leadership Council which provides advice and input to the college dean.

Departmental Academic Honors Program

Undergraduate students in the Kelce College of Business may elect to participate in the university-wide departmental academic honors program. Specific requirements for this program may be found elsewhere in this catalog. Details are also provided at: http://www.pittstate.edu/business/about/board-of-advisors.dot

Kelce Business Scholars

The top three percent of full-time undergraduate business majors, as measured by cumulative GPA, are designated each semester as Kelce Business Scholars. The names of these scholars are prominently listed on a recognition board in Kelce Center during the semester following their achievement.

Undergraduate Academic Advising

Entering first year students and transfer students may declare a major within the Kelce College of Business upon admission to Pittsburg State University. However, all undergraduate students must also meet the college entrance requirement as outlined below. Prior to the completion of 30 semester hours and formal admission to the Kelce College of Business, all majors receive advisement and enrollment support through the Kelce Academic Advising Office located on the first floor of the Kelce Center. Upon admission to the college, all undergraduate students are assigned a faculty advisor teaching in their declared major area of study.

Undergraduate Admission to the Kelce College of Business

Undergraduate students desiring admission into the Kelce College of Business must meet the following admission requirements in addition to those of the university. The Kelce College of Business will admit students who meet the following requirements:

- Completion of 30 semester hours applicable to the degree that the student is seeking with a 2.5 overall cumulative grade point average.
- Achieved at least a 2.25 overall cumulative grade point average if seeking a degree in Economics, Finance, International Business, Management, or Marketing.
- Achieved at least a 2.50 overall cumulative grade point average if seeking a degree in Accounting or Computer Information Systems.
- Completion of the following courses with no grade lower than a C:
  - English Composition, ENGL 101 or Honors English Composition, ENGL 140 – 3 hours
Introduction to Research Writing, ENGL 299 or Honors English Composition, ENGL 190 – 3 hours

Speech Communications, COMM 207 – 3 hours

Elementary Statistics, MATH 143 – 3 hours

Mathematics requirement, minimum 3 hours; either College Algebra, MATH 110 or 113, or higher

Computer Information Systems, CIS 130 – 3 hours

Financial Accounting, ACCTG 201 – 3 hours

Admission to the Kelce College of Business is required prior to enrollment in all upper level business courses numbered 300 and above with the exception of MGT 310 Business Statistics for those students who have completed MATH 143 Elementary Statistics.

Business minors, non-degree seeking students, exchange students, and students with other degree objectives will be allowed to take business courses numbered 300 and above if they meet the specific course prerequisites as outlined in the university catalog.

**Kelce College of Business Prerequisite Policy**

- All business courses numbered in the 200's have a sophomore-standing prerequisite requirement. Sophomore standing is defined as the completion of 25 semester hours.

- All business courses numbered 300 and above require admission to the Kelce College of Business with the exception of MGT 310 Business Statistics for those students who have completed MATH 143.

- All courses indicating senior-standing prerequisite are defined as the completion of 85 semester hours.

- All students are required to complete Kelce College of Business prerequisites as outlined in the Pittsburg State University Catalog. If a student is enrolled in a course without completion of the required prerequisite, the student will receive notice to seek advising for schedule revisions. If the schedule is not revised or approved prior to the first day of class, the Kelce Academic Advising office will administratively remove the class from the student’s schedule.

**Kelce College of Business Excessive Retake Policy**

Students wishing to enroll in the same business course for the fourth time or more must petition the Dean of the College for approval.

**Transfer Credit Limitation**

At least 50 percent of the business credit hours (i.e. the credit hours from the areas of accounting, economics, finance, management, marketing, and computer information systems) that are required for the Bachelor of Business Administration degree must be earned at Pittsburg State University.

**Bachelor of Business Administration Course Requirements**

A Bachelor of Business Administration Degree is comprised of four parts: Basic Skills, General Education Electives, the Kelce College Core, and Major classes.

**Basic Skills (15 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
<td></td>
</tr>
<tr>
<td>ENGL 190: Honors English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 113: College Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 143: Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Education Electives (38-42 hours)**

**Sciences (8-9 hours)**

**Natural Sciences (Select one)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td></td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211: Principles of Biology I</td>
<td></td>
</tr>
</tbody>
</table>

BIOL 113 Environmental Life Science is recommended for Bachelor of Business Administration Degree.

**Physical Sciences (Select one)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 105: Introductory Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 106: Introductory Chemistry Laboratory</td>
<td></td>
</tr>
<tr>
<td>CHEM 107: Chemistry for the Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 108: Chemistry for the Life Sciences Laboratory</td>
<td></td>
</tr>
<tr>
<td>PHYS 160: Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 165: Physical Geology Laboratory</td>
<td></td>
</tr>
<tr>
<td>PHYS 166: Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 167: Meteorology Laboratory</td>
<td></td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
</tbody>
</table>
and PHYS 172: Physical Science Laboratory .............................................. 1
PHYS 175: Descriptive Astronomy .......................................................... 3
and PHYS 176: Astronomy Laboratory ...................................................... 1
PHYS 375: Solar System Astronomy .......................................................... 3
and PHYS 176: Astronomy Laboratory ...................................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ........................................................ 3
WGS 200: Introduction to Women's Studies ......................................... 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics .............................................................................. 3
POLS 103: Comparative Political Institutions ........................................ 3

Producing and Consuming (9 hours)
ECON 200: Principles of Microeconomics ............................................. 3
ECON 201: Principles of Macroeconomics ............................................ 3
CIS 130: Computer Information Systems ................................................. 3

Fine Arts and Aesthetic Studies (select one)
(2-3 hours)
ART 155: Printmaking and Paper Arts ................................................. 3
ART 178: Introduction to the Visual Arts ................................................. 3
ART 188: The Designed World .............................................................. 3
ART 217: Crafts I .................................................................................... 3
ART 222: Jewelry Design I ...................................................................... 3
ART 233: Drawing I ............................................................................... 3
ART 244: Ceramics I ............................................................................... 3
ART 266: Sculpture I ............................................................................... 3
ART 277: Painting I ............................................................................... 3
ART 288: Introduction to Art History I .................................................... 3
ART 289: Introduction to Art History II .................................................. 3
ART 311: Art Education ................................................................. 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress . 3
ART 430: Automotive: Art and Design ................................................ 3
COMM 105: Performance Appreciation .............................................. 3
COMM 205: Performance Studies .......................................................... 3
COMM 295: Theatre History (____) ........................................................ 3
ENGL 250: Introduction to Creative Writing ....................................... 3
HHP 151: Dance Appreciation .............................................................. 3
MUSIC 120: Music Appreciation (____) ................................................ 3
MUSIC 121: Introduction to Music Literature ....................................... 3

Cultural Studies (Select one) (3 hours) (15 hours for International Business majors)
ANTH 101: Introduction to Cultural Anthropology .................................. 3
MLL 114: Chinese Language and Culture I ............................................. 3
MLL 124: French Language and Culture I .............................................. 3
MLL 154: Spanish Language and Culture I ............................................. 3
MLL 184: Russian Language and Culture I .............................................. 3
MLL 194: Korean Language and Culture I .............................................. 3
GEOG 106: World Regional Geography .............................................. 3
GEOG 300: Elements of Geography .................................................... 3
GEOG 304: Human Geography ........................................................... 3
WGS 399: Global Women’s Issues ....................................................... 3

International Business majors MUST take GEOG 106 World Regional Geography. Additionally, International Business majors must take one additional 3 hour Cultural Studies Course and 9 hours of Foreign Language or equivalent. Students already proficient in a foreign language may take a departmentally approved language proficiency test. The students will be required to pay for any applicable costs of the exam. A passing score on the test, as deemed appropriate by the international business advisor, will be required. Students are not given Pittsburg State University credit for passing the proficiency exam, nor do they earn Pittsburg State University credit hours for passing the exam. Students may be required to take approved electives in lieu of the 9 hour foreign language requirement if a passing grade on the exam is achieved. The International Business adviser, or departmental representative, will determine substitution courses. In all cases, students must earn the minimum number of credit hours required for the major.

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ......................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ............................................................ 3
FCS 301: Nutrition .............................................................................. 3
HHP 150: Lifetime Fitness Concepts .................................................... 1
NURS 303: Introduction to Public Health ............................................. 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .......................................................... 3
HIST 102: World History from 1500 .................................................... 3
HIST 201: American History to 1865 .................................................... 3
HIST 202: American History from 1865 .............................................. 3

Literature
ENGL 113: General Literature ............................................................. 3
ENGL 114: General Literature (Genre) .................................................. 3
ENGL 116: General Literature (Theme) ................................................. 3
ENGL 120: Literature and Film ............................................................. 3
ENGL 315: Mythology ......................................................................... 3
ENGL 320: Literature and Film ............................................................. 3

Philosophy
PHIL 103: Introduction to Philosophy .................................................. 3
PHIL 105: Ethics .................................................................................. 3
PHIL 112: Biomedical Ethics ............................................................... 3
PHIL 113: Business Ethics ................................................................. 3
PHIL 114: Environmental Ethics .......................................................... 3
PHIL 207: Critical Thinking ............................................................... 3
PHIL 208: Logic .................................................................................. 3
PHIL 231: World Religions ................................................................. 3
Kelce College Core (39 hours)

ACCTG 201: Financial Accounting ...................................................... 3
ACCTG 202: Managerial Accounting ................................................... 3
MGT 310: Business Statistics .............................................................. 3
MGT 320: Basic Quantitative Methods ................................................ 3
FIN 326: Business Finance ................................................................. 3
MGT 330: Management and Organizational Behavior ......................... 3
MKTG 330: Principles of Marketing .................................................... 3
CIS 420: Management Information Systems ........................................ 3
MGT 420: Quantitative Decision Making ............................................. 3
MGMKT 444: Legal and Social Environment of Business .................... 3
MGT 510: Operations Management .................................................... 3
MGT 690: Business Strategy ............................................................... 3


Economics- Three hours selected from the following*, **

ECON 318: Intermediate Microeconomics ........................................... 3
ECON 319: Intermediate Macroeconomics ......................................... 3
ECON 430: Money and Banking ......................................................... 3
ECON 440: International Economics .................................................. 3

*The Business Economics major should select any 3 hour upper level ECON elective (300 or above) that is not required in the major.

**The International Business major requires ECON 440 International Economics

Major

Accounting
Computer Information Systems
Economics
Finance
Management
Marketing
International Business
Accounting and Computer Information Systems

Chairperson: Peter A. Rosen*
Professor(s): Maeve Cummings*,**, David O'Bryan*,**
Associate Professor(s): Jae Joon Choi*, Peter A. Rosen*,
Wei Sha*
Assistant Professor(s): Mary Jo Goedeke*, Theresa J. Presley*
Instructors: Rebecca Casey, Mary Polfer, Dwight Strong,
Gail Yarick
*Graduate Faculty
**University Professor

Room 223 Kelce
Telephone: 620-235-4561
Fax: 620-235-4558
http://www.pittstate.edu/department/accounting
E-mail: acctg@pittstate.edu

Undergraduate

Bachelor of Business Administration Degree with a
Major in Accounting
Bachelor of Business Administration Degree with a
Major in Computer Information Systems
Minor in Accounting
Minor in Computing
Minor in Fraud Examination
Minor in Internal Auditing
Certificate in Internal Auditing

Graduate

Master of Business Administration Degree with a
Concentration in Accounting

UNDERGRADUATE DEGREE PROGRAMS

Major in Accounting

The major in Accounting provides preparation for professional accounting careers in industry, government, non-profits, and in public accounting. The major in Accounting provides a sound foundation for those wishing to sit for the Certified Public Accountant (CPA) examination, Certified Management Accountant (CMA) examination, Certified Internal Auditor (CIA) examination, and Certified Fraud Examiner (CFE) examination. Effective July 1, 1997, candidates for the CPA examination in Kansas are required to have completed 150 semester hours of college credit. Those interested in sitting for either the CPA, CMA, CIA, or CFE examinations should consult the department chair for specific examination requirements.

Major in Computer Information Systems

The major in Computer Information Systems involves the study and analysis of information flow in an organization and the design of an information gathering and processing system using computers, which will facilitate planning and decision making in the organization. The typical graduate finds employment in business, industry, or government as a programmer, programmer/analysts, information technology support specialists or various other positions related to operating and managing a modern information technology installation. Some choose to continue their study as a graduate student. With experience or further study, a graduate may advance to positions such as systems analyst, software engineer, project manager, database administrator, or manager of information systems.

Students majoring in Computer Information Systems select an emphasis of either Information Assurance and Computer Security or System Design.

Information Assurance and Computer Security Emphasis

Information Assurance and Computer Security deals with the increasing need to provide for the protection of information that is stored and processed by computer systems and communicated using modern communication networks.

The basis for the program begins with an understanding of the role of information in contemporary society, the technological means to store, transmit, and generate information, and the importance of assuring that information will be accurate, confidential and available.

System Design Emphasis

The System Design program at Pittsburg State University draws upon the Bachelor of Business Administration degree program to provide the environmental awareness of the role of information in the firm and combine it with the Information Systems program that provides a solid technological foundation that prepares the student for careers in computer programming, system design and analysis, database programming and administration, and information technology support.
Admission to Accounting and Computer Information Systems Program

Admission to the Kelce College of Business will automatically admit accounting majors to the accounting program and computer information systems majors to the computer information systems program.

Continued Progress in Accounting and Computer Information Systems Programs

Admission to all accounting and computer information systems courses numbered 400 or above requires a 2.5 GPA.* Accounting and Computer Information Systems majors must maintain a 2.5 GPA in order to continue with the program.

*The 2.5 GPA requirement is in addition to other course prerequisites.

Changes in Requirements

Baccalaureate degree curriculum offered by the Department of Accounting and Computer Information Systems are periodically revised and updated. Such revisions will be communicated by the department to currently enrolled students majoring in its programs. Each student is required to graduate under the most recent curriculum in effect at the time of that student's graduation unless those revisions would extend the student's graduation date. Requests for exceptions to such curriculum revisions should be filed in writing with the department chair.

Junior Standing Prerequisite

All undergraduate courses offered in the Department of Accounting and Computer Information Systems numbered 300 and above have a junior standing prerequisite. For purposes of this prerequisite, junior standing is defined as the completion of 55 semester hours applicable to the student's degree program. A student with fewer than 55 hours may petition the Department of Accounting and Computer Information Systems for admission to ACCTG 315 Intermediate Managerial Accounting and ACCTG 318 Intermediate Financial Accounting I.

Bachelor of Business Administration Degree with a Major in Accounting

Students seeking the Bachelor of Business Administration degree with a major in accounting must complete the following curriculum. At least 24 hours of required upper division business courses, including at least 12 hours of upper division accounting courses, must be taken at Pittsburg State University.

Basic Skills (15 hours)

General Education Electives (38-42 hours)

Kelce College Core (39 hours)

Major

ACCTG 315: Intermediate Managerial Accounting ........................................3
ACCTG 410: Intermediate Financial Accounting II ....................................3
ACCTG 411: Individual Taxation .................................................................3
ACCTG 422: Internal Auditing ......................................................................3
ACCTG 585: Accounting Law ......................................................................3
ACCTG 610: External Auditing and Assurance Services ...............................3
ACCTG 611: Advanced Taxation .................................................................3
ACCTG 620: Advanced Financial Accounting ..............................................3

- Electives in accounting numbered above 299 (3 hours)

General Electives (0-2 hours)

Total hours for Bachelor of Business Administration Degree with a Major in Accounting (124 hours)

Bachelor of Business Administration Degree with a Major in Computer Information Systems

Students seeking the Bachelor of Business Administration degree with a major in computer information systems must complete the following curriculum. At least 50 percent of the upper division business credit hours (i.e., the credit hours from the areas of accounting, economics, finance, management, marketing, and information systems) that are required for the Bachelor in Business Administration degree must be earned at Pittsburg State University.

Basic Skills (15 hours)

General Education Electives (38-42 hours)

Kelce College Core (39 hours)

Computer Information Systems Major Requirements

CIS 230: Visual Basic Programming ..............................................................3
CIS 240: C ++ Programming .........................................................................3
CIS 380: Systems Analysis and Design .........................................................3
CIS 470: Computer Networking ....................................................................3
CIS 615: Database Management ....................................................................3
Information Assurance and Computer Security Emphasis

CIS 350: Introduction to System Administration .................................. 3
CIS 670: Information Assurance and Computer Security I .................. 3
CIS 671: Information Assurance and Computer Security II .................. 3
ACCTG 422: Internal Auditing ......................................................... 3
ACCTG 522: Information Systems Auditing and Controls .................. 3

System Design Emphasis

CIS 345: Object Oriented Programming Using Java ............................ 3
CIS 350: Introduction to System Administration .................................. 3
CIS 640: Software Engineering ....................................................... 3

- CIS Elective numbered 300 and above (3 hours)

Unrestricted Electives (0-5 hours)

Total minimum hours required to receive Bachelor of Business Administration- Computer Information Systems (124 hours)

Minor in Accounting

Minor in Accounting (21 hours)

ACCTG 201: Financial Accounting .................................................. 3
ACCTG 202: Managerial Accounting ................................................ 3
ACCTG 315: Intermediate Managerial Accounting ............................ 3
ACCTG 420: Accounting Information Systems ................................... 3

Two courses from the following (6 hours)

ACCTG 410: Intermediate Financial Accounting II ............................ 3
ACCTG 422: Internal Auditing ......................................................... 3
ACCTG 625: Fraud Examination ..................................................... 3

For the minor in accounting, CIS 420 Management Information Systems may be substituted for ACCTG 420 Accounting Information Systems.

Minor in Computing

The minor in Computing is available to students seeking the Bachelor of Arts or the Bachelor of Science degree. This minor will consist of a minimum of 21 semester hours chosen from Computer Information Systems courses. At least six hours must be upper division courses (numbered above 299). Students must complete a two course sequence of Programming courses consisting of CIS 230 Visual Basic Programming and CIS 240 C++ Programming.

Programming Sequence

CIS 230: Visual Basic Programming ................................................ 3
CIS 240: C++ Programming ......................................................... 3

An Introduction to Computer Systems

CIS 350: Introduction to System Administration .................................. 3

Electives from Computer Information Systems

Courses numbered above 199 (six hours above 299) (12 hours)

Minor in Fraud Examination

The Justice Studies program, in conjunction with the Department of Accounting and Computer Information Systems, offers a minor in Fraud Examination. Administered in the Department of Accounting and Computer Information Systems, the curriculum is patterned after the requirements found in the nationally recognized Certificate in Fraud Examination, providing coverage of the Certificate areas of: Criminology and Ethics; Legal Elements of Fraud; Financial Transactions; and Fraud Investigation. The demand for persons in this field is expected to increase and the minor represents a significant opportunity for Justice Studies majors who are interested in fraud and other instances of white collar crime.

Core Classes (15 hours)

ACCTG 201: Financial Accounting .................................................. 3
ACCTG 422: Internal Auditing ......................................................... 3
ACCTG 625: Fraud Examination ..................................................... 3
JUST 223: Basic Interviewing and Counseling Skills ......................... 3
JUST 522: Crime Scenes and the Law of Evidence ............................ 3

Select one (3 hours)

JUST 528: White Collar Crime ....................................................... 3
SOC 547: Criminology ................................................................. 3

Select one (3 hours)

JUST 500: Criminal Law and Society .............................................. 3
JUST 501: Criminal Procedure ....................................................... 3
POL 609: Administrative Law ....................................................... 3

NOTE: Currently, the Internal Revenue Service allows persons who have had a total of 15 hours of accounting and nine hours of other business related classes to apply for "Special Agent" positions. Justice Studies classes add to the qualifications of persons who are interested in such a career.
Minor in Internal Auditing

For the minor in internal auditing, CIS 420 Management Information Systems may be substituted for ACCTG 420 Accounting Information Systems.

ACCTG 201: Financial Accounting ............................................................ 3
JUST 223: Basic Interviewing and Counseling Skills .................................. 3
ENGL 301: Technical/Professional Writing ................................................ 3
ACCTG 420: Accounting Information Systems ........................................... 3
ACCTG 422: Internal Auditing ................................................................. 3
ACCTG 522: Information Systems Auditing and Controls .......................... 3
ACCTG 625: Fraud Examination .............................................................. 3

Certificate in Internal Auditing

ACCTG 201: Financial Accounting ............................................................ 3
ACCTG 422: Internal Auditing ................................................................. 3

Select at least two of the following:

ACCTG 522: Information Systems Auditing and Controls .......................... 3
ACCTG 614: Internship in Accounting .................................................... 3-6
ACCTG 625: Fraud Examination .............................................................. 3

ACCTG 614 Internship in Accounting must be an Internal Auditing or IT Auditing internship.

Master of Business Administration Degree with a Concentration in Accounting

A concentration in accounting is available with the Masters of Business Administration degree, offered through the Department of Management and Marketing.
Economics, Finance, and Banking

Anil Lal, Coordinator for Economics; Kevin Bracker, Coordinator for Finance
Professor(s): Kevin Bracker*, **, Bienvenido Cortes*, **, Paul Grimes*, Anil Lal*, Connie Shum*
Assistant Professor(s): Alexander Binder*, Michael E. Davidsson*, June Freund*, Fang Lin*
Instructors: Michael McKinnis
*Graduate Faculty
**University Professor

Room 211 Kelce
Telephone: 620-235-4547
Fax: 620-235-4572
http://www.pittstate.edu/department/economics/
E-mail: econ@pittstate.edu

Undergraduate

Bachelor of Business Administration Degree with a Major in Business Economics or Finance
Minor in Economics
Kansas Insurance Certificate

The Department of Economics, Finance and Banking offers baccalaureate degree programs with majors in economics and finance. A minor is offered in economics. The major in economics and the major in finance lead to the Bachelor of Business Administration degree. All students majoring in economics or finance must be admitted to the Kelce College of Business.

Students already admitted to the Kelce College of Business wishing to transfer their major to economics or finance must have a 2.50 GPA on all hours attempted at that time.

A major in economics is designed for students who wish careers in bank management, business forecasting, labor relations, operations analysis, or who wish to pursue managerial positions in governmental and corporate organizations. A major in finance prepares students for careers in banking, investment houses, savings and loan institutions, credit unions, credit management, and for managerial positions in governmental and corporate organizations. The study of economics and finance requires a blend of analytical, evaluative and descriptive skills and can be very rewarding.

Changes in Requirements

Baccalaureate degree curriculums offered by the Department of Economics, Finance and Banking are periodically revised and updated. Such revisions will be communicated by the department to currently enrolled students majoring in its programs. Each student is required to graduate under the most recent curriculum in effect at the time of that student's graduation unless those revisions would extend the student's graduation date. Requests for exceptions to such curriculum revisions should be filed in writing with the department chairperson.

Junior Standing Prerequisite

Most undergraduate courses offered in the Department of Economics, Finance and Banking numbered 300 and above have a junior standing prerequisite. For purposes of this prerequisite, junior standing is defined as the completion of 55 semester hours applicable to the student's degree program.

Bachelor of Business Administration Degree with a Major in Business Economics or Finance

Students seeking the Bachelor of Business Administration (BBA) degree with a major in business economics or finance must complete the following curriculum. At least 50 percent of the business credit hours (i.e., the credit hours from the areas of accounting, economics, finance, management, marketing, and information systems) that are required for the Bachelor in Business Administration degree must be earned at Pittsburg State University.

Due to the growth of multinational corporations and the increased interest in international trade, students preparing for business are encouraged to consider foreign language courses when selecting electives in the area of the humanities.

The general education degree requirements consist of 56-63 credit hours of course work.

Basic Skills (15 hours)

General Education Electives (38-42 hours)

Kelce College Core (39 hours)
Major selected from the following

Major in Business Economics (18 hours)
ECON 318: Intermediate Microeconomics ................................................................. 3
ECON 319: Intermediate Macroeconomics ................................................................. 3
ECON 650: Econometrics ......................................................................................... 3
ECON 665: Seminar in Applied Economics ................................................................. 3
   • Electives in Economics (Restricted to ECON 430, 433, 437, 440, 468, 485 and 693 (6 hours)

Major in Finance (18 hours)
FIN 621: Investments I ............................................................................................. 3
FIN 623: Financial Institutions and Markets ............................................................. 3
FIN 627: Advanced Business Finance ........................................................................ 3
FIN 631: Seminar in Financial Management ............................................................. 3

Three hours selected from
FIN 624: Investments II ............................................................................................. 3
FIN 625: International Finance .................................................................................... 3
ECON 650: Econometrics ......................................................................................... 3

Three hours selected from
ACCTG 315: Intermediate Managerial Accounting .................................................. 3

Minor in Economics
The minor in economics consists of 15 hours of economics including ECON 200 Principles of Microeconomics and ECON 201 Principles of Macroeconomics. The remaining nine hours can be chosen from any ECON 300-level or higher course.

Kansas Insurance Certificate
FIN 208: Introduction to Risk Management and Insurance ..................................... 3

Select two of the following:
   • FIN 210 Financial Planning (PSU) (3 hours) or
     FINAN 661 Financial Planning (Kansas State University) (3 hours)
   • BU 378 Life and Health Insurance (Washburn) (3 hours)
   • FIN 680 Retirement and Employment Benefit Planning (Fort Hays State University) (3 hours)
   • XXXX Property and Casualty Insurance (University of Kansas) (3 hours)

Select one of the following:
ACCTG 411: Individual Taxation .................................................................................. 3
AT 562: Damage Analysis, Estimating, and Insurance Appraisal ......................................................... 3
FIN 623: Financial Institutions and Markets ................................................................. 3
Management and Marketing

Chairperson: Lynn M. Murray*  
Associate Professor(s): Linden Dalecki*, Stephen V. Horner*, Sang-Heui Lee*, Kristen Maceli*, Lynn M. Murray*  
Instructors: Shipra Paul, Mary K. Wachter  
*Graduate Faculty  
**University Professor

Room 110 Kelce  
Telephone: 620-235-4588  
Fax: 620-235-4513  
http://www.pittstate.edu/department/marketing/  
E-mail: mgmkt@pittstate.edu

Undergraduate

Bachelor of Business Administration Degree with a  
Major in Management  
Bachelor of Business Administration Degree with a  
Major in Marketing  
Bachelor of Business Administration Degree with a  
Major in International Business  
Minor in Business Administration  
Minor in International Business  
Minor in Marketing

Graduate

Master of Business Administration  
Master of Business Administration Degree with a  
Concentration in Accounting

The Department of Management and Marketing offers baccalaureate and masters degree programs. Baccalaureate degree programs are offered in management, marketing and international business. Minors are offered in business administration, international business and marketing. A graduate program is available leading to the Master of Business Administration degree with an emphasis in general administration, international business or a concentration in accounting.

Undergraduate Degree Programs

The department offers majors in management, marketing and international business leading to the Bachelor of Business Administration degree. See Admission to the Kelce College of Business

Major in Management is designed for students who want a broad background for management positions in business, service industries, manufacturing or government.

Major in Marketing prepares students for positions in sales, merchandising, retail management, and market research in manufacturing, wholesaling and retailing institutions.

Major in International Business is designed for students who wish to pursue global business opportunities and positions.

Changes in Requirements

Baccalaureate degree curricula offered by the Department of Management and Marketing are periodically revised and updated. Such revisions will be communicated by the department to currently enrolled students majoring in its programs. Each student is required to graduate under the most recent curriculum in effect at the time of that student's graduation unless those revisions would extend the student’s graduation date. Requests for exceptions to such curriculum revisions should be filed in writing with the department chairperson.

Junior Standing Prerequisite

Many undergraduate courses offered in the Department of Management and Marketing numbered 300 and above have a junior standing prerequisite. For purposes of this prerequisite, junior standing is defined as the completion of 55 semester hours applicable to the student's degree program.

Admission to Management, Marketing or International Business Programs

Students already admitted to the Kelce College of Business wishing to transfer their major to management, marketing or international business must have a 2.25 grade point average on all hours attempted at that time.

Bachelor of Business Administration Degree with a Major in Management

Students seeking the Bachelor of Business Administration (BBA) degree with a major in management must complete the following curriculum. At least 24 semester hours of required upper division business courses must be taken at Pittsburg State University.
Due to the growth of multi-national corporations and the increased interest in international trade, students preparing for careers in business are encouraged to consider foreign language courses when selecting electives in the area of the humanities.

**Basic Skills (15 hours)**

**General Education Electives (38-42 hours)**

**Kelce College Core (39 hours)**

**Major in Management (21 hours)**

IB 330: International Business ......................................................... 3  
or IB 340: International Marketing .................................................... 3  
MGT 520: Quality Management ....................................................... 3  
MGT 530: Advanced Organizational Behavior ..................................... 3  
MGT 540: Human Resources Management ....................................... 3

**Two courses selected from:**

ACCTG 422: Internal Auditing ......................................................... 3  
ACCTG 625: Fraud Examination ....................................................... 3  
COMM 450: Small Group Communication ....................................... 3  
COMM 629: Theories of Human Communication ............................... 3  
COMM 755: Organizational Communication ..................................... 3  
ECON 465: Collective Bargaining ..................................................... 3  
ECON 468: Labor Economics ............................................................ 3  
EST 393: Introduction to Industrial Safety ......................................... 3  
HRD 596: Introduction to Human Resource Development .................. 3  
PSYCH 575: Industrial and Organizational Psychology ..................... 3

- One elective course selected from Kelce upper division courses (3 hours)

General Electives (electives either in Kelce College or outside Kelce) (4-11 hours)

Total minimum hours required for the degree (124 hours)

**Bachelor of Business Administration Degree with a Major in International Business**

Students seeking the Bachelor of Business Administration (BBA) degree with a major in marketing must complete the following curriculum. At least 24 semester hours of required upper division business courses must be taken at Pittsburg State University.

Due to the growth of multi-national corporations and the increased interest in international trade, students preparing for careers in business are encouraged to consider foreign language courses when selecting electives in the area of the humanities.

**Basic Skills (15 hours)**

**General Education Electives (38-42 hours)**

**Kelce College Core (39 hours)**

**Major in Marketing (21 hours)**

MKTG 510: Consumer Behavior ...................................................... 3  
MKTG 520: Marketing Research ....................................................... 3  
IB 340: International Marketing ...................................................... 3  
or IB 330: International Business ...................................................... 3  
MKTG 680: Applied Marketing Management .................................... 3

**Two courses selected from:**

MKTG 430: Retail and Channels Management .................................. 3  
MKTG 440: Advertising Management ............................................... 3  
MKTG 450: Personal Selling and Sales Management ......................... 3  
GMKT 532: Marketing Channel Management .................................... 3  
MKTG 610: Topics in Marketing (___) .............................................. 1-3

- One elective course selected from Kelce upper division courses (3 hours)

General Electives (electives either in Kelce College or outside Kelce) (4-11 hours)

Total minimum hours required for the degree (124 hours)

**Bachelor of Business Administration Degree with a Major in International Business**

The goal of the International Business major is to provide high-quality, in-depth education in international affairs, to cultivate foreign language and inter-cultural communications skills, to provide opportunities for study abroad, to enhance students’ vocational skills in an increasingly interconnected world, and to provide an intellectual climate that cultivates curiosity, tolerance and an eagerness to learn about the world.

**Basic Skills (15 hours)**

**General Education Electives (38-42 hours)**

**Kelce College Core (39 hours)**

**Major in International Business (18 hours)**

IB 330: International Business ...................................................... 3  
IB 340: International Marketing ...................................................... 3  
IB 530: Cross Cultural Analysis ...................................................... 3  
IB 630: Special Topics (International Experience - International Business) ...................................................... 1-3

**Two courses selected from related electives:**

IB 520: Emerging Markets ........................................................... 3  
COMM 601: Intercultural Communication ....................................... 3  
GEOG 507: Geography of the Global Economy ............................... 3  
POLS 530: International Relations ................................................. 3
POLS 630: International Political Economy .......................... 3
IB 630 Special Topics (International Experience - International Business)- A number of experiences may meet this requirement (e.g. study abroad and so forth). All International Experiences must be approved in advance by the International Business Major advisor.

General electives to meet 124 hour minimum requirement (0-1 hours)

Total hours for Bachelor of Business Administration Degree with a Major in International Business (124-128 hours)

**Minor in Business Administration**

Students with a major in other colleges or departments may wish to minor in business. The minor in business administration may be used to satisfy the minor requirement for the Bachelor of Arts degree. It may also be used to satisfy the minor requirement for several majors under the Bachelor of Science degree. The Department of Management and Marketing welcomes students from those areas.

The minor in business administration may not be applied to the Bachelor of Business Administration degree.

**Minor in Business Administration**

- Accounting (6 hours)*

  ECON 200: Principles of Microeconomics .............................................. 3
  FIN 326: Business Finance .................................................................. 3
  MGT 330: Management and Organizational Behavior .......................... 3
  MKTG 330: Principles of Marketing ................................................ ...... 3
  MGMKT 444: Legal and Social Environment of Business ........................ 3

* Prerequisite for Accounting and ECON 200: sophomore standing

** Prerequisites for FIN 326: ECON 200 Principles of Microeconomics, ACCTG 202 Managerial Accounting and junior standing.

***Prerequisite for MGT 330, MKTG 330, MGMKT 444: junior standing.

**International Business Minor (For College of Business Majors)**

- Introduction to a foreign language or equivalent** (3 hours)

  IB 330: International Business ............................................................ 3
  IB 530: Cross Cultural Analysis ............................................................ 3
  or IB 340: International Marketing ...................................................... 3
  IB 630: Special Topics (International Experience - International Business).................................................................................. 1-3

**Two courses selected from related electives:**

  IB 520: Emerging Markets .................................................................. 3
  COMM 601: Intercultural Communication ............................................ 3
  ECON 440: International Economics ................................................... 3
  GEOG 507: Geography of the Global Economy .................................... 3
  POLS 530: International Relations ....................................................... 3
  POLS 630: International Political Economy ......................................... 3

IB 630 Special Topics (International Experience - International Business)- A number of experiences may meet this requirement (e.g. study abroad and so forth). All International Experiences must be approved in advance by the International Business Major advisor.

** Students already proficient in a foreign language may take a departmentally approved language proficiency test. The students will be required to pay for any applicable costs of the exam. A passing score on the test, as deemed appropriate by the international business advisor, will be required. Students are not given Pittsburg State University credit for passing the proficiency exam, nor do they earn Pittsburg State University credit hours for passing the exam. Students may be required to take approved electives in lieu of the 3 hour foreign language requirement if a passing grade on the exam is achieved. The International Business adviser, or departmental representative, will determine substitution courses. In all cases, students must earn the minimum number of credit hours required for the minor.
International Business Minor (For Non-Business Majors)

ECON 201: Principles of Macroeconomics ................................. 3
MGT 330: Management and Organizational Behavior .................. 3
MKTG 330: Principles of Marketing ............................................. 3
IB 330: International Business .................................................... 3
MGMT 444: Legal and Social Environment of Business ............... 3
IB 630: Special Topics (International Experience - International Business) ...................................................... 1-3

- Introduction to a foreign language or equivalent (3 hours)**

IB 630 Special Topics (International Experience - International Business): A number of experiences may meet this requirement (e.g. study abroad and so forth). All International Experiences must be approved in advance by the International Business Major advisor.

** Students already proficient in a foreign language may take a departmentally approved language proficiency test. The students will be required to pay for any applicable costs of the exam. A passing score on Pittsburg State University test, as deemed appropriate by the International business advisor, will be required. Students are not given Pittsburg State University credit for passing the proficiency exam, nor do they earn Pittsburg State University credit hours for passing the exam. Students may be required to take approved electives in lieu of the 3 hour foreign language requirement if a passing grade on the exam is achieved. The International Business adviser, or departmental representative, will determine substitution courses. In all cases, students must earn the minimum number of credit hours required for the minor.

Minor in Marketing

Students with a major in other colleges or departments may wish to minor in marketing. The minor in marketing may be used to satisfy the minor requirement for the Bachelor of Arts degree. It may also be used to satisfy the minor requirement for several majors under the Bachelor of Science degree. The Department of Management and Marketing welcomes students from those areas.

The minor in marketing is available to all Bachelor of Business Administration degree seekers except marketing majors.

Minor in Marketing

MGT 330: Management and Organizational Behavior ............... 3
MKTG 330: Principles of Marketing ............................................. 3
MGMT 444: Legal and Social Environment of Business ............... 3
MKTG 510: Consumer Behavior ................................................. 3

Choose three of the following seven electives

MKTG 430: Retail and Channels Management ......................... 3
MKTG 440: Advertising Management ........................................... 3
MKTG 450: Personal Selling and Sales Management ................. 3
MGMT 532: Marketing Channel Management ............................. 3
MKTG 610: Topics in Marketing (___) ................................... 1-3
IB 340: International Marketing ................................................. 3

Master of Business Administration

The Master of Business Administration (MBA) degree is a graduate professional program which emphasizes breadth of preparation in the various competencies required of business executives. Depth is provided through the selection of a limited concentration in accounting and general administration. The MBA program is ideally suited for individuals whose undergraduate degrees were in areas other than business, as well as for students with the degree in business. Additional information regarding admission and degree requirements may be obtained from the MBA program director.

MBA Program Mission

The mission of the Kelce College of Business' Masters in Business Administration (MBA) Program is to support the University and College missions by providing quality graduate business education. The program serves students, employers, and citizens in southeast Kansas and the surrounding Tri-state region, as well as a number of international constituencies.

Admissions

1. Applicants must be first admitted to the Graduate School of Pittsburg State University. The process is initiated by completing an application for admission. The application link may be found at https://go.pittstate.edu/grad/application. Applications and official transcripts from domestic students should be submitted to the graduate office no later than July 15 for the Fall semester, December 15 for the Spring semester, and May 1 for the Summer session. The deadline for these materials from international applicants is May 1 for Fall semester and October 15 for the Spring semester.
2. Applicants are encouraged to visit the MBA webpage for admission requirements and updates: [http://www.pittstate.edu/college/business/mba-program/](http://www.pittstate.edu/college/business/mba-program/).

3. Admission decisions are made by the MBA Program Committee.

4. Admission into the Kelce MBA Program may take one of four tracks: traditional, recent Kelce graduate, advanced degree, or executive. Standardized testing requirements vary based on the admission track. In all cases, GMAT/GRE waiver decisions are made by the MBA Program Committee.

5. Admission decisions will be classified as either "Fully Admitted" or "Denied Admission". There is no provisional or conditional admission to the MBA program.

6. International applicants are required to submit official documents to an outside credentialing agency. Information about this requirement may be found on the MBA Admissions webpage [http://www.pittstate.edu/college/business/mba-program/](http://www.pittstate.edu/college/business/mba-program/). Other applicants may be required to submit documents to an outside agency, as advised by the MBA Director.

**A student may apply via one of the following admissions tracks:**

**A. Traditional:** This track is designed for applicants who have a business or non-business undergraduate degree from an accredited university. International applicants are required to submit their undergraduate documents for a course-by-course evaluation to a credentialing agency such as World Education Services (WES), Educational Credentials Evaluators (ECE), or National Association of State Boards of Accountancy (NASBA) (for accounting applicants). A GMAT score (or GRE equivalent) of 450 or higher is also required. Applicants must meet a minimum of 1050 points based on the formula: 200 times overall undergraduate GPA plus the GMAT (of 450 or higher).

**B. Advanced Degree:** Master's or doctoral degree holders from other accredited universities may apply without the GMAT/GRE requirement. Applicants must submit an essay discussing their backgrounds and the relevance of the MBA to their career goals, a current resume, and two letters of reference. These materials must be submitted to mba@pittstate.edu.

**C. Executive:** Qualified business professionals may apply without the GMAT/GRE requirement. Applicants must provide documented evidence of at least five years of significant managerial experience as well as an accredited undergraduate degree. In addition, applicants must submit an essay discussing their professional experiences and the relevance of the MBA to their career goals, a current resume and two letters of reference. These materials must be submitted to mba@pittstate.edu.

**D. Recent PSU Graduate:** The GMAT/GRE requirement is waived for recent business graduates of the PSU Kelce College of Business subject to the following conditions: the applicant must have an overall undergraduate GPA of 3.25 and the degree must have been earned within the last two years prior to the admission decision. The GMAT/GRE waiver also applies to recent non-Kelce graduates with an undergraduate GPA of 3.25 or higher and a minor in business.

7. Unofficial academic documents are not accepted for MBA admission decisions.

8. Applicant credentials, including academic records and professional experience materials described previously, will be subjected to verification of authenticity. Evidence of falsified or misleading documents will result in immediate denial or revocation of admission.

9. Upon admission, candidates who lack the necessary academic business background will be required to enroll in up to 15 hours of pre-requisite courses. The pre-requisite courses may be found in the PSU Catalog and on the MBA webpage. Specific course requirements for each student will be determined by the MBA Director in consultation with the MBA Program Committee.

**Senior/Graduate Admissions**

Seniors at Pittsburg State University may apply for admission to the MBA program. They may take graduate work and receive graduate credit if they are in their final semester of undergraduate work. In addition, the following requirements must be met: (a) overall grade point average (GPA) of at least 3.25; (b) a minimum GMAT score of 400. A student whose native language is not English must submit a minimum TOEFL score of 550 on the paper-based exam, 213 on the computer-based exam, 79 on the internet based exam, or be completing a baccalaureate degree at Pittsburg State University.
The planned academic program for senior-graduate semester will not exceed sixteen semester hours including the graduate work. Upon application to the Dean of Graduate and Continuing Studies, the student may be approved as a senior-graduate student and may register for no more than six hours of graduate work. The specific courses available for senior-graduate status are MGMKT 839 (Marketing Strategy) and FIN 836 (Financial Strategy). If the senior-graduate does not complete the undergraduate degree in the semester in which they are enrolling in courses for graduate credit, graduate credit will not be awarded for the courses taken.

**Academic Actions**

An MBA student must maintain a B average (at least a 3.00 GPA) in all foundation courses taken at Pittsburg State University after admission to the MBA Program. An MBA student is issued a warning letter upon receipt of a grade of "C" or lower. An MBA student is placed on probation upon receipt of a second grade of "C" or lower. An MBA student is issued a letter indicating that his or her graduate status is in jeopardy at any point when his or her cumulative grade point average in graduate work falls below 3.00.

**Curriculum Requirements**

The course requirements for the MBA degree consist of a minimum of 34 hours and a maximum of 64 hours. The 15 semester hours of foundation courses may be waived if appropriate undergraduate courses have been taken. None of the decision and strategy, integrating or elective courses may be waived.

A minimum of 31 hours beyond the foundation courses must be numbered 800 and above. No more than three hours of graduate work may be taken in courses numbered between 500 and 699.

Additional information regarding admission and degree requirements may be obtained from the MBA program director.

The following courses must be taken unless specifically waived by the MBA program director based on previous academic work. The equivalency of courses presented as waivers to corresponding courses at Pittsburg State University will be determined on an individual basis by the MBA program director.

**General Administrative Emphasis (64 hours)**

**Prerequisite Courses (15 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 310: Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 326: Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGT 330: Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>ECON 805: Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ACCTG 811: Seminar in Accounting</td>
<td>1-3</td>
</tr>
</tbody>
</table>

or 9 hours of economics including 3 hours of intermediate microeconomics

ACCTG 811 should be taken for 3 hours and subject should be Accounting for MBA's.

**Decision and Strategy Courses (22 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMKT 801: MBA Experience</td>
<td>1</td>
</tr>
<tr>
<td>ACCTG 814: Management Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 826: Quantitative Business Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 828: Leadership and Behavioral Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 830: Business, Government and Society</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 831: International Business</td>
<td>3</td>
</tr>
<tr>
<td>FIN 836: Financial Strategy</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 839: Marketing Strategy</td>
<td>3</td>
</tr>
</tbody>
</table>

**Integrating Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMKT 895: Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Approved Electives (choose any three courses)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 801: Topics: (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ETECH 804: Quality: Management and Control</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 816: Group Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>ACCTG 819: Cost Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 821: Topics in Business (___)</td>
<td>1-3</td>
</tr>
<tr>
<td>ECON 827: Seminar in Economics (___)</td>
<td>3</td>
</tr>
<tr>
<td>ETECH 831: Value Engineering</td>
<td>3</td>
</tr>
<tr>
<td>TE 841: Production Technology: Manufacturing (___)</td>
<td>3</td>
</tr>
<tr>
<td>GRT 888: Product Design and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

- One elective may be taken at the 500-600 level subject to Advisor approval.

If CIS 801 or MGMKT 821 is chosen, the course must be taken for three hours.

**International Business Emphasis (73 hours)**

**Prerequisite Courses (24 hours)**

- Foreign Language or Equivalent (9 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 310: Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>FIN 326: Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGT 330: Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>ECON 805: Economic Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>
ACCTG 811: Seminar in Accounting (___) ........................................... 1-3
or 9 hours of economics including 3 hours of intermediate microeconomics

ACCTG 811 should be taken for 3 hours and subject should be Accounting for MBA's.

Decision and Strategy Courses (25 hours)

MGMKT 801: MBA Experience .......................................................... 1
ACCTG 814: Management Control Systems .................................. 3
MGMKT 821: Topics in Business (___) ........................................... 1-3
MGMKT 826: Quantitative Business Analysis ............................... 3
MGMKT 828: Leadership and Behavioral Management .............. 3
MGMKT 830: Business, Government and Society ....................... 3
MGMKT 831: International Business ............................................. 3
FIN 836: Financial Strategy ......................................................... 3
MGMKT 839: Marketing Strategy .................................................. 3

MGMKT 821 Topics in Business (International Experience) - A number of experiences may meet this requirement (e.g. study abroad and so forth). All international experiences must be approved in advance by the International Business Emphasis advisor. This course must be taken for three hours.

Integrating Course

MGMKT 895: Strategic Management ............................................. 3

Approved Electives (Choose any two courses) (6 hours)

IB 340: International Marketing ................................................... 3
IB 530: Cross Cultural Analysis ..................................................... 3
POLS 630: International Political Economy ................................. 3
SOC 676: Global Sociology .......................................................... 3
CIS 801: Topics: (___) ................................................................ 1-3
ACCTG 811: Seminar in Accounting (___) ............................... 1-3
MGMKT 821: Topics in Business (___) ........................................... 1-3
ECON 827: Seminar in Economics (___) ..................................... 3

- One elective may be taken at the 500-600 level subject to advisor approval.

If ACCTG 811, CIS 801 or MGMKT 821 is chosen, the course must be taken for three hours.

ACCTG 811 Seminar in Accounting must be taken as International Accounting
CIS 801 Topics must be taken as Global Information MGT
ECON 827 Seminar in Economics must be taken as Seminar in International Economics or Finance
MGMKT 821 Topics in Business must be taken as International

Master of Business Administration Degree with a Concentration in Accounting

Concentration in Accounting

The Master of Business Administration (MBA) degree is a graduate professional program which emphasizes breadth of preparation in the various competencies required of business executives. Depth is provided through the selection of a limited concentration in accounting or general administration. The MBA program is ideally suited for individuals whose undergraduate degree was in business as well as for students whose undergraduate major was in mathematics, technology, engineering, nursing, social work, natural science, or one of the physical sciences. Students whose undergraduate degree includes an accounting major may, through careful planning, complete the Bachelor of Business Administration degree and the MBA degree with a concentration in accounting in five years.

MBA Program Mission

The mission of the Kelce College of Business' Masters of Business Administration (MBA) Program is to support the University and College missions by providing quality graduate business education. The program serves students, employers, and citizens in southeast Kansas and the surrounding tri-states region, as well as a number of international constituencies.

Admissions

Admission to the MBA program requires the following:

1. Applicants must be first admitted to the Graduate School of Pittsburg State University. The process is initiated by completing an application for admission. The application link may be found at https://go.pittstate.edu/grad/application. Applications and official transcripts from domestic students should be submitted to the graduate office no later than July 15 for the Fall semester, December 15 for the Spring semester, and May 1 for the Summer session. The deadline for these materials from international applicants is May 1 for Fall semester and October 15 for the Spring semester.

2. Applicants are encouraged to visit the MBA webpage for admission requirements and updates: http://www.pittstate.edu/college/business/mba-program/.
3. Admission decisions are made by the MBA Program Committee.

4. Admission into the Kelce MBA Program may take one of four tracks: traditional, recent Kelce graduate, advanced degree, or executive. Standardized testing requirements vary based on the admission track. In all cases, GMAT/GRE waiver decisions are made by the MBA Program Committee.

5. Admission decisions will be classified as either "Fully Admitted" or "Denied Admission". There is no provisional or conditional admission to the MBA program.

6. International applicants are required to submit official documents to an outside credentialing agency. Information about this requirement may be found on the MBA Admissions webpage http://www.pittstate.edu/college/business/mba-program/. Other applicants may be required to submit documents to an outside agency, as advised by the MBA Director.

**Admission Tracks**

A. **Traditional:** This track is for applicants who possess an undergraduate degree in either a business or a non-business field from an accredited university and who do not qualify for another admission track. This track is also appropriate for Kelce College graduates who earned their degrees more than two years prior to the admission application, and/or do not meet the 3.25 GPA requirement under the recent Kelce graduate track or experience requirements under the executive track. For these applicants, a GMAT score, or equivalent GRE score, is required prior to the admission decision. The absolute minimum acceptable GMAT score is 450, or GRE equivalent. For admission, applicants must meet a minimum of 1,050 points based on the following formula: 200 times the overall undergraduate grade point average plus the GMAT score (the GRE equivalent must meet, or exceed, this targeted GMAT).

B. **Recent Kelce Graduate:** The GMAT/GRE requirement will be waived for recent business graduates of the Kelce College of Business subject to the following: the applicant must have an overall grade point average of 3.25 upon graduation with a BBA degree and the degree must have been earned within the last two years prior to the admission decision.

C. **Advanced Degree:** Master's or doctoral degree holders from other fields who graduated from accredited universities may be eligible to apply without the GMAT/GRE requirement. These applicants must submit an essay that details what the candidate seeks to gain from the attainment of the MBA degree from the Kelce College of Business. A current resume and two letters of recommendation are required under this track. Admission decisions under this track are selective and competitive.

D. **Executive:** Qualified business professionals may be eligible to apply without a GMAT/GRE score. The applicant must provide documented evidence of at least five years of significant managerial experience and an accredited undergraduate degree. The applicant must also write an essay which discusses his/her professional experiences and accomplishments as well as what the applicant seeks to gain from the attainment of the MBA degree from the Kelce College of Business. Finally, a current resume along with two letters of recommendation are required. Admission decisions under the executive track are selective and competitive.

7. Unofficial academic documents are not accepted for MBA admission decisions.

8. Applicant credentials, including academic records and professional experience materials described previously, will be subjected to verification of authenticity. Evidence of falsified or misleading documents will result in immediate denial or revocation of admission.

9. Upon admission, candidates who lack the necessary academic business background will be required to enroll in up to 15 hours of pre-requisite courses. The pre-requisite courses may be found in the PSU Catalog and on the MBA webpage. Specific course requirements for each student will be determined by the MBA Director in consultation with the MBA Program Committee.

**Admission - Senior Graduate**

Seniors at Pittsburg State University may apply for admission to the MBA program. They may take graduate work and receive graduate credit if they are in their final semester of undergraduate work. In addition, the following requirements must be met: (a) overall grade point average (GPA) of at least 3.25; (b) minimum GMAT score of 400. A student whose native language is not English must submit a minimum TOEFL score of 550 on the paper-based exam or 213 on the computer-based exam or be completing a baccalaureate degree at Pittsburg State University.
The planned academic program for the senior-graduate semester will not exceed sixteen semester hours including the graduate work. Upon application to the Dean of Graduate and Continuing Studies, the student may be approved as a senior-graduate student and may register for no more than six hours of graduate work. The specific courses available for senior-graduate status are MGMKT 839 (Marketing Strategy) and FIN 836 (Financial Strategy). If the senior-graduate does not complete the undergraduate degree in the semester in which they are enrolling in courses for graduate credit, graduate credit will not be awarded for the courses taken.

**Academic Actions**

An MBA student must maintain a “B” average (at least a 3.00 GPA) in all foundation courses taken at Pittsburg State University after admission to the MBA Program. An MBA student is issued a warning letter upon receipt of a grade of "C" or lower. An MBA student is placed on probation upon receipt of a second grade of "C" or lower. An MBA student is issued a letter indicating that his or her graduate status is in jeopardy at any point when his or her cumulative grade point average in graduate work falls below 3.00.

**Curriculum Requirements**

The course requirements for the MBA degree consist of a minimum of 34 hours and a maximum of 82 hours. The 48 semester hours of foundation courses may be waived if appropriate undergraduate courses have been taken. None of the decision and strategy, integrating or elective courses may be waived.

A minimum of 31 hours beyond the foundation courses must be numbered 800 and above. No more than three hours of graduate work may be taken in courses numbered between 500 and 699.

Additional information regarding admission and degree requirements may be obtained from the MBA program director or from the chairperson of the Department of Accounting.

The following courses must be taken unless specifically waived by the MBA program director based on previous academic work. The equivalency of courses presented as waivers to corresponding courses at Pittsburg State University will be determined on an individual basis by the MBA program director.

### Foundation Courses (48 hours)

- ACCTG 201: Financial Accounting .......................................................... 3
- ACCTG 202: Managerial Accounting ......................................................... 3
- MGT 310: Business Statistics .................................................................. 3
- ACCTG 315: Intermediate Managerial Accounting .................................. 3
- FIN 326: Business Finance ...................................................................... 3
- MGT 330: Management and Organizational Behavior ............................ 3
- MKTG 330: Principles of Marketing ......................................................... 3
- ACCTG 420: Accounting Information Systems ....................................... 3
- ACCTG 422: Internal Auditing ................................................................. 3
- MGMKT 444: Legal and Social Environment of Business ....................... 3
- MGT 510: Operations Management ......................................................... 3
- ACCTG 585: Accounting Law .................................................................. 3
- ECON 805: Economic Analysis ............................................................... 3

or 9 hours of economics including an upper division economics course (3 hours)

### Decision and Strategy Courses (22 hours)

- MGMKT 801: MBA Experience ................................................................. 1
- ACCTG 814: Management Control Systems ............................................. 3
- MGMKT 826: Quantitative Business Analysis .......................................... 3
- MGMKT 828: Leadership and Behavioral Management ............................ 3
- MGMKT 830: Business, Government and Society ................................... 3
- MGMKT 831: International Business ....................................................... 3
- FIN 836: Financial Strategy .................................................................... 3
- MGMKT 839: Marketing Strategy ............................................................ 3

### Integrating Course

- MGMKT 895: Strategic Management ...................................................... 3

### Approved Electives* (choose any three courses)

- ACCTG 805: Internship in Accounting .................................................... 1-3
- ACCTG 811: Seminar in Accounting (___) ............................................... 1-3
- ACCTG 812: Tax Research ..................................................................... 3
- ACCTG 813: Financial Statement Analysis ............................................. 3
- ACCTG 815: Financial Statement Auditing ............................................. 3
- ACCTG 819: Cost Management ............................................................... 3

If ACCTG 805 or ACCTG 811 is chosen, the course must be taken for three hours.

*All electives must be taken from the Department of Accounting and approved by the MBA Director. Candidates wishing to sit for the CPA examination should consult with the Chairperson of the Accounting Department with respect to curriculum requirements.

Total Degree Requirement hours (82 hours)

215
College of Education

Dean: James E. Truelove
Room: 115 Hughes Hall
Telephone: 620-235-4518
Fax: 620-235-4520
Email: edsc@pittstate.edu

Departments

Health, Human Performance and Recreation
Psychology and Counseling
Teaching and Leadership

Mission, Programs, and Accreditation

The mission of the College of Education is to prepare competent, committed, caring professionals, provide service to the various communities of which we are a part, and expand the body of knowledge through research and dissemination activities.

The programs of the College are designed (1) to provide professional curricula for the preparation of teachers, administrators, various school services, psychologists, counselors, and recreationists; (2) to offer undergraduate work leading to the baccalaureate degree with majors in elementary education K-6, early childhood unified, exercise science, physical education, psychology, and recreation; (3) to offer graduate work for elementary and secondary teachers; school and college service personnel; administrators; psychologists; counselors; and recreational therapists. The College of Education is also organized to provide professional services to schools and to other educational and social agencies. An important role is to encourage and to conduct educational research.

Pittsburg State University is a member of the American Association of Colleges for Teacher Education, and both undergraduate and graduate preparation programs for teaching and school service positions are accredited by the Council for the Accreditation of Educator Preparation. The Clinical Mental Health Counseling Program is accredited by the Council for Accreditation of Counseling and Related Educational Programs. The Clinical Psychology program is accredited by the Masters of Psychology Accreditation Council.

Baccalaureate Degrees

Curricula are offered leading to the Bachelor of Arts, the Bachelor of Science, and the Bachelor of Science in Education degrees. The following baccalaureate degrees are offered through the College and the respective departments:

Bachelor of Arts Degree

Psychology

Bachelor of Science Degree

Exercise Science

Psychology

Recreation

Bachelor of Science in Education Degree

Elementary Education (K-6)

Early Childhood Unified (ECU) Birth Through Third Grade Licensure

Physical Education

Graduate Degrees

The Departments within the College offer the following graduate degrees, majors and emphases:

Master of Arts Degree

Teaching (Secondary or Special Education Emphases)

Master of Science Degree

Counseling (Clinical Mental Health or School Emphases)

Education (School Health Emphasis)

Educational Leadership

Educational Technology (Technology Integration Specialist or Library Media Licensure Emphases)

Health, Human Performance and Recreation

Psychology (General or Clinical)

Reading (Reading Specialist-Licensure or Classroom Reading Teacher Emphases)

Special Education Teaching (High Incidence/Low Incidence Special Education K-6, 6-12 Emphasis)

Teaching (Elementary, English for Speakers of Other Languages or Secondary Emphases)

Teaching (Environmental Education Emphasis)
Admission to Teacher Education

All students who wish to prepare to teach and to meet licensure requirements should obtain a Teacher Education Handbook from the Office of Teacher Education, 110 Hughes Hall. This handbook guides students in the necessary admission requirements to teacher education and the professional semester. The application for admission to teacher education should be made during the first semester of the sophomore year, or in the case of community college transfers, early in the first semester of attendance at Pittsburg State University. A student must file an application for admission to teacher education before he/she can receive credit for pre-professional laboratory experiences counting toward a Bachelor of Science in Education degree at Pittsburg State University. Application forms for admission to teacher education may be obtained from the Office of Teacher Education, 110 Hughes Hall.

Requirements For Admission For Elementary Education K-6 Majors and Early Childhood Unified (ECU) Birth Through Third Grade Licensure

1. Complete the Admission Application.
2. Be recommended for Teacher Education by advisor, Explorations in Education or Transitions instructor and two college instructors.
3. Meet the basic skills requirement with a minimum ACT composite score of 22*

   *Other basic skills options may be available by petition if the submitted ACT score does not meet the stated minimum.
4. Complete EDUC 261 Explorations in Education with a minimum grade of “C” and a positive recommendation for continuance from the cooperating school-based teacher.
5. Complete UGS 101 Transitions (for students transferring credit for EDUC 261).
7. Cumulative GPA of 2.80.
8. Complete a statement of disclosure and background check.
9. Complete initial electronic portfolio requirements.

Requirements for Admission For Secondary/PK-12 Education Majors

1. Complete the Admission Application.
2. Be recommended for Teacher Education by advisor, Explorations in Education or Transitions instructor and two college instructors.
3. Meet the basic skills requirement with a minimum ACT composite score of 22*

   *Other basic skills options may be available by petition if the submitted ACT score does not meet the stated minimum.
4. Complete EDUC 261 Explorations in Education with a minimum grade of “C” and a positive recommendation for continuance from the cooperating school-based teacher.
5. Complete UGS 101 Transitions (for students transferring credit for EDUC 261).
6. Earn a “C” or better in ENGL 101 English Composition, ENGL 299 Introduction to Research Writing, COMM 207 Speech Communication, and three credit hours of mathematics numbered MATH 110 or higher.
7. Cumulative GPA of 2.50.
8. Complete a statement of disclosure and background check.
9. Complete initial electronic portfolio requirements.

Before applying for admission to teacher education, the student and advisor should prepare a tentative plan of the full scope of the student's remaining program. The plan should ensure that all courses and requirements for admission to teacher education are met prior to the final year of study. Otherwise the student cannot enroll in restricted courses.

Students must be admitted to teacher education before they can enroll in the following courses:

Elementary Education (K-6)

EDUC 361 Elementary School Mathematics (3 hours)
EDUC 363 Elementary School Social Studies (3 hours)
EDUC 367 Intermediate Reading and Language Arts with Practicum (4 hours)
EDUC 464 Foundations of Measurement and Evaluation (2 hours)
Early Childhood Unified (ECU) Birth through Third Grade
EDUC 361 Elementary School Mathematics (3 hours)
EDUC 366 Primary Reading and Language Arts with Practicum (4 hours)
EDUC 464 Foundations of Measurement and Evaluation (2 hours)
PSYCH 357 Educational Psychology (3 hours)
SPED 550 Methods, Primary Children with Disabilities (2 hours)

Secondary/PK-12 Majors
(____) 479 Techniques for Teaching (____) (3 hours)
EDUC 520 Methods and Materials for Academic Literacy (3 hours)
PSYCH 357 Educational Psychology (3 hours)

Teacher candidates must be admitted to teacher education prior to application for the professional semester.
At least six hours of resident credit at Pittsburg State University must have been completed before admission to the professional semester.

Basic Skills Requirement

Admission to the Teacher Education Program at Pittsburg State University requires the submission of an ACT composite score of 22. If the ACT score does not meet this minimum requirement, a student may petition CARTE for the right to meet the basic skills requirement using one of the following options:
Core: Reading = 156, Writing = 162, Mathematics = 142
College-Base scores: Reading, Writing and Mathematics = 235 or higher on each section.

Note: For elementary education (K-6) majors, enrollment in courses with the EDUC prefix will not be allowed, with the exception of EDUC 261 Explorations in Education, until the Basic Skills requirement has been met.

Scholastic Achievement in Common Core

For admission to teacher education, the Elementary Education (K-6) teacher candidate must have a minimum cumulative grade point average of 2.80 on a common core of general education courses underlined below.

General Education Curriculum for Elementary Education (K-6)

31-34 total hours - Required GPA 2.80

Basic Skills (15 hours)

COMM 207 Speech Communication* (3 hours)
ENGL 101 English Composition* (3 hours)
ENGL 190 Honors English Composition* or
ENGL 299 Introduction to Research Writing* (3 hours)
MATH 204 Mathematics for Education I* (3 hours)
MATH 304 Mathematics for Education II (3 hours)

*Must have a “C” or better in each of these Basic Skills courses.

General Education Electives (36-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)

BIOL 113 Environmental Life Science (4 hours)
BIOL 111 and 112 General Biology and Laboratory (5 hours)

Physical Sciences (Select one)

PHYS 171 and 172 Physical Science and Laboratory (4 hours)
CHEM 105 and 106 Introductory Chemistry and Laboratory (4 hours)

Social Studies ** (3 hours)

SOC 100 Introduction to Sociology (3 hours)
Political Studies** (3 hours)
  POLS 101  U.S. Politics (3 hours)
**The higher course grade of SOC 100 or POLS 101 will be used in calculating the 2.80 content core GPA.

Producing and Consuming (6 hours)
  Economy (Select One) (3 hours)
    ECON 191  Issues in Today’s Economy (3 hours)
    FCS 230  Consumer Education and Personal Finance (3 hours)
  Technology (3 hours)
    EDTH 330  Technology for the Classroom (3 hours)

Fine Arts and Aesthetic Studies (3 hours)
  ART 311  Art Education (3 hours)

Cultural Studies  (Select one) (3 hours)
  GEOG 106  World Regional Geography (3 hours)
  GEOG 300  Elements of Geography (3 hours)

Health and Well Being (4-6 hours)
  Psychological
    PSYCH 155  General Psychology (3 hours)
  Physical (Select one)
    FCS 203  Nutrition and Health (3 hours)
    FCS 301  Nutrition (3 hours)
    HHP 150  Lifetime Fitness Concepts (1 hour)
    NURS 303  Introduction to Public Health (3 hours)

Human Heritage (6 hours)
  History (Select One)
    HIST 101  World History to 1500 (3 hours)
    HIST 102  World History from 1500 (3 hours)
    HIST 201  American History to 1865 (3 hours)
    HIST 202  American History from 1865 (3 hours)

  Literature (Select One)
    ENGL 113  General Literature (3 hours)
    ENGL 114  General Literature (Genre) (3 hours)
    ENGL 116  General Literature (Theme) (3 hours)

  TOTAL (51-54 hours)

For admission to teacher education, the Early Childhood Unified (ECU) Birth Through Third Grade Licensure must have a minimum cumulative grade point average of 2.80 on a common core of general education courses underlined below.

General Education Curriculum for Early Childhood Unified (ECU) Birth Through Third Grade Licensure

33-36 total hours - Required GPA 2.80

Basic Skills (15 hours)
  COMM 207  Speech Communication* (3 hours)
  ENGL 101  English Composition* (3 hours)
  ENGL 190  Honors English Composition* or
  ENGL 299  Introduction to Research Writing* (3 hours)
  MATH 204  Mathematics for Education I* (3 hours)
  MATH 304  Mathematics for Education II (3 hours)

*Must have a “C” or better in each of these Basic Skills courses.

General Education Electives (35-39 hours)

Sciences (8-9 hours)
  Natural Sciences (Select one)
    BIOL 113  Environmental Life Science (4 hours)
    BIOL 111 and 112  General Biology and Laboratory (5 hours)

  Physical Sciences (Select one)
    PHYS 171 and 172  Physical Science and Laboratory (4 hours)
    CHEM 105 and 106  Introductory Chemistry and Laboratory (4 hours)

  Social Studies  ** (3 hours)
SOC 100 Introduction to Sociology (3 hours)
Political Studies** (3 hours)

POLS 101 U.S. Politics (3 hours)

**The higher course grade of SOC 100 or POLS 101 will be used in calculating the 2.80 content core GPA.

Producing and Consuming (6 hours)

Economy (Select One) (3 hours)

ECON 191 Issues in Today’s Economy (3 hours)
FCS 230 Consumer Education and Personal Finance (3 hours)

Technology (3 hours)

EDTH 330 Technology for the Classroom (3 hours)

Fine Arts and Aesthetic Studies (2-3 hours)

Any Fine Arts course listed for the general education requirements (2-3 hours)

Cultural Studies (Select one) (3 hours)

GEOG 106 World Regional Geography (3 hours)
GEOG 300 Elements of Geography (3 hours)

Health and Well Being (4-6 hours)

Psychological

PSYCH 155 General Psychology (3 hours)

Physical (Select one)

FCS 203 Nutrition and Health (3 hours)
FCS 301 Nutrition (3 hours)
HHP 150 Lifetime Fitness Concepts (1 hours)
NURS 303 Introduction to Public Health (3 hours)

Human Heritage (6 hours)

History (Select One)

HIST 101 World History to 1500 (3 hours)
HIST 102 World History from 1500 (3 hours)
HIST 201 American History to 1865 (3 hours)
HIST 202 American History from 1865 (3 hours)

Literature (Select One)

ENGL 113 General Literature (3 hours)
ENGL 114 General Literature (Genre) (3 hours)
ENGL 116 General Literature (Theme) (3 hours)

TOTAL (50-54 hours)

Secondary/K-12 Majors

Undergraduate students preparing to teach secondary or PreK-12 must meet University general education requirements and earn a minimum grade of “C” in ENGL 101, 190 or 299, COMM 207, and three credit hours of mathematics (College Algebra or above).

Courses meeting general education requirements may also satisfy major, minor, emphasis or program requirements.

Refer to curriculum guides in the department of your major for additional course requirements.

Basic Skills (12-13 hours)

COMM 207 Speech Communication* (3 hours)
ENGL 101 English Composition* (3 hours)
ENGL 190 Honors English Composition* or
ENGL 299 Introduction to Research Writing* (3 hours)

Mathematics (Select one) (3-4 hours)

MATH 110 College Algebra with Review* (3 hours)
MATH 113 College Algebra* (3 hours)
MATH 126 Pre-Calculus* (4 hours)
MATH 133 Quantitative Reasoning* (3 hours)
MATH 143 Elementary Statistics* (3 hours)

*Must have a “C” or better in each of these Basic Skills courses.

General Education Electives (34-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)

BIOL 111 and 112 General Biology and Laboratory (5 hours)
BIOL 113  Environmental Life Science (4 hours)
BIOL 211  Principles of Biology I (4 hours)

**Physical Sciences** (Select one)

CHEM 105 and 106  Introductory Chemistry and Laboratory (4 hours)
CHEM 107 and 108 Chemistry for Life Sciences and Laboratory (4 hours)
PHYS 160 and 165  Physical Geology and Laboratory (4 hours)
PHYS 166 and 167  Meteorology and Laboratory (4 hours)
PHYS 171 and 172  Physical Science and Laboratory (4 hours)
PHYS 175 and 176  Descriptive Astronomy and Laboratory (4 hours)
PHYS 375 and 176  Solar System Astronomy and Laboratory (4 hours)

**Social Studies** (Select one) (3 hours)
SOC 100  Introduction to Sociology (3 hours)
WGS 200  Introduction to Women’s Studies (3 hours)

**Political Studies** (Select one) (3 hours)
POLS 101  U.S. Politics (3 hours)
POLS 103  Comparative Political Institutions (3 hours)

**Producing and Consuming** (Select one from two of the following three categories) (5-6 hours)

**Economy**
ECON 191  Issues in Today’s Economy (3 hours)
FCS 230  Consumer Education and Personal Finance (3 hours)

**Technology**
EET 247  Computer Programming for Electronic Systems (3 hours)
GT 190  Introduction to Technological Systems (2 hours)
GT 350  Technology and Civilization (3 hours)

EDTH 330  Technology for the Classroom (3 hours)
TE 551  Integrated Technology for Educators (3 hours)
TM 350  Societal Influence of Technology (3 hours)

**Business**
ACCTG 201  Financial Accounting (3 hours)
CIS 130  Computer Information Systems (3 hours)
MGT 101  Introduction to Business (3 hours)
MGT 105  Introduction to Entrepreneurship (3 hours)

**Fine Arts and Aesthetic Studies** (Select one) (2-3 hours)
ART 155  Printmaking and Paper Arts (3 hours)
ART 178  Introduction to the Visual Arts (3 hours)
ART 188  The Designed World (3 hours)
ART 217  Crafts I (3 hours)
ART 222  Jewelry Design I (3 hours)
ART 233  Drawing I (3 hours)
ART 244  Ceramics I (3 hours)
ART 266  Sculpture I (3 hours)
ART 277  Painting I (3 hours)
ART 288  Introduction to Art History I (3 hours)
ART 289  Introduction to Art History II (3 hours)
ART 311  Art Education (3 hours)
ART 351  Printmaking, Papermaking, Bookarts and the Letterpress (3 hours)
ART 430  Automotive: Art and Design (3 hours)

**COMM**
COMM 105  Performance Appreciation (3 hours)
COMM 205  Performance Studies (3 hours)
COMM 295  Theatre History (___) (3 hours)
ENGL 250  Introduction to Creative Writing (3 hours)
HHP 151  Dance Appreciation (3 hours)
Human Health

Cultural Studies  (Select one) (3 hours)

ANTH 101 Introduction to Cultural Anthropology (3 hours)

MLL 114 Chinese Language and Culture I (3 hours)

MLL 124 French Language and Culture I (3 hours)

MLL 154 Spanish Language and Culture I (3 hours)

MLL 184 Russian Language and Culture I (3 hours)

MLL 194 Korean Language and Culture I (3 hours)

GEOG 106 World Regional Geography (3 hours)

GEOG 300 Elements of Geography (3 hours)

GEOG 304 Human Geography (3 hours)

WGS 399 Global Women’s Issues (3 hours)

Health and Well Being (4-6 hours)

Psychological

PSYCH 155 General Psychology (3 hours)

Physical (Select one)

FCS 203 Nutrition and Health (3 hours)

FCS 301 Nutrition (3 hours)

HHP 150 Lifetime Fitness Concepts (1 hour)

NURS 303 Introduction to Public Health (3 hours)

Human Heritage (Select one from two of the following three categories) (6 hours)

History

HIST 101 World History to 1500 (3 hours)

HIST 102 World History from 1500 (3 hours)

HIST 201 American History to 1865 (3 hours)

HIST 202 American History from 1865 (3 hours)

Literature

ENGL 113 General Literature (3 hours)

ENGL 114 General Literature (Genre) (3 hours)

ENGL 116 General Literature (Theme) (3 hours)

ENGL 120 Literature and Film (3 hours)

ENGL 315 Mythology (3 hours)

ENGL 320 Literature and Film (3 hours)

Philosophy

PHIL 103 Introduction to Philosophy (3 hours)

PHIL 105 Ethics (3 hours)

PHIL 112 Biomedical Ethics (3 hours)

PHIL 113 Business Ethics (3 hours)

PHIL 114 Environmental Ethics (3 hours)

PHIL 207 Critical Thinking (3 hours)

PHIL 208 Logic (3 hours)

PHIL 231 World Religions (3 hours)

TOTAL (46-52 hours)

Proficiency in English Usage

The teacher candidate must complete ENGL 101 English Composition, ENGL 299 Introduction to Research Writing, or its equivalent, as well as COMM 207 Speech Communication or its equivalent, with a grade of “C” or higher.

Physical Fitness

The teacher candidate must meet the same requirements of physical condition as those pertaining to regularly employed school personnel.

This criterion is met by submitting a certification of health signed by a licensed physician on a form prescribed by the Kansas State Board of Health, which includes a statement that there is no evidence of a physical condition that would conflict with the health, safety, or welfare of pupils. Forms are distributed in professional education classes.

Emotional Stability

The office of the Associate Vice President for Campus Life and Auxiliary Services and the faculty advisor will be responsible for reporting any evidence of lack of
emotional stability on the part of the applicants for admission to teacher education.

**Dispositions for Teaching**

The teacher candidate's faculty advisor, EDUC 261 or UGS 101 instructor and two other instructors selected by the student will complete an evaluation sheet on which they provide information with reference to the student's dispositions and other characteristics for teaching. In those cases where sufficient reservations are indicated, the student's application will be formally reviewed by the Committee on Admission To and Retention In Teacher Education (CARTE).

**Field Experiences (on-site in PK-12 classrooms)**

Laboratory experiences are required for all students preparing to teach. To be approved for admission to teacher education, students must successfully complete the first field experience completed in Explorations in Education.

Successful completion requires the successful completion of EDUC 261 Explorations in Education, with a letter grade of “C” or higher, and a positive recommendation for continuance from the cooperating school-based teacher.

Those enrolled in teacher preparation programs take EDUC 261 Explorations in Education during the first semester of the sophomore year. An application for admission to teacher education must be submitted prior to placement at a school site for the field experience requirement in EDUC 261 Explorations in Education.

EDUC 307 Clinical Experience is taken during the junior year. EDUC 307 Clinical Experience is required for students preparing to teach at the elementary level. Some secondary/PK-12 education majors are also required to complete a second pre-lab experience.

EDUC 308 Specialized Clinical Experience provides additional field experiences for students who are focusing on learners with special needs or learners in early childhood or middle school programs.

**Retention in Teacher Education**

After a student has been admitted to teacher education, the student must continue to meet the criteria established in the several areas indicated above.

Upon conclusion of field experiences, the cooperating teacher prepares a formal evaluation and recommendation which is utilized in the review of files for admission to teacher education and the professional semester.

In the area of scholastic achievement, the specified requirements for admission to the professional semester must be met. The record of each student admitted to teacher education is reviewed with regularity.

Reviews assure the successful continued progress of each student toward the goal of recommendation for licensure to the Kansas State Department of Education.

**Teacher Education Transfer Credit**

Students currently enrolled at Pittsburg State University who wish to enroll in professional education courses at another institution for transfer back to Pittsburg State University must have written approval of the student's advisor, the department chair, and the Dean of the College of Education prior to registration for the courses. It is the student's responsibility to have the grades on these transfer credits reported to the Registrar's Office as soon as possible after the completion of the course(s).

**Admission to Professional Semester**

All students preparing to teach are required to successfully complete the professional semester.

**Criteria for Admission to the Professional Semester**

An applicant for the professional semester must meet the following criteria at the time of enrollment for the professional semester. Application for the professional semester must be made by February 15 for the fall semester and September 15 for the spring semester.

1. Admission to teacher education prior to application for the professional semester.

2. A grade of "C" or higher in PSYCH 263 Developmental Psychology.

3. Successful completion of:
   a. Multi-cultural requirement in PSYCH 357 Educational Psychology
   b. Diversity project in SPED 510 Overview of Special Education or SPED 511 Overview of Special Education (Birth through 6th Grade) (Secondary/PreK-12
education majors must complete SPED 510; Early Childhood Unified majors must complete SPED 511).

4. Satisfactory completion of submission 2 of the electronic portfolio.

5. Completion of background check.

6. Approval from major academic department.

7. At least six hours of resident credit at Pittsburg State University.

**Additional Professional Semester Admission Requirement for Elementary Education K-6 Majors**

1. Successful completion of the following Academic Standards:
   a. Cumulative GPA = 2.80
   b. In-Major GPA = 3.00 with no grade below “C”
   c. Completion of ALL courses listed under the Education, Psychology, and Lab Experiences section (50 hours)
   d. Completion of a minimum of 100 credit hours
   e. A 2.00 GPA in each field of concentration - English, Speech and Literature; History and Social Science; and Science and Mathematics
   f. A grade of “C” or higher in PSYCH 357 Educational Psychology
   g. Successful completion of EDUC 307 Clinical Experience
   h. Completion of MATH 304 Mathematics for Education II

2. Successful completion of the following **Praxis Subject Assessment** exams:
   a. Principles of Learning and Teaching: K-6
   b. Elementary Education: Curriculum, Instruction and Assessment

**Additional Professional Semester Admission Requirements for Early Childhood Unified (ECU) Majors**

1. Successful completion of the following Academic Standards:
   a. Cumulative GPA = 2.80
   b. In-Major GPA = 3.00 with no grade below “C”
   c. Completion of ALL courses listed under the Education, Psychology and Lab Experiences section (62 hours)
   d. Completion of a minimum of 100 credit hours
   e. A grade of “C” or higher in PSYCH 357 Educational Psychology
   f. Completion of MATH 304 Mathematics for Education II

**Additional Professional Semester Admission Requirements for Secondary and PK-12 Majors**

1. Successful completion of the following academic standards:
   a. Cumulative GPA = 2.50
   b. In-Major GPA = 2.75
   c. A minimum grade of “B” in PSYCH 357 Educational Psychology
   d. A GPA of 3.00 in 15 hours of Professional Education courses with no grade below a “C” in the following:
      - EDUC 261 Explorations in Education
      - SPED 510 Overview of Special Education
      - PSYCH 357 Educational Psychology* (minimum grade of “B”)
      - EDUC 520 Methods and Materials for Academic Literacy*
      - ( ) 479 Techniques for Teaching Middle and Secondary School*
   e. Completion of a minimum of:
      - 95 cumulative hours
      - 30 hours in major

*Must be admitted to Teacher Education.

For more specific information about the professional semester and procedures for enrolling in it, the student should consult the Office of Teacher Education, 110 Hughes Hall.
Additional Requirements

The teacher candidate must complete a course relating to the teaching of the exceptional child. The courses offered at Pittsburg State University which meet this requirement are SPED 510 Overview of Special Education and SPED 511 Overview of Special Education (Birth through 6th Grade).

The Kansas State Department of Education requires all applicants for initial issuance of licensure to take and satisfactorily pass the Principles of Learning and Teaching Test (PLT) and a subject assessment in each teaching area for which licensure is sought.

Information relative to required testing is available in the Office of Teacher Education, 110 Hughes Hall.

RECOMMENDATION FOR A KANSAS LICENSE TO TEACH

All licenses to teach in Kansas are issued by the Kansas State Department of Education.

Each application for an initial license, or added endorsement, must be supported by (1) an official transcript of all college work completed, and (2) the recommendation of the Licensing Officer. It is the policy of Pittsburg State University that every applicant recommended to the Kansas State Board of Education, or to the State Department of Education of other states, for initial licensure, has complied with the policies and regulations of this university for admission to and retention in teacher education, has completed a teaching program, and has met the general and professional educational requirements for teacher licensure. The recommendation will reflect the confidence of university authorities (i.e., Dean of the College of Education and Director of Teacher Education) in the professional promise of the applicant. It is not based solely on the fact that the applicant has completed a specified program or sequence of courses. The Registrar shall certify to the Licensing Officer that the applicant has complied with requirements for the teaching major.

Further information relative to requirements for licensure and renewal may be obtained from the Licensing Officer, 110 Hughes Hall.

Title II Disclosure Concerning Teacher Education Graduates

The United States Department of Education requires that teacher education programs report on the success of the teacher education graduates as measured by pass rates on licensure tests. The pass rates for Pittsburg State University graduates on standardized licensure tests for years 2012-2016 are listed below. To receive additional information regarding the Title II report, contact the Director of Teacher Education, 110 Hughes Hall.

The following lists the number of program completers per year, the pass rate for the Principles of Learning and Teaching (PLT) and the pass rate for the Praxis Subject Assessments:

<table>
<thead>
<tr>
<th>Year</th>
<th>#Completers</th>
<th>% Pass PLT</th>
<th>% Pass Content Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>159</td>
<td>98.6%</td>
<td>97.3%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>156</td>
<td>97.2%</td>
<td>94.7%</td>
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<tr>
<td>2014-2015</td>
<td>151</td>
<td>100%</td>
<td>97.9%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>151</td>
<td>99.2%</td>
<td>97.2%</td>
</tr>
</tbody>
</table>

SPECIAL UNITS AND SERVICE FACILITIES

Interactive Distance Learning Classroom

The College of Education houses a fully functioning interactive distance learning (IDL) classroom. The classroom, Room 315, Hughes Hall, contains the latest in distance learning technologies.

The system provides for full motion two-way audio and video connections for up to four locations. A computer system has been integrated into the system, providing an avenue for delivering computer mediated instruction to the distance sites. An important benefit of the computer is access for IDL instructors to full internet resources and the ability to display these resources to all connected sites. In addition, the configuration of the IDL classroom allows it to be used locally as a mediated classroom. This enables undergraduate and graduate students majoring in education to be exposed to the very latest in instructional delivery systems.

Pittsburg State University Internship

The Pittsburg State University Internship is required for the Elementary Education (K-6), Math and English programs and is an optional program for all other education majors. The program enables senior level students to participate in a semester long internship prior to the professional semester. Partnerships have been established with local schools to provide placements and support for interns. In order to
participate, the teacher candidate must be admitted to Teacher Education and complete an application requesting permission to serve as an intern.

Mentor teachers must be recommended for participation in the partnership by their building level principal. During the internship semester, participants work in a classroom with their mentor teacher in addition to completing required coursework on campus. Additionally, faculty from Pittsburg State University supervise the interns and work with the mentor teachers. The interns then have the opportunity to conclude their teacher education program with a sixteen-week student teaching experience in the same classroom during the fall or spring semester.

The mission of the partnership between Pittsburg State University and the PK-12 schools is to:

- Continue to improve the quality of education for area PK-12 students by utilizing research-based techniques and teaching strategies;
- Provide pre-service teachers with an authentic experience which effectively utilizes unique elements of a diverse student population and experienced professional staff in area schools;
- Stimulate and encourage the participating PK-12 schools and Pittsburg State University faculties to develop professionally through continuous collaboration and interaction so that the community of life-long learners is better prepared to live and work in an ever-changing society.

**Instructional Resource Center (IRC)**

The Instructional Resource Center (IRC) located in B25 Whitesitt Hall serves as a major instructional resource in all areas of teacher and school service personnel preparation. While its primary use has been by prospective teachers, it is designed to serve experienced teachers and administrators in school systems in the service area of Pittsburg State University.

The IRC occupies approximately 2200 square feet of floor space with facilities to accommodate substantial numbers of students in the main library area with conference, audio-visual, and individual work spaces provided. Services available for student’s use include a photocopier, laminating machine, computers, and printers. A wide variety of instructional resource materials is available.

The primary purpose of the IRC is to provide experience with unit planning, selection, organization and effective use of multiple instructional resources, and to encourage curriculum development and improvement. The IRC has been added as a branch library to the university’s on-line library catalog.

**College of Education Computer Laboratory**

The College of Education Computer Laboratory, located in B22 Hughes Hall, houses the computing services available to education majors at Pittsburg State University. Through experiences in the laboratory, education majors acquire the skills and knowledge associated with educational technologies.

Word processing, spreadsheet, and data base software are accessible through all computer platforms. The Windows computers are connected to campus-wide networks which allow for the sharing of numerous and varied software products, including instructional software, statistics software, and drawing and painting packages. The networked computers also support research and communications by education majors by providing access to the World Wide Web.

**Laboratories for Psychology and Counseling**

Specialized laboratory areas in Whitesitt Hall are provided in support of the programs in psychology and counseling. Facilities include a diagnostic psychological assessment clinic, classroom-laboratory areas and counseling/therapy observation suites, complete with dual cameras and split screen video equipment for observation and recording.

**Field Experiences**

Field experiences for prospective and practicing teachers and other school service personnel are provided through cooperative arrangements with public schools and other educational or education-related agencies in the area.

Pre-student teaching experiences, student teaching, practicum experience, and internships are included.

**MASTER OF ARTS DEGREE**

The Master of Arts in Teaching is a program for individuals holding a non-teaching Baccalaureate degree in a content area and who are seeking licensure...
to teach in a 6-12 or PK-12 school setting. The purpose
of the program is to train teachers for positions in high
need content areas in both urban and rural schools. For
specific admission and degree requirements, please see
Graduate Degrees and Options.

MASTER OF SCIENCE DEGREE

Admission

The minimum admission requirements for master's
degree curricula offered in the College of Education may
be obtained from the respective departments, the
College, or from the Dean of Graduate and Continuing
Studies. (See, also, general requirements for Admission
to Study for the master's degree listed elsewhere in this
catalog.)

Options

Option I of the Master of Science degree requires
satisfactory completion of a minimum of 30 semester
hours, including thesis credit of three to six semester
hours. Of the 30 hours, no fewer than 15 should be in
courses numbered 800 to 899, including 890 and 891,
and 24 must be in courses numbered 700 to 899.
Students with strong academic records who plan to do
advanced work beyond the master's degree are
particularly encouraged to follow this option.

Option II of the Master of Science degree may be
elected by the student upon the recommendation of
the major advisor. This option requires satisfactory
completion of a minimum of 32 semester hours of
approved course work. Of these, no fewer than 16
semester hours should be in courses numbered 800 to
899, including Methods of Research 891, and no fewer
than 26 should be in courses numbered 700 to 899.

Option III of the Master of Science degree may be
elected in special cases by the student upon
recommendation of the advisor and approval of the
department chairperson. This option requires
completion of at least six semester hours in graduate
research seminars with an average grade of "B" and
satisfactory completion of a minimum of 32 semester
hours of approved course work. Of these no fewer than
15 semester hours should be in courses numbered 800
to 899, and no fewer than 26 should be in courses
numbered 700 to 899.

Comprehensive Examinations/Special Project

Candidates for a graduate degree in fall or spring
semester must satisfactorily pass a comprehensive
examination or a special project in the field of their
major graduate work not later than four weeks prior to
the date on which the degree is to be conferred. For
summer term candidates, the examination or special
project must be passed not later than two weeks prior
to the degree conference date. The examination may
be either oral or written or both. The format is at the
discretion of the department which prepares,
administers, and evaluates the examination/special
project. Registration for the comprehensive
examination must be completed in the department
office of your major at least two weeks prior to the
examination.

Advisement

Each graduate student is assigned to an advisor at the
time of admission to graduate study. It is essential that
the student plan tentatively the entire program in
consultation with the advisor and that the advisor be
consulted prior to each enrollment. Specific curriculum
designs, incorporating the common requirements as
well as required and recommended courses for a
particular curriculum, are available from the
chairperson of the department or the advisor.

Education Programs

The applicant for admission to study for the Master of
Science degree with a major in teaching must present
evidence of successful completion of a minimum of 18
semester hours of undergraduate credit in education
and psychology, distributed so as to furnish an
adequate background for the work proposed in the
graduate level. For admission to a major at the master's
degree level in elementary teaching, secondary
teaching, special education, library media, or
elementary and secondary school administration and
supervision, an applicant must hold or be eligible for a
standard teaching license. Special exception to the
requirement for licensure may be made for candidates
preparing for employment in higher education or other
agencies.

Candidates for the degree must complete a minimum of
15 semester hours in education and psychology. The
course in Methods of Research 891 should be taken
early in the graduate program, preferably in the first
enrollment. This course is required both under Option I
and Option II. It may be required under Option III.

Special requirements. Candidates preparing for work in
special professional fields should select their courses
under the guidance of the advisor with a view to meeting licensure requirements.

Health, Human Performance, and Recreation

The application for admission to study for the Master of Science degree with a major in health, human performance and recreation must present evidence of successful completion of a minimum of 20 semester hours of acceptable undergraduate foundation credit and a grade point average of 2.70 from an appropriate field. These credit hours should be so distributed to furnish an adequate background for the work required in the graduate major.

Candidates for the degree must complete a minimum of 32 hours, which includes core and emphasis hours, for either Option I: Research and Thesis or Option II: Coursework. A minimum of 27 semester hours must be completed within the Department of Health, Human Performance, and Recreation (see departmental section for listing of specific courses required.)

Psychology and Counseling

The applicant for admission to study for the Master of Science degree with a major in psychology or counseling must present evidence of successful completion of a minimum of 20 semester hours of undergraduate credit in psychology and closely related subjects distributed so as to furnish an adequate background for the work proposed on the graduate level.

Candidates for the degree must complete a minimum of 32 semester hours in psychology at the graduate level.

The General Aptitude Test of the Graduate Record Examination is required for admission to the programs (see department section for specific admission requirements).

SPECIALIST IN EDUCATION DEGREE

The program leading to the Specialist in Education (Ed.S.) degree is a professional program in education requiring two years of intensive work in specialized graduate study beyond the master's degree. Although the degree is normally earned in the area of the individual's master's degree, the experience, background and professional aims of the candidate for admission may indicate modifications of this general plan.

The student's program is formulated on the basis of requirements common to all Specialist in Education degree curricula in the college and course work selected through advisement appropriate to the student's background and to the particular specialization.

Option I of the Specialist in Education degree requires satisfactory completion of a minimum of 30 semester hours including an Ed.S. Thesis (Special Research Project 990).

Option II of the Specialist in Education degree requires completion of a minimum of 32 semester hours, including TCHL 930 Seminar in Research Skills (or other approved 900 level research course).

Admission

The applicant for admission to study for the Specialist in Education degree must present evidence of successful completion of a master's degree in the area in which specialization is proposed or in a closely related area. The applicant who lacks required specific background in the proposed area of specialization must complete satisfactorily not less than 10 graduate hours in such study before beginning the specialist degree program. A significant practicum experience shall be completed prior to completion of the degree. (See, also, Requirements for Admission to Study and Requirements for the Degree under the Specialist in Education Degree in the general requirements section of this catalog.)

Comprehensive Examination/Special Project

Candidates must satisfactorily pass a comprehensive examination or special project in the field of their graduate major not later than four weeks before the date on which the degree is to be conferred. The examination may be either oral or written or both. The major department shall prepare and give the examination over the formal and informal study required for the degree. The department will then certify on the Petition for the Degree to the Office of Graduate and Continuing Studies that the student has satisfactorily passed the examination or special project. Registration for the comprehensive examination must be completed in the department office of your major at least two weeks prior to the examination.

Advisement

Each applicant, admitted to graduate study for the Specialist in Education degree, is assigned to a major advisor. It is expected that those admitted to this program will be mature graduate students who are knowledgeable and responsible with respect to program and research requirements. The student
should take the initiative, in consultation with the advisor, in planning the degree program and in meeting fully all requirements. Specific curriculum designs incorporating the common requirements, as well as required and recommended courses for a particular area, are available from the chairperson of the department or the advisor.
Health, Human Performance and Recreation

Chairperson: John H. Oppliger*
Professor(s): R. Scott Gorman*, ***, Robert Hefley*, Janice Jewett*, John H. Oppliger*, **, Julia Spresser*
Assistant Professor(s): Sarah Ball, Mike Carper*, Laura Covert*, Derek Crawford*, Rick Hardy*, Cole Shewmake*
Instructors: Shelly Grimes
*Graduate Faculty
**University Professor
***Graduate Coordinator

Room 101 Student Recreation Center
Telephone: 620-235-4665
Fax: 620-235-4385
http://www.pittstate.edu/department/health/
E-mail: joppliger@pittstate.edu

Undergraduate

Bachelor of Science in Education Degree with a Major in Physical Education
Bachelor of Science Degree with a Major in Exercise Science
Bachelor of Science Degree with a Major in Recreation

Undergraduate Minors

Minor in Coaching
Minor in Dance
Minor in Exercise Science
Minor in Physical Education
Minor in Recreation
Second Teaching Option in Physical Education

Undergraduate Certificates

Certificate in Coaching
Certificate in Dance

Graduate

Master of Science Degree with a Major in Health, Human Performance and Recreation

Policy Statement

It is the belief of the Department of Health, Human Performance and Recreation that students preparing for careers in education, wellness and recreation fields possess both the academic qualifications and professional ethics necessary for success.

All students in the department are expected to maintain satisfactory ethical standards and adequate self-understanding. Student performance is monitored by means of semester grades and behavioral evidence of appropriate adjustment and professional conduct.

Evidence of unsatisfactory progress will result in the department informing the student and suggesting possible steps toward remediation. Unethical behavior is considered grounds for immediate dismissal from all departmental programs.

Advisement

All students are expected to understand the steps involved in completion of their chosen programs. Students are assigned a faculty advisor upon admission and should meet with their advisors prior to enrollment to insure that their personal curriculum plans are appropriate to career plans.

Degree programs offered by the department include the Bachelor of Science in Education with a Major in Physical Education, the Bachelor of Science with a Major in Recreation, and the Bachelor of Science with a Major in Exercise Science.

The Department of Health, Human Performance and Recreation offers minors in Coaching, Dance, Exercise Science, Physical Education and Recreation. Students selecting a minor must have both advisement and departmental approval.

Bachelor of Science in Education Degree with a Major in Physical Education

The Health, Human Performance and Recreation Department offers courses in the theory and practice of physical education for the preparation of teachers and athletic coaches. Students earning a major in physical education will complete courses in the theory and practice of physical education to be prepared to teach physical education pre-kindergarten through grade twelve. In addition to the core, students complete either an emphasis area or a minor. Emphasis areas include: Coaching; Group Fitness, Dance and Rhythms; and Strength and Conditioning. Students choosing to complete a minor must select one from a discipline appropriate to teacher preparation. Professional Education courses and admission to Teacher Education are required for all students. Students who have completed an Introduction to Education course at another institution of higher education MAY be eligible to have the course transferred to Pittsburg State.
University as an equivalent to the entry-level education course, EDUC 261 Explorations in Education. For full credit and to meet admission requirements for Teacher Education, students who transfer this course to Pittsburg State University must contact the Office of Teacher Education.

**General Education Requirements* (47-51 hours)**

Basic Skills (12 hours)

General Education Electives (35-39 hours)

- Sciences** (9 hours)
- Social Studies (3 hours)
- Political Studies (3 hours)
- Producing and Consuming (5-6 hours)
- Fine Arts and Aesthetic Studies (2-3 hours)
- Cultural Studies (3 hours)
- Health and Well-Being (4-6 hours)
- Human Heritage (6 hours)

*See General Education Requirements for Students Preparing to Teach Secondary School for a list of specific courses. Also Scholastic Achievement in Common Core for admission to teacher education for secondary teaching majors.

**BIOL 111/112 General Biology and Laboratory required.

The following 40-41 hour core is the minimum for the major in physical education.

**Core (40-41 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP 195</td>
<td>Introduction to Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 257</td>
<td>Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 258</td>
<td>Anatomy and Physiology Laboratory</td>
<td></td>
</tr>
<tr>
<td>HHP 260</td>
<td>First Aid and CPR</td>
<td>2</td>
</tr>
<tr>
<td>HHP 262</td>
<td>Care and Prevention of Athletic Injuries</td>
<td>2</td>
</tr>
<tr>
<td>HHP 341</td>
<td>Elementary School Physical Education and Health</td>
<td>3</td>
</tr>
<tr>
<td>HHP 345</td>
<td>Measurement and Evaluation I</td>
<td>2</td>
</tr>
<tr>
<td>HHP 360</td>
<td>Theory and Fundamentals of Activities I</td>
<td>2</td>
</tr>
<tr>
<td>HHP 361</td>
<td>Theory and Fundamentals of Activities II</td>
<td>2</td>
</tr>
<tr>
<td>HHP 362</td>
<td>Theory and Fundamentals of Activities III</td>
<td>2</td>
</tr>
<tr>
<td>HHP 460</td>
<td>Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>HHP 462</td>
<td>Adapted Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>HHP 464</td>
<td>Physiology of Exercise</td>
<td>3</td>
</tr>
<tr>
<td>HHP 466</td>
<td>Motor Development</td>
<td>3</td>
</tr>
<tr>
<td>HHP 468</td>
<td>Principles of Administration in Health and Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>HHP 479</td>
<td>Techniques for Teaching Physical Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Must be admitted to Teacher Education to enroll in HHP 479.

**Swimming (according to ability) select from (1-2 hours)**

- HHP 120: Swimming I ......................................................... 1
- HHP 220: Lifeguarding ....................................................... 2

**Areas of Emphases**

Students must complete the core and either an emphasis or minor.

**Coaching Emphasis**

This emphasis prepares students to serve as athletic coaches in K-12 and college settings.

- HHP 320: Rules and Officiating ............................................. 2
- HHP 340: Scientific Foundations of Coaching ......................... 2
- HHP 385: Practicum in Health and Human Performance .............. 2

**Coaching Theory Courses**

Select three courses from the following

- HHP 321: Coaching Softball and Baseball .............................. 2
- HHP 322: Coaching Track and Field ....................................... 2
- HHP 323: Coaching Football ................................................. 2
- HHP 324: Coaching Basketball ............................................. 2
- HHP 325: Coaching Volleyball ............................................. 2
- HHP 326: Coaching Swimming .............................................. 2

- HHP 385 must be taken as Coaching (by advisement)

**Group Fitness, Dance and Rhythms Emphasis**

This emphasis prepares the physical education teacher to deliver rhythm and dance to students. Upon completion of the program, students are encouraged to take the Primary Group Exercise Certification Exam offered by the Aerobic and Fitness Association of America.

- HHP 151: Dance Appreciation ............................................... 3
- HHP 200: Lifetime Sports: (____) .......................................... 1-3
- HHP 347: Elementary Games and Rhythms for K-6 ................. 2
- HHP 349: Group Fitness Instruction ................................. 2
- HHP 385: Practicum in Health and Human Performance ........ 2
- HHP 440: Topics in Health, Human Performance and Recreation (____) ................................ 1-3

- HHP 151 Dance Appreciation will satisfy the general education Fine Arts and Aesthetic Studies area.

*HHP 200 must be taken as a Dance Related course. Two hours maximum may be used.
HHP 385 must be taken as Group Fitness, Dance and Rhythms (by advisement).

*HHP 440 must be taken as Dance Workshops. Two hours maximum may be used.

*For a total of 3 hours

**Strength and Conditioning Emphasis**

This emphasis prepares students to serve as strength and conditioning specialists in private, education and athletic settings. Students completing the Strength and Conditioning emphasis will be encouraged to take the Certified Strength and Conditioning Specialist (CSCS) Exam offered by the National Strength and Conditioning Association.

HHP 101: Weight Training ................................................................. 1
HHP 200: Lifetime Sports: (___) ......................................................... 1-3
HHP 385: Practicum in Health and Human Performance .................... 1-3
HHP 440: Topics in Health, Human Performance and Recreation (___) ......................................................................................... 1-3
HHPR 760: Technology and Instrumentation in Human Performance ........................................................................................................ 3
HHPR 763: Scientific Principles of Strength and Conditioning .......... 3

HHP 200 must be taken as Advanced Weight Training. Two hours are required.

HHP 385 must be taken as Strength and Conditioning and Program Design (by advisement).

HHP 440 must be taken as Nutrition Workshops/Professional Development (by advisement). Only 1 hour needed.

**Admission to Teacher Education and Professional Semester**

All students who wish to prepare to teach and to meet licensure requirements are required to apply for admission to Teacher Education during the second semester of the sophomore year, or in the case of community college transfers, early in the first semester of the junior year.

Application for the professional semester must be made by February 15th for the fall semester; September 15th for the spring semester.

**Professional Education**

EDUC 261: Explorations in Education ................................................. 3
EDUC 307: Clinical Experience .......................................................... 1
EDUC 520: Methods and Materials for Academic Literacy ................ 3
PSYCH 263: Developmental Psychology .......................................... 3
PSYCH 357: Educational Psychology ................................................ 3

SPED 510: Overview of Special Education ........................................... 3

*See Admission to Professional Semester for professional education grade point requirements.

Must be admitted to Teacher Education to enroll in EDUC 520 and PSYCH 357.

**Professional Semester**

EDUC 458: Methods and Curriculum .................................................. 3
EDUC 462: Secondary and Middle Level Education ............................ 2
EDUC 464: Foundations of Measurement and Evaluation .................. 2
EDUC 475: Supervised Teaching in the Elementary School ................ 3
EDUC 482: Supervised Teaching in the Secondary School ................. 5
HHP 579: Supervised Student Teaching and Follow-Up of Teachers ......................................................................................... 3

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by the State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University.

**Bachelor of Science Degree with a Major in Exercise Science**

Exercise Science is the study of movement and the associated functional responses and adaptations. Exercise scientists must understand the scientific basis underlying exercise-induced physiological responses. Students pursuing the degree of Bachelor of Science with a major in Exercise Science will complete courses in theory and practice of exercise testing and prescription. In addition to the core and recommended electives, students may choose a minor although one is not required. A minimum grade point average of 3.00 is required within the core and track area of the Exercise Science program. Students completing the program will be qualified to sit for the Certified Personal Trainer, Certified Group Exercise Instructor, Certified Health Fitness Specialist Exams offered by the American College of Sports Medicine (ACSM). In addition, students completing 500 hours in a clinical experience program are qualified to sit for the Certified Clinical Exercise Specialist exam through the ACSM. Students are also qualified to sit for the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist or Certified Personal Trainer Exams upon completion of the program.

**General Education Requirements** (49-51 hours)

Basic Skills** (12 hours)

General Education Electives (37-39 hours)
Required General Education/Prerequisite courses* (6 hours)

- BIOL 111 General Biology and BIOL 112 General Biology Laboratory (satisfied by general education) (0 hours)
- CHEM 105 Introductory Chemistry and CHEM 106 Introductory Chemistry Laboratory (satisfied by general education) (0 hours)
- MATH 143 Elementary Statistics (satisfied by general education) (0 hours)
- CIS 130 Computer Information Systems (satisfied by general education) (0 hours)
- PHIL 105 Ethics (satisfied by general education) (0 hours)
- FCS 203 Nutrition and Health or FCS 301 Nutrition (satisfied by general education) (0 hours)

BIOL 257: Anatomy and Physiology .......................................... 3
and BIOL 258: Anatomy and Physiology Laboratory .................. 2
EXSCI 200: Introduction to Exercise Science .............................. 1

*2.75 GPA required

Exercise Science core* (14 hours)
HHP 260: First Aid and CPR ....................................................... 2
EXSCI 290: Introduction to Exercise Science Research
  Methods ................................................................. 2
REC 425: Personal Training and Fitness Management ................... 3
HHP 460: Kinesiology ......................................................... 3
HHP 464: Physiology of Exercise ............................................. 3
EXSCI 599: Pre-Internship .................................................... 1

*Minimum 3.00 GPA required

Select one of the following tracks: (21-27 hours)

Clinical/Pre-Professional Track*
EXSCI 500: Physiology of Exercise II ...................................... 3
EXSCI 510: Technology and Instrumentation in Exercise
  Physiology ................................................................. 3
EXSCI 520: Exercise Testing and Prescription ............................. 3
EXSCI 530: Clinical Exercise Physiology ................................... 3
EXSCI 550: Research Project in Exercise Physiology ................. 3
EXSCI 600: Internship ....................................................... 6-12

*3.00 GPA required

(Suggested Minor: Biology, Physical Science, Interdisciplinary Gerontology, Public Health, or Psychology)

Non-Clinical Track*
COMM 277: Introduction to Public Relations ............................. 3
REC 320: Management Strategies and Financing in Recreation 3
REC 430: Commercial Recreation ......................................... 3
EXSCI 520: Exercise Testing and Prescription ............................. 3
EXSCI 550: Research Project in Exercise Physiology ................. 3
EXSCI 600: Internship ....................................................... 6-12

*3.00 GPA required

(Suggested Minor: Business Administration, Marketing, Interdisciplinary Gerontology, Public Health, or Psychology)

Exercise Science Electives (26 hours)
BIOL 211: Principles of Biology I ............................................. 4
BIOL 212: Principles of Biology II ........................................... 4
BIOL 322: Genetics .............................................................. 3
and BIOL 323: Genetics Laboratory ....................................... 2
BIOL 371: General Microbiology ......................................... 3
and BIOL 372: General Microbiology Laboratory ................... 2
BIOL 410: Biological and Medical Terminology ....................... 2
BIOL 656: Human Physiology ............................................. 3
and BIOL 657: Human Physiology Laboratory ....................... 2
BIOL 660: Human Anatomy and Dissection ............................................ 5
CHEM 215: General Chemistry I ............................................................ 3
and CHEM 216: General Chemistry I Laboratory ................................. 2
CHEM 225: General Chemistry II ........................................................... 3
and CHEM 226: General Chemistry II Laboratory ............................... 2
CHEM 575: Biochemistry I ................................................................. 3
COMM 629: Theories of Human Communication .................................. 3
FCS 285: Lifespan Human Development ............................................. 3
HHP 262: Care and Prevention of Athletic Injuries .............................. 2
HHP 349: Group Fitness Instruction ..................................................... 2
HHP 462: Adapted Physical Education ................................................. 2
HHP 466: Motor Development ............................................................ 3
HHPR 763: Scientific Principles of Strength and Conditioning ........... 3
NURS 265: Health Promotion and Disease Prevention ....................... 2
NURS 314: Health Care Terminology and Drug Calculations ............. 3
NURS 405: Gerontological Nursing ..................................................... 3
PHYS 100: College Physics I ............................................................... 4
and PHYS 130: Elementary Physics Laboratory I ................................. 1
PHYS 101: College Physics II ............................................................. 4
and PHYS 131: Elementary Physics Laboratory II ............................... 1
PSYCH 263: Developmental Psychology .......................................... 3
PSYCH 360: Psychology of Aging ...................................................... 3
PSYCH 362: Death and Dying ............................................................ 3
PSYCH 389: Research Methods in Psychology I .................................. 3
PSYCH 456: Introduction to Social Psychology .................................. 3
PSYCH 571: Abnormal Psychology .................................................... 3
PSYCH 675: Human Factors Psychology ........................................... 3
REC 240: Introduction to Therapeutic Recreation ............................... 3
REC 419: Survey Research Techniques in Recreation ......................... 3
REC 441: Therapeutic Interventions for Older Adults ......................... 3
REC 465: Assessment and Documentation in Therapeutic Recreation .... 3
REC 469: Intervention in Therapeutic Recreation ................................ 3

- Other electives* (0-8 hours)

*to meet minimum graduation requirements of 124 hours

**Bachelor of Science Degree with a Major in Recreation**

This curriculum satisfies requirements for a Bachelor of Science degree with a major in Recreation. In addition to the core, students must complete an emphasis area as well as a minor. Emphasis areas include: Recreation Administration, Therapeutic Recreation, and Community, Corporate and Hospital Wellness. A minimum 2.50 GPA is required in core and emphasis areas prior to enrolling in REC 498 Internship. A minimum GPA of 2.50 in all recreation core and emphasis courses is required in order to graduate.

**General Education Requirements** (46-51 hours)

- Basic Skills (12 hours)
- General Education Electives (34-39 hours)
- Sciences (8-9 hours)

**Social Studies (3 hours)**

**Political Studies (3 hours)**

**Producing and Consuming (5-6 hours)**

**Fine Arts and Aesthetic Studies (2-3 hours)**

**Cultural Studies (3 hours)**

**Health and Well-Being (4-6 hours)**

**Human Heritage (6 hours)**

*See General Education Requirements for All Baccalaureate Degrees for details and a list of specific courses.

The following 39 hour core is the minimum for the major in Recreation.

**Core (39 hours)**

- REC 160: Introduction to Recreation and Leisure .......................... 3
- REC 240: Introduction to Therapeutic Recreation ......................... 3
- HHP 260: First Aid and CPR ......................................................... 2
- REC 270: Field Study in Recreation Leisure and Fitness ............... 2
- REC 320: Management Strategies and Financing in Recreation ........ 3
- REC 321: Recreation Program Design and Leadership ................. 3
- REC 317: Camping and Outdoor Education .................................. 3
- REC 419: Survey Research Techniques in Recreation ................... 3
- REC 461: Professional Conference ............................................... 1
- REC 462: Pre-Internship Seminar ................................................. 1
- REC 470: Administration of Recreation ....................................... 3
- REC 471: Administration of Recreation ....................................... 3
- REC 498: Internship in Recreation ............................................... 12

**Areas of Emphases**

An emphasis must be completed in either Recreation Administration, Therapeutic Recreation or Community, Corporate and Hospital Wellness. A select minor relative to the emphasis area is required. ***

**Recreation Administration Emphasis**

The Recreation Administration emphasis provides students with the skills needed to serve leadership, supervisory, and management roles in city, park and recreation capacities and other leisure service agencies. Upon completion of the program, students are encouraged to take the Certified Park and Recreation Professional (CPRP) Exam offered by the National Recreation and Park Association.

- COMM 277: Introduction to Public Relations ................................. 3
- REC 419: Survey Research Techniques in Recreation ................... 3
- REC 430: Commercial Recreation ................................................. 3
Therapeutic Recreation Emphasis

This emphasis prepares students for supervisory and leadership positions in various private and community-based health care facilities delivering recreation therapy to individuals with various disabilities. Students completing the Therapeutic Recreation emphasis qualifies them to sit for the National Council on Therapeutic Recreation Certification (NCTRC) Exam.

Biol 257: Anatomy and Physiology ................................................. 3
and BIOL 258: Anatomy and Physiology Laboratory .................. 2
PSYCH 263: Developmental Psychology ....................................... 3
REC 419: Survey Research Techniques in Recreation .................... 3
HHP 462: Adapted Physical Education ............................................ 2
REC 465: Assessment and Documentation in Therapeutic Recreation ................................................................. 3
REC 469: Intervention in Therapeutic Recreation ......................... 3
REC 471: Theory of Therapeutic Recreation Program Service and Development .................................................. 3
REC 480: Professional Trends and Issues in Therapeutic Recreation Services ......................................................... 3
PSYCH 571: Abnormal Psychology ................................................. 3

***Therapeutic Recreation Emphasis requires a minor in Psychology, Interdisciplinary Gerontology, or Public Health (21 hours).

PSYCH 263 and PSYCH 571 can be counted toward Psychology Minor.

Community, Corporate and Hospital Wellness Emphasis

This emphasis prepares students for supervisory and leadership positions in the wellness field in community, corporate (private), and hospital-based settings. Students completing the emphasis will be encouraged to take the Certified Personal Trainer & Group Fitness Exams offered by ACE, NSCA, ACSM or a similar agency.

FCS 203: Nutrition and Health .................................................... 3
or FCS 301: Nutrition ................................................................. 3
BIOL 257: Anatomy and Physiology ........................................... 3
and BIOL 258: Anatomy and Physiology Laboratory ................. 2
HHP 349: Group Fitness Instruction ............................................ 2
REC 425: Personal Training and Fitness Management ................ 3
REC 430: Commercial Recreation .............................................. 3

HHP 460: Kinesiology ................................................................. 3
HHP 464: Physiology of Exercise ............................................... 3

***Community, Corporate and Hospital Wellness Emphasis requires a minor in Business Administration, Dance, Marketing, Public Health, or Exercise Science (21 hours).

FCS 203 Nutrition and Health will satisfy a portion of the general education Health and Well-Being area.

Minor in Coaching

The Coaching minor provides the coaching background for both educators and non-educators possessing an interest in athletic coaching. This minor also reflects the opportunities existing in the field of communications and sport. The curriculum provides the student with an understanding of sport specific terms, strategies and concepts as well as an introduction to the medical and administrative issues surrounding sport in today’s society.

Required Coursework (20 hours)

HHP 260: First Aid and CPR ..................................................... 2
HHP 262: Care and Prevention of Athletic Injuries ..................... 2
HHP 320: Rules and Officiating ............................................... 2
HHP 340: Scientific Foundations of Coaching .......................... 2
HHP 385: Practicum in Health and Human Performance .......... 2
HHP 440: Topics in Health, Human Performance and Recreation (___) ................................................................. 1-3
REC 461: Professional Conference .............................................. 1

Select three courses from the following

HHP 321: Coaching Softball and Baseball ................................. 2
HHP 322: Coaching Track and Field ........................................ 2
HHP 323: Coaching Football ................................................... 2
HHP 324: Coaching Basketball .................................................. 2
HHP 325: Coaching Volleyball .................................................. 2
HHP 326: Coaching Swimming .................................................. 2

HHP 440 must be taken as Topics in Safety, Nutrition or Conditioning for 3 hours (by advisement)

Minor in Dance

The purpose of the Minor in Dance is to provide knowledge and resources for students to be involved in community and commercial dance programs as instructors, facilitators, and directors as well as provide skills for students to become dance sponsors and coaches within schools. In addition, this minor will provide tools for integrating dance and rhythms in educational settings. Theatre majors will also find the dance minor helpful with performances involving dance. Students will learn about studio dance, competitive studio dancing, middle school and high school dance tryouts, performances, competitions and camps, dance
terminology, choreography, performances (including recitals), costumes, music for dancing, technology and other issues related to the world of dance for recreation, competition, educational, theatrical, and school dance teams.

**Dance**

HHP 151: Dance Appreciation ...................................................... 3  
DANCE 200: Dance (____) ............................................................. 1-3  
HHP 260: First Aid and CPR .......................................................... 2  
HHP 262: Care and Prevention of Athletic Injuries ............................ 2  
DANCE 360: Theory and Methods of Teaching Dance .................... 3  
DANCE 370: Technology for Dance ................................................ 3  
HHP 385: Practicum in Health and Human Performance ............... 2  
DANCE 410: Dance Performance and Production ......................... 3

**Electives - Choose a minimum of three credits from the following:**

MGT 101: Introduction to Business .................................................. 3  
COMM 105: Performance Appreciation ........................................... 3  
MUSIC 120: Music Appreciation (____) ........................................... 3  
MUSIC 156: Band (____) ............................................................... 1  
or MUSIC 356: Band (____) ........................................................... 1  
or MUSIC 756: Band (____) ........................................................... 1  
HHP 200: Lifetime Sports: (____) .................................................... 1-3  
HHP 347: Elementary Games and Rhythms for K-6 ....................... 2  
HHP 349: Group Fitness Instruction ................................................ 2  
COMM 363: Technical Production I ............................................... 3  
DANCE 420: Dance Performance ................................................. 1  
HHP 440: Topics in Health, Human Performance and  
   Recreation (____) ................................................................. 1-3

DANCE 200 must be taken for a total of 3 hours in different areas of dance.

HHP 200 Lifetime Sports and DANCE 200 Dance (____)  
may be taken as Ballroom/Western Dance, Dance Team,  
Hip Hop Dance, Pilates, Zumba or Ballet.

**Minor in Exercise Science**

The purpose of the Exercise Science minor is to have  
competent and dedicated professionals teach, research,  
and serve in the health and wellness field. This minor is  
designed to complement a number of majors, including  
but not limited to, physical therapy, nursing, pre-  
medicne, physical education, and recreation. The  
exercise science minor is intended to provide depth into  
exercise functions and dysfunctions of a wide  
population as well as have the potential to lead  
students to graduate programs if desired.

**Exercise Science**

EXSCI 500: Physiology of Exercise II ............................................. 3  
EXSCI 510: Technology and Instrumentation in Exercise  
   Physiology ................................................................. 3  
EXSCI 520: Exercise Testing and Prescription ............................... 3  
EXSCI 530: Clinical Exercise Physiology ..................................... 3  
REC 441: Therapeutic Interventions for Older Adults .................... 3  
HHP 460: Kinesiology .............................................................. 3  
HHP 464: Physiology of Exercise .................................................. 3  
REC 441 or other approved elective (3 hours)

**Minor in Physical Education**

The Physical Education minor is available to students  
interested in the discipline. Additional coursework is  
required to gain licensure in K-12 Physical Education.

**Physical Education**

HHP 195: Introduction to Physical Education ............................... 2  
Biol 257: Anatomy and Physiology ........................................... 3  
and BIOL 258: Anatomy and Physiology Laboratory .................... 2  
HHP 260: First Aid and CPR ...................................................... 2  
HHP 345: Measurement and Evaluation I ..................................... 2  
HHP 360: Theory and Fundamentals of Activities I ....................... 2  
HHP 361: Theory and Fundamentals of Activities II ...................... 2  
HHP 362: Theory and Fundamentals of Activities III .................... 2  
HHP 460: Kinesiology .............................................................. 3  
HHP 462: Adapted Physical Education ......................................... 2  
HHP 468: Principles of Administration in Health and Physical  
   Education .......................................................................... 3  
HHP 479: Techniques for Teaching Physical Education ................ 3  

Swimming (according to ability) select from (1-2 hours)

HHP 120: Swimming I ............................................................... 1  
HHP 220: Lifeguarding .............................................................. 2

Must be admitted to Teacher Education to enroll in HHP 479.

**Minor in Recreation**

The Recreation minor provides the general recreation  
background suitable for students majoring in the  
disciplines of business and marketing and other related  
fields.

**Recreation**

REC 160: Introduction to Recreation and Leisure ......................... 3  
REC 240: Introduction to Therapeutic Recreation ......................... 3  
REC 311: Recreation Program Design and Leadership .................. 3  
REC 317: Camping and Outdoor Education .................................. 3  
REC 320: Management Strategies and Financing in  
   Recreation .......................................................................... 2  
REC 470: Administration of Recreation ....................................... 3

**Electives- four hours chosen from**

HHP 260: First Aid and CPR ...................................................... 2  
REC 275: Recreation Practicum .................................................. 2  
REC 280: Recreation Methods and Leadership ............................ 3  
REC 419: Survey Research Techniques in Recreation .................. 3  
REC 440: Topics in Health, Physical Education and Recreation  
   (____) ............................................................................. 1-3
Second Teaching Option in Physical Education

Those persons interested in physical education as a second teaching option should complete the following course requirements:

Second Teaching Option

HHP 195: Introduction to Physical Education ................................................. 2
BIOL 257: Anatomy and Physiology ............................................................... 3
and BIOL 258: Anatomy and Physiology Laboratory ....................................... 2
HHP 260: First Aid and CPR ......................................................................... 2
HHP 262: Care and Prevention of Athletic Injuries ....................................... 2
HHP 341: Elementary School Physical Education and Health ...................... 3
HHP 345: Measurement and Evaluation I ......................................................... 2
HHP 360: Theory and Fundamentals of Activities I ....................................... 2
HHP 361: Theory and Fundamentals of Activities II ...................................... 2
HHP 362: Theory and Fundamentals of Activities III .................................... 2
HHP 460: Kinesiology .................................................................................... 3
HHP 462: Adapted Physical Education ............................................................ 2
HHP 464: Physiology of Exercise .................................................................... 3
HHP 466: Motor Development ....................................................................... 3
HHP 468: Principles of Administration in Health and Physical Education .......... 3
HHP 479: Techniques for Teaching Physical Education .................................. 3

Swimming (according to ability) select from (1-2 hours)

HHP 120: Swimming I .................................................................................... 1
HHP 220: Lifeguarding .................................................................................. 2

Must be admitted to Teacher Education to enroll in HHP 479.

Certificate in Coaching

The purpose of the certificate is to provide knowledge and resources for students wanting to lead young people involved in interscholastic youth sports.

HHP 260: First Aid and CPR ......................................................................... 2
HHP 262: Care and Prevention of Athletic Injuries ....................................... 2
HHP 320: Rules and Officiating .................................................................... 2
HHP 340: Scientific Foundations of Coaching .............................................. 2
HHP 385: Practicum in Health and Human Performance ............................. 2

Electives - six hours chosen from:

HHP 321: Coaching Softball and Baseball ..................................................... 2
HHP 322: Coaching Track and Field ............................................................... 2
HHP 323: Coaching Football .......................................................................... 2
HHP 324: Coaching Basketball ..................................................................... 2
HHP 325: Coaching Volleyball ...................................................................... 2
HHP 326: Coaching Swimming ..................................................................... 2

Certificate in Dance

The purpose of the Certificate in Dance is to provide knowledge and resources for students to be involved in community and commercial dance programs as instructors, facilitators, and directors as well as provide skills for students to become dance sponsors and coaches within schools. In addition, the dance certificate will provide tools for integrating dance and rhythms in educational settings. Theatre majors will also find the dance minor helpful with performances involving dance. Students will learn about studio dance, competitive studio dancing, middle school and high school dance tryouts, performances, competitions and camps, dance terminology, choreography, performances (including recitals), costumes, music for dancing, technology and other issues related to the world of dance for recreation, competition, educational, theatrical, and school dance teams.

Dance

HHP 151: Dance Appreciation ...................................................................... 3
DANCE 200: Dance (____) ............................................................................. 1-3
HHP 260: First Aid and CPR ......................................................................... 2
HHP 262: Care and Prevention of Athletic Injuries ....................................... 2
DANCE 360: Theory and Methods of Teaching Dance ................................... 3
DANCE 370: Technology for Dance ............................................................. 3
HHP 385: Practicum in Health and Human Performance ............................. 2
DANCE 410: Dance Performance and Production ........................................ 3

DANCE 200 must be taken for a total of 3 hours in different areas of dance.

Electives - Choose a minimum of three credits from the following:

COMM 105: Performance Appreciation ......................................................... 3
MGT 101: Introduction to Business ................................................................. 3
MUSIC 120: Music Appreciation (____) ......................................................... 3
MUSIC 156: Band (____) ................................................................................ 1
or MUSIC 356: Band (____) ......................................................................... 1
or MUSIC 756: Band (____) ......................................................................... 1
HHP 200: Lifetime Sports: (____) ................................................................. 1-3
HHP 347: Elementary Games and Rhythms for K-6 ..................................... 2
HHP 349: Group Fitness Instruction ............................................................... 2
COMM 363: Technical Production I ............................................................... 1
DANCE 420: Dance Performance ................................................................. 1
HHP 440: Topics in Health, Human Performance and Recreation (____) .......... 1-3

HHP 200 Lifetime Sports and DANCE 200 Dance (____) may be taken as Ballroom/Western Dance, Dance Team, Hip Hop Dance, Pilates, Zumba or Ballet.

Master of Science Degree with a Major in Health, Human Performance and Recreation

The online Master of Science degree program is designed to prepare students for careers in the fields of sport, physical education, wellness and recreation, and exercise science. Candidates complete the required core of 15 (18 for thesis option) hours and one of three
12 hour curricular emphases offered within the degree and five hours of elective for a minimum of 32 hours. Candidates selecting either the Human Performance and Wellness or Sport and Leisure Service Management emphases must complete an internship. The degree program normally takes a minimum of one and a half to two years to complete.

Admission Requirements

For work leading to the Master of Science degree with a major in Health, Human Performance and Recreation, a candidate must have a minimum undergraduate grade point average of 2.70, regardless of degree earned. A candidate holding a degree from another discipline must have a 2.70 grade point average in 20 semester hours of acceptable undergraduate foundation credit from an appropriate Health, Human Performance and Recreation field. A grade point average of 3.00 must be maintained throughout the program. Additional requirements include:

- Department interview with either the Graduate Coordinator or Department chairperson
- A written statement of educational goals and objectives
- Two personal letters of reference
- Official transcripts (mailed)

See department for conditions for Full Admission.

Master of Science Degree Required Core (15 hours)

HHPR 801: Methods of Assessment in Health Human Performance and Recreation ...............................................................3
HHPR 806: Special Investigations (___) .................................................................1-3
HHPR 810: Foundations of Human Performance and Wellness ........................................3
or HHPR 820: Foundations of Recreation and Leisure ..................................................3
HHPR 878: Social-Psychology of Sport and Recreation ..................................................3
HHPR 891: Methods of Research ....................................................................................3

Thesis Option

HHPR 890: Research and Thesis ....................................................................................3-5

HHPR 890 is taken for 3-5 hours depending upon the topic and the recommendation of the advisor.

Area of Emphasis

In addition to core requirements, students must complete one area of emphasis.

Human Performance and Wellness Emphasis (12 hours)

The Human Performance and Wellness emphasis prepares students possessing education, health, exercise science or similar degrees for careers in education, community and private settings. This emphasis includes 12 hours of required courses and five hours of electives.

HHPR 760: Technology and Instrumentation in Human Performance ..........................................................3
HHPR 863: Biomechanics .................................................................................................3
HHPR 866: Advanced Exercise Physiology ........................................................................3
HHPR 895: Internship (___) ...............................................................................................3

- Electives (5 hours)

HHPR 895 Internship must be taken in Human Performance and Wellness.

Sport and Leisure Service Management Emphasis (12 hours)

The Sport and Leisure Service Management emphasis prepares students possessing recreation, education, business or similar degrees for management careers in sport, leisure, and education settings. This emphasis includes 12 hours of required courses and five hours of electives.

HHPR 823: Finance and Marketing in Sport and Leisure Services ..............................................................3
HHPR 825: Leadership and Legal Issues in Sport and Leisure Services ......................................................3
HHPR 826: Sport and Leisure Facility Development and Operation .................................................................3
HHPR 895: Internship (___) ...............................................................................................3

- Electives (5 hours)

HHPR 895 Internship must be taken in Sport and Leisure Service Management.

General Emphasis (12 hours)

The General Emphasis provides students the opportunity to develop a broad background in Health, Human Performance and Recreation professions. This emphasis includes 12 hours of required courses and five hours of electives.

HHPR 823: Finance and Marketing in Sport and Leisure Services ..............................................................3
HHPR 825: Leadership and Legal Issues in Sport and Leisure Services ......................................................3
HHPR 863: Biomechanics .................................................................................................3
HHPR 866: Advanced Exercise Physiology ........................................................................3

- Electives (5 hours)
Psychology and Counseling

Chairperson: David P. Hurford*
Professor(s): Julie A. Allison*,**, Rebecca Brannock*,**, David P. Hurford*,**, Conni Rush*, Janet V. Smith*,**, Jamie Wood*
Associate Professor(s): Harriet Bachner*, Steven Duvall*, Gwendolyn Murdock*, C. Bruce Warner*
Assistant Professor(s): Chris Spera*, Ryan Speelman
Instructors: Cebrail Karayigit, Tysha VanBcelaere

* Graduate Faculty
**University Professor

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http://www.pittstate.edu/department/psychology/
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Undergraduate

Bachelor of Arts Degree with a Major in Psychology
Bachelor of Science Degree with a Major in Psychology
Psychology as a Second Teaching Field
Minor in Psychology
Minor in Psychology for Justice Studies Majors
Minor in Substance Abuse Services

Graduate

Master of Science Degree with a Major in Psychology
(General and Clinical Psychology)
Master of Science Degree with a Major in Counseling
Specialist in Education Degree with a Major in School Psychology

Policy Statement

The Department of Psychology and Counseling believes that students and faculty share an ethical responsibility to assure that individuals preparing for careers in mental health services possess both the academic qualifications and level of personal adjustment necessary to function effectively as professional mental health service providers.

All students in the department are expected to maintain satisfactory ethical standards and adequate self-understanding. Student performance is monitored by the department by means of semester grades and behavioral evidence of appropriate adjustment and professional conduct. If satisfactory progress is not being made, the department will inform the student and suggest possible steps toward remediation (and specify criteria to regain good standing in the program) or offer assistance to the student in finding a field of study that is more suited to the student’s interests and/or abilities. Unethical behavior is considered grounds for immediate dismissal from all training programs in the department.

Advisement

All students are assigned a faculty advisor upon admission. Advisors have a number of career-oriented curriculum plans showing required and suggested courses. Students are strongly encouraged to consult with their advisors at least once a semester (before enrollment) to ensure that their personal curriculum plans are appropriate to career plans.

UNDERGRADUATE DEGREE PROGRAMS

While careers involving the provision of direct mental health services have traditionally been the most common choices for those entering the field of psychology, many career choices and directions are available. Bachelor’s degree holders in psychology now find job roles readily available in human resources, employee recruitment and selection, public relations, market research and advertising, program development, teaching, research, case management, substance abuse services, community relations, administration, and other human service areas.

However, individuals who wish to have professional status and credentials as a psychologist or counselor must obtain a graduate degree.

The Department of Psychology and Counseling offers a full range of bachelor’s degree programs to prepare students in applied skills or for entry into graduate and professional level training. Students should work closely with their advisors to establish career goals and to select and plan programs that will allow them to effectively pursue graduate training or develop appropriate applied skills for entry into the world of work.

Undergraduate Admission Requirements

The following Bachelor of Science in Psychology options require completion of an application process and admission to the program/degree.

- Bachelor of Science in Psychology- Substance Abuse Services
- Bachelor of Science in Psychology- Case Management
• Bachelor of Science in Psychology - Psychology and the Military
• Minor in Substance Abuse Services

Applicants must have 60 hours complete and 3.0 GPA before applying. Admission to the above programs in the department requires that students submit the following:

• Department Application and Non-Refundable Application Fee of $40.00 payable to Department of Psychology and Counseling: Once the student has been accepted, additional fees are required to cover the cost of criminal background checks. The student's acceptance status will be considered "conditional" until the fees have been paid and the criminal background check has been completed.

Costs:

  o Domestic students with one last name-no additional fees.
  o Domestic students who have more than one last name (maiden name, married names, nicknames or other names used) - $18.00 per last name
  o International students- must pay the actual cost of the criminal background check for the student's specific country (see International Criminal History Pricing document for specific details)

• Consent for Release of Criminal Background Check
• Personal Statement of Career Goals (Describing background, professional/educational goals, and specific program area of interest at Pittsburg State University)
• Three Completed Professional Recommendation Forms (At least one reference should be from a teacher or academic advisor who can speak on behalf of your academic performance. References from friends, relatives, neighbors, ministers, personal physicians, and personal counselors are not acceptable. References from employers, teachers, or academic advisors are preferred.)

General Education Requirements

General Education Degree Requirements for the Bachelor of Arts Degree and the Bachelor of Science Degree total 46-54 hours and are distributed over nine areas. See General Education Requirements for All Baccalaureate Degrees.

General Education Degree Requirements for the Bachelor of Science in Education Degree total 46-54 hours and are distributed over nine areas. See General Education Requirements for Students Preparing to Teach Secondary School. Students preparing to teach secondary school should also see Scholastic Achievement in Common Core.

Department Assessment

All baccalaureate degree candidates in the department are required to complete the department assessment during their enrollment in PSYCH 665 Psychology as a Profession II.

GRADUATE DEGREE PROGRAMS

A student who wants a career as a professional psychologist or school counselor should plan on graduate study. The Department of Psychology and Counseling offers the Master of Science degree with a major in either psychology or counseling and the Specialist in Education degree with a major in school psychology.

The Master of Science degree with a major in psychology and the Master of Science degree with a major in school counseling have been developed specifically to prepare students for a variety of careers in schools and other agencies offering psychological services. The Specialist in Education program in school psychology is designed to prepare candidates for careers as school psychologists.

Graduate Admission Requirements

Admission to graduate study in the department is competitive and requires that students submit the following:

• Graduate and Continuing Studies Application for Admission to Graduate Study and non-refundable application fee of $35.00 for domestic students or $60.00 for international students
• Department Application and non-refundable application fee of $40.00 (this is in addition to

Applications are accepted for Summer Admission only. Deadline is March 1.
the Graduate and Continuing Studies application fee) payable to Department of Psychology and Counseling:

Once the student has been accepted, additional fees are required to cover the cost of criminal background checks. The student’s acceptance status will be considered “conditional” until the fees have been paid and the criminal background check has been completed.

Costs:

- Domestic students with one last name – no additional fees.
- Domestic students who have more than one last name (maiden name, married names, nicknames or other names used) - $18.00 per surname.
- International students – must pay the actual cost of the criminal background check for the student’s specific country (see International Criminal History Pricing document for specific details)

- Consent for Release of Criminal Background Check
- Personal Statement of Career Goals
- Graduate Record Examination (GRE) Scores (General Test Only) – A minimum score of 141 on the Quantitative Reasoning area, a minimum score of 146 on the Verbal Reasoning area, and 3.5 or above on the Analytical Writing area
- Three completed Professional Recommendation Forms
- All official degree statement transcripts
- A minimum TOEFL score of 550/79 for students whose primary language is not English
- Cumulative undergraduate GPA of 3.00

All application materials must be received before applications will be considered. Incomplete application files will not be considered. It is the responsibility of the applicant to monitor file completion.

One can matriculate into the programs at three different times: Fall, Spring, or Summer. Application deadlines are: Summer or Fall Admission, March 1; and Spring Admission, October 1. Late application deadlines are November 15 for Spring admission and May 1 for Summer or Fall admission. Late applications will only be considered if space is still available in the program. A non-refundable late application fee of $25.00 payable to the Department of Psychology and Counseling is required. Applications for Master of Science in Clinical Psychology are normally accepted for Fall admission. Applications will be considered for Spring admission, but please note that this will extend the student’s program of study by one semester. Normally applications that remain inactive for more than 30 days or that are incomplete after the next application deadline are considered no longer active and will be denied.

Most graduate students in the Department are at some point involved in providing direct mental health services as part of their practicum and internship experiences. As a result, the Department has a policy that requires all applicants consent to criminal background checks with Validity Screening Solutions regarding the applicant’s history of convictions for crimes involving violence or exploitation of others. Failure to sign the form for Consent for Release of Criminal Background Check will result in the immediate denial of the application.

Applicants for admission to all Master of Science degree programs must present evidence of completion of at least 21 hours in psychology and closely related subjects distributed so as to furnish an appropriate background for the work proposed on the graduate level. Background courses may be assigned to students who have fewer than 21 hours of specified prerequisite course work in psychology and/or a GPA below 3.00 or GRE scores below 146 on the verbal area, 141 on the quantitative area and 3.5 on the analytical writing area (and who can be admitted conditionally).

Degree Requirements

In addition to completing the prescribed curricula for the degree program emphasis and option, each student is required to submit a program (plan) of studies for admission to candidacy and to pass a written comprehensive examination.

Program of Studies

Graduate students should prepare a written plan of studies in consultation with the major advisor after completing at least 12 hours of graduate course work and removing all admission deficiencies. This plan should be submitted through the advisor to the department for approval before the student’s final 12 hours of coursework in the graduate program.
Graduate Student Retention

Students must maintain a GPA of 3.00 or higher throughout the program (3.25 for Master of Science School Counseling). A student shall have no grade lower than "B" in any courses applied to meet graduation requirements for that program. Students may repeat any coursework where they have earned a "C" or below, provided this is not in conflict with the terms of a conditional admittance to the program. Deficiencies in grades, professional behavior, or adjustment may lead to dismissal from the program. A graduate student in the Department who receives two grades below "B" in graduate coursework will be dismissed from the program. Students dismissed may reapply for admission and may be considered for readmission through the regular graduate admission process.

In order to insure that all students demonstrate openness to self-examination and professional self-development as well as the ability to develop and maintain good interpersonal relationships in individual and group contexts that characterize the level of personal functioning necessary for effective professional practice, faculty members will systematically monitor these factors throughout each student's program. In addition to frequent feedback from faculty and students concerning academic performance, self-understanding, and interpersonal effectiveness, faculty members conduct the following regular assessments:

1. Combined application information including letters of recommendation, personal statements, interviews, and other data will be used to select students for admission who are likely to demonstrate effective personal functioning as well as to develop high levels of professional commitment and skilled practice.

2. Each semester, the respective program committee will review the progress of each graduate psychology or counseling major in the three areas of effective personal functioning, professional commitment, and skilled practice. If inadequate performance is found in any area, the students will be informed by their faculty advisors of the specific areas and of recommended remediation steps to be completed to regain good standing.

3. During the semester before practicum enrollment, the same three areas will be assessed by the faculty advisor and the faculty practicum review committee. By this point in addition to earning "A" or "B" grades in all required courses for the relevant program, students must demonstrate sufficient self-understanding and ability to establish effective personal relationships necessary to engage in supervised practice. If there are limitations in these areas, the practicum application will not be approved for the next semester, and the student will be informed by letter of the steps required for remediation before reapplication in a subsequent semester. The student is also directed to work closely with his/her faculty advisor in the remediation plan.

4. In addition to using academic performance and behavioral evaluation to assess the student's professional development and skilled practice, self development and the ability to establish good interpersonal relationships in both individual and group contexts are monitored and evaluated during each fieldwork semester. If the student's performance in these areas is judged to be insufficient by the faculty instructor in consultation with the site supervisor, the student will not be allowed to enroll in fieldwork until remediation is completed and personal and interpersonal effectiveness demonstrated. If, at any of these points, the relevant program committee judges that the students' personal, interpersonal, ethical, professional, and/or academic performance, despite remediation, is not sufficient to continue in the program, the student will be informed of the decision and offered the opportunity to discuss alternative academic and/or career plans with their advisor. Students may grieve such decisions beginning with a written statement for the program committee to reconsider, and then following the regular grievance procedure steps described in the Pittsburg State University Catalog.

Consistent with the philosophy of the Pittsburg State University Master of Science in Psychology and Counseling program, a recommendation for student discontinuance in the program is not perceived by faculty as reflecting personal inadequacy. Rather, we view such situations as generally resulting from a mismatch of student interests and abilities with program philosophy and goals.

Graduate Research Requirements

There are three options from which students can select to fulfill the graduate research requirement. These options are listed below and should be determined in consultation with the student’s academic advisor.
Option I: Thesis

The student must present a satisfactory thesis and defend it before a thesis committee of at least three members. The committee must include at least one member from outside the department. The thesis option requires a minimum of 30 semester hours, with no fewer than 15 semester hours in courses numbered 800-899 and at least 24 hours in courses numbered 700-899. Enrollment in PSYCH 890 Research and Thesis must be for 3-6 hours and is included in the semester hour requirements. The thesis must meet the requirements of the Graduate Studies thesis manual.

Option II: Applied Research

The student will complete research related to a specific problem or will complete a specific advanced project. This option includes creative and aesthetic efforts such as performances, exhibits, or creative writing. The applied research option requires a minimum of 32 hours of coursework, with no fewer than 15 semester hours in courses numbered 800-899 and at least 26 hours in courses numbered 700-899. Enrollment in PSYCH 891 Methods of Research in Psychology and Counseling must be for 3 hours and is included in the semester hour requirements.

Option III: Coursework

The student will complete coursework that demonstrates evidence of advanced work in an area of concentration. Departments will require evidence of competency through activities such as research papers, portfolios, practica, internships, etc. Students should check with their major department for specific requirements in the coursework option. The coursework option requires a minimum of 32 hours of coursework, with no fewer than 15 semester hours in courses numbered 800-899 and at least 26 hours in courses numbered 700-899.

Comprehensive Examinations

All graduate students in the department are required to pass a written comprehensive examination in their last semester of enrollment. Students must register for the comprehensive examinations in the department office no later than the date for petitioning for degrees.

For those who do not pass the examination, the following policies apply:

1. The examination must be retaken within one year to maintain eligibility to satisfactorily pass the examination.
2. The examination may be retaken after a failure only one time. A candidate who does not satisfactorily pass the second time will be dismissed from his/her program.

Enrollment in Practicum, Internship, Fieldwork

Any student wishing to enroll in a practicum, internship, or fieldwork of any type in the Department of Psychology and Counseling must complete the application process. Formal application must be made to the department no later than mid-semester of the semester before enrollment in the practicum, internship, or fieldwork course (mid-fall to enroll during the spring semester; mid-spring for enrollment in the summer and/or fall semesters).

Admission to graduate practica or internship is open only to students who have been admitted to candidacy in the specific degree program for which the practicum/internship is required. (The exception to this rule is for students who are re-specializing and adding a second endorsement in elementary or secondary school counseling. A certification contract is required.) Specific prerequisite coursework requirements apply. Application forms are available in the department office.

Bachelor of Arts Degree with a Major in Psychology

The Bachelor of Arts degree with a major in psychology is designed for the student who wishes to pursue the scientific study of psychology as part of a liberal arts education. It is also designed for students who wish to obtain a graduate degree in psychology. Beyond the minimum course requirements in psychology, the student takes courses in the liberal arts and in a foreign language in order to better understand the place of psychology in today's international community.

General Education Requirements (46-52 hours)

See General Education Requirements for All Baccalaureate Degrees.

Common Core (Required) (24 hours)

PSYCH 165: Psychology as a Profession I ................................. 2
Bachelor of Arts Psychology Core

Degree Core Required (in addition to required Common Core) (6 hours)

PSYCH 691: Evolutionary Psychology .............................................. 3
PSYCH 756: Social Psychology ..................................................... 3

Electives in Psychology (6 hours)

Total hours in the major (36 hours)

Minor (20 hours)

A minor of at least 20 hours in some other field is required.

Foreign Language (9 hours)

The Bachelor of Arts requires 9 hours in one foreign language.

General Electives (to bring total to 124 hours)

Total hours for Bachelor of Arts Degree with a Major in Psychology (124 hours)

Bachelor of Science Degree with a Major in Psychology

The Bachelor of Science degree with a major in psychology is for the student interested in the study of the applied aspects of psychology with an emphasis on practical skills. This program requires a concentration of courses in developmental disabilities, case management, substance abuse services, human resource development, human factors, psychology and legal issues or psychology and the military.

General Education Requirements (46-52 hours)

See General Education Requirements for All Baccalaureate Degrees.

Common Core (Required) (24 hours)

PSYCH 263: Developmental Psychology .............................................. 3
PSYCH 389: Research Methods in Psychology I .................................. 3
PSYCH 392: Research Methods in Psychology II .................................. 3
PSYCH 394: Principles of Learning ..................................................... 3
PSYCH 463: Cognitive Processes ....................................................... 3
PSYCH 571: Abnormal Psychology .................................................... 3
PSYCH 665: Psychology as a Profession II ........................................... 1
PSYCH 724: Physiological Psychology .............................................. 3
or PSYCH 698: Sensation and Perception ........................................... 3

Bachelor of Science Psychology Core

Degree Core Required (in addition to required Common Core) (3 hours)

PSYCH 756: Social Psychology ..................................................... 3

Electives in Psychology (9 hours)

Total hours in the major (36 hours)

Area of Concentration

Option I: Developmental Disabilities (27 hours)

MGT 330: Management and Organizational Behavior ......................... 3
MGT 540: Human Resources Management .......................................... 3
or PSYCH 616: Introduction to Group Processes .................................. 3
PSYCH 357: Educational Psychology .................................................. 3
or PSYCH 430: Positive Psychology ................................................... 3
PSYCH 736: Psychology of Family Development ................................... 3
PSYCH 741: Behavior Modification .................................................... 3
REC 311: Recreation Program Design and Leadership ......................... 3
PSYCH 781: Psychology of Exceptional Children ................................ 3
SPED 738: Characteristics of Students with High-Incidence Learning Needs ........................................... 3
SWK 344: Mental Health Theory and Practice .................................... 3

Option II: Case Management (30 hours)

PSYCH 701: Ethics in Human Services .............................................. 3
PSYCH 703: Mental Health Case Management ..................................... 3
PSYCH 711: Addictions I ................................................................. 3
PSYCH 736: Psychology of Family Development ................................... 3
PSYCH 741: Behavior Modification .................................................... 3
PSYCH 781: Psychology of Exceptional Children ................................ 3
SWK 201: Introduction to Social Work .............................................. 3
SWK 599: Social Work and the Law .................................................. 3

And 6 hours chosen from:

PSYCH 430: Positive Psychology ................................................... 3
PSYCH 616: Introduction to Group Processes ..................................... 3
PSYCH 720: Multicultural Issues in Psychology and Counseling ............. 3
PSYCH 778: Fieldwork in Psychology ............................................... 3
SWK 345: Topics in Social Work ..................................................... 3
SWK 365: Social Process and Social Policy ........................................ 3
SWK 385: Human Behavior Social Environment: Individual and Family Functioning ........................................... 3
- Or additional workshops or courses by advisement

PSYCH 703 and PSYCH 720 offered odd number summers only.

PSYCH 711 offered every summer.

SWK 345 Topic is Correctional Case Management.

NOTE: To complete Option II: Case Management, the student must apply (application available in the department office) and be accepted before undertaking coursework in Option II. Completion of Option II requires enrollment during at least one summer session.

**Option III: Substance Abuse Services (30 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 616: Introduction to Group Processes</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 701: Ethics in Human Services</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 711: Addictions I</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 720: Multicultural Issues in Psychology and Counseling</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 727: Pharmacology and Substance Abuse</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 774: Family and Addictions</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 775: Individual Counseling in Addictions</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 776: Addiction Services Coordination</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 777: Fieldwork in Psychology for Substance Abuse Services</td>
<td>3</td>
</tr>
</tbody>
</table>

PSYCH 777 should be taken for a total of 6 hours.

PSYCH 720 offered odd number summers only.

PSYCH 727 and PSYCH 774 offered even number summers only.

PSYCH 711 offered every summer.

NOTE: To complete Option III: Substance Abuse Services, the student must apply (application available in the department office) and be accepted before undertaking coursework in Option III: Substance Abuse Services. (Completion of all coursework qualifies graduates for licensure as addictions counselors through the Behavioral Sciences Regulatory Board in Kansas.) Completion of this option requires enrollment during at least two summer sessions.

**Option IV: Human Resource Development (27 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 575: Industrial and Organizational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>HRD 596: Introduction to Human Resource Development</td>
<td>3</td>
</tr>
</tbody>
</table>

**And 21 hours chosen from:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRD 575: Instructional Media in Human Resource Development</td>
<td>3</td>
</tr>
<tr>
<td>HRD 597: Organizational Staffing</td>
<td>3</td>
</tr>
<tr>
<td>HRD 598: Talent Management</td>
<td>3</td>
</tr>
<tr>
<td>HRD 630: Employee and Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>MGT 330: Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 444: Legal and Social Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 540: Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 779: Fieldwork in Psychology: Human Resource Development Practicum</td>
<td>1-3</td>
</tr>
<tr>
<td>TM 390: Trade and Job Analysis</td>
<td>3</td>
</tr>
<tr>
<td>TM 520: Leadership in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>TM 653: Workforce Preparation</td>
<td>3</td>
</tr>
<tr>
<td>TM 679: Presentation Skills</td>
<td>3</td>
</tr>
<tr>
<td>TM 606: Industrial Supervision</td>
<td>3</td>
</tr>
</tbody>
</table>

MGMKT 444, MGT 540 - See course description for prerequisite information.

Junior standing is required for MGMKT 444 Legal and Social Environment of Business.

MGT 330 is a pre-requisite for MGT 540.

**Option V: Human Factors (27 hours minimum)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 575: Industrial and Organizational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 675: Human Factors Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 724: Physiological Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYCH 698: Sensation and Perception</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives chosen from the following categories (18-20 hours)**

**Biology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 257: Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 258: Anatomy and Physiology Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

BIOL 257/258 see course description for prerequisite information.

**Safety (no more than three courses from this category count toward concentration):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EST 393: Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 512: Risk Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EST 604: Occupational Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 629: Legal Issues in Environmental Health and Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics and Computer Information Systems (no more than three courses from this category count toward concentration)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 150: Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 155: Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>CIS 230: Visual Basic Programming</td>
<td>3</td>
</tr>
<tr>
<td>CIS 325: Advanced Visual Basic Programming</td>
<td>3</td>
</tr>
</tbody>
</table>
CIS 380: Systems Analysis and Design ........................................... 3

CIS 230, CIS 325 and CIS 380 see course description for prerequisite information.

**Electronics Engineering Technology:**

EET 141: Introductory Electronics ............................................... 3
EET 144: D.C. Circuit Analysis Methods ....................................... 3
EET 244: Logic Circuits .............................................................. 3

EET 144 and EET 244 see course description for prerequisite information.

**General Technology:**

GT 191: Foundations of Technology and Engineering .................. 2
GT 330: Engineering Materials and Processes .......................... 3
GT 380: Manufacturing Enterprise ............................................. 3

PSYCH 724 or PSYCH 698 whichever course was not taken as a part of the core.

GT 380 see course description for prerequisite information.

**Option VI: Psychology and Legal Issues (27 hours)**

JUST 104: Introduction to the Justice System ............................. 3
or JUST 109: Principles of Justice Studies ................................. 3
PSYCH 430: Positive Psychology ................................................ 3
PSYCH 575: Industrial and Organizational Psychology ................ 3
PSYCH 741: Behavior Modification .......................................... 3
PSYCH 771: Psychology and the Law ........................................ 3
PSYCH 773: Criminal Psychopathology ..................................... 3

**And 9 hours chosen from:**

FCS 580: Family Violence and Child Abuse ............................... 3
JUST 480: Women, Crime, and Justice .................................... 3
JUST 500: Criminal Law and Society ........................................ 3
JUST 501: Criminal Procedure .................................................. 3
JUST 521: Special Topics in Justice Studies (____) ...................... 1-3
JUST 522: Crime Scenes and the Law of Evidence .................... 3
POLI 661: Constitutional Law I ............................................... 3
SOC 527: Correctional Systems ............................................... 3
SOC 547: Criminology ............................................................. 3
SOC 548: Juvenile Delinquency ............................................... 3

- Or other additional course(s) or workshops through advisement

PSYCH 771 and PSYCH 773 offered even number summers only.

General Education Requirements (46-53 hours)

General Electives (to bring total to 124 hours)

Total hours for Bachelor of Science Degree with a Major in Psychology (124 hours)

NOTE: Completion of Option VI requires enrollment during at least one summer session.

**Option VII: Psychology and the Military (27 hours)**

NURS 265: Health Promotion and Disease Prevention .................. 2
PSYCH 430: Positive Psychology ............................................. 3
PSYCH 505: Power-Based Violence .......................................... 3
PSYCH 605: Psychology and the Military .................................. 3
PSYCH 701: Ethics in Human Services ....................................... 3
PSYCH 705: Human Service Skills .......................................... 3
PSYCH 711: Addictions I .......................................................... 3
or PSYCH 774: Family and Addictions .................................... 3
PSYCH 741: Behavior Modification .......................................... 3
PSYCH 749: Crisis Management and Treatment ....................... 1

PSYCH 505, 605 and 774 offered odd number summers only.

PSYCH 711 offered every summer.

**Psychology as a Second Teaching Field**

To receive the departmental endorsement for certification in psychology as a second teaching field, the Department of Psychology and Counseling requires the following 11 hours of coursework in psychology (in addition to prerequisite courses and the courses required of all teacher education candidates):

PSYCH 165: Psychology as a Profession I ................................. 2
PSYCH 392: Research Methods in Psychology II ....................... 3
PSYCH 430: Positive Psychology ............................................. 3
PSYCH 463: Cognitive Processes ............................................. 3

**Minor in Psychology**

To complete a minor in psychology, the student takes 21 hours--usually seven courses--in psychology. In meeting this requirement, students may take any psychology courses for which they have the prerequisites. Only three hours of credit earned in PSYCH 440 or 740 Topics in Psychology and only three hours of credit earned in PSYCH 592 Applied Research Methods will be counted in the 21-hour minor.

Psychology faculty will advise students concerning psychology courses appropriate for specific majors.

**Minor in Psychology for Justice Studies Majors**

The Department of Psychology and Counseling has developed a series of courses for a minor in Psychology that would be highly suitable for Justice Studies majors. Number of hours required for the minor is 21-22 hours.
(Note: PSYCH 771 and PSYCH 773 are offered even number summers only.)

PSYCH 389: Research Methods in Psychology I ........................................ 3
or SOSCI 388: Social Research Analysis .................................................. 4
PSYCH 392: Research Methods in Psychology II ..................................... 3
PSYCH 571: Abnormal Psychology .......................................................... 3
PSYCH 575: Industrial and Organizational Psychology ............................. 3
PSYCH 756: Social Psychology ............................................................... 3
PSYCH 771: Psychology and the Law ....................................................... 3
PSYCH 773: Criminal Psychopathology .................................................... 3

Minor in Substance Abuse Services

To complete the minor in substance abuse services, the student completes the 33 hours listed below. Students must apply (application available in the department office) and be accepted before undertaking coursework in the substance abuse services minor. (Completion of all coursework qualifies graduates for licensure as addiction counselors through the Behavioral Sciences Regulatory Board in Kansas.) Completion of this minor requires enrollment during at least two summer sessions. (Note: PSYCH 720 is offered odd number summers only. PSYCH 727 and PSYCH 774 are offered even number summers only. PSYCH 711 is offered summers only. PSYCH 777 should be taken for 6 hours.)

Required Courses

PSYCH 571: Abnormal Psychology ......................................................... 3
PSYCH 616: Introduction to Group Processes .......................................... 3
PSYCH 701: Ethics in Human Services .................................................... 3
PSYCH 711: Addictions I ....................................................................... 3
PSYCH 720: Multicultural Issues in Psychology and Counseling ............. 3
PSYCH 727: Pharmacology and Substance Abuse .................................. 3
PSYCH 774: Family and Addictions ....................................................... 3
PSYCH 775: Individual Counseling in Addictions ................................... 3
PSYCH 776: Addiction Services Coordination ....................................... 3
PSYCH 777: Fieldwork in Psychology for Substance Abuse Services .... 3

PSYCH 777 should be taken for a total of six hours.

Master of Science Degree with a Major in Psychology Emphasis in General Psychology

The Master of Science degree requires a core of 15 (18 for thesis option) hours followed by additional courses to total a minimum of 33 hours. Beyond the core the student can, through advisement, direct studies for the Master of Science degree toward a terminal program in general psychology, toward community college teaching of psychology, toward a pre-doctoral program, or toward a pre-specialist program in school psychology. Completion of the Master of Science degree with a major in psychology (general) does not qualify an individual to be a mental health service provider. The program is not designed to train practitioners and thus students seeking the general Master of Science are not eligible to enroll in a practicum or internship in the department. Those students planning to apply for the Specialist in Education in School Psychology should consult with their advisor in selecting elective courses.

Master of Science Degree with an Emphasis in General Psychology Required Core (18 hours)

PSYCH 722: Fundamentals of Tests and Measurement ............................. 3
PSYCH 741: Behavior Modification ....................................................... 3
PSYCH 830: Psychology of Learning ..................................................... 3
PSYCH 834: Introduction to Human Neuropsychology ......................... 3
PSYCH 859: Advanced Developmental Psychology ............................ 3
PSYCH 891: Methods of Research in Psychology and Counseling ........ 3

Plus a minimum of 15 hours (to total a minimum of 33 hours) chosen in consultation with the student's advisor. (Must include PSYCH 890 Research and Thesis for students electing Option I).

Total hours for Emphasis in General Psychology (33 hours)

Master of Science Degree with a Major in Psychology Emphasis in Clinical Psychology

The Master of Science degree with a major in psychology (clinical emphasis) meets the educational requirements of the Kansas Behavioral Sciences Regulatory Board course work and fieldwork requirements for Licensed Master's Level Psychologists. Additional field experience and the licensure examination qualifies graduates for licensure as clinical psychotherapists in Kansas. A minimum of 67 hours is required, including coursework in psychopathology, assessment, treatment, and research; and 750 clock hours of practicum and internship experiences. The program in clinical psychology is accredited by the Masters in Psychology Accreditation Council (MPCAC).

Required Core (58 hours)

PSYCH 722: Fundamentals of Tests and Measurement ............................. 3
PSYCH 801: Ethical Issues in Clinical Psychology .................................. 3
PSYCH 803: Intellectual Assessment ...................................................... 3
PSYCH 808: Child Personality Assessment ............................................ 3
PSYCH 809: Personality Assessment ....................................................... 3
PSYCH 811: Psychopathology and Diagnosis of Mental Disorders .......... 3
PSYCH 818: Theories of Counseling and Psychotherapy ....................... 3
PSYCH 819: Techniques of Counseling and Psychotherapy ............. 3
PSYCH 823: Psychopharmacology ................................................. 3
PSYCH 832: Evidence-Based Interventions: Adults ...................... 3
PSYCH 834: Introduction to Human Neuropsychology .................. 3
PSYCH 839: Group Interventions ..................................................... 3
PSYCH 860: Clinical Psychology ..................................................... 1
PSYCH 872: Practicum in Clinical Psychology ............................... 1-6
PSYCH 890: Research and Thesis ................................................... 3-6
PSYCH 891: Methods of Research in Psychology and Counseling ..... 3
PSYCH 895: Internship in Clinical Psychology ............................... 1-9

PSYCH 890 Research and Thesis (or Therapy/Assessment Elective by Advisement)

PSYCH 895 Internship in Clinical Psychology

Plus nine hours of electives selected from chosen area below:

Electives for General Community Mental Health Option: (chosen from) (9 hours)
PSYCH 711: Addictions I ................................................................. 3
PSYCH 720: Multicultural Issues in Psychology and Counseling .......... 3
PSYCH 736: Psychology of Family Development .......................... 3
PSYCH 817: Theories and Techniques of Family Counseling and Therapy ................................................................. 3
PSYCH 833: Evidence-Based Interventions: Children .................. 3
PSYCH 844: Diversity Issues in Counseling ................................ 3
PSYCH 845: Practice in Family Counseling .................................. 1-3

Electives for Intellectual Disabilities/Developmental Disabilities (ID/DD) Option: (chosen from) (9 hours)
PSYCH 741: Behavior Modification ............................................... 3
PSYCH 781: Psychology of Exceptional Children ......................... 3
PSYCH 805: Psychoeducational Assessment .................................. 3
PSYCH 830: Psychology of Learning ............................................. 3

Electives for Child and Family Option: (chosen from) (9 hours)
PSYCH 736: Psychology of Family Development .......................... 3
PSYCH 817: Theories and Techniques of Family Counseling and Therapy ................................................................. 3
PSYCH 833: Evidence-Based Interventions: Children .................. 3
PSYCH 844: Diversity Issues in Counseling ................................ 3
PSYCH 845: Practice in Family Counseling .................................. 1-3
PSYCH 859: Advanced Developmental Psychology ...................... 3

Electives for Addictions Option: (chosen from) (9 hours)
PSYCH 711: Addictions I ................................................................. 3
PSYCH 720: Multicultural Issues in Psychology and Counseling .......... 3
PSYCH 774: Family and Addictions ................................................. 3
PSYCH 776: Addiction Services Coordination ................................ 3

Electives for Counseling Option:
12 credits required for students seeking LPC (check with your advisor as requirements vary by state)
PSYCH 745: Introduction to Counseling and Psychotherapy ............. 3
PSYCH 844: Diversity Issues in Counseling .................................. 3
PSYCH 848: Career Development .................................................. 3
PSYCH 859: Advanced Developmental Psychology ...................... 3

Pre-requisites for entry into Clinical Psychology program include: PSYCH 389 Research Methods in Psychology I, PSYCH 392 Research Methods in Psychology II, and PSYCH 571 Abnormal Psychology.

Total hours for Master of Science Degree with an Emphasis in Clinical Psychology (67 hours)

Master of Science Degree with a Major in School Counseling (Pre K-12)
The Master of Science degree in School Counseling prepares candidates for professional careers as school counselors in Pre K-12 settings. Candidates interested in pursuing the Master of Science degree in School Counseling are strongly encouraged to complete an undergraduate degree in education. Although two years of teaching experience was required for candidates planning to secure employment as school counselors in the state of Kansas in the past, that is no longer a requirement but is still recommended. Candidates without a degree in education or teaching experience will be required to complete additional coursework not reflected on this program guide. In addition to completing the following 48 hour program of study in School Counseling, a passing score on the PRAXIS II specialty test in Guidance and Counseling (code 20420) is needed as well.

Master of Science Degree with a Major in School Counseling Curriculum
Courses listed are in the recommended order they should be taken.

Courses are offered every semester unless indicated otherwise.
PSYCH 745: Introduction to Counseling and Psychotherapy ............. 3
PSYCH 722: Fundamentals of Tests and Measurement ..................... 3
PSYCH 816: Group Dynamics ....................................................... 3
PSYCH 848: Career Development .................................................. 3
PSYCH 818: Theories of Counseling and Psychotherapy ............... 3
PSYCH 819: Techniques of Counseling and Psychotherapy ............ 3
PSYCH 814: Program Planning and Management in School Counseling ................................................................. 2
Persons with a bachelor's degree may begin working toward the Master of Science General Psychology degree in psychology. All Specialist in Education applicants must have a master's degree in psychology or a related field, including at least 10 hours of graduate work applicable to the area of school psychology. The candidate for this degree must meet requirements for initial licensure as a school psychologist in the state of Kansas. Full licensure requires completion of this degree plus one school year of internship. The program must include a minimum of 32 hours of approved coursework beyond the master's degree, of which 21 hours must be numbered 800 or above and at least nine of the 21 hours must be numbered 900 or above. This curriculum adheres to the standards established by the Kansas State Department of Education and to the curriculum recommendations of the National Association of School Psychologists (NASP).

Admission is competitive and limited to the number of practicum sites available.

**Specialist in Education Degree with a Major in School Psychology Curriculum**

**Prerequisites:** PSYCH 263 Developmental Psychology, PSYCH 357 Educational Psychology, PSYCH 389 Research Methods in Psychology I, PSYCH 392 Research Methods in Psychology II, PSYCH 571 Abnormal Psychology, and PSYCH 781 Psychology of Exceptional Children (or SPED 510 Overview of Special Education).

The following sequence of courses meets Kansas State Department of Education requirements for initial licensure as a school psychologist:

**Courses Taken in the Master's Degree Program in Psychology (36 hours)**

**Required Core (18 hours)**

- PSYCH 722: Fundamentals of Tests and Measurement .................................................. 3
- PSYCH 741: Behavior Modification ............................................................................. 3
- PSYCH 830: Psychology of Learning ........................................................................... 3
- PSYCH 834: Introduction to Human Neuropsychology ........................................... 3
- PSYCH 859: Advanced Developmental Psychology .................................................... 3
- PSYCH 891: Methods of Research in Psychology and Counseling .......................... 3

**M.S. Electives Taken to Meet Certification Requirements (18 hours)**

- PSYCH 755: Introduction to School Psychology ......................................................... 3
- PSYCH 783: Ethical and Legal Issues in School Psychology and Related Fields ........ 3
Courses Taken in the Ed.S. Program in School Psychology (32-34 hours)

PSYCH 803: Intellectual Assessment .................................................. 3
PSYCH 805: Psychoeducational Assessment ...................................... 3
PSYCH 808: Child Personality Assessment ........................................ 3
PSYCH 819: Techniques of Counseling and Psychotherapy ................. 3
PSYCH 845: Practice in Family Counseling ...................................... 1-3
PSYCH 870: Practicum in School Psychology .................................. 1-4
PSYCH 901: Contemporary Problems in School Psychology ............... 3
PSYCH 970: Advanced Practicum in School Psychology .................... 1-12
PSYCH 990: Special Research Project ............................................. 3-6
or TCHL 930: Seminar in Research Skills ....................................... 3

- PSYCH Electives (3-5 hours)

Internship (Post Degree, Required for Certification) (6 hours)

PSYCH 995: Internship in School Psychology .................................... 3

PSYCH 995 Internship in School Psychology (6 hours)
Teaching and Leadership

Chairperson: Alice Sagehorn*
Professor(s): Carolyn Fehrenbach*, Brenda Frieden*, Susan Knell*, Kent Runyan*, Alice Sagehorn*,**, Steven Scott*, Tatiana Sildus*, Howard W. Smith*
Associate Professor(s): Brenda Roberts*, Julie Samuels*, Ray Willard*, Martha York* Assistant Professor(s): Marcus Daczewitz*, Jean Dockers*, Bridgette Fincher*, Gloria Flynn, Michelle Hudiburg*, Shelly Martin*, Elizabeth Mascher*, Robert Morton*, Brian Sims*, Kristi Stuck* Instructors: Angela Abbott, Amy Bartlow, Ann George*, Tracy Rampy, Pam Sells*, Kylie Stewart, Terri Cooper Swanson* Lecturer: Renee Goostree*, Alan L. Roberts Coordinator: Crystal L. Davis *Graduate Faculty **University Professor

Room 201 Hughes Hall
Telephone: 620-235-4484
Fax: 620-235-4520
http://www.pittstate.edu/department/teaching-leadership/index.dot
E-mail: tchlspittstate.edu

Undergraduate

Bachelor of Science in Education Degree with a Major in Early Childhood Unified (ECU) Birth through Third Grade
Bachelor of Science in Education Degree with a Major in Elementary Education (K-6)
Second Teaching Fields Middle Level Education
Minor in English for Speakers of Other Languages
Minor in Inclusive Education
Minor in International Teaching (Non Licensure)
Minor in Leadership Studies
Minor in Technological Literacy
Minor in Special Education for Students Majoring in Family and Consumer Sciences- Early Childhood Emphasis
Minor in Urban and Suburban Experience (Non Licensure)

Graduate

Master of Arts Degree with a Major in Teaching (Secondary Teaching Licensure Program)
Master of Arts Degree with a Major in Teaching (Special Education Licensure Program)
Master of Science Degree with a Major in Education and an Emphasis in School Health
Master of Science Degree with a Major in Educational Leadership
Master of Science Degree with a Major in Educational Technology
Master of Science Degree with a Major in Reading with Emphases in Reading Specialist Licensure or Classroom Reading Teacher
Master of Science Degree with a Major in Special Education Teaching
Master of Science Degree with a Major in Teaching with Emphases in Elementary, Secondary or English for Speakers of Other Languages
Master of Science Degree with a Major in Teaching with an Emphasis in Environmental Education
Specialist in Education Degree with a Major in Advanced Studies in Leadership with an Emphasis in General School Administration
Specialist in Education Degree with a Major in Advanced Studies in Leadership with an Emphasis in Special Education
Certificate in Autism Spectrum Disorders
Certificate in District Leadership
Certificate in Reading/Language Arts
Certificate in School Library
Certificate in Teaching English to Speakers of Other Languages
Certificate in Technology Integration

The Department of Teaching and Leadership offers both undergraduate and graduate education and teacher licensure programs. The undergraduate degree programs include a major in Elementary Education (K-6) leading to the Bachelor of Science in Education degree and an undergraduate major in Early Childhood Unified Birth through Third Grade including Special Education leading to the Bachelor of Science in Education degree in partnership with Family and Consumer Sciences.

The department offers six undergraduate minors available to any major. They are: English for Speakers of Other Languages (Pre-K-12, which can lead to an endorsement to the teaching license); Inclusive Education; International Teaching, Leadership, Urban and Suburban Experience; and Technological Literacy (STEM).

The graduate programs are designed to meet the needs of individuals seeking additional preparation for teaching and/or leadership in K-12 schools and institutions of higher education. The graduate programs include: Master of Science in Educational Leadership;
Master of Science in Educational Technology with an emphasis in Educational Integration Specialist or Library Media Specialist; Master of Science in Reading with an emphasis in Classroom Teacher or Reading Specialist; Master of Science in Special Education Teaching with endorsements in High Incidence Special Education K-6, 6-12 and Low Incidence Special Education K-6, 6-12; Master of Science in Teaching with an emphasis in Elementary, Secondary, English for Speakers of Other Languages or Environmental Education.

Two graduate programs provide both an alternative route to licensure and a Master of Arts in Teaching. The Master of Arts in Teaching, Secondary is an alternative secondary teaching license program for those who have a baccalaureate degree in a content area that is taught in grades 6-12. The Master of Arts in Teaching Special Education is an innovative Special Education teaching license program. This program is limited to those individuals who hold a baccalaureate degree in any area and who are currently working as a para-professional in a Special Education classroom with students who are identified as High Incidence.

The Masters of Science with a major in Education and an emphasis in School Health is designed for School Nurses. The program, in partnership with the Irene Ransom Bradley School of Nursing, includes courses in Nursing, Special Education, Leadership, and Research.

The Specialist in Education Degree with a major in Advanced Studies in Leadership is designed for those who completed a Masters Degree and want to continue their education. There are three areas of emphasis: General School Administration, Special Education; and Community College Leader.

An eighteen credit hour Autism Certificate is offered in conjunction with Fort Hays State University, and the Kansas State Department of Education. The Autism Certificate offers three areas of specialization: Classic Autism, High Functioning Autism and Early Childhood.

**University of Arkansas Partnership**

The Pittsburg State University College of Education, Department of Teaching and Leadership, has an articulation agreement with the University of Arkansas, Fayetteville for graduates of the Specialist in Education Degree (EdS) with a major in Advanced Studies in Leadership and the Educational Doctorate (EdD) in Leadership at the University of Arkansas, Fayetteville. For more information about the EdS to EdD Leadership program, contact the department.

**UNDERGRADUATE PROGRAMS**

The undergraduate degree programs include a major in Elementary Education (K-6) leading to the Bachelor of Science in Education degree and an undergraduate major in Early Childhood Unified Birth through Third Grade including Special Education leading to the Bachelor of Science in Education degree in partnership with the Family and Consumer Sciences department.

For all candidates preparing to teach at the early childhood, elementary or secondary level, the department provides a sequence of courses in professional education. Included is an entire semester devoted to professional course work, related laboratory experiences, and off-campus student teaching.

**Application for Admission to Teacher Education and Information on Field Experiences**

See [Admission to Teacher Education](#).

**Scholastic Achievement**

For admission to Teacher Education, the teacher candidate for the Elementary Education (K-6) major or the Early Childhood Unified (ECU) Birth through Third Grade major must have a 2.80 grade point average on the 33-36 semester hour general education core curriculum and have a 22 ACT or higher.

**Pittsburg State University Internship**

The Pittsburg State University Internship is a requirement for Elementary Education (K-6) majors and for Early Childhood Unified majors. The Internship enables senior level students to participate in a semester long field experience prior to the professional semester. Partnerships have been established with local schools to provide placements and support for interns. In order to participate, the teacher intern must be admitted to Teacher Education and complete an application requesting permission to serve as an intern. During the internship, the intern is allowed to enroll in one course in addition to the restricted course work for his/her declared major. Mentor teachers must be recommended for participation in the partnership by their building level principal. During the internship semester, participants work eight (8) to ten (10) clock hours per week in a classroom working with their mentor teacher in addition to completing required coursework on campus. Additionally, faculty from Pittsburg State University supervises the interns and work with the mentor teachers. The interns then have the opportunity to conclude their teacher education
program with a sixteen-week student teaching experience in the same classroom during the fall or spring semester.

The mission of the partnership between Pittsburg State University and the PK-12 schools is to:

- Continue to improve the quality of education for area PK-12 students by utilizing research-based techniques and teaching strategies;
- Provide pre-service teachers with an authentic experience which effectively utilizes unique elements of a diverse student population and experienced professional staff in area schools;
- Stimulate and encourage the participating PK-12 schools and Pittsburg State University faculties to develop professionally through continuous collaboration and interaction so that the community of life-long learners is better prepared to live and work in an ever changing society.

The Professional Semester

All candidates enrolled in the regular academic year who are preparing to teach (early childhood, elementary and secondary) are required to participate in the professional semester.

The professional semester is an entire semester devoted to professional education and related professional laboratory experiences, including supervised teaching. The candidate must plan and expect to devote the full school day, Monday through Friday, to these experiences and additional time to extra-class activities of pupils. During the off-campus period, the candidate is expected to devote full time throughout each week in the cooperating school and community to the same extent as does the teacher on the job. Candidates are not permitted to take additional course work during the professional semester without prior approval.

Application for the professional semester must be made by February 15 for the fall semester and September 15 for the spring semester.

A candidate must have been admitted to teacher education prior to application for the professional semester. At least six hours of resident credit at Pittsburg State University must have been completed before admission to the professional semester. To be admitted to the professional semester, a cumulative grade point average of 2.80 is required and a grade point average of 3.00 in major are required for Elementary Education K-6 and Early Childhood Unified (ECU) Birth through 3rd Grade majors; 2.50 cumulative grade point average and 2.75 in major is required for secondary/PreK-12 majors. Elementary Education majors must take and pass the Principles of Learning and Teaching and Elementary Content Test prior to the Professional Semester.

Eligibility for admission to the professional semester is determined by the criteria for admission to and retention in teacher education as well as specific requirements for the professional semester. (See Teacher Education section of this catalog.)

The full-time professional semester experience is provided in selected schools in the service area of the university and is under the direct supervision of a qualified member of the department staff.

Enrollment in the Elementary Education (K-6) and Early Childhood Unified (ECU) Birth through 3rd Grade professional semester consists of:

- EDUC 455 Elementary and Middle Level Education
- EDUC 458 Methods and Curriculum
- EDUC 475 Supervised Teaching in the Elementary School
- EDUC 476 Supervised Teaching in the Elementary School
- EDUC 579 Supervised Student Teaching and Follow-Up of Teachers

Enrollment in the secondary professional semester consists of:

- EDUC 458 Methods and Curriculum
- EDUC 462 Secondary and Middle Level Education
- EDUC 464 Foundations of Measurement and Evaluation
- EDUC 480 Supervised Teaching in the Secondary School
- EDUC 482 Supervised Teaching in the Secondary School
- (____) 579 Supervised Student Teaching and Follow-Up of Teachers
Enrollment in the PK-12 professional semester consists of:

EDUC 458  Methods and Curriculum
EDUC 462  Secondary and Middle Level Education
EDUC 464  Foundations of Measurement and Evaluation
EDUC 475  Supervised Teaching in the Elementary School or
EDUC 477  Supervised Teaching in Foreign Languages in the Elementary School
EDUC 482  Supervised Teaching in the Secondary School

(____) 579  Supervised Student Teaching and Follow-Up of Teachers

If the candidate’s minor requires supervised teaching, EDUC 480 Supervised Teaching in the Secondary School should be included in the minor. Candidates in the secondary professional semester may be assigned to an off-campus middle high school or senior high school according to the specific level at which the student teaching experience is desired. Assignment to a six-year secondary school may also be requested.

For more specific information about the professional semester and procedures for enrolling in it, the student should consult the Office of Teacher Education, 110 Hughes Hall.

Requirements for Graduate Study

Graduate students should work closely with their academic advisors to ensure all degree requirements are met. Each program has particular admission requirements, recommended sequences for certain courses, and other important factors to be considered. Careful examination and review of the catalog information, program guides, and correspondence with the Department of Teaching and Leadership and the Office of Graduate and Continuing Studies is strongly encouraged.

Two options exist for the graduate degrees offered by the department:

a. Thesis Option, referred to as Option I, requires 3-6 thesis hours;

b. Non-Thesis Option, referred to as Option II, requires no thesis hours.

All department graduate programs share three important procedural steps:

1. Application for admission to program through Office of Graduate and Continuing Studies;
2. Application for candidacy through consultation with advisor;
3. Petition for degree through Office of Graduate and Continuing Studies.

Culminating Assessment Requirements

Licensure Programs and Non-Licensure Programs require a culminating assessment, either a portfolio or comprehensive exit exam must be submitted for evaluation.

Graduate Certificates

The Department of Teaching and Leadership offers six Graduate Certificate Programs. These 18 hour non-degree Graduate Certificate Programs are designed to certify that participants have specialized knowledge and skills regarding the characteristics and methodologies of the particular field of study. The fields of study include Reading/Language Arts, School Library, Technology Integration, Autism Spectrum Disorders, District Leadership and Teaching English to Speakers of Other Languages (TESOL) which can result in an endorsement to a Kansas Teaching License.

Bachelor of Science in Education Degree with a Major in Early Childhood Unified (ECU) Birth through Third Grade

The Bachelor of Science in Education, Early Childhood Unified Birth through Third Grade, is an interdisciplinary undergraduate major offered by the Departments of Teaching and Leadership and Family and Consumer Sciences. The ECU program prepares participants for working/teaching in infant-toddler programs, preschool programs, and primary grades in public schools. It leads to eligibility for teaching licensure from the Kansas State Department of Education for both general and special education through grade three. Candidates in this program must meet all requirements of Teacher Education programs.

Majors in the Early Childhood Unified (ECU) Birth through Third Grade devote the greater portion of their
work during the first two years of coursework in general education and early childhood coursework/field experiences. The work of the last two years consists of continued academic coursework with greater focus upon special education, early childhood education, and primary grade education and experiences in public school settings. The candidate’s professional education program culminates in the senior year, usually the last semester, with the professional semester, a 17-credit hour block which includes off-campus student teaching in a primary level classroom.

General Education Components

COMM 207, ENGL 101, ENGL 190 OR ENGL 299, MATH 204, BIOL 113 OR BIOL 111 and BIOL 112, PHYS 171 and PHYS 172 OR CHEM 105 and CHEM 106, SOC 100, POLS 101, GEOG 106 OR GEOG 300, PSYCH 155, FCS 203 OR FCS 301 OR HHP 150 OR NURS 303, HIST 101 OR HIST 102 OR HIST 201 OR HIST 202 are general education content core curriculum of 33-36 hours. A 2.80 GPA in this content core is required for admission to Teacher Education.

Basic Skills (15 hours)

COMM 207: Speech Communication .................................................. 3
ENGL 101: English Composition ...................................................... 3
ENGL 190: Honors English Composition .......................................... 3
or ENGL 299: Introduction to Research Writing ............................ 3
MATH 204: Mathematics for Education I ........................................ 3
MATH 304: Mathematics for Education II ....................................... 3

Must have a “C” or better in each of these Basic Skills courses: COMM 207, ENGL 101, ENGL 190 or ENGL 299, MATH 204.

General Education Electives (35-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)

BIOL 111: General Biology .......................................................... 3
and BIOL 112: General Biology Laboratory ................................. 2
BIOL 113: Environmental Life Science ........................................ 4

Physical Sciences (Select one)

PHYS 171: Physical Science ......................................................... 3
and PHYS 172: Physical Science Laboratory ............................... 1
CHEM 105: Introductory Chemistry ............................................ 3
and CHEM 106: Introductory Chemistry Laboratory .................. 1

Social Studies (3 hours)

SOC 100: Introduction to Sociology ............................................. 3

Political Studies (3 hours)

POLS 101: U.S. Politics ..................................................................... 3
The higher course grade of SOC 100 or POLS 101 will be used in calculating the 2.8 content core GPA.

Producing and Consuming (6 hours)

Economy (Select one)

ECON 191: Issues in Today’s Economy ......................................... 3
FCS 230: Consumer Education and Personal Finance ................. 3

Technology

EDTH 330: Technology for the Classroom .................................. 3

Fine Arts and Aesthetic Studies (2-3 hours)

Any Fine Arts course listed for the general education requirements (2-3 hours)

Cultural Studies (Select one) (3 hours)

GEOG 106: World Regional Geography ........................................ 3
GEOG 300: Elements of Geography ......................................... 3

Health and Well Being (4-6 hours)

Psychological

PSYCH 155: General Psychology ................................................ 3

Physical (Select one)

FCS 203: Nutrition and Health .................................................... 3
FCS 301: Nutrition ................................................................. 3
HHP 150: Lifetime Fitness Concepts .......................................... 1
NURS 303: Introduction to Public Health .................................. 3

Human Heritage (6 hours)

History (Select One)

HIST 101: World History to 1500 ............................................... 3
HIST 102: World History from 1500 ......................................... 3
HIST 201: American History to 1865 ........................................ 3
HIST 202: American History from 1865 ................................. 3

Literature (Select One)

ENGL 113: General Literature .................................................... 3
ENGL 114: General Literature (Genre) ....................................... 3
ENGL 116: General Literature (Theme) ..................................... 3

Total General Education Components 50-54 hours.
Elementary, Psychology and Lab Experiences

(The following courses must be completed with a 3.00 GPA or higher and no grade lower than a “C” for admission to Professional Semester).

NOTE: EDUC courses may be taken concurrently but not prior to EDUC 261.

I. Education, Psychology, and Laboratory Experiences (68-69 hours)

EDUC 261: Explorations in Education ................................................. 3
EDUC 320: Early Childhood Foundations and Curriculum .................. 3
EDUC 321: Methods in Creative Expression ...................................... 3
EDUC 322: Early Literacy and Language Development .................. 2
EDUC 323: Literature for Young Children Birth-3rd ......................... 1
EDUC 360: Curriculum Development for Elementary Education .......... 3
EDUC 361: Elementary School Mathematics ..................................... 3
EDUC 362: Science and Social Studies for Early Childhood .......... 3
EDUC 369: Science and Social Studies Methods K-3 ....................... 3
FCS 490: Development of the Child: Birth Through Age Eight .......... 3
FCS 491: Preschool Laboratory ....................................................... 1-2
FCS 590: Development of the Child: Birth Through Age Eight .......... 3
FCS 591: Supervised Teaching in the Early Childhood Lab ............... 5
EDUC 369: Science and Social Studies Methods K-3 ....................... 3
EDUC 390: Practicum in Early Childhood ......................................... 3
FCS 390: Practicum in Early Childhood .......................................... 3
FCS 490: Developmental Planning: Preschool and Kindergarten ........ 3
FCS 491: Preschool Laboratory ....................................................... 1-2
EDUC 551: Diversity in the Classroom ........................................... 3
FCS 590: Development of the Child: Birth Through Age Eight .......... 3
FCS 591: Supervised Teaching in the Early Childhood Lab ............... 5
EDUC 321: Methods in Creative Expression ...................................... 3
SPED 350: Methods, Infants/Toddlers with Disabilities .................. 2
SPED 450: Methods, Preschoolers with Disabilities ......................... 2
PSYCH 263: Developmental Psychology ......................................... 3
EDTH 330: Technology for the Classroom ....................................... 3
EDUC 464: Foundations of Measurement and Evaluation............... 2
PSYCH 357: Educational Psychology ............................................. 3
SPED 561: Elementary Special Education Practicum ....................... 1
FCS 690: Parent/Professional Relationships ................................... 3
EDTH 330: Technology for the Classroom (satisfied by general education) (3 hours)

EDUC 361, EDUC 366, EDUC 464, PSYCH 357 and SPED 561 require admission to Teacher Education prior to enrollment.

II. Professional Semester (15 hours)

EDUC 455: Elementary and Middle Level Education ....................... 2
EDUC 458: Methods and Curriculum ............................................. 3
EDUC 475: Supervised Teaching in the Elementary School ............. 3
EDUC 476: Supervised Teaching in the Elementary School ............. 5
EDUC 579: Supervised Student Teaching and Follow-Up of Teachers .......... 2
EDUC 261, EDUC 320, EDUC 321, EDUC 322, EDUC 323, EDUC 360 and EDTH 330 must have completed 30 credit hours and have a 2.50 cumulative GPA to enroll.

SPED 350, SPED 450 and SPED 560 must have completed 45 credit hours and have a 2.50 GPA to enroll.

SPED 511 must have completed 60 credit hours and have a 2.50 cumulative GPA.

Concurrent enrollment recommended (PSYCH 263 and EDUC 261).

FCS 390 and FCS 391 require concurrent enrollment.

FCS 490 and FCS 491 require concurrent enrollment.

FCS 591 requires permission of instructor to enroll.

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by The State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University. See Admission to Professional Semester for professional education grade point requirements.

Total hours for Bachelor of Science in Education Degree with a Major in Early Childhood Unified (ECU) (133-138 hours)

Bachelor of Science in Education Degree with a Major in Elementary Education (K-6)

 Majors in Elementary Education (K-6) devote the greater portion of their work during the first two years to a broad general education. The work of the last two years consists of continued academic coursework at the upper level and professional courses and experiences. The candidate’s professional education program culminates in the senior year with the professional semester, a 15-hour block which includes off-campus student teaching.

Candidates working toward licensure in Elementary Education (K-6) who wish to add a second teaching field in middle level education or English for Speakers of Other Languages (ESOL) will find those listings under the heading Second Teaching Fields.
General Education Components

COMM 207, ENGL 101, ENGL 190 OR ENGL 299, MATH 204, BIOL 113 OR BIOL 111 and BIOL 112, PHYS 171 and PHYS 172 OR CHEM 105 and CHEM 106, SOC 100, POLS 101, GEOG 106 OR GEOG 300, PSYCH 155, FCS 203 OR FCS 301 OR HHP 150 OR NURS 303, HIST 101 OR HIST 102 OR HIST 201 OR HIST 202 are general education content core curriculum of 33-36 hours. A 2.80 GPA in this content core is required for admission to Teacher Education.

Basic Skills (15 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
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<td>MATH 204: Mathematics for Education I</td>
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</tr>
<tr>
<td>MATH 304: Mathematics for Education II</td>
<td>3</td>
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</tbody>
</table>

Must have a “C” or better in each of these Basic Skills courses: COMM 207, ENGL 101, ENGL 190 or ENGL 299, MATH 204.

General Education Electives (36-39)

Sciences (8-9 hours)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
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</table>

Natural Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 105: Introductory Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 106: Introductory Chemistry Laboratory</td>
<td>1</td>
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Physical Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 116: General Literature (Theme)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 113: General Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 114: General Literature (Genre)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 116: General Literature (Theme)</td>
<td>3</td>
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Social Studies (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 100: Introduction to Sociology</td>
<td>3</td>
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Political Studies (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>POLS 101: U.S. Politics</td>
<td>3</td>
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</tbody>
</table>

The higher course grade of SOC 100 or POLS 101 will be used in calculating the 2.8 content core GPA.

Producing and Consuming (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ECON 191: Issues in Today's Economy</td>
<td>3</td>
</tr>
<tr>
<td>FCS 230: Consumer Education and Personal Finance</td>
<td>3</td>
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</tbody>
</table>

Technology

<table>
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<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDTH 330: Technology for the Classroom</td>
<td>3</td>
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Fine Arts and Aesthetic Studies (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ART 311: Art Education</td>
<td>3</td>
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</table>

Cultural Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>GEOG 106: World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 300: Elements of Geography</td>
<td>3</td>
</tr>
</tbody>
</table>

Health and Well Being (4-6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Psychological

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 203: Nutrition and Health</td>
<td>3</td>
</tr>
<tr>
<td>FCS 301: Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HHP 150: Lifetime Fitness Concepts</td>
<td>1</td>
</tr>
<tr>
<td>NURS 303: Introduction to Public Health</td>
<td>3</td>
</tr>
</tbody>
</table>

Human Heritage (6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101: World History to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102: World History from 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 201: American History to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 202: American History from 1865</td>
<td>3</td>
</tr>
</tbody>
</table>

Literature (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 113: General Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 114: General Literature (Genre)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 116: General Literature (Theme)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total General Education Components 51-54 hours.

Elementary, Psychology and Lab Experiences

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
</table>
| I. Education, Psychology, and Laboratory Experiences (56-58)
| (The following courses must be completed with a 3.00 GPA or higher and no grade lower than a "C" for admission to Professional Semester).
| NOTE: Must meet Basic Skills requirement to enroll in any EDUC courses with the exception of EDUC 261 Explorations in Education.
| Basic Skills requirements: ACT composite score of 22 or higher. |
Must pass licensing exams as required by Kansas State Department of Education, PLT and Elementary Content, prior to Professional Semester.

EDUC 252: Children's Literature ......................................................... 3
EDUC 261: Explorations in Education .................................................. 3
EDUC 307: Clinical Experience ............................................................ 1
EDUC 320: Early Childhood Foundations and Curriculum .................... 3
EDUC 362: Elementary School Science .............................................. 3
EDUC 366: Primary Reading and Language Arts with
Practicum .......................................................................................... 4
EDUC 368: Effective Classroom Management ...................................... 2
EDUC 551: Diversity in the Classroom ................................................. 3
HHP 341: Elementary School Physical Education and Health ............ 3
MUSIC 140: Children's Music ............................................................. 3
or EDUC 321: Methods in Creative Expression .................................. 3
PSYCH 263: Developmental Psychology ........................................... 3
PSYCH 357: Educational Psychology ................................................ 3
EDTH 330: Technology for the Classroom ........................................... 3
SPED 510: Overview of Special Education ......................................... 3
or SPED 511: Overview of Special Education (Birth thru 6th Grade) .... 3
EDUC 360: Curriculum Development for Elementary Education ....... 3
SPED 513: Instructional Approaches for the Inclusive Classroom ....... 3

Next six courses require prior Admission to Teacher Education

EDUC 345: Topics in (___) ................................................................. 1-3
EDUC 361: Elementary School Mathematics ..................................... 3
EDUC 363: Elementary School Social Studies .................................... 3
EDUC 367: Intermediate Reading and Language Arts with
Practicum .......................................................................................... 4
EDUC 464: Foundations of Measurement and Evaluation ............... 2
EDUC 308 Specialized Clinical Experience may be taken for 1 hour

EDTH 330 Technology for the Classroom (satisfied by
geneneral education) (3 hours)

EDUC 345 should be taken for 3 hours.

II. Professional Semester (15 hours)

EDUC 455: Elementary and Middle Level Education ....................... 2
EDUC 458: Methods and Curriculum .............................................. 3
EDUC 475: Supervised Teaching in the Elementary School ........... 3
or EDUC 477: Supervised Teaching in Foreign Languages in
the Elementary Schools ................................................................... 3
EDUC 476: Supervised Teaching in the Elementary School ........... 5
EDUC 579: Supervised Student Teaching and Follow-Up of
Teachers ........................................................................................... 2

III. Electives (0-2 hours)

Total hours for Bachelor of Science in Education with a
Major in Elementary Education (K-6) (124 hours)

Concurrent enrollment recommended (PSYCH 263 and
EDUC 261).

EDUC 345, EDUC 361, EDUC 363, EDUC 367, EDUC 368,
and EDUC 464 require admission to Teacher Education.

EDUC 362 and EDUC 366 must have already earned 60
hours to enroll.

EDUC 308 requires permission of instructor.

EDUC 366 is a prerequisite for EDUC 367.

EDUC 261, EDUC 307 and EDUC 308 require an
additional 33 hours of field experience outside the class.

EDUC 366 Primary Reading and Language Arts with
Practicum is a prerequisite for EDUC 368.

Fields of Concentration

Fields of Concentration which are shown below can be
satisfied by completing the elementary education
program.

A 2.0 GPA is required in each area of concentration.

Field of English, Speech, and Literature (15
hours)

COMM 207: Speech Communication .............................................. 3
EDUC 252: Children's Literature ..................................................... 3
ENGL 101: English Composition .................................................... 3
ENGL 190: Honors English Composition ....................................... 3
or ENGL 299: Introduction to Research Writing ............................. 3

• A literature requirement (3 hours)

Field of History and Social Science (15
hours)

One course from each of the following:

• Economics (3 hours)
• Geography (3 hours)
• History (3 hours)
• Political Science (3 hours)
• Sociology (3 hours)
Field of Science and Mathematics (14 hours)

- A biological science lecture (3 hours)
- A biological science lab (1 hour)
- A physical science lecture (3 hours)
- A physical science lab (1 hour)
- Six (6) hours of mathematics courses approved by advisor

Students planning to teach should become familiar with the current Regulations for Certifying School Personnel, issued by the State Board of Education. Information concerning these regulations may be obtained from the Director of Teacher Education, 110 Hughes Hall, Pittsburg State University. See Admission to Professional Semester for professional education grade point requirements.

Second Teaching Fields Middle Level Education

A second teaching field in middle level education is available to candidates seeking a Bachelor of Science in Education degree with a major in Elementary Education (K-6) or a major in a teaching field at the secondary level. These courses, along with a passing score on the Praxis Subject Assessment, meet the requirements to teach middle level students in Mathematics, English Language Arts, Science or History Comprehensive. For additional information, contact the chairperson of the Department of Biology, Chemistry, English and Modern Languages, History, Philosophy and Social Sciences, Mathematics or Physics.

Pre K-12 Licensure in French and Spanish for the Pre K-12 Teacher

See English and Modern Languages Department for specific course requirements.

Professional Education Requirements (34 hours)

EDUC 261: Explorations in Education .................................................. 3
EDUC 307: Clinical Experience ............................................................ 1
EDUC 308: Specialized Clinical Experience ......................................... 1-3
EDUC 511: Methods and Materials in Middle Level Education ....... 3
EDUC 520: Methods and Materials for Academic Literacy ............... 3
PSYCH 263: Developmental Psychology ........................................... 3
PSYCH 357: Educational Psychology ................................................ 3

Professional Semester

EDUC 455: Elementary and Middle Level Education ...................... 2
or EDUC 462: Secondary and Middle Level Education ................... 2
EDUC 458: Methods and Curriculum ................................................. 3
EDUC 464: Foundations of Measurement and Evaluation ............... 2
EDUC 476: Supervised Teaching in the Elementary School .......... 5
or EDUC 480: Supervised Teaching in the Secondary School ........ 3
EDUC 482: Supervised Teaching in the Secondary School ............. 5
EDUC 579: Supervised Student Teaching and Follow-Up of Teachers ................................................................. 2

Concurrent enrollment recommended (PSYCH 263 and EDUC 261).

Candidates adding a second teaching field would select one of the following areas of coursework.

Courses for English (Middle Level Grades 5-8) (34 hours)

ENGL 202: English Grammar and Usage ......................................... 3
ENGL 220: World Masterpieces ....................................................... 3
ENGL 232: American Literature II ................................................... 3
ENGL 241: British Literature I ......................................................... 3
ENGL 242: British Literature II ....................................................... 3
ENGL 302: Advanced Composition ................................................ 3
ENGL 304: Introduction to Writing About Literature .................. 3
ENGL 308: English Linguistics ....................................................... 3
ENGL 479: Literature for Middle and Secondary Schools ............ 3
ENGL 479: Techniques for Teaching English in Middle and Secondary Schools ......................................................... 3
ENGL 480: Internship in Teaching English .................................... 1
ENGL 603: History of the English Language .................................. 3

Courses for Mathematics (Middle Level Grades 5-8) (26 hours)

MATH 126: Pre-Calculus ................................................................. 4
MATH 143: Elementary Statistics ................................................... 3
MATH 304: Mathematics for Education II ...................................... 3
MATH 307: Geometry for Education ............................................. 3
MATH 471: Manipulatives for Teaching Mathematics ................. 1
MATH 472: Technology for Teaching Secondary Mathematics .... 2
MATH 479: Techniques for Teaching Mathematics ........................ 3
MATH 503: Introduction to Advanced Mathematical Concepts for Education ................................................................. 3

- A computer programming course which will also satisfy the General Education computing requirement (3 hours)

Courses for History Comprehensive (Middle Level Grades 5-8) (42 hours)

HIST 101: World History to 1500 .................................................... 3
HIST 102: World History from 1500 ............................................. 3
HIST 201: American History to 1865 ........................................... 3
HIST 202: American History from 1865 ..................................... 3
HIST 479: Techniques for Teaching Middle and Secondary Social Studies ................................................................. 3
HIST 619: Kansas and the West .................................................... 3
ECON 191: Issues in Today's Economy ......................................... 3
GEOG 106: World Regional Geography ..................................... 3
GEOG 300: Elements of Geography .......................................... 3
POLS 101: U.S. Politics ................................................................. 3
SOC 100: Introduction to Sociology ............................................. 3
Choose three from the following six courses*
HIST 540: English History to 1660 ............................................................. 3
HIST 546: The Age of Empire ................................................................. 3
HIST 650: Colonial America ................................................................. 3
HIST 656: Sectional Crisis and Civil War .............................................. 3
HIST 665: Modern America Since 1968 ................................................ 3

ECON 191, GEOG 106, POLS 101 and SOC 100 are accepted for General Education Hours and Program Hours

Admission to Teacher Education is required prior to enrollment in HIST 479.

*The History, Philosophy and Social Sciences Department Chair may approve appropriate content substitutions for history electives.

Courses for Science (Middle Level Grades 5-8) (26 hours)

BIOL 111: General Biology ................................................................. 3
and BIOL 112: General Biology Laboratory ........................................ 2
BIOL 479: Techniques for Teaching Biology ....................................... 3
CHEM 105: Introductory Chemistry .................................................... 3
and CHEM 106: Introductory Chemistry Laboratory ......................... 1
PHYS 160: Physical Geology ............................................................... 3
and PHYS 165: Physical Geology Laboratory ....................................... 1
PHYS 166: Meteorology .................................................................... 3
PHYS 171: Physical Science ............................................................... 3
and PHYS 172: Physical Science Laboratory ....................................... 1
PHYS 175: Descriptive Astronomy ..................................................... 3

Minor in Inclusive Education

This minor will provide the Bachelor of Science in Education major (elementary or secondary) with additional preparation for serving the needs of all students in the general education classroom and assist candidates in deciding if they want to pursue a career or Master of Science in Special Education. This minor does not lead to a provisional certification in Special Education, but could result in a district waiver for Special Education.

Required Courses (18 hours)

SPED 510: Overview of Special Education ............................................ 3
or SPED 511: Overview of Special Education (Birth thru 6th Grade) ............ 3
SPED 512: Characteristics of Students in Inclusive Settings .................. 3
SPED 513: Instructional Approaches for the Inclusive Classroom ............ 3
SPED 514: Professional Collaboration in Inclusive Settings ................... 3
SPED 515: Positive Behavior Support in Inclusive Settings .................... 3
EDUC 551: Diversity in the Classroom ............................................... 3

SPED 510/511 is a pre-requisite for SPED 512, SPED 513, SPED 514, and SPED 515.

SPED 512 and SPED 513 are pre-requisites for SPED 514.

SPED 514 includes 50 hours of clinical experience.

Minor in International Teaching (Non Licensure)

Core Courses

EDUC 308: Specialized Clinical Experience .......................................... 1-3
EDUC 551: Diversity in the Classroom ............................................... 3
EDUC 553: Assessment and the English Language Learner .................. 3
EDUC 554: Methods and Instructional Materials for English Language Learners .................................................. 3
COMM 601: Intercultural Communication .......................................... 3

- or equivalent course approved by advisor

EDUC 308 Specialized Clinical Experience must be taken for 3 hours

Electives

- Any of the language and/or literature courses offered by the Department of English and Modern Languages and Literatures (3 hours)

Total hours required for International Teaching Minor (18 hours).
Minor in Leadership Studies

Required Courses (6 hours)
LDSP 600: Foundations of Leadership ........................................... 3
LDSP 601: Service Learning Seminar ............................................. 1
LDSP 602: Leadership Seminar .................................................... 2

Additional leadership courses chosen from:
(15 hours)
COMM 450: Small Group Communication ...................................... 3
COMM 601: Intercultural Communication ................................ ...... 3
JUST 322: Ethics and Justice Policy ............................................. 3
MGT 330: Management and Organizational Behavior ................. 3
MGT 530: Advanced Organizational Behavior ............................ 3
MIL 100: Military Science I ..................................................... 1
PHIL 105: Ethics .................................................................. 3
POLS 301: State and Local Government and Politics ............... 3
PSYCH 430: Positive Psychology ............................................. 3
PSYCH 575: Industrial and Organizational Psychology .......... 3
PSYCH 616: Introduction to Group Processes ......................... 3
REC 311: Recreation Program Design and Leadership .......... 3
SOC 360: Community Sociology ............................................. 3
SOC 443: Race and Ethnic Relations ...................................... 3
TM 606: Industrial Supervision ............................................... 3
TM 679: Presentation Skills .................................................. 3

- Electives by approval of Leadership Studies
  Minor Advisor (3 hours)

Minor in Technological Literacy

The minor in Technological Literacy is available to all appropriate majors. The minor combines Educational Technology courses with Technology and Engineering Education courses to provide a comprehensive approach to the practical use and implementation of computer skills, design and problem solving skills and teaming concepts into real world practices and experiences.

Required Courses (19 hours)
TE 301: STEM Experiences for Elementary Education .............. 1
EDTH 330: Technology for the Classroom ............................... 3
TE 331: Overview of Technology and Engineering in STEM
  Education ........................................................................ 3
EDUC 345: Topics in (___) .................................................. 1-3
TE 551: Integrated Technology for Educators ......................... 3
EDTH 551: Instructional Technology for Educators ............... 3
TE 403: Current Topics in Technology Education (___) .......... 1-3

EDUC 345 Topics in Education the topic should be STEM
Integration. TE 403 Current Topics in Technology
Education the topic should be STEM Delivery

Minor in Special Education for Students
Majoring in Family and Consumer Sciences- Childhood Development Emphasis

This minor will be available to students seeking a Bachelor of Science in Family and Consumer Sciences with a Childhood Development Emphasis. This minor by itself will not result in any kind of special education endorsement through the Kansas State Department of Education.

Students who complete the coursework for this minor will be better prepared to work with young children with disabilities in Head Start, child care, and community preschool settings. This reflects a growing trend in which young children with disabilities are more fully included in all types of community settings.

Required Courses (18 hours)
SPED 350: Methods, Infants/Toddlers with Disabilities ............. 2
SPED 351: Field Experience: Infants and Toddlers with
  Disabilities .................................................................... 1
SPED 450: Methods, Preschoolers with Disabilities ................. 2
SPED 451: Field Experience: Preschoolers with Disabilities .... 1
SPED 511: Overview of Special Education (Birth thru 6th
  Grade) ........................................................................ 3
SPED 560: Assessment of Young Children .............................. 3
FCS 590: Development of the Child: Birth Through Age Eight 3
SPED 744: Special Education Technology .............................. 3

Minor in Urban and Suburban Experience
(Non Licensure)

Core Courses (9 hours)
EDUC 308: Specialized Clinical Experience ............................ 1-3
EDUC 368: Effective Classroom Management ......................... 2
EDUC 551: Diversity in the Classroom .................................... 3
EDUC 554: Methods and Instructional Materials for English
  Language Learners ....................................................... 3

Electives: (Choose one course from each
section) (9 hours)

Social and Cultural
PHIL 231: World Religions .................................................. 3
GEOG 301: Introduction to Urban Geography .......................... 3
SOC 360: Community Sociology ........................................... 3
PSYCH 456: Introduction to Social Psychology ..................... 3
COMM 601: Intercultural Communication ............................. 3

Family
FCS 480: Dynamics of Family Relationships ......................... 3
FCS 580: Family Violence and Child Abuse ......................... 3
SOC 536: The Family and Society ......................................................... 3
FCS 690: Parent/Professional Relationships ........................................ 3

Race and Ethnicity
SWK 375: Multiculturalism and Diversity in Social Work
Practice ......................................................................................... 3
SOC 440: Personality and Social Structure ........................................ 3
SOC 443: Race and Ethnic Relations ................................................ 3
SOC 512: Social Stratification ............................................................ 3

Total hours required for the Minor in Urban and Suburban Experience (18 hours).

Master of Arts Degree with a Major in Teaching (Secondary Teaching Licensure Program)

The Master of Arts in Teaching (Secondary Teaching) is a program for individuals holding a Bachelor of Science or Bachelor of Arts degree from an accredited university/college in a non-teaching content area and who are seeking licensure to teach in a 6-12 school setting. The purpose of the program is to train teachers for positions in high need content areas in both urban and rural schools.

Admission Requirements:

(1) Review of transcripts verifying applicant’s earned degree in content area or completion of coursework equivalent to requirements for Pittsburg State University approved teacher education programs;

(2) Required documents to be considered for admission to the MAT program: two completed recommendation forms and a writing sample;

(3) Professional disposition and a sample teaching lesson evaluated by the MAT Admission Review Committee;

(4) Applicant must be then recommended by the MAT Committee for Admission and Retention in Teacher Education;

(5) Passing score on a basic skills test (reading, writing, and math) or an ACT of 22 or above;

(6) In-major GPA of 2.75 or higher and cumulative GPA of 3.00 or higher.

(7) Passing score on the appropriate Content Area test.

See department for conditions for Full Admission.

Mid-Point Review

(1) At mid-point the overall GPA will be reviewed. A 3.00 is required.

Culminating Event

Successful completion of the Teacher Work Sample and Portfolio.

Passing score on the Principles of Learning and Teaching Test.

Curriculum for Master of Arts in Teaching (Secondary Teaching): 36 hour program

Core Curriculum

A. Professional Characteristics (three semester hours)
TCHL 825: The Professional Semester Teacher - Initial Experience ......................................................... 3

B. Instructional Planning (nine semester hours)
READ 720: Content Literacy for Middle and Secondary Teachers ................................................................. 3
TCHL 850: Current Teaching Practices ......................................................... 3
TCHL 851: Multicultural Approaches to Diversity in the Classroom ................................................................. 3

C. Management of Educational Environment (six semester hours)
PSYCH 810: Advanced Educational Psychology ......................................................... 3
TCHL 836: Positive Classroom Management ......................................................... 3

D. Evaluation and Assessment (three semester hours)
TCHL 878: Assessment for Effective Teaching ......................................................... 3

E. Research and Inquiry (three semester hours)
TCHL 849: The Professional Semester Teacher-Culminating Experience ......................................................... 3

Option III: Area of Concentration:
Instructional Skills (12 semester hours)
SPED 815: Individuals with Exceptionalities ......................................................... 3
TCHL 839: Techniques for Teaching Secondary ......................................................... 3
TCHL 843: Trends and Issues ......................................................... 3
TCHL 879: Instructional Planning and Delivery ......................................................... 3
Master of Arts Degree with a Major in Teaching (Special Education Licensure Program)

The Master of Arts in Teaching (Special Education) is a program for innovative Special Education para-educators holding a Bachelor of Science or Bachelor of Arts degree from an accredited university/college in a non-teaching content area and who are seeking licensure to teach in a secondary setting. The purpose of this program is to train teachers for positions in high need content areas in both urban and rural schools. Students must remain employed as a para-educator for the duration of the program.

Admission Requirements:

(1) Undergraduate degree; 3.00 GPA or admitted with condition;

(2) At least one year experience as a para-educator in a special education classroom;

(3) Current employment as a para-educator.

Application Procedures:

1. Transcript is audited by Pittsburg State University licensure officer. Send transcript to Teacher Education Office, 110 Hughes Hall, 1701 South Broadway, Pittsburg, KS 66762 or fax to 620-235-4421.

2. Candidate will complete a Professional Disposition Assessment (transcript must be audited prior to assessment).

3. Candidate must provide two completed recommendation forms from district superintendent, director of special education or supervisor.

4. Candidate must submit a letter from a district superintendent, director of special education or supervisor verifying at least one year of experience with special education students.

5. Once admitted, candidate is assigned an advisor.

6. By end of 1st semester, candidate must pass a basic skills test or have an ACT of 22 or higher.

See department for Conditions for Full Admission.

Mid-Point Review

At mid-point the overall GPA will be reviewed. A 3.00 is required.

Culminating Event

Successful completion of the Teacher Work Sample and Portfolio.

Passing score on the Principles of Learning and Teaching.

Passing score on the Special Education Content Test.

Curriculum for Master of Arts in Teaching (Special Education): 36 hour program

SPED 738: Characteristics of Students with High-Incidence Learning Needs .........................................................3
SPED 744: Special Education Technology ..............................................3
SPED 745: Behavior Analysis and Management ......................................3
SPED 750: Assessment in Special Education .........................................3
SPED 761: Practicum I: High-Incidence Learning Needs ..........................3
SPED 780: Teaching Secondary Students with High-Incidence Learning Needs ..........................................................3
SPED 849: Partnerships with Families of Exceptional Children and Youth .................................................................3
SPED 861: The Professional Special Educator .........................................3
PSYCH 810: Advanced Educational Psychology ....................................3
TCHL 825: The Professional Semester Teacher - Initial Experience ..............3
TCHL 839: Techniques for Teaching Secondary ....................................3
READ 870: Developmental Reading Instruction .....................................3

Master of Science Degree with a Major in Education and an Emphasis in School Health

Online Delivery

The primary goal of the degree program is to assist School Nurses expand their knowledge of Special Education, Nursing, and Leadership in Pre-Kindergarten through Grade 12 school settings. The Master of Science Degree with a Major in Education and an Emphasis in School Health is offered with two Options, both of which prepare a Bachelor of Science in Nursing graduate to work with a diverse Pre-Kindergarten through Grade 12 population in an effective and efficient manner.

Procedural Steps for Masters Degree

There are four important procedural steps which are the candidate's responsibility while he/she is pursuing a masters degree.

1. The student must apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies.
2. The student must apply for candidacy in conference with his/her advisor prior to enrollment in his/her 12th hour of coursework.

3. The student must petition the Graduate and Continuing Studies Office to graduate.

4. The candidate must complete a portfolio during his/her last semester of enrollment.

**Admission Criteria:**

The admissions criteria for the Master’s Degree in Education with an Emphasis in School Health will include the following:

1. The student must hold a Bachelor of Science in Nursing degree, be a licensed nurse, and working as a School Nurse.

2. The student will have a GPA of at least 3.00 in the undergraduate major.

3. The student must submit two recommendation forms from superintendent, principal or supervisor.

4. Students may be granted probationary admission by maintaining a 3.0 grade point average during the first nine hours of coursework.

**Midpoint Review:**

The student must have at least a 3.00 GPA at the midpoint (12 hours) of his or her program.

**Culminating Event:**

Students complete a portfolio.

Students may choose from two different plans when pursuing their master’s degree, Option I or Option III, both of which are described in the University Catalog. Option I requires a minimum of 36 hours. Option III requires a minimum of 36 hours. A research component is demonstrated through successful completion of TCHL 891 Methods of Research and through written a portfolio assessments. Students with strong academic records who plan to do advanced work beyond the master's degree are encouraged to follow Option I which includes a thesis. Upon recommendation of the major advisor, the candidate may elect Option III.

**Special Notes:**

1. This is a cohort program and courses are to be taken in the designated sequence beginning in the fall semester of each year.

2. This program does not lead to licensure in teaching or nursing.

**Curriculum for Master of Science Degree with a Major in Education (School Health): 36 hour program**

**Thesis Option**

**A. Research (6 hours)**

TCHL 890: Research and Thesis ......................................................... 3-6
TCHL 891: Methods of Research ...................................................... 3

TCHL 890 Research and Thesis should be taken for 3 hours

**B. Understanding the Individual (12 hours)**

SPED 743: Characteristics of Young Children with Disabilities .......... 3
SPED 812: Characteristics of Learners with Autism Spectrum Disorder .................................................. 3
SPED 815: Individuals with Exceptionalities ..................................... 3
SPED 849: Partnerships with Families of Exceptional Children and Youth ................................................ 3

**C. Understanding the School (6 hours)**

LDSP 800: Educational Leadership I ................................................. 3
SPED 822: Seminar in Special Education Law .................................... 3

**D. School Health (Nursing Department) (12 hours)**

NURS 836: Family Process/Management of Chronic Illness:

Practicum (____) ............................................................................. 3
NURS 850: Curriculum Development ............................................... 3
NURS 854: Teaching Strategies: Practicum ...................................... 1
NURS 855: Teaching Strategies ...................................................... 2
NURS 865: Strategic Development .................................................. 3

TOTAL Hours Thesis Option (36 hours)

**Coursework Option**

**A. Research (3 hours)**

TCHL 891: Methods of Research ...................................................... 3

**B. Understanding the Individual (12 hours)**

SPED 743: Characteristics of Young Children with Disabilities .......... 3
SPED 812: Characteristics of Learners with Autism Spectrum Disorder .................................................. 3

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E. Electives (from Nursing, Leadership, and/or Special Education or with approval of advisor) (3 hours)

TOTAL Hours Coursework Option (36 hours)

Master of Science Degree with a Major in Educational Leadership

Licensure/Non-Licensure Programs

The Department of Teaching and Leadership is responsible for the preparation of school superintendents, secondary school principals, middle school principals, elementary school principals, and associated administrative and supervisory personnel.

Programs for the preparation of administrators, and supervisors, may lead to the Master of Science and/or Specialist in Education degrees and licensure for the respective positions.

Experiences will be provided for educators who will be in leadership roles for such activities as chapter/title programs, school/district curriculum projects and leadership duties in other human services professions. These experiences may involve one or more of the following five interrelated areas: measurement, evaluation, statistical analyses, computer usage and research design.

Admission to Programs in Educational Leadership

Students beginning a program of preparation for educational leadership must meet requirements beyond those for general admission to graduate study in the university and for other majors in the College of Education. Criteria for admission include a combination of characteristics considered to be related to and predictive of success in a program of preparation and in a position in the field.

All applicants to programs of preparation for the Master’s degree in building level licensure must meet the following criteria.

Admissions Criteria

The admissions criteria for the Master’s Degree in Educational Leadership includes the following:

1. The student will have a history of assuming leadership roles in a variety of settings.

2. The student will demonstrate effective writing skills.

3. The student will demonstrate the ability to work collaboratively with others.

4. The student will show a commitment to assuming leadership roles within organizations.

5. The student will demonstrate a history of meeting deadlines and satisfactorily accomplishing major tasks.

6. The student will have a GPA of at least 3.00 for one of the following:

a. The last two years of undergraduate work for those students who have only an undergraduate degree and less than nine hours of graduate work.

b. Nine hours or more of current graduate credit courses.

c. A completed graduate degree.

Admissions Process

All students who first apply to the Educational Leadership Master’s Program will be conditionally admitted as long as they show evidence that they completed or will complete at the end of the semester an earned bachelor’s degree from an accredited institution of higher learning.

After completion of 12 graduate hours in the program, the student will submit a leadership portfolio that the Educational Leadership faculty will review to decide on full admittance to the Master’s Program.

The Educational Leadership Admission Committee will meet three times during the year to decide whether or not to fully admit students to the program. During the
review of student portfolios, faculty will use an established rubric to judge a student’s potential for success in the program. These Admissions Meetings will occur on or around October 15, March 15 and July 1.

The course requirements of LDSP 800 will include the creation of this leadership portfolio. If a student does not take LDSP 800 as one of the first nine hours, the student will individually compile the leadership portfolio along with a written statement justification for not including LDSP 800 as one of their first nine hours in the program. One member of the Educational Leadership faculty will take responsibility for helping them compile the required portfolio.

The leadership portfolio will include the following:

1. An application for admission to Graduate School.
2. Official transcripts from all colleges and universities attended by the student.
3. Two letters of recommendation from supervisors and/or professional peers; one must attest, with concrete examples, to the student’s potential as an educational leader.
4. A resume of educational and professional experiences.
5. A copy of current licensure (if wanting to pursue building level licensure).
6. A written statement of the student’s professional goals.
7. A written leadership autobiography describing the leadership roles the student has assumed during his/her adult life.
8. Work samples prepared individually by the student from each of four courses (1st 12 hours completed).
9. Documentation of the student’s ability to work collaboratively.
10. Documentation of the student’s history of meeting deadlines and satisfactorily accomplishing major tasks.

Admissions Criteria and Process for Those Seeking Building Licensure Only

Students who wish only to take courses required for building licensure and not receive a degree must also meet the same admissions criteria detailed above if they wish for Pittsburg State University to recommend them for licensure to the appropriate state department of education. They must prepare a portfolio and submit it for review by the Educational Leadership Admission Committee at one of its triennial meetings.

Procedural Steps for Master's Degree

1. Apply for and be admitted conditionally to the Master's in Educational Leadership program through the Office of Graduate and Continuing Studies;
2. After the completion of 12 graduate hours, compile Leadership Portfolio and submit to the Educational Leadership Admissions Committee;
3. Be fully admitted to Master's in Educational Leadership program;
4. Apply for candidacy in conference with advisor;
5. Petition the Graduate and Continuing Studies Office to graduate.

Program Objectives:

The master's degree program in educational leadership requires a minimum of 36 hours and is designed to prepare licensed leaders to assume school principalships and non-licensed leaders to assume leadership roles in school and other settings. All department requirements must be completed prior to admission to candidacy. For the Master of Science degree with a major in Educational Leadership, the following requirements must be met:

Required core (21 hours)
LDSP 800: Educational Leadership I ......................................................... 3
LDSP 801: Educational Leadership II ...................................................... 3
LDSP 809: Legal Foundations of Public Education .................................. 3
TCHL 834: Curriculum Development ......................................................... 3
LDSP 888: Foundations of Education ......................................................... 3
LDSP 893: Practicum in Educational Leadership I - Building Level Administration ......................................................... 3
LDSP 894: Practicum in Educational Leadership II - Building Level Administration ......................................................... 3

Research Options (3-9 hours)

Option I (Thesis Program)
TCHL 890: Research and Thesis ................................................................. 3-6
TCHL 891: Methods of Research ................................................................. 3

Option II (Non-Thesis Program)
TCHL 891: Methods of Research ................................................................. 3
Choose ONE Area of Emphasis

Building Level Leader (Licensure) (12 hours)
LDSP 847: The Principalship ............................................................. 3
LDSP 855: Administration and Supervision of Special Education ............................................................. 3
LDSP 863: Supervision of Instruction ...................................................... 3

Building Level Curriculum Course
LDSP 835: Elementary and Middle School Curriculum .......................... 3
or LDSP 836: Secondary School Curriculum ......................................... 3

Educational Leader (Non-Licensure) (12 hours)
TCHL 843: Trends and Issues ............................................................... 3

- Electives by advisement (9 hours)

Note: Students interested in the non-licensure emphasis but who work in a school setting are strongly encouraged to take LDSP 855 Administration and Supervision of Special Education.

Master of Science Degree with a Major in Educational Technology

The Master of Science degree with a major in Educational Technology is designed to prepare the student to work with educational technology in educational settings. Two curricular emphases are offered within the degree: (1) Technology Integration Specialist and (2) Library Media Specialist. Candidates who select the technology integration specialist emphasis prepare to lead in the design, development, and management of instructional materials through the use of educational technologies. Candidates who select the library media emphasis prepare to lead in the design, development, and direction of library media centers in elementary, middle and/or secondary schools. Recommendation for licensure as a school library media specialist is an expected end result. This program is delivered entirely online.

Note for Library Media Licensure only:
The student must provide evidence that he/she has a valid teaching license to be accepted into the Educational Technology Program. A valid professional teaching license must be held to add the library media endorsement.

Procedural Steps for Master’s Degree:
1. The student must apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies.
2. The student must fulfill the entrance requirements for the Educational Technology program as directed by the advisor.
3. The student must apply for candidacy in conference with the advisor.
4. The student must petition the Graduate and Continuing Studies office to graduate. All official transcripts from other institutions must be on file in the Graduate and Continuing Studies office. The advisor must have unofficial copies of the same transcripts.
5. The student must maintain an overall GPA of 3.00 or above for course work.
6. The candidate must satisfactorily pass the e-portfolio at the end of the program.

Admission Criteria

1. The student must apply for the degree program through the Office of Graduate and Continuing Studies.
2. Students must provide a copy of valid teaching license.
3. Students must have a 3.0 undergraduate GPA.
4. Students must have an official undergraduate transcript posted.

See department for conditions for Full Admission.

Mid-Point Check

1. Students must maintain a 3.0 GPA during first 9 hours of coursework.

Culminating Event

1. Student must successfully complete an e-portfolio.
2. Students in the Library Media Program must successfully pass the licensure examination.

Required core (24 hours)
EDTH 731: Digital Portfolio ............................................................... 1
EDTH 733: Professional Development ................................................ 1
EDTH 734: Infrastructure Networking ................................................. 1
EDTH 735: Information Retrieval and Transfer .................................. 3
EDTH 805: Design and Production of Instructional Materials .............. 3
EDTH 819: Practicum in Educational Technology .............................. 1-6
EDTH 825: Administration of Instructional Systems ............................. 3
TCHL 834: Curriculum Development ................................................. 3
EDTH 838: Educational Technology Curriculum .................................. 3
EDTH 825: Administration of Instructional Systems ............................ 3
EDTH 819: Practicum in Educational Technology .............................. 1-6
EDTH 805: Design and Production of Instructional Materials .............. 3
EDTH 838: Educational Technology Curriculum .................................. 3
EDTH 868: Educational Technology Applications ................................ 3
EDTH 838: Educational Technology Curriculum .................................. 3
EDTH 825: Administration of Instructional Systems ............................ 3
EDTH 819: Practicum in Educational Technology .............................. 1-6
EDTH 805: Design and Production of Instructional Materials .............. 3
EDTH 838: Educational Technology Curriculum .................................. 3
EDTH 868: Educational Technology Applications ................................ 3

Research Options (3-9 hours)

Option I (Thesis Program)
TCHL 890: Research and Thesis ......................................................... 3-6
TCHL 891: Methods of Research ......................................................... 3

Option II (Non-Thesis Program)
TCHL 891: Methods of Research ......................................................... 3

Choose ONE Area of Emphasis

Technology Integration Specialist (9 hours)
EDTH 732: Topics in Educational Technology (__) ............................ 1-3
EDTH 817: Technology Integration Specialist ..................................... 3
EDTH 818: Trends and Issues in Educational Technology ................. 3

School Library Media Licensure (9 hours)
EDTH 737: Cataloging and Classification ........................................... 3
READ 834: Advanced Children's and Young Adult Literature .............. 3

Electives (3 hours)

All required core courses as well as EDTH 737 and READ 834 are courses for licensure as a Library Media Specialist.

Master of Science Degree with a Major in Reading with Emphases in Reading Specialist Licensure or Classroom Reading Teacher

The Master of Science in Reading is offered with two emphases. Emphasis I provides Reading Specialist Licensure and is designed for the teacher seeking Reading Licensure. Emphasis I requires the Master's Degree plus a yearlong district-administered mentoring program after the completion of the degree. The courses required for licensure are READ 720, READ 834, READ 845, READ 848, READ 870, READ 871, READ 872, READ 873, READ 874, TCHL 854, TCHL 891 and SPED 738. Emphasis II (Classroom Reading Teacher) is designed for the teacher who wishes to be a better classroom teacher of reading but does not wish to seek licensure. The courses required are READ 870, READ 871, READ 872 and READ 873 with 9 additional reading or reading related hours selected in consultation with the advisor.

Candidates may choose from two different plans when pursuing their master's degree, Option I or Option III, both of which are described fully in Graduate Degrees and Options of the University Catalog. Option I requires 39 hours for Reading Specialist, and 33 hours for Classroom Reading Teacher, including a thesis; Option III requires 39 hours for Reading Specialist, and 36 hours for Classroom Reading Teacher, no thesis required. Candidates should read the information and then consult with their advisor about which plan to follow.

Admission Requirements

Candidates seeking admission to the Master of Science in Reading degree program must meet requirements for teaching licensure. Candidates must obtain a grade point average of 3.00 in the undergraduate major field, including the student teaching semester. Conditional entry will be given if the grade point average in the undergraduate major field is below a 3.00. A grade point average of 3.00 must be attained within the first nine hours of coursework to gain full admission. Candidates must also submit a writing sample for evaluation using a topic aligned with the Reading Graduate Knowledge Base.

Candidates in teaching positions must submit two recommendation forms from a PK-12 administrator, peer teacher, and/or university professor. Candidates not in teaching positions must submit two recommendation forms from university professors.

See department for conditions for Full Admission.

Mid-Point Assessment Requirements

At mid-point the overall GPA will be reviewed. A 3.00 is required.

Culminating Assessment Requirements

For those in Licensure Programs, a portfolio must be submitted for evaluation. For those in Non-Licensure Programs a comprehensive exit exam is required.
Reading Specialist Licensure Emphasis

I. Courses to be taken to meet departmental general requirements:
(Option I- 15 hours, Option III- 15 hours)

A. Research

Option I
TCHL 890: Research and Thesis .............................................. 3-6
TCHL 891: Methods of Research .............................................. 3

Option III
TCHL 891: Methods of Research .............................................. 3

B. Understanding The Individual
Option I and Option III (6 hours)
SPED 738: Characteristics of Students with High-Incidence Learning Needs .............................................. 3
TCHL 854: Advanced Methods and Instructional Materials for English Language Learners .............................................. 3

C. Understanding the School

Option I
READ 874: Apprenticeship in Reading ....................................... 3

This must be the last course taken toward conditional licensure.

Option III
READ 874: Apprenticeship in Reading ....................................... 3

Choose one course from the following
TCHL 843: Trends and Issues .................................................... 3
TCHL 850: Current Teaching Practices ......................................... 3
READ 869: Literacy Topics and Trends ........................................ 3
LDSP 835: Elementary and Middle School Curriculum .................. 3
LDSP 888: Foundations of Education ........................................ 3

This must be the last course taken toward conditional licensure.

II. Courses in Reading: (Option I and Option III- 24 hours required)
READ 720: Content Literacy for Middle and Secondary Teachers ................................................................. 3
READ 834: Advanced Children’s and Young Adult Literature ........ 3
READ 845: Approaches to Teaching Writing ............................... 3
READ 848: Advanced Language Arts .......................................... 3
READ 870: Developmental Reading Instruction ............................ 3

READ 871: Diagnosis of Reading Difficulties .............................. 3
READ 872: Methods and Materials in Remedial Reading ................ 3
READ 873: Practicum in the Diagnosis and Remediation of Reading Difficulties .................................................... 3

Courses must be taken in this order: READ 870, READ 871, READ 872 and READ 873. (READ 871 and READ 872 may be taken concurrently.) (READ 872 and READ 873 may be taken concurrently.)

Classroom Reading Teacher Emphasis

I. Courses to be taken to meet departmental general requirements:
(Option I- 15 hours, Option III- 15 hours)

A. Research

Option I
TCHL 890: Research and Thesis .............................................. 3-6
TCHL 891: Methods of Research .............................................. 3

Option III
TCHL 891: Methods of Research .............................................. 3

B. Understanding The Individual
Choose from the following:
SPED 738: Characteristics of Students with High-Incidence Learning Needs .............................................. 3
PSYCH 810: Advanced Educational Psychology ........................ 3
TCHL 852: Advanced Culture and Language Acquisition for English Language Learners .............................................. 3
TCHL 854: Advanced Methods and Instructional Materials for English Language Learners .............................................. 3
PSYCH 859: Advanced Developmental Psychology ........................ 3

C. Understanding the School
Option I (3 hours)
Option III (6 hours)

Choose from the following
TCHL 843: Trends and Issues .................................................... 3
TCHL 850: Current Teaching Practices ......................................... 3
READ 869: Literacy Topics and Trends ........................................ 3
LDSP 888: Foundations of Education ........................................ 3

II. Courses in Reading
Option I- 18 semester hours required
Option III- 21 semester hours required
Select from the following courses
READ 720: Content Literacy for Middle and Secondary Teachers ................................................. 3
TCHL 806: Special Investigations (_____) ................................................................................... 1-3
READ 834: Advanced Children’s and Young Adult Literature ..................................................... 3
READ 845: Approaches to Teaching Writing ............................................................................... 3
READ 848: Advanced Language Arts .......................................................................................... 3
READ 870: Developmental Reading Instruction ............................................................................. 3
READ 871: Diagnosis of Reading Difficulties ............................................................................... 3
READ 872: Methods and Materials in Remedial Reading ............................................................. 3
READ 873: Practicum in the Diagnosis and Remediation of Reading Difficulties ........................................... 3

READ 870, READ 871, READ 872 are pre-requisites for READ 873 (these four courses are required for the program).

Master of Science Degree with a Major in Special Education Teaching

A program leading to the Master of Science degree with a major in special education teaching is available. One curricular emphasis is offered within the degree: High Incidence/Low Incidence Special Education K-6, 6-12.

Special Notes for High Incidence/Low Incidence Special Education K-6, 6-12

1. The requirements for a general education license must be met before any special education endorsement can be granted.

2. One practicum will be at the elementary level. The other will be completed at the secondary level.

3. There is no provisional endorsement at the functional level.

4. Characteristics courses (SPED 738 & SPED 852) are prerequisites for methods courses at their respective levels (SPED 779, SPED 780, and SPED 853).

5. Special Education Praxis exams are required for full endorsement.

Procedural Steps for Master’s degree:

1. The student must apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies.

2. The student must apply for candidacy in conference with the advisor prior to enrollment in his/her 12th hour of coursework.

3. The student must petition the Graduate and Continuing Studies Office to graduate.

Admission Criteria:

The admissions criteria for the Master’s Degree in Special Education Teaching will include the following:

1. The student must hold a Bachelor of Arts or Bachelor of Science in Education degree with requirements met for general education conditional teaching license.

2. The student will have a GPA of at least 3.00 in the undergraduate major.

3. The student must submit two recommendation forms from superintendent, principal, special education director or supervisor.

4. International students must check with graduate website for requirements.

5. Students may be granted probationary admission by maintaining a 3.0 grade point average during the first nine hours of coursework.

See department for conditions for Full Admission.

Midpoint Review:

The student must have a least a 3.00 GPA at the midpoint (12 hours) of his or her program.

Culminating Event:

Each candidate must complete a portfolio before the Master’s degree will be granted. Arrangements for the portfolio will be made with each candidate’s advisor.

High Incidence/Low Incidence Special Education K-6, 6-12 Emphasis (Endorsement)

Special Education Core (12 hours)
SPED 745: Behavior Analysis and Management ................................................................. 3
SPED 750: Assessment in Special Education ........................................................................... 3
SPED 822: Seminar in Special Education Law ................................................................. 3
SPED 833: Leadership and Collaboration in Special Education ......................................... 3

Research Options (3-9 hours)

Option I (Thesis Program)
TCHL 890: Research and Thesis .......................................................................................... 3-6
TCHL 891: Methods of Research ......................................................................................... 3
Option II (Non-Thesis Program)
TCHL 891: Methods of Research ........................................... 3

Characteristics and Methods Courses (21 hours)
SPED 738: Characteristics of Students with High-Incidence Learning Needs ........................................... 3
SPED 761: Practicum I: High-Incidence Learning Needs ........................................... 3
SPED 779: Teaching Elementary Students with High-Incidence Learning Needs ........................................... 3
SPED 780: Teaching Secondary Students with High-Incidence Learning Needs ........................................... 3
SPED 782: Characteristics of Students with Low-Incidence Learning Needs ........................................... 3
SPED 853: Teaching Students with Low-Incidence Learning Needs ........................................... 3
SPED 860: Practicum/Low-Incidence Learning Needs ........................................... 3

SPED 779 Prerequisite SPED 738
SPED 780 Prerequisite SPED 738
SPED 853 Prerequisite SPED 852

SPED 738, SPED 779, SPED 780, and/or SPED 761: Nine of these 12 hours are required for provisional endorsement at the level of initial general education licensure (K-6, K-9) (6-12).

Master of Science Degree with a Major in Teaching with Emphases in Elementary, Secondary or English for Speakers of Other Languages

This course of study leads to the Master of Science in Teaching degree with an emphasis in elementary, secondary, or English for Speakers of Other Languages (ESOL).

Procedural Steps for Master's degree:

1. The student must apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies.
2. The student must apply for candidacy in conference with the advisor prior to enrollment in his/her 12th hour of coursework.
3. The student must petition the Graduate and Continuing Studies Office to graduate.

Admission Criteria

The admission criteria for the Master's Degree in Teaching with an emphasis in Elementary, Secondary, or English for Speakers of Other Languages (ESOL) include the following:

1. The student will have a GPA of at least 3.00 in the undergraduate major.
2. The student will submit two completed recommendation forms.
3. International students must check with graduate website for requirements.
4. Students may be granted probationary admission by maintaining a 3.30 grade point average during the first nine hours of coursework.

See department for conditions for Full Admission.

Midpoint Review:

The student must have at least a 3.00 GPA at the midpoint (12 hours) of his or her program.

Culminating Event:

1. Students who pursue the emphasis in Elementary or Secondary Education must complete a written comprehensive examination.
2. Students who pursue the emphasis in English for Speakers of Other Languages complete a portfolio.

Students may choose from two different plans when pursuing their master's degree, Option I or Option III, both of which are described in the University Catalog. For the Elementary and Secondary emphasis areas, Option I requires a minimum of 30 credit hours which includes a thesis. Option III requires a minimum of 33 hours, consisting of twelve hours minimum in or outside the College of Education, by advisement, to develop an emphasis or endorsement area, plus the 21 hour core. For the ESOL emphasis, Option I requires a minimum of 36 hours. Option III requires a minimum of 36 hours.

A research component is demonstrated through successful completion of TCHL 891 Methods of Research and through written comprehensive examinations and/or portfolio assessments. Students with strong academic records who plan to do advanced work beyond the master's degree are encouraged to follow Option I which includes a thesis. Upon recommendation of the major advisor, the candidate may elect Option III.
I. Core Courses

- Option I: 21 semester hours required
- Option III: 21 semester hours required

A. Professional Characteristics (three semester hours required)
   Professional, Leadership
   TCHL 843: Trends and Issues ............................................................. 3

B. Instructional Planning (six semester hours required)
   Instruction
   TCHL 850: Current Teaching Practices ............................................... 3
   and READ 870: Developmental Reading Instruction .......................... 3
   or READ 720: Content Literacy for Middle and Secondary Teachers .......................................................... 3
   TCHL 870 Grant Writing and External Resources (PK-12, with field component)
   READ 720 Content Literacy for Middle and Secondary Teachers (with field component) (by advisement for secondary emphasis)

C. Management of Educational Environment (six semester hours required)
   Diversity
   TCHL 854: Advanced Methods and Instructional Materials for English Language Learners ............................................................. 3

Select one course by advisement
   PSYCH 810: Advanced Educational Psychology ................................ 3
   TCHL 840: Seminar: (____) .............................................................. 1-3
   PSYCH 859: Advanced Developmental Psychology ........................... 3

D. Evaluation and Assessment (three semester hours required)
   Assessment, Communication
   Select one course by advisement
   TCHL 853: Advanced Assessment and the English Language Learner ............................................................. 3
   TCHL 878: Assessment for Effective Teaching .................................... 3
   SPED 750: Assessment in Special Education .................................... 3

E. Research and Inquiry (three semester hours required)

Technology, Research
   TCHL 891: Methods of Research ......................................................... 3

II. Elementary Emphasis

Option I: minimum of nine semester hours required
   TCHL 890: Research and Thesis ......................................................... 3-6
   TCHL 892: Practicum in Teaching ......................................................... 3

   - Electives by advisement (0-3 hours)

Option III: minimum of 12 semester hours of required methodology courses required
   Choose from four of the following by advisement

   - A graduate level course in reading (3 hours)
   - A graduate level course in mathematics (3 hours)
   - A graduate level course in sciences (3 hours)
   - A graduate level course in language arts (3 hours)
   - A graduate level course in social studies (3 hours)
   - A graduate level course in English for Speakers of Other Languages (ESOL) (3 hours)
   - Workshops, seminars and special topics by advisement (3 hours)

III. Secondary Emphasis

Option I: minimum of nine semester hours required
   TCHL 890: Research and Thesis ......................................................... 3-6
   TCHL 892: Practicum in Teaching ......................................................... 3

   - Electives by advisement (0-3 hours)

Option III: minimum of 12 semester hours
   In the content field inside or outside of the College of Education with at least six semester hours in the same area.
IV. English for Speakers of Other Languages Licensure Emphasis*

Option I: minimum of 15 semester hours required

TCHL 890: Research and Thesis ...................................................... 3-6

- Must also complete the requirement for Option III as listed below (12-18 hours)

Option III: minimum of 18 semester hours of English for Teachers of Other Languages (ESOL) courses are recommended for Kansas ESOL endorsement

TCHL 853 and TCHL 854 should be taken as part of the Master of Science Teaching Core Courses, leaving only 12 additional hours required for the English for Teachers of Other Languages (ESOL) emphasis (12-18 hours)

ENGL 714: Applied Linguistics for English for Speakers of Other Languages ................................................................. 3
TCHL 851: Multicultural Approaches to Diversity in the Classroom ......................................................................................... 3
TCHL 852: Advanced Culture and Language Acquisition for English Language Learners .................................................... 3
TCHL 853: Advanced Assessment and the English Language Learner ..................................................................................... 3
TCHL 854: Advanced Methods and Instructional Materials for English Language Learners .................................................. 3
TCHL 855: Advanced Practicum with English Language Learners .......................................................................................... 3

*If qualified licensure endorsement available.

TCHL 851, TCHL 852, TCHL 853, TCHL 854 and ENGL 714 are prerequisites or co-requisites.

TCHL 853 and TCHL 854 are part of the Master of Science in Teaching Core Courses. If these two courses are chosen to complete the core requirements, only 12 additional hours in the English for Teachers of Other Languages (ESOL) emphasis are required to complete the Master of Science degree.

Master of Science Degree with a Major in Teaching with an Emphasis in Environmental Education

This course of study leads to the Master of Science Degree with a Major in Teaching with an emphasis in Environmental Education. The primary goal of the Environmental Education emphasis is to focus on the preparation of general education teachers to teach and assess environmental education curricula, develop a deeper understanding of the biological content, and expand the body of knowledge through research and dissemination.

Procedural Steps for Master's degree:

1. The student must apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies.
2. The student must apply for candidacy in conference with the advisor prior to enrollment in his/her 12th hour of coursework.
3. The student must petition the Graduate and Continuing Studies Office to graduate.

Admission Criteria

The admission criteria for the Master of Science Degree with a Major in Teaching with an emphasis in Environmental Education include the following:

1. The student will have a GPA of at least 3.00 in the undergraduate major.
2. The student will submit two completed recommendation forms.
3. International students must check with graduate website for requirements.
4. Students may be granted probationary admission by maintaining a 3.30 grade point average during the first nine hours of coursework.

See department for conditions for Full Admission.

Midpoint Review:

The student must have at least a 3.00 GPA at the midpoint (12 hours) of his or her program.
Culminating Event:

Students who pursue the emphasis in Environmental Education complete a portfolio.

Students may choose from two different plans when pursuing their master's degree, Option I or Option III, both of which are described in the University Catalog. The Environmental Education Option I requires a minimum of 36 hours and Option III requires a minimum of 36 hours.

A research component is demonstrated through successful completion of TCHL 891 Methods of Research and through written comprehensive examinations and/or portfolio assessments. Students with strong academic records who plan to do advanced work beyond the master's degree are encouraged to follow Option I which includes a thesis. Upon recommendation of the major advisor, the candidate may elect Option III.

Core Courses (21 hours)

A. Professional Characteristics (3 hours)
TCHL 843: Trends and Issues ................................................................. 3

B. Instructional Planning (9 hours)
BIOL 802: Advanced Topics in Biology (____) .................................. 1-3

Select two courses by advisement
TCHL 850: Current Teaching Practices ................................................. 3
TCHL 832: Elementary School Science ............................................... 3
READ 720: Content Literacy for Middle and Secondary Teachers ................................................................. 3
READ 870: Developmental Reading Instruction .................................. 3

BIOL 802 should be taken for 3 hours with different topics and credit hours listed below:

Topics:

BIOL 802 Advanced Topics in Biology (Invertebrate and Plant Field Studies) for a total of 4 hours
BIOL 802 Advanced Topics in Biology (Natural History Workshop for Teachers) for a total of 4 hours
BIOL 802 Advanced Topics in Biology (Vertebrate Field Studies) for a total of 2 hours
BIOL 802 Advanced Topics in Biology (Ecological Investigations) for a total of 2 hours

Options

Student may choose a thesis or coursework option.

Thesis Option (36 hours)
Core Courses (21 hours)
Environmental Emphasis Courses (12 hours)
Thesis - TCHL 890 Thesis (3 hours)

Coursework Option (33 hours)
Core Courses (21 hours)
Environmental Emphasis Courses (12 hours)

D. Evaluation and Assessment (3 hours)

Select one course by advisement
TCHL 853: Advanced Assessment and the English Language Learner ......................................................................................... 3
TCHL 878: Assessment for Effective Teaching .................................. 3
SPED 750: Assessment in Special Education ................................... 3

E. Research and Inquiry (3 hours)
TCHL 891: Methods of Research ......................................................... 3

Environmental Emphasis Courses (12 hours)
BIOL 802: Advanced Topics in Biology (____) ................................. 1-3

BIOL 802 should be taken for 12 hours with different topics and credit hours listed below:

Topics:

BIOL 802 Advanced Topics in Biology (Invertebrate and Plant Field Studies) for a total of 4 hours
BIOL 802 Advanced Topics in Biology (Natural History Workshop for Teachers) for a total of 4 hours
BIOL 802 Advanced Topics in Biology (Vertebrate Field Studies) for a total of 2 hours
BIOL 802 Advanced Topics in Biology (Ecological Investigations) for a total of 2 hours

C. Management of Educational Environment (3 hours)
TCHL 836: Positive Classroom Management .................................. 3
Specialist in Education Degree with a Major in Advanced Studies in Leadership with an Emphasis in General School Administration

The Specialist in Education degree program in school administration is designed to prepare superintendents and other central office personnel. Candidates for the degree must hold a Master’s Degree in an educational related field in addition to the requirements for the Specialist Degree. The degree program is designed to permit a student to specialize in a specific comprehensive knowledge of administration at both elementary and secondary levels. This is accomplished through electives and individual study courses available in the program to meet individual needs.

Procedural Steps for Specialist’s Degree:

1. Apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies;
2. Complete admission portfolio;
3. Apply for candidacy in conference with the advisor;
4. Petition the Graduate and Continuing Studies Office to graduate.

Admissions Criteria

The admissions criteria for the Specialist Degree Proposed Admission Standards for Educational Leadership Program will include the following:

1. The student will have a history of assuming leadership roles in a variety of settings.
2. The student will demonstrate effective writing skills when asked to respond to an on-the-spot writing assignment.
3. The student will demonstrate effective writing skills when given the opportunity to respond over a week's time.
4. The student will demonstrate in writing the ability to:
   a. Synthesize information from a variety of sources.
   b. Apply knowledge to real-world problems.
   c. Problem-solve without grabbing at the first solution that comes to mind.
5. The student will demonstrate the ability to work collaboratively with others.
6. The student will demonstrate the ability to understand a piece of research.
7. The student will show a commitment to assuming leadership roles within organizations.
8. The student will demonstrate the ability to be self-reflective.
9. The student will demonstrate a history of meeting deadlines and satisfactorily accomplishing major tasks.

Admissions Process

All students who first apply to the Educational Leadership Specialist’s Program will be conditionally admitted as long as they show evidence that they completed or will complete at the end of the semester an earned master's degree from an accredited institution of higher learning.

The Educational Leadership Admission Committee will meet three times during the year to decide whether or not to fully admit a student to the program. During the review of student portfolios, faculty will use an established rubric to judge a student’s potential for success in the program. These Admissions Meetings will occur on or around October 15, March 15 and July 1.

The course requirements of LDSP 901 will include the creation of this leadership portfolio. If a student does not take LDSP 901 as one of the first six hours, the student will individually compile the leadership portfolio along with a written statement justification for not including LDSP 901 as one of their first nine hours in the program. One member of the Educational Leadership faculty will take responsibility for helping these students compile the required portfolio. The leadership portfolio will include the following:

1. An application for admission to Graduate School.
2. Official transcripts from all colleges and universities attended by the student.
3. Three completed recommendation forms: one from a superintendent, one from a Site Council member or School Board member, and one from a professor who taught the applicant at the master's degree level.
4. A resume of educational and professional experiences.
5. A copy of current licensure.

6. A written statement of the student’s professional goals.

7. A written leadership autobiography describing the leadership roles the student has assumed during his/her adult life.

8. A writing sample where the student responded on-the-spot to a specified topic.

9. A written response to a case study where the student had at least one week to construct his/her response.

Admissions Criteria and Process for Those Seeking District-Level Licensure Only

Students who wish only to take courses required for district-level licensure and not receive a degree must also meet the same admissions criteria detailed above if they wish for Pittsburg State University to recommend them for licensure to the appropriate state department of education. They must prepare a portfolio and submit it for review by the Educational Leadership Admission Committee at one of its triennial meetings.

General School Administration Core (15 hours)

LDSP 901: Educational Systems Leadership I .................. 3
LDSP 902: Educational Systems Leadership II .................. 3
LDSP 903: Educational Systems Leadership III ................. 3
LDSP 997: Practicum Educational Systems Leadership I .................. 3
LDSP 998: Practicum: Educational Systems Leadership II ........... 3

Research Core Courses- choose from (12-15 hours)

TCHL 824: Educational Statistics I ........................................ 3
TCHL 826: Computer Applications in Advanced Educational Research ......................................................... 3
TCHL 884: Educational Statistics II ........................................ 3
TCHL 930: Seminar in Research Skills ..................................... 3
and TCHL 990: Special Research Project ................................... 2-6
or TCHL 991: Research and Specialist Thesis ............................. 3-6

Leadership Core Courses- choose from (9-12 hours)

LDSP 800: Educational Leadership I ..................................... 3
LDSP 854: Organizational Theory and Planning .......................... 3
LDSP 859: Change Processes and Professional Development ........ 3
TCHL 870: Grant Writing and External Resources ...................... 3
LDSP 874: Educational Policy Making and Reform .................... 3

Specialist in Education Degree with a Major in Advanced Studies in Leadership with an Emphasis in Special Education

The Specialist in Education degree program in Special Education is designed to prepare district level leaders. Candidates for the degree must hold a master’s degree in an educational related field in addition to the requirements for the specialist degree.

Procedural Steps for Specialist’s Degree:

1. Apply for and be admitted to a degree program through the Office of Graduate and Continuing Studies;

2. Complete admission portfolio;

3. Apply for candidacy in conference with the advisor;

4. Petition the Graduate and Continuing Studies Office to graduate.

Admissions Criteria

The admissions criteria for the Specialist Degree Proposed Admission Standards for Special Education Program will include the following:

1. The student will have a history of assuming leadership roles in a variety of settings.

2. The student will demonstrate effective writing skills when asked to respond to an on-the-spot writing assignment.

3. The student will demonstrate effective writing skills when given the opportunity to respond over a week's time.

4. The student will demonstrate in writing the ability to:
   a. Synthesize information from a variety of sources.
   b. Apply knowledge to real-world problems.
   c. Problem-solve without grabbing at the first solution that comes to mind.

5. The student will demonstrate the ability to work collaboratively with others.

6. The student will demonstrate the ability to understand a piece of research.

7. The student will show a commitment to assuming leadership roles within organizations.
8. The student will demonstrate the ability to be self-reflective.

9. The student will demonstrate a history of meeting deadlines and satisfactorily accomplishing major tasks.

**Admissions Process**

All students who first apply to the Educational Leadership Specialist's Program will be conditionally admitted as long as they show evidence that they completed or will complete at the end of the semester an earned master's degree from an accredited institution of higher learning.

The Educational Leadership Admission Committee will meet three times during the year to decide whether or not to fully admit a student to the program.

During the review of student portfolios, faculty will use an established rubric to judge a student's potential for success in the program. These Admissions Meetings will occur on or around October 15, March 15 and July 1.

The course requirements of LDSP 800 will include the creation of this leadership portfolio. If a student does not take LDSP 800 as one of the first six hours, the student will individually compile the leadership portfolio along with a written statement justification for not including LDSP 800 as one of their first nine hours in the program. One member of the Educational Leadership faculty will take responsibility for helping these students compile the required portfolio. The leadership portfolio will include the following:

1. An application for admission to Graduate School.
2. Official transcripts from all colleges and universities attended by the student.
3. Three completed recommendation forms: one from a superintendent, one from a Site Council member or School Board member, and one from a professor who taught the applicant at the master's degree level.
4. A resume of educational and professional experiences.
5. A copy of current licensure.
6. A written statement of the student's professional goals.
7. A written leadership autobiography describing the leadership roles the student has assumed during his/her adult life.
8. A writing sample where the student responded on-the-spot to a specified topic.
9. A written response to a case study where the student had at least one week to construct his/her response.

**Special Notes:**

1. Only 700 level hours and above can be applied to the degree program. In addition, the program must include a minimum of 9 hours of 900 level course work and no more than 9 hours of 700 level course work.

2. Substitutions may be allowed for those students who have completed courses required in Ed.S. as a part of other degree programs. The student's official advisor must approve the substitutions in advance.

**Special Education Core- choose from (12-15 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 821</td>
<td>Teaching Students with ASD: Strategies for Building Social Relationships</td>
<td>3</td>
</tr>
<tr>
<td>SPED 822</td>
<td>Seminar in Special Education Law</td>
<td>3</td>
</tr>
<tr>
<td>SPED 823</td>
<td>Teaching Students with Autism Spectrum Disorders in the Inclusive Classroom</td>
<td>3</td>
</tr>
<tr>
<td>SPED 827</td>
<td>Teaching Students with ASD: Understanding Sensory Processing Characteristics</td>
<td>2</td>
</tr>
<tr>
<td>SPED 829</td>
<td>Teaching Students with ASD: Issues in Transition</td>
<td>3</td>
</tr>
<tr>
<td>SPED 912</td>
<td>Characteristics of Students with Autism Spectrum Disorder</td>
<td>3</td>
</tr>
<tr>
<td>SPED 914</td>
<td>Teaching Students with ASD: Research Strategies for School and Community</td>
<td>3</td>
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**Research Core Courses- choose from (12-15 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCHL 824</td>
<td>Educational Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>TCHL 826</td>
<td>Computer Applications in Advanced Educational Research</td>
<td>3</td>
</tr>
<tr>
<td>TCHL 884</td>
<td>Educational Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>TCHL 930</td>
<td>Seminar in Research Skills</td>
<td>3</td>
</tr>
<tr>
<td>and TCHL 990: Special Research Project</td>
<td>2-6</td>
<td></td>
</tr>
<tr>
<td>or TCHL 991: Research and Specialist Thesis</td>
<td>3-6</td>
<td></td>
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**Leadership Core Courses- choose from (12 hours)**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDSP 800:</td>
<td>Educational Leadership I</td>
<td>3</td>
</tr>
<tr>
<td>LDSP 854:</td>
<td>Organizational Theory and Planning</td>
<td>3</td>
</tr>
<tr>
<td>LDSP 859:</td>
<td>Change Processes and Professional Development</td>
<td>3</td>
</tr>
<tr>
<td>TCHL 870:</td>
<td>Grant Writing and External Resources</td>
<td>3</td>
</tr>
</tbody>
</table>

**Certificate in Autism Spectrum Disorders**

The Department of Teaching and Leadership offers two online graduate certificates that focus on school-aged children with Autism Spectrum Disorders and one online graduate certificate that focuses on early childhood autism. These certificates are a joint effort by
Pittsburg State University, Fort Hays State University (FHSU), and the Kansas State Department of Education. The "Classic" Autism and "Higher Functioning" Autism Certificates are designed to certify that educators, service providers and family members have developed specialized knowledge and skills related to the characteristics, methods of assessment and evidence-based practices for school-aged children. Single certificates are 15 credit hour programs and a dual certificate is an 18 credit hour program.

The Early Childhood Autism Certificate is an 18 credit hour program for educators, home- and community-based providers and family members. The program is designed to certify that the individual completing the certificate has developed specialized knowledge and skills regarding the characteristics, methods of assessment and evidence-based practices for teaching young children, ages 0-5, with autism spectrum disorders and developmental delays.

Students must select one of the three strands in the program: "classic" autism, "higher functioning" autism, or early childhood autism. Those who select the "classic" strand will take nine of the required core hours from Pittsburg State University and the final three from Fort Hays State University. Those who select the "higher functioning" autism strand will take the 12 required core hours from Pittsburg State University. Those who select the early childhood strand will take 12 required core hours from Pittsburg State University and three core hours from Fort Hays State University. All strands are completed with a three hour elective.

The class in communication for the "classic" and early childhood strands is offered through Fort Hays State University, and students transfer the credit to Pittsburg State University. Elective courses are offered through Pittsburg State University or they may be taken through Kansas State Department of Education or professional associations for credit at the discretion of Pittsburg State University.

Students who wish to complete both strands of the certificate program will be required to take the additional three hour course, completing the certificate program with 18 hours.

Program completion

Two classes are offered each semester so that the certificate can be earned in one calendar year.

Once students have completed the required coursework and demonstrated that they have met the skill competency requirements, their advisor will recommend them for the certificate.

Required Coursework (12 hours)
SPED 750: Assessment in Special Education ................................. 3
SPED 812: Characteristics of Learners with Autism Spectrum Disorder ......................................................... 3
SPED 814: Teaching Students with ASD: Strategies for School and Community ............................................ 3

Specialization Area (Choose one or more)

Classic Autism Strand
- SLP 815 ASD: Communication Assessment and Intervention (from Fort Hays State) (3 hours)

Higher Functioning Autism Strand
SPED 821: Teaching Students with ASD: Strategies for Building Social Relationships ..................................... 3

Early Childhood Strand
SPED 830: Teaching Students with ASD: Early Childhood .......... 3

Electives chosen from the following (3 hours)
SPED 747: KISN Training Series .................................................. 1-3
SPED 822: Seminar in Special Education Law ................................ 3
SPED 823: Teaching Students with Autism Spectrum Disorders in the Inclusive Classroom ........................................ 2
SPED 827: Teaching Students with ASD: Understanding Sensory Processing Characteristics ............................... 1
SPED 829: Teaching Students with ASD: Issues in Transition ....... 3
SPED 831: Teaching Students with ASD: Family Engagement ...... 3

- Other electives may be used with prior approval by the program advisor.
- SPED 831 is required for Early Childhood Strand

Certificate in District Leadership

The Graduate Certificate in District Leadership program is a 15 hour non-degree, licensure program in partial requirements for a Kansas District Leadership license. All of the courses may be applied to the Specialist in Education Degree with a Major in Advanced Studies in Leadership with an emphasis in General School Administration. Financial aid is available to qualified students during the fall and spring semesters ONLY.
Admission Requirements:

- The candidate must hold a Bachelor's and Master's degree
- Master's degree with a minimum 3.0 GPA or admitted with condition
- Hold a valid Building Administrator License

Procedural Steps for Certificate:

1. Apply through the Office of Graduate and Continuing Studies for the Graduate Certificate in District Leadership
2. Submit an official transcript
3. The student must petition for completion of the Certificate program during their last semester

Students may enter the program in the Fall Semester Only

Fall Semester
LDSP 901: Educational Systems Leadership I .................................. 3
LDSP 997: Practicum Educational Systems Leadership I ................... 3

Spring Semester
LDSP 902: Educational Systems Leadership II ................................. 3
LDSP 998: Practicum: Educational Systems Leadership II ................ 3

Summer Semester
LDSP 903: Educational Systems Leadership III ............................... 3

Certificate in Reading/Language Arts

The Graduate Certificate in Reading/Language Arts (ELA) program is an 18 hour non-degree and non-licensure program designed to certify that participants have specialized knowledge and skills in teaching reading/language arts. All of the courses may be applied to the Master's Degree in Reading, Classroom Teacher emphasis or Reading Specialist emphasis.

Undergraduate students may begin the Certificate program in their final semester with approval from their advisor and the Reading Program Coordinator.

Admission Requirements:

- The candidate must hold a Bachelor's degree or be in their final semester of a Pittsburg State University undergraduate program.

- Undergraduate degree; 3.0 GPA or admitted with condition.

Procedural Steps for Certificate:

1. Apply through the Graduate and Continuing Studies Office to the Graduate Certificate in Reading/Language Arts.
2. Submit an official transcript.
3. The student must petition for completion of the Certificate program during their last semester.

Students may enter the program in any semester.

Fall Semester
READ 845: Approaches to Teaching Writing ...................................... 3
READ 870: Developmental Reading Instruction ................................... 3

Spring Semester
READ 834: Advanced Children's and Young Adult Literature .............. 3
READ 848: Advanced Language Arts .................................................. 3

Summer Semester
READ 720: Content Literacy for Middle and Secondary Teachers ............. 3
READ 848: Advanced Language Arts .................................................. 3

Certificate in School Library

The Graduate Certificate in School Library program is an 18 hour non-degree and non-licensure program designed to certify that participants have specialized knowledge and skills in administering the school library from Pre-School through Grade 12. All of the courses may be applied to the Master's Degree in Educational Technology with an Emphasis in Library Media. Undergraduate students may begin the Certificate program in their final semester with approval from their advisor and the School Library advisor.

Admission Requirements:

- The candidate must hold a Bachelor's degree or be in their final semester of a Pittsburg State University undergraduate program.

- Undergraduate degree; 3.0 GPA or admitted with condition.

Procedural Steps for Certificate:

1. Apply through the Graduate and Continuing Studies Office to the Graduate Certificate in School Library.
2. Submit an official transcript.

3. The student must petition for completion of the Certificate program during their last semester.

Students may enter the program in the Spring Semester Only

Spring Semester
EDTH 735: Information Retrieval and Transfer ......................................................... 3
READ 834: Advanced Children's and Young Adult Literature .......................... 3

Summer Semester
EDTH 825: Administration of Instructional Systems .................................................. 3
EDTH 838: Educational Technology Curriculum .................................................... 3

Fall Semester
EDTH 737: Cataloging and Classification .................................................................. 3
EDTH 868: Educational Technology Applications .................................................... 3

Certificate in Teaching English to Speakers of Other Languages

The Graduate Certificate in Teaching English to Speakers of Other Languages (TESOL) program is an 18 hour non-degree and non-licensure program designed to certify that participants have specialized knowledge and skills in teaching non-native English speaking students from Pre-School through Grade 12. All of the courses may be applied to the Master's Degree in Teaching with an emphasis in English for Speakers of Other Languages. Undergraduate students may begin the Certificate program in their final semester with approval from their advisor and the ESOL advisor.

Admission Requirements:

- The candidate must hold a Bachelor's degree or be in their final semester of a Pittsburg State University undergraduate program.

- Undergraduate degree; 3.0 GPA or admitted with condition.

- International Students who are not Native Speakers of English must pass the TOEFL with a score of 79 or higher.

Procedural Steps for Certificate:

1. Apply through the Graduate and Continuing Studies Office to the Graduate Certificate in TESOL.

2. Submit an official transcript.

3. The student must petition for completion of the Certificate program during their last semester.

Students may enter the program in the Spring Semester Only.

Spring Semester
TCHL 853: Advanced Assessment and the English Language Learner
................................................................. 3
TCHL 851: Multicultural Approaches to Diversity in the Classroom
....................................................................... 3

Summer Semester
ENGL 714: Applied Linguistics for English for Speakers of Other Languages
................................................................................................................. 3
TCHL 852: Advanced Culture and Language Acquisition for English Language Learners
..................................................................................................................... 3

Fall Semester
TCHL 854: Advanced Methods and Instructional Materials for English Language Learners
..................................................................................................................... 3
TCHL 855: Advanced Practicum with English Language Learners
.......................................................................................................................... 3

Certificate in Technology Integration

The Graduate Certificate in Technology Integration is an 18 hour non-degree and non-licensure program designed to certify that participants have specialized knowledge and skills to effectively integrate technology into curriculum, instruction and assessment; lead and support the use of instructional technology to meet the needs of all learners; and collect and analyze student data to assist in making instructional decisions. All of the courses may be applied to the Master’s Degree in Educational Technology with an emphasis in Technology Integration. Undergraduate students may begin the Certificate program in their final semester with approval from their advisor and the Technology Integration advisor.

Admission Requirements:

- The candidate must hold a Bachelor’s degree or be in their final semester of a Pittsburg State University undergraduate program.

- Undergraduate degree; 3.0 GPA or admitted with condition.

Procedural Steps for Certificate:

1. Apply through the Graduate and Continuing Studies Office to the Graduate Certificate in Technology Integration.
2. Submit an official transcript.

3. The student must petition for completion of the Certificate program during their last semester.

Students may enter the program in any semester.

**Fall Semester**
- EDTH 732: Topics in Educational Technology (___) .......................... 1-3
- EDTH 733: Professional Development ................................................ 1
- EDTH 868: Educational Technology Applications ............................. 3

EDTH 732 should be taken for 2 hours.

**Spring Semester**
- EDTH 817: Technology Integration Specialist ....................................... 3
- EDTH 818: Trends and Issues in Educational Technology .................... 3

**Summer Semester**
- EDTH 805: Design and Production of Instructional Materials ............ 3
- EDTH 838: Educational Technology Curriculum ............................. 3
College of Technology

Dean: Tim Dawsey, PhD; Associate Dean: Robert Frisbee

Room: S101 Kansas Technology Center
Telephone: 620-235-4365
Fax: 620-235-4343
Email: tdawsey@pittstate.edu

Departments
Automotive Technology
School of Construction
Engineering Technology
Graphics and Imaging Technologies
Technology and Workforce Learning

Mission

The mission of the College of Technology is to be the center for excellence in technology for the state of Kansas. The College of Technology assumes this leadership role through programs in four departments—Automotive Technology, Engineering Technology, Graphics and Imaging Technologies, Technology and Workforce Learning and the School of Construction. Academic majors in the College of Technology lead to associate degrees, baccalaureate degrees and graduate degrees with majors in areas such as automotive technology, construction management and construction engineering technologies, engineering technology, graphics and imaging technologies, technology education and technical teacher education. Please see the following pages for all degree programs found within the College of Technology. Graduate programs include Master of Engineering Technology and Master of Science degrees with majors in human resource development, technical teacher education, technology, technology education and a Specialist in Education degree with a major in workforce development and education.

To accomplish its mission, the college recognizes the following five areas of responsibility:

1. The college supports excellence in education through its degree and certificate programs, and through its leadership in industrial technical training for the state of Kansas and the nation.

2. The college promotes scholarship and creativity in the application of advanced technology by providing a resource for applied research and consultation to support industry.

3. The college maintains strong industrial relationships through cooperative education, student placement, resource generation, and curricular review and development.

4. The college provides statewide leadership in technical teacher education.

5. The college provides an educational environment which utilizes experiential and academic processes to prepare students for technical and professional careers and in their personal lives.

The College of Technology fulfills the university’s commitment to assist American industry in the era of high technology growth by providing qualified graduates in the entire technological spectrum from the technician to the professional manager and applied designer/researcher. The college fulfills its teacher education mission by providing highly competitive teachers of technology for public schools from middle school through the university, for technical and vocational schools and institutions and for industrial trainers-teachers in industry world wide.

The close industrial ties lead to outstanding opportunities for Co-Op and internship work while students are enrolled and an exceptional placement record for graduates.

Degree Programs

Associate of Applied Science and Two-Year Technical Certificate Programs

Automotive Service Technology (AAS and certificate)
Electrical Technology (AAS and certificate)
Wood Technology (AAS only)

These technical programs provide intensive vocational and technical training. Two year Certificates or Associate of Applied Science degrees are awarded for the successful completion of the programs. The programs are on the campus where students enjoy the many benefits, services and activities of university life. Students move rapidly from formal education to the workplace.

Undergraduate Degrees

Associate of Applied Science
Bachelor of Applied Science in Technology
Bachelor of Science
Bachelor of Science in Education
Bachelor of Science in Engineering Technology
Bachelor of Science in Technology
Bachelor of Science in Career and Technical Education

These programs are designed (1) to prepare for employment in business and industry in managerial and supervisory positions; (2) to prepare for employment as technologists and technicians; (3) to prepare teachers and supervisors in career and technical education, technology education, and industrial training.

Graduate Degrees

Master of Engineering Technology
Master of Science
Specialist in Education

Graduate programs include a combination of education, technical, and management courses from the departments within the College of Technology.

Cooperative doctoral programs exist with major universities within the region.

Industrial Advisory Committees

All of the programs of study utilize industrial and educational advisory committees to assist the faculty in determining the direction of each program, the educational experiences that are needed and the instructional facilities and faculty required to achieve these ends. Members are representative of corporations of various sizes and come from a variety of states.

Student Organizations

Student organizations are an important part of the educational process. Participation provides leadership opportunities and unique learning experiences. The student organizations available in most majors are affiliated with professional associations.

Four-Year Bachelor of Applied Science with a Major in Technology (Associate of Applied Science Degree Emphasis)

This program offers students who have graduated from a two-year associate of applied science degree technical program the opportunity to extend their education and training. All associate of applied science degree graduates (with a minimum of 2.50 GPA) can transfer up to 64 college credits to Pittsburg State University. Graduates receive a Bachelor of Applied Science with a major in technology and a selected emphasis by completing an additional minimum of 60 hours from Pittsburg State University. The degree program content is based on previous academic and technical preparation.

Like two-year technical programs, this bachelor degree gives students complete, hands-on training for a real-world job. Students learn engineering technology, theory, logic, leadership, and business skills to broaden their knowledge, and to better prepare them for management opportunities. Coursework is both specialized and comprehensive. Emphasis areas are similar to the programs completed at the associate of applied science degree level. Technical emphases areas available at Pittsburg State University include:

Automotive Technology
Automotive/Power Mechanics Emphasis
Collision Repair and Insurance Management Emphasis
Diesel and Heavy Equipment Emphasis
Diesel and Heavy Equipment (Caterpillar ThinkBIGGER) Emphasis

School of Construction
Construction Emphasis
Environment and Safety Emphasis

Engineering Technology
Electronics Emphasis
Manufacturing Emphasis
Mechanical Emphasis
Plastics Emphasis

Graphics and Imaging Technologies
Digital and Print Media Emphasis

Technology and Workforce Learning
Technical Teacher Education Emphasis
Technology Management Emphasis
Wood Emphasis
Automotive Technology

Chairperson: John Thompson*
Professor(s): Perry E. Cummins, Robert Frisbee*
Associate Professor(s): Tim Dell*, Trenton Lindbloom, Robert Scott Norman, Bob Schroer, John Thompson*
Assistant Professor(s): Mike Elder, Randy Jones, Steve Polley
Instructors: Chauncey Pennington, Nicolaus Prelogar
*Graduate Faculty

Room N120 KTC
Telephone: 620-235-6189
Fax: 620-235-6190
http://www.pittstate.edu/department/auto/about-the-department/index.dot
E-mail: john.thompson@pittstate.edu

Undergraduate

Automotive Service Technology Certificate
Associate of Applied Science Degree with a Major in Automotive Service Technology
Bachelor of Science in Technology Degree with a Major in Automotive Technology
Bachelor of Applied Science Degree with a Major in Technology
Minor in Automotive Technology
Minor in Diesel/Heavy Equipment

Graduate

Master of Science Degree with a Major in Technology: Automotive Technology Emphasis

These curricula lead to degrees of Associate of Applied Science and Bachelor of Science in Technology and are designed to prepare individuals for employment in education and industry. Successful graduates of Associate of Applied Science degree programs are employed as technicians in their respective technical field. Graduates of the technology programs find employment in administrative or supervisory positions in industrial organizations and assume responsibilities in areas of product development, manufacturing, sales and distribution, training or in teaching. They have the practical skills, technical knowledge, and organizational competence required of mid-level management personnel.

Automotive Service Technology (Two-Year)

Program prepares individuals to become automotive service technicians. Graduates are employed by automotive service centers and dealerships to use the latest in diagnostic equipment to troubleshoot and repair today's complex automobiles. This program is a NATEF-accredited program and prepares students for Automotive Service Excellence (ASE) certifications. Hands-on laboratory/live work experiences and technical instruction necessary for ASE certification are the main components of the program.

Course Prefixes

AST – Automotive Service Technology (AAS [Two-Year], Certificate)
AT – Automotive Technology (BAS, BST, [Four-Year])

Automotive Service Technology Certificate

Technical Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 101: Engine Repair</td>
<td>3</td>
</tr>
<tr>
<td>AST 102: Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AST 122: Auto Mechanics General Laboratory I</td>
<td>5</td>
</tr>
<tr>
<td>AST 150: Engine Performance I</td>
<td>3</td>
</tr>
<tr>
<td>AST 151: Electrical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>AST 152: Auto Mechanics General Laboratory II</td>
<td>5</td>
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<tr>
<td>AST 160: Automatic Transmissions</td>
<td>3</td>
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<tr>
<td>AST 163: Manual Drive Train and Transaxle</td>
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<td>AST 251: Electrical Systems II</td>
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<td>AST 252: Auto Mechanics General Laboratory III</td>
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<td>AST 255: Automotive Heating and Air Conditioning</td>
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<td>AST 256: Suspension and Steering</td>
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<td>AST 257: Auto Mechanics General Laboratory IV</td>
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<tr>
<td>or AST 299: Automotive Service Coop Internship</td>
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<td>AST 260: Engine Performance II</td>
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<tr>
<td>AST 264: Current Topics in Automotive Service Technology (Test Prep 1)</td>
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<td>AST 264: Current Topics in Automotive Service Technology (Test Prep 2)</td>
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<td>AST 264: Current Topics in Automotive Service Technology (Test Prep 5)</td>
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Total hours for Automotive Service Technology Certificate (55-56 hours)
### Associate of Applied Science Degree with a Major in Automotive Service Technology

The Associate of Applied Science degree is for those individuals who seek automotive service training and certification plus additional preparation for advancement into management, engineering, sales or other related areas. Upon completing the AAS degree, some graduates choose to pursue a BAS in Technology with an emphasis in Automotive Power Mechanics. See [Bachelor of Applied Science- Technology](#).

#### Basic Skills (13-16 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Elective Courses

Choose two from different departments:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 208: Logic</td>
<td>3</td>
</tr>
<tr>
<td>or POLS 101: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>or PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

(Choose two from different departments)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 201: Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>CIS 130: Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECON 191: Issues in Today's Economy</td>
<td>3</td>
</tr>
<tr>
<td>GT 190: Introduction to Technological Systems</td>
<td>2</td>
</tr>
<tr>
<td>MATH 110: College Algebra with Review</td>
<td>5</td>
</tr>
<tr>
<td>MATH 113: College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 133: Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>MATH 143: Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MGT 101: Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 105: Introduction to Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Only three hours of MATH 110 count toward degree.

#### Technical Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 101: Engine Repair</td>
<td>3</td>
</tr>
<tr>
<td>AST 102: Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AST 122: Auto Mechanics General Laboratory I</td>
<td>3</td>
</tr>
<tr>
<td>AST 150: Engine Performance I</td>
<td>5</td>
</tr>
<tr>
<td>AST 151: Engineering I</td>
<td>3</td>
</tr>
<tr>
<td>AST 152: Auto Mechanics General Laboratory II</td>
<td>5</td>
</tr>
<tr>
<td>AST 160: Automatic Transmissions</td>
<td>3</td>
</tr>
<tr>
<td>AST 163: Manual Drive Train and Transaxle</td>
<td>3</td>
</tr>
<tr>
<td>AST 164: Current Topics in Automatic Transmissions</td>
<td>1</td>
</tr>
<tr>
<td>AST 251: Electrical Systems II</td>
<td>3</td>
</tr>
<tr>
<td>AST 252: Auto Mechanics General Laboratory III</td>
<td>5</td>
</tr>
<tr>
<td>AST 255: Automotive Heating and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>AST 256: Suspension and Steering</td>
<td>3</td>
</tr>
<tr>
<td>AST 257: Auto Mechanics General Laboratory IV</td>
<td>5</td>
</tr>
<tr>
<td>or AST 299: Automotive Service Coop Internship</td>
<td>6</td>
</tr>
<tr>
<td>or PHIL 208: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>or PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
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</table>

The suggested sequence for the Associate of Applied Science in Automotive Service Technology follows:

#### First Year

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>AST 101: Engine Repair</td>
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<tr>
<td>AST 102: Brakes</td>
<td>3</td>
</tr>
<tr>
<td>AST 122: Auto Mechanics General Laboratory I</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
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</tr>
</tbody>
</table>

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 150: Engine Performance I</td>
<td>3</td>
</tr>
<tr>
<td>AST 151: Electrical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>AST 152: Auto Mechanics General Laboratory II</td>
<td>5</td>
</tr>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Summer Session**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 160: Automatic Transmissions</td>
<td>3</td>
</tr>
<tr>
<td>AST 163: Manual Drive Train and Transaxle</td>
<td>3</td>
</tr>
<tr>
<td>AST 164: Current Topics in Automatic Transmissions</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Second Year

**First Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 251: Electrical Systems II</td>
<td>3</td>
</tr>
<tr>
<td>AST 252: Auto Mechanics General Laboratory III</td>
<td>5</td>
</tr>
<tr>
<td>AST 260: Engine Performance II</td>
<td>3</td>
</tr>
</tbody>
</table>

• Elective course (2-4 hours)

**Second Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 255: Automotive Heating and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>AST 256: Suspension and Steering</td>
<td>3</td>
</tr>
<tr>
<td>AST 257: Auto Mechanics General Laboratory IV</td>
<td>5</td>
</tr>
<tr>
<td>or AST 299: Automotive Service Coop Internship</td>
<td>6</td>
</tr>
<tr>
<td>PSYCH 155: General Psychology</td>
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<tr>
<td>or PHIL 208: Logic</td>
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</tbody>
</table>

• Elective course (2-4 hours)

Total Hours for Associate of Applied Science Degree with a Major in Automotive Service Technology (64-69 hours)
Bachelor of Science in Technology Degree with a Major in Automotive Technology

The Bachelor of Science in Technology Automotive Technology major completes a 41 credit hour automotive core and at least one of six 21-credit hour options in: 1) automotive manufacturing management; 2) automotive service management and marketing; 3) diesel and heavy equipment; 4) automotive collision repair and insurance management; 5) automotive technical; and 6) automotive mechanical design. Program prepares students with technical and business courses for success in a variety of automotive-related professional positions.

General Education*

Basic Skills (12-14 hours)

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 190: Honors English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>MATH 113: College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 110: College Algebra with Review</td>
<td>5</td>
</tr>
<tr>
<td>or MATH 133: Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 150: Calculus I</td>
<td>5</td>
</tr>
</tbody>
</table>

MATH 150 is required for Automotive Mechanical Design Option

General Education Electives (34-40 hours)

Sciences (8-10 hours)

Natural Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211: Principles of Biology I</td>
<td>4</td>
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</tbody>
</table>

Physical Sciences (Select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 105: Introductory Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 106: Introductory Chemistry Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 107: Chemistry for the Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 108: Chemistry for the Life Sciences Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 160: Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 165: Physical Geology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 100: College Physics I</td>
<td>4</td>
</tr>
<tr>
<td>and PHYS 130: Elementary Physics Laboratory I</td>
<td>1</td>
</tr>
</tbody>
</table>

PHYS 100 and PHYS 130 are required for Automotive Mechanical Design Option

Social Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>WGS 200: Introduction to Women's Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Political Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 101: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 103: Comparative Political Institutions</td>
<td>3</td>
</tr>
</tbody>
</table>

Producing and Consuming (5-6 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT 190: Introduction to Technological Systems</td>
<td>2</td>
</tr>
<tr>
<td>or GT 350: Technology and Civilization</td>
<td>3</td>
</tr>
<tr>
<td>ACCTG 201: Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>or CIS 130: Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>or MGT 101: Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>or MGT 105: Introduction to Entrepreneurship</td>
<td>3</td>
</tr>
</tbody>
</table>

Fine Arts and Aesthetic Studies (select one) (2-3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ART 155: Printmaking and Paper Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 178: Introduction to the Visual Arts</td>
<td>3</td>
</tr>
<tr>
<td>ART 188: The Designed World</td>
<td>3</td>
</tr>
<tr>
<td>ART 217: Crafts I</td>
<td>3</td>
</tr>
<tr>
<td>ART 222: Jewelry Design I</td>
<td>3</td>
</tr>
<tr>
<td>ART 233: Drawing I</td>
<td>3</td>
</tr>
<tr>
<td>ART 244: Ceramics I</td>
<td>3</td>
</tr>
<tr>
<td>ART 266: Sculpture I</td>
<td>3</td>
</tr>
<tr>
<td>ART 277: Painting I</td>
<td>3</td>
</tr>
<tr>
<td>ART 288: Introduction to Art History I</td>
<td>3</td>
</tr>
<tr>
<td>ART 289: Introduction to Art History II</td>
<td>3</td>
</tr>
<tr>
<td>ART 311: Art Education</td>
<td>3</td>
</tr>
<tr>
<td>ART 351: Printmaking, Papermaking, Bookarts and the Letterpress</td>
<td>3</td>
</tr>
<tr>
<td>ART 430: Automotive: Art and Design</td>
<td>3</td>
</tr>
<tr>
<td>COMM 105: Performance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>COMM 205: Performance Studies</td>
<td>3</td>
</tr>
<tr>
<td>COMM 295: Theatre History (____)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 250: Introduction to Creative Writing</td>
<td>3</td>
</tr>
<tr>
<td>HHP 151: Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 120: Music Appreciation (____)</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 121: Introduction to Music Literature</td>
<td>2</td>
</tr>
</tbody>
</table>

Cultural Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 101: Introduction to Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>MLL 114: Chinese Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 124: French Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 154: Spanish Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 184: Russian Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>MLL 194: Korean Language and Culture I</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 106: World Regional Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 300: Elements of Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 304: Human Geography</td>
<td>3</td>
</tr>
<tr>
<td>WGS 399: Global Women's Issues</td>
<td>3</td>
</tr>
</tbody>
</table>

Health and Well Being (4-6 hours)

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Psychological

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>
Physical (Select one)
FCS 203: Nutrition and Health ....................................................... 3
FCS 301: Nutrition ......................................................................... 3
HHP 150: Lifetime Fitness Concepts ............................................. 1
NURS 303: Introduction to Public Health ........................................ 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .................................................. 3
HIST 102: World History from 1500 ............................................. 3
HIST 201: American History to 1865 ........................................... 3
HIST 202: American History from 1865 ....................................... 3

Literature
ENGL 113: General Literature ...................................................... 3
ENGL 114: General Literature (Genre) .......................................... 3
ENGL 116: General Literature (Theme) ........................................ 3
ENGL 120: Literature and Film ...................................................... 3
ENGL 320: Literature and Film ...................................................... 3
ENGL 315: Mythology ................................................................. 3

Philosophy
PHIL 103: Introduction to Philosophy .......................................... 3
PHIL 105: Ethics ........................................................................... 3
PHIL 112: Biomedical Ethics ....................................................... 3
PHIL 113: Business Ethics ........................................................... 3
PHIL 114: Environmental Ethics ................................................. 3
PHIL 207: Critical Thinking ....................................................... 3
PHIL 208: Logic ........................................................................... 3
PHIL 231: World Religions .......................................................... 3

*For specific courses see General Education Requirements for All Baccalaureate Degrees.

Support Courses
ECON 200: Principles of Microeconomics .................................... 3
MATH 143: Elementary Statistics ............................................... 3
ENGL 301: Technical/Professional Writing ................................... 3

** Approved Electives (7 credit hours selected from the following)
AT 101: Automotive Maintenance for All Majors ...................... 3
AT 300: Automotive Internship (__) ............................................ 3-6
AT 301: Fundamentals of Collision Technology ....................... 3
AT 331: Fall SAE Baja Team ....................................................... 1
AT 332: Spring SAE Baja Team ................................................... 2
AT 335: Industry Tours in the Transportation Industry ................... 1-2
AT 340: Diesel Engine Fundamentals ........................................ 3
AT 400: Automotive Internship (__) ............................................ 3-6
AT 403: Current Topics in Automotive Technology (__) .......... 1-3
AT 405: Laboratory Teaching Internship ................................... 3
AT 416: Fluid Power ................................................................. 3
AT 418: Failure Analysis ............................................................ 3
AT 462: Structural and Non-Structural Analysis ....................... 3
AT 562: Damage Analysis, Estimating, and Insurance Appraisal ........................................................................... 3
AT 613: Service Techniques Laboratory ...................................... 3
AT 630: On Highway Systems ..................................................... 3
AT 635: Advanced Engine performance ..................................... 3
AT 641: Construction Equipment Systems .................................. 3
AT 642: Agricultural Equipment and Powertrains ..................... 3
AT 650: Dynamometer and Performance Testing ...................... 3
AT 662: Automotive Finishing and Refinishing ....................... 3
AT 682: Dealership Sales Operations ......................................... 3
AT 687: Corporate Sales, Service, and Parts Management .......... 3
EET 141: Introductory Electronics .............................................. 3
EST 393: Introduction to Industrial Safety .................................. 3
MFGET 162: Welding Processes and Procedures ....................... 3
TM 606: Industrial Supervision .................................................. 3

**Courses cannot be used as elective and required course.

Automotive Technical Core
AT 100: Orientation to the Transportation Industry ....................... 1
AT 115: Mobile Electrical/Electronics .......................................... 3
AT 116: Mobile Electrical/Electronics Laboratory ....................... 3
AT 210: Brake Systems ............................................................ 3
AT 211: Steering, Alignment and Suspension ................................ 3
AT 213: Engine Systems ........................................................... 3
AT 314: Manual Transmission and Drivelines ......................... 3
AT 399: Professional Development in the Transportation Industry ........................................................................... 2
AT 410: Emerging Trends in the Transportation Industry .......... 1
AT 414: Automatic Transmissions ............................................ 3
AT 415: Mobile Climate Systems .............................................. 3
AT 515: Engine Performance ...................................................... 3
or AT 621: Advanced Diesel Electronics and Diesel Engine Laboratory .................................................. 3
AT 519: Mobile Fuels, Lubricants and Alternate Fuels ............... 3
AT 580: Dealership Service Operations ..................................... 3
AT 620: Hybrid, Electric, and Fuel Cell Vehicles ....................... 3
AT 699: Senior Seminar ............................................................ 1

At least one of the following options must be completed

Option One: Manufacturing Management in the Transportation Industry
MFGET 160: Manufacturing Graphics ......................................... 3
MFGET 261: Computer Aided Part Design ................................... 3
MFGET 263: Manufacturing Methods I ....................................... 2
MFGET 268: Manufacturing Methods I Laboratory ..................... 1
MFGET 367: Manufacturing Methods II ..................................... 4
MFGET 405: Quality Control ...................................................... 3
EST 393: Introduction to Industrial Safety .................................. 3

  • Approved manufacturing elective# (3-5 hours)

#MFGET 661 Computer Aided Manufacturing I or MFGET 567 Principles of Metalcasting plus MFGET 568 Metalcasting Processing Laboratory are the recommended electives.
### Option Two: Dealership and Corporate Transportation Management

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 202: Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>AT 301: Fundamentals of Collision Technology</td>
<td>3</td>
</tr>
<tr>
<td>AT 682: Dealership Sales Operations</td>
<td>3</td>
</tr>
<tr>
<td>AT 687: Corporate Sales, Service, and Parts Management</td>
<td>3</td>
</tr>
<tr>
<td>MGT 330: Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 330: Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 444: Legal and Social Environment of Business</td>
<td>3</td>
</tr>
</tbody>
</table>

ACCTG 202 can be substituted through approval of an accounting elective.

### Option Three: Diesel and Heavy Equipment Complete 21 hours (7 of the 8 courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFGET 162: Welding Processes and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>AT 340: Diesel Engine Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>AT 416: Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>AT 418: Failure Analysis</td>
<td>3</td>
</tr>
<tr>
<td>AT 630: On Highway Systems</td>
<td>3</td>
</tr>
<tr>
<td>AT 641: Construction Equipment Systems</td>
<td>3</td>
</tr>
<tr>
<td>AT 642: Agricultural Equipment and Powertrains</td>
<td>3</td>
</tr>
<tr>
<td>AT 654: Advanced Hydraulic Systems and Off Highway Systems Laboratory</td>
<td>3</td>
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</table>

### Option Four: Collision Repair and Insurance Management

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MFGET 162: Welding Processes and Procedures</td>
<td>3</td>
</tr>
<tr>
<td>AT 301: Fundamentals of Collision Technology</td>
<td>3</td>
</tr>
<tr>
<td>AT 462: Structural and Non-Structural Analysis</td>
<td>3</td>
</tr>
<tr>
<td>AT 562: Damage Analysis, Estimating, and Insurance Appraisal</td>
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<tr>
<td>AT 662: Automotive Finishing and Refinishing</td>
<td>3</td>
</tr>
<tr>
<td>AT 682: Dealership Sales Operations</td>
<td>3</td>
</tr>
<tr>
<td>AT 687: Corporate Sales, Service, and Parts Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### Option Five: Automotive Technical Complete 21 hours (7 of the 8 courses)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 301: Fundamentals of Collision Technology</td>
<td>3</td>
</tr>
<tr>
<td>AT 340: Diesel Engine Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>AT 416: Fluid Power</td>
<td>3</td>
</tr>
<tr>
<td>AT 418: Failure Analysis</td>
<td>3</td>
</tr>
<tr>
<td>AT 613: Service Techniques Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>AT 635: Advanced Engine performance</td>
<td>3</td>
</tr>
<tr>
<td>AT 650: Dynamometer and Performance Testing</td>
<td>3</td>
</tr>
<tr>
<td>EET 141: Introductory Electronics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Option Six: Automotive Mechanical Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECET 121: Engineering Graphics I</td>
<td>3</td>
</tr>
<tr>
<td>MECET 220: Statics</td>
<td>3</td>
</tr>
<tr>
<td>MECET 226: Computer Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>MECET 420: Kinematics</td>
<td>2</td>
</tr>
<tr>
<td>MECET 423: Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MECET 424: Mechanics of Materials Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MECET 428: Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MECET 523: Mechanical Design I</td>
<td>3</td>
</tr>
</tbody>
</table>

### Bachelor of Applied Science Degree with a Major in Technology

This program offers students who have graduated from an accredited two-year associate degree technical program the opportunity to extend their education and training. All associate degree graduates (with a minimum GPA of 2.50) can automatically transfer up to 64 college credits to Pittsburg State University. Graduates receive a Bachelor of Applied Science degree with a major in technology and a selected emphasis by completing an additional minimum of 60 hours from Pittsburg State University. The degree program content is based on previous academic and technical preparation.

Like two-year technical programs, this bachelor degree gives students complete, hands-on training for a real-world job. Students learn engineering technology, theory, logic, leadership, and business skills to broaden their knowledge, and to better prepare them for management opportunities. Coursework is both specialized and comprehensive. Emphasis areas are similar to the programs completed in the associate degrees. Technical emphasizes areas through the Automotive Technology department are Automotive/Power Mechanics Emphasis, Collision Repair and Insurance Management Emphasis, Diesel and Heavy Equipment Emphasis and Diesel and Heavy Equipment (Caterpillar ThinkBIGGER) Emphasis.

### Basic Skills

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 301: Technical/Professional Writing</td>
<td>3</td>
</tr>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

COMM 207 as well as ENGL 301 can have other courses substituted in their place.
Behavioral, Social, History & Political Studies

PSYCH 155: General Psychology .................................................. 3
SOC 100: Introduction to Sociology ............................................... 3
or POLS 101: U.S. Politics ........................................................... 3
or HIST 201: American History to 1865 ...................................... 3
or GT 350: Technology and Civilization ........................................ 3
or TM 350: Societal Influence of Technology ................................... 3
or Social Science and/or Political Studies Elective (3 hours)

Mathematics

MATH 113: College Algebra ....................................................... 3
or MATH 114: Elements of Technical Analysis .............................. 3
MATH 143: Elementary Statistics .................................................. 3

MATH 113 as well as MATH 143 can be substituted by another mathematics course.

Sciences (Minimum of 6 hours)

BIOL 113: Environmental Life Science ........................................ 4
PHYS 171: Physical Science .......................................................... 3
PHYS 172: Physical Science Laboratory .......................................... 1

BIOL 113 can be substituted by another natural science course.

PHYS 171 can be substituted by another physical science course.

Producing and Consuming

ACCTG 201: Financial Accounting .............................................. 3
or Approved business substitute (3 hours)

Fine Arts (choose one)

ART 178: Introduction to the Visual Arts ....................................... 3
COMM 105: Performance Appreciation ....................................... 3
COMM 205: Performance Studies ................................................ 3
HHP 151: Dance Appreciation .................................................... 3
MUSIC 120: Music Appreciation (____) ............................................ 3

- Approved Humanities (e.g., Ethics) (3 hours)

Cultural Studies (choose one)

GEOG 300: Elements of Geography ........................................... 3
GEOG 304: Human Geography .................................................... 3

- Approved elective from cultural studies (3 hours)

Business Support Courses

Business Courses

MGT 330: Management and Organizational Behavior ..................... 3
MGMKT 444: Legal and Social Environment of Business ................ 3
MGT 540: Human Resources Management ................................... 3
or MKTG 330: Principles of Marketing ......................................... 3

Automotive/Power Mechanics Emphasis Courses

Technology Management (Organization and Leadership)

AT 580: Dealership Service Operations ........................................ 3

(Select 9 hours from below)

TM 606: Industrial Supervision .................................................. 3
AT 687: Corporate Sales, Service, and Parts Management ............. 3
AT 695: Corporate Service and Part Management .......................... 3
EST 393: Introduction to Industrial Safety ..................................... 3
EST 396: Introduction to Construction Safety .................................. 3
MFGE 405: Quality Control ....................................................... 3
or approved substitute safety or management course

Technical Specialization, Support and Electives

Technical Specialization

- Technical courses from 2-Year associate degree (40 hours)

Automotive Technical Support Courses

AT 300: Automotive Internship (___) ............................................. 3-6
AT 399: Professional Development in the Transportation Industry .... 2
AT 515: Engine Performance ....................................................... 3
AT 620: Hybrid, Electric, and Fuel Cell Vehicles ............................. 3
AT 699: Senior Seminar ............................................................. 1

Technical Electives (Select 12 hours from below)

AT 301: Fundamentals of Collision Technology ............................ 3
AT 314: Manual Transmission and Drivelines ............................... 3
AT 340: Diesel Engine Fundamentals ............................................ 3
AT 400: Automotive Internship (___) ......................................... 3-6
AT 414: Automatic Transmissions .............................................. 3
AT 415: Mobile Climate Systems ................................................. 3
AT 416: Fluid Power ................................................................. 3
AT 418: Failure Analysis .............................................................. 3
AT 462: Structural and Non-Structural Analysis ............................ 3
AT 515: Engine Performance ..................................................... 3
AT 519: Mobile Fuels, Lubricants and Alternate Fuels .................... 3
AT 562: Damage Analysis, Estimating, and Insurance Appraisal .... 3
AT 630: On Highway Systems ................................................. 3
AT 635: Advanced Engine Performance .................................. 3
AT 641: Construction Equipment Systems ............................. 3
AT 650: Dynamometer and Performance Testing .................. 3
AT 662: Automotive Finishing and Refinishing ................. 3

AT 300 and AT 400 should be taken for 3 hours each.

**Collision Repair and Insurance Management**

**Technology Management (Organization and Leadership)**
AT 580: Dealership Service Operations .................................. 3

(Select 9 hours from below)
TM 606: Industrial Supervision ................................................. 3
AT 687: Corporate Sales, Service, and Parts Management .......... 3
AT 695: Corporate Service and Part Management .................. 3
EST 393: Introduction to Industrial Safety .............................. 3
EST 396: Introduction to Construction Safety ......................... 3
MFGET 405: Quality Control ................................................... 3
or approved substitute safety or management course

**Technical Specialization, Support and Electives**

**Technical Specialization**
- Technical courses from 2-Year associate degree (40 hours)

**Automotive Technical Support Courses**
AT 300: Automotive Internship (___) ....................................... 3-6
AT 399: Professional Development in the Transportation Industry ................................................. 2
AT 562: Damage Analysis, Estimating, and Insurance Appraisal ......................................................... 3
AT 620: Hybrid, Electric, and Fuel Cell Vehicles ..................... 3
AT 699: Senior Seminar .......................................................... 1

**Technical Electives (Select 12 hours from below)**
AT 210: Brake Systems .......................................................... 3
AT 211: Steering, Alignment and Suspension .......................... 3
AT 213: Engine Systems ........................................................... 3
AT 301: Fundamentals of Collision Technology ...................... 3
AT 314: Manual Transmission and Drivelines ....................... 3
AT 340: Diesel Engine Fundamentals .................................... 3
AT 400: Automotive Internship (___) ....................................... 3-6
AT 414: Automatic Transmissions ......................................... 3
AT 415: Mobile Climate Systems .......................................... 3
AT 418: Failure Analysis .......................................................... 3
AT 462: Structural and Non-Structural Analysis ...................... 3
AT 515: Engine Performance .................................................. 3
AT 662: Automotive Finishing and Refinishing ...................... 3

AT 300 and AT 400 should be taken for 3 hours each.

**Diesel and Heavy Equipment Emphasis Courses**

**Technology Management (Organization and Leadership)**
AT 580: Dealership Service Operations .................................. 3

(Select 9 hours from below)
TM 606: Industrial Supervision ................................................. 3
AT 687: Corporate Sales, Service, and Parts Management .......... 3
AT 695: Corporate Service and Part Management .................. 3
EST 393: Introduction to Industrial Safety .............................. 3
EST 396: Introduction to Construction Safety ......................... 3
MFGET 405: Quality Control ................................................... 3
or approved substitute safety or management course

**Technical Specialization, Support and Electives**

**Technical Specialization**
- Technical courses from 2-Year associate degree (40 hours)

**Automotive Technical Support Courses**
AT 300: Automotive Internship (___) ....................................... 3-6
AT 399: Professional Development in the Transportation Industry ................................................. 2
AT 621: Advanced Diesel Electronics and Diesel Engine Laboratory ......................................................... 3
AT 654: Advanced Hydraulic Systems and Off Highway Systems Laboratory ........................................... 3
AT 699: Senior Seminar .......................................................... 1

**Technical Electives (Select 12 hours from below)**
AT 400: Automotive Internship (___) ....................................... 3-6
AT 416: Fluid Power ............................................................... 3
AT 418: Failure Analysis .......................................................... 3
AT 519: Mobile Fuels, Lubricants and Alternate Fuels .......... 3
AT 630: On Highway Systems .................................................. 3
AT 640: Off Highway Systems ............................................... 3
AT 650: Dynamometer and Performance Testing .................. 3

AT 300 and AT 400 should be taken for 3 hours each.
Diesel and Heavy Equipment (Caterpillar ThinkBIGGER) Emphasis Courses

Technology Management (Organization and Leadership)
AT 580: Dealership Service Operations .................................................. 3

(Select 9 hours from below)
TM 606: Industrial Supervision ............................................................. 3
AT 687: Corporate Sales, Service, and Parts Management .................... 3
AT 695: Corporate Service and Part Management ................................. 3
EST 393: Introduction to Industrial Safety ............................................. 3
EST 396: Introduction to Construction Safety ....................................... 3
MFGET 405: Quality Control .................................................................. 3
or approved substitute safety or management course

Technical Specialization, Support and Electives

Technical Specialization
- Technical courses from 2-Year associate degree (40 hours)

Automotive Technical Support Courses
AT 300: Automotive Internship (___) ..................................................... 3-6
AT 399: Professional Development in the Transportation Industry ............ 2
AT 621: Advanced Diesel Electronics and Diesel Engine Laboratory ........ 3
AT 654: Advanced Hydraulic Systems and Off Highway Systems Laboratory 3
AT 699: Senior Seminar ....................................................................... 1

Technical Electives (Select 12 hours from below)
AT 400: Automotive Internship (___) ..................................................... 3-6
AT 416: Fluid Power ............................................................................. 3
AT 418: Failure Analysis ...................................................................... 3
AT 519: Mobile Fuels, Lubricants and Alternate Fuels ......................... 3
AT 630: On Highway Systems ............................................................. 3
AT 640: Off Highway Systems ............................................................ 3
AT 650: Dynamometer and Performance Testing ................................... 3

AT 300 and AT 400 should be taken for 3 hours each.

Minor in Automotive Technology
Minor consist of a minimum of 25 semester hours in one technical field.

Automotive Minor
AT 115: Mobile Electrical/Electronics .................................................. 3
AT 116: Mobile Electrical/Electronics Laboratory .................................. 3
AT 210: Brake Systems ................................................................. 3

Electives chosen from (10 hours)
AT 314: Manual Transmission and Drivelines ........................................ 3
AT 403: Current Topics in Automotive Technology (___) ................. 1-3
or AT 410: Emerging Trends in the Transportation Industry ................. 1
AT 414: Automatic Transmissions ...................................................... 3
AT 415: Mobile Climate Systems .......................................................... 3
AT 515: Engine Performance ............................................................... 3
AT 580: Dealership Service Operations ................................................ 3
AT 613: Service Techniques Laboratory ............................................... 3
AT 697: Corporate Sales, Service, and Parts Management .................... 3

Minor in Diesel/Heavy Equipment
AT 115: Mobile Electrical/Electronics .................................................. 3
AT 116: Mobile Electrical/Electronics Laboratory .................................. 3
AT 340: Diesel Engine Fundamentals ................................................... 3
AT 416: Fluid Power ............................................................................. 3
AT 418: Failure Analysis ...................................................................... 3

Select 9 hours from the following:
AT 621: Advanced Diesel Electronics and Diesel Engine Laboratory ........ 3
AT 630: On Highway Systems ............................................................. 3
AT 640: Off Highway Systems ............................................................ 3
AT 654: Advanced Hydraulic Systems and Off Highway Systems Laboratory 3

Total hours for Minor in Diesel/Heavy Equipment (24 hours)

Master of Science Degree with a Major in Technology: Automotive Technology Emphasis

The Master of Science degree with a major in Technology, with an emphasis in Automotive Technology is offered through the Department of Technology and Workforce Learning. (See Master of Science - Technology.)

Two options are available: Option I, a core of 15 credits is complemented by the required thesis (6 credits) and 9 credits of emphasis/electives courses for a total of 30 credit hours; Option II includes a core of 15 credits which are required and 18 credits of enrichment/emphasis electives courses. The final plan would be worked out between the student and their advisor.
School of Construction

Chairperson: James L. Otter, Director
Professor(s): James L. Otter, L.S. LEED AP; Randall J. Timi, P.E.
Associate Professor(s): Dennis J. Audo, Denise Bertoncino, Patrick R. Flynn, Justin Honey A.C. LEED AP; Joseph D. Levens Jr., CPC, LEED AP; Shannon D. Nicklaus, LEED AP; Seth E. O’Brien, CPC, LEED AP; Holly Page-Sagehorn, Norman Philipp, PE; Brian A. Sandford*
Assistant Professor(s): Cliford Morris, Marty Ann Petersen, Steven Schaffner, William J. Streth*, LEED AP
Instructor: Erin D. Obrien Jordan
*Graduate Faculty
Room W223 Kansas Technology Center
Telephone: 620-235-6555
Fax: 620-235-6558
http://www.pittstate.edu/department/construction/
E-mail: construction@pittstate.edu

Undergraduate

Bachelor of Science Degree with a Major in Interior Design
Bachelor of Science in Engineering Technology Degree with a Major in Construction Engineering Technology
Bachelor of Science in Technology Degree with a Major in Construction Management
Bachelor of Science in Technology Degree with a Major in Environmental and Safety Management
Bachelor of Applied Science Degree with a Major in Technology (Construction emphasis or Environment and Safety emphasis)
Minor in Construction Technology
Minor in Construction Technology for Interior Design
Minor in Construction Management
Minor in Interior Design
Minor in Safety, Health and Environmental Management

Graduate

Master of Engineering Technology
Master of Science Degree with a Major in Technology: Construction Management Emphasis

Introduction

The Pittsburg State University School of Construction bases its curriculums on the operations of the modern construction industry focusing on construction field and project operations. The Construction Engineering Technology major with a Bachelor of Science in Engineering Technology degree is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org. Both the Construction Engineering Technology and Construction Management degree curriculums begin with a practical approach to construction materials and methods education then proceed through appropriate laboratory and construction project management and engineering technology coursework. The Construction Engineering Technology major adds strong engineering technology concepts while the Construction Management major adds courses in various construction emphases. Both conclude with a simulated real-world capstone experience. The School of Construction sponsors several student organizations and honor societies.

Both majors prepare students for professional careers in construction and construction-related industries. Opportunities include professional positions as field engineers, estimators, project engineers, superintendents, project managers, owners and safety managers. These positions are available in the commercial, residential, civil, industrial, engineering, and specialty sectors of the construction industry locally, nationally and internationally.

The curriculum emphasizes current technology, leadership skills, ethics and professionalism. Industry-specific computer applications include CAD, scheduling, estimating and modeling presented to the student in early coursework and used throughout the curriculum. Building Information Modeling (BIM), Virtual Design and Construction (VDC), Leadership in Energy and Environmental Design (LEED) and Lean Construction topics are presented in the curriculum. Laboratories utilize modern industry-grade equipment in appropriate areas. The School of Construction maintains close ties to industry and alumni, and are strongly supported in the form of scholarships, equipment, advisement, and graduate placement.

The Environmental and Safety Management (ESM) major prepares students for a career in safety and environmental management and supervision. The ESM major has a focus on both general and specific aspects of environmental and safety practice and compliance common in industry. Graduates of the program have many career opportunities available in the public or private sector. The ESM program has its own leadership council and sponsors the student chapter of the American Society of Safety Engineers (ASSE).
The School of Construction and the Department of Engineering Technology combines to offer a construction technical specialty in the Master of Engineering Technology degree.

Facilities

The Pittsburg State University School of Construction is housed in the Kansas Technology Center. It provides modern classroom and laboratory facilities and equipment including dedicated outdoor laboratory space used to simulate real world industry experiences in construction and safety.

Mission

Our mission is to provide a quality construction education and develop professional leaders for the construction industry through extensive recruitment, real-world education and successful placement. We strive to improve the community through service, economic development and applied research.

Vision

Our vision is to be an innovative leader in an effective, people-centered, collaborative, accessible learning environment maximizing the potential of construction students, faculty and industry constituents.

Educational Objectives/Outcomes

Educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing its graduates to achieve within two to five years of the start of their professional career. The educational objectives of the School of Construction at Pittsburg State University are:

Objective 1: Graduates will have the ability to enter and continue advancement within the construction industry or construction-related industries including managerial or technical positions in construction field supervision, project management, cost estimating, scheduling, contract administration, material testing and inspection, field engineering and surveying, supervised design, technical sales, or governmental regulation.

Objective 2: Graduates will have a sense of professionalism that allows them to become informed and participating citizens cognizant of ethics, civic duty, and social responsibility.

Objective 3: Graduates will have technical skills and knowledge in mathematics, science, engineering, and technology to support planning, analyzing, and solving of engineering and construction problems using current and appropriate management and design tools and techniques.

Objective 4: Graduates will have business skills and knowledge in management practices, cost accounting, and financial decision-making to support sound construction project management.

Objective 5: Graduates will have leadership skills that prepare them to assume roles in which they can effectively create an environment in which others attain their full potential.

Objective 6: Graduates will have effective verbal, non-verbal, and interpersonal communication skills to support their role in industry.

Outcomes are statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that the students acquire in their matriculation through the program.

Outcome 1: Students will demonstrate an appropriate mastery of the knowledge, techniques, skills and modern tools/software of construction related to: contract documents, codes, materials testing, construction layout/surveying, best construction methods/practices, estimating, scheduling, safety, design of construction systems (temporary structures, concrete, foundations, formwork, basic electrical/mechanical systems), appropriate software (Excel, Autocad, Primavera, Timberline).

Outcome 2: Students will demonstrate an ability to apply current knowledge and adapt to emerging application of mathematics, science, engineering and technology related to construction methods and design.

Outcome 3: Students will demonstrate an ability to conduct, analyze and interpret experiments, and apply experimental results to improve construction processes and solve construction problems.

Outcome 4: Students will demonstrate an ability to apply creativity in the design of construction systems, components, or processes.

Outcome 5: Students will demonstrate the ability to communicate (graphically, verbally and non-verbally) and function effectively in teams.
Outcome 6: Students will understand the importance of lifelong learning, continuous improvement, timeliness and a commitment to quality.

Outcome 7: Students will understand professional, ethical and social responsibilities, and show a respect for diversity and a knowledge of contemporary professional, societal and global issues.

No credit is allowed toward graduation or to satisfy prerequisite requirements for grades below "C" in CMCET courses, MATH 113 College Algebra and MATH 122 Plane Trigonometry.

**Laboratories**

The curriculum in the School of Construction requires considerable applied experience in various construction processes and software applications. To support this experience, the School of Construction is served by supporting laboratories that utilize current technology, software and equipment within the safety labs, surveying lab, materials testing lab, project management lab, estimating lab, HVAC lab, equipment simulation lab, outdoor labs and computer lab.

**Faculty/Students**

The faculty in the School of Construction must have an earned baccalaureate and masters degree in construction engineering, construction engineering technology, construction management, environmental or safety management, or a closely related construction field, and a minimum of three years construction experience related to the subjects they are teaching. The School of Construction presently has fifteen (15) full-time faculty members and approximately 300-350 undergraduate and graduate majors and minors.

**Professional Affiliations**

The faculty are members of various professional organizations including:

- Associated Schools of Construction (ASC)
- American Society for Engineering Education (ASEE)
- Associated General Contractors of America (AGC)
- Associated General Contractors (AGC of Kansas)
- Builders Association of Kansas City
- Kansas Contractors Association (KCA)
- Kansas Society of Land Surveyors (KSLS)
- National Society of Professional Engineers (NSPE)
- American Concrete Institute (ACI)
- American Institute of Constructors (AIC)
- National Association of Home Builders (NAHB)
- Mechanical Contractors Association of America (MCAA)
- National Association of Women in Construction (NAWIC)
- American Society of Safety Engineers (ASSE)
- National Safety Council (NSC)
- National Society of Professional Surveyors (NSPS)
- Partnership for Environmental Technology Education (PETE)
- United States Green Building Council (USGBC)
- Lean Construction Institute (LCI)
- Project Management Institute (PMI)
- Association for the Advancement of Cost Engineering (AACE)
- American Society of Civil Engineers (ASCE)

**Scholarships and Awards**

Student achievement is recognized through an annual awards process within the College of Technology. School of Construction scholarships are available through the University and the private sector. The School of Construction offers scholarships from the Construction Alumni Association, various construction trade associations and a growing number of regional and national construction companies.

**Student Organizations**

Students in the School of Construction have the opportunity to be involved with numerous student organizations. These student organizations/chapters include:

- Associated General Contractors (AGC) of Kansas
- Mechanical Contractors Association of America (MCA)
- American Society of Safety Engineers (ASSE)
- Society of Women Engineers (SWE)
- National Association of Home Builders (NAHB)
- Sigma Lambda Chi (Construction Honor Society)
- Women in Construction (WIC)

Students are able to attend state and national meetings and events.

**Leadership Councils**

The School of Construction is advised by two leadership councils. The Construction Leadership Council is made up of over 40 members who represent most of the various sectors and specialty areas in construction as well as a variety of closely related industries. Many are
Pittsburg State University alumni. The Environmental and Safety Management Leadership Council consists of safety representatives from various industries. Both boards meet each semester with Pittsburg State University faculty and administration to provide direction and input on program and curriculum issues.

Technology Minors

The technology minors in the School of Construction require a minimum of 21 semester hours in a technical area.

Changes in Requirements

Baccalaureate degree curriculums offered by the School of Construction are periodically revised and updated. Such revisions will be communicated by the School of Construction to currently enrolled students majoring in its programs. Each student is encouraged to complete the most recent curriculum in effect at the time of that student’s graduation unless those revisions would extend the student’s graduation date.

Prefixes for the School of Construction Programs:

CMCET - Construction Management and Construction Engineering Technologies courses.
EST - Environmental and Safety courses.
ETECH - General Engineering Technology courses.
IND - Interior Design courses.

Bachelor of Science Degree with a Major in Interior Design

Basic Skills (12 hours)

COMM 207: Speech Communication .................................................. 3
ENGL 101: English Composition ...................................................... 3
ENGL 190: Honors English Composition ......................................... 3
or ENGL 299: Introduction to Research Writing ............................ 3
MATH 113: College Algebra .............................................................. 3

General Education Electives (35-38 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)

BIOL 111: General Biology .............................................................. 3
and BIOL 112: General Biology Laboratory .................................... 2
BIOL 113: Environmental Life Science .......................................... 4
BIOL 211: Principles of Biology I .................................................... 4

Physical Sciences

PHYS 171: Physical Science .......................................................... 3
and PHYS 172: Physical Science Laboratory ................................ 1

- (or other approved Physical Science course)

Social Studies (Select one) (3 hours)

SOC 100: Introduction to Sociology ............................................... 3
WGS 200: Introduction to Women’s Studies ............................... 3

Political Studies (3 hours)

POLS 101: U.S. Politics ................................................................. 3

Producing and Consuming (6 hours)

Economy

ECON 191: Issues in Today’s Economy ....................................... 3

Business

MGT 101: Introduction to Business ............................................. 3

Fine Arts and Aesthetic Studies (select one)

(2-3 hours)

ART 155: Printmaking and Paper Arts ....................................... 3
ART 178: Introduction to the Visual Arts ..................................... 3
ART 188: The Designed World .................................................. 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I ......................................................... 3
ART 233: Drawing I ............................................................... 3
ART 244: Ceramics I ............................................................... 3
ART 266: Sculpture I ............................................................... 3
ART 277: Painting I ............................................................... 3
ART 288: Introduction to Art History I ....................................... 3
ART 289: Introduction to Art History II ...................................... 3
ART 311: Art Education .......................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress 3
ART 430: Automotive: Art and Design ....................................... 3
COMM 105: Performance Appreciation ...................................... 3
COMM 205: Performance Studies ............................................. 3
COMM 295: Theatre History (___) .............................................. 3
ENGL 250: Introduction to Creative Writing ................................ 3
HHP 151: Dance Appreciation .................................................. 3
MUSIC 120: Music Appreciation (___) ........................................ 3
MUSIC 121: Introduction to Music Literature .............................. 2

Cultural Studies (Select one) (3 hours)

ANTH 101: Introduction to Cultural Anthropology ........................ 3
MLL 114: Chinese Language and Culture I ............................... 3
MLL 124: French Language and Culture I .................................. 3
MLL 154: Spanish Language and Culture I ............................... 3
MLL 184: Russian Language and Culture I ............................... 3
MLL 194: Korean Language and Culture I ............................... 3
GEOG 106: World Regional Geography ................................... 3
GEOG 300: Elements of Geography .......................................... 3
GEOG 304: Human Geography ............................................... 3
WGS 399: Global Women’s Issues ............................................. 3
Health and Well Being (4-6 hours)
PSYCH 155: General Psychology ....................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health .............................................................. 3
FCS 301: Nutrition .................................................................................. 3
HHP 150: Lifetime Fitness Concepts ....................................................... 1
NURS 303: Introduction to Public Health ................................................ 3

Human Heritage (Select Philosophy PLUS one course from History or Literature) (6 hours)

Philosophy
PHIL 113: Business Ethics ....................................................................... 3

History
HIST 101: World History to 1500 ............................................................ 3
HIST 102: World History from 1500 ....................................................... 3
HIST 201: American History to 1865 ...................................................... 3
HIST 202: American History from 1865 .................................................. 3

Literature
ENGL 113: General Literature .................................................................. 3
ENGL 114: General Literature (Genre) ..................................................... 3
ENGL 116: General Literature (Theme) ..................................................... 3
ENGL 120: Literature and Film ................................................................ 3
ENGL 315: Mythology .............................................................................. 3
ENGL 320: Literature and Film ................................................................ 3

Major Requirements

Interior Design Courses* (49 hours)
IND 110: Interior Design Fundamentals .................................................. 3
IND 120: Interior Design Studio Fundamentals ....................................... 3
IND 312: History of Design I .................................................................... 3
IND 313: History of Design II .................................................................. 3
IND 315: Interior Design: Studio I .......................................................... 3
IND 316: Space Planning and Programming ............................................ 3
IND 323: Interior Design Materials and Resources .................................. 3
IND 324: Applied Color and Lighting Design .......................................... 3
IND 325: Interior Design: Studio II ......................................................... 3
IND 411: Professional Practice for Interior Design .................................... 3
IND 420: Interior Design: Studio III ........................................................ 3
IND 422: Interior Design: Studio IV ........................................................ 3
IND 425: LEED in Interior Design ........................................................... 3
IND 570: Professional Internship Preparation ......................................... 1
IND 571: Professional Internship ............................................................ 2
IND 572: Interior Design Portfolio Prep and Senior Exhibit .................... 1
FCS 356: Textiles ..................................................................................... 3
EST 621: Ergonomics/Human Factors .................................................... 3

Construction Support Courses* (19 hours)
CMCET 133: Construction Graphics ...................................................... 3
CMCET 235: Methods of Construction-Light Frame and
    Finishes .............................................................................................. 2
CMCET 330: Mechanical Systems (HVAC) ............................................. 3
CMCET 331: Electrical Systems ............................................................. 3
CMCET 332: Residential Design ............................................................ 3
CMCET 340: Building Information Modeling (BIM) ............................... 3
CMCET 350: Mechanical Systems (Plumbing) ....................................... 2

Graphic Design Support Courses* (9 hours)
GIT 142: Raster Graphics Software ....................................................... 3
GIT 221: Web Graphics Software .......................................................... 3
GIT 240: Page Layout Software ............................................................. 3

*A grade of C or better is required in all major requirements and their prerequisites.

Bachelor of Science in Engineering Technology Degree with a Major in Construction Engineering Technology

Basic Skills (12 hours)
COMM 207: Speech Communication .................................................... 3
ENGL 101: English Composition ............................................................ 3
ENGL 190: Honors English Composition ................................................ 3
or ENGL 299: Introduction to Research Writing ..................................... 3
MATH 143: Elementary Statistics ....................................................... 3

General Education Electives (30-34 hours)

Sciences (9-10 hours)

Natural Sciences (Select one)
BIOL 111: General Biology ..................................................................... 3
and BIOL 112: General Biology Laboratory ......................................... 2
BIOL 113: Environmental Life Science .................................................. 4
BIOL 211: Principles of Biology I ........................................................... 4

Physical Sciences (Select one)
PHYS 100: College Physics I ................................................................. 4
or PHYS 104: Engineering Physics I ...................................................... 4
PHYS 130: Elementary Physics Laboratory I ......................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ...................................................... 3
WGS 200: Introduction to Women’s Studies ............................................ 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics .......................................................................... 3
POLS 103: Comparative Political Institutions ......................................... 3

Producing and Consuming (6 hours)

Technology
CMCET 234: The Construction Industry ............................................... 3
Business
ACCTG 201: Financial Accounting ......................................................... 3

Fine Arts and Aesthetic Studies/Cultural Studies (Select one) (2-3 hours)
ANTH 101: Introduction to Cultural Anthropology ................................ 3
ART 155: Printmaking and Paper Arts .................................................... 3
ART 178: Introduction to the Visual Arts ................................................ 3
ART 188: The Designed World ............................................................... 3
ART 217: Crafts I .............................................................................. 3
ART 222: Jewelry Design I ................................................................. 3
ART 233: Drawing I .......................................................................... 3
ART 244: Ceramics I ......................................................................... 3
ART 266: Sculpture I ......................................................................... 3
ART 277: Painting I .......................................................................... 3
ART 288: Introduction to Art History I .................................................. 3
ART 289: Introduction to Art History II ............................................... 3
ART 311: Art Education ..................................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress .......... 3
ART 430: Automotive: Art and Design ............................................... 3
COMM 105: Performance Appreciation .............................................. 3
COMM 205: Performance Studies ....................................................... 3
COMM 295: Theatre History (____) .................................................... 3
ENGL 250: Introduction to Creative Writing ........................................ 3
HHP 151: Dance Appreciation ........................................................... 3
MUSIC 120: Music Appreciation (____) .............................................. 3
MUSIC 121: Introduction to Music Literature ....................................... 2
MILL 114: Chinese Language and Culture I ......................................... 3
MILL 124: French Language and Culture I .......................................... 3
MILL 154: Spanish Language and Culture I ......................................... 3
MILL 184: Russian Language and Culture I ......................................... 3
MILL 194: Korean Language and Culture I ......................................... 3
GEOG 106: World Regional Geography ............................................. 3
GEOG 300: Elements of Geography .................................................. 3
GEOG 304: Human Geography ........................................................ 3
WGS 399: Global Women's Issues .................................................... 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology .......................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ............................................................... 3
FCS 301: Nutrition ........................................................................... 3
HHP 150: Lifetime Fitness Concepts ................................................... 1
NURS 303: Introduction to Public Health ............................................ 3

Human Heritage (Select one course from one of the following three categories) (3 hours)

History
HIST 101: World History to 1500 ......................................................... 3
HIST 102: World History from 1500 .................................................... 3
HIST 201: American History to 1865 ................................................... 3

Literature
ENGL 113: General Literature ............................................................... 3
ENGL 114: General Literature (Genre) .................................................. 3
ENGL 116: General Literature (Theme) ................................................ 3
ENGL 120: Literature and Film ........................................................... 3
ENGL 315: Mythology ........................................................................ 3
ENGL 320: Literature and Film ........................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy .................................................. 3
PHIL 105: Ethics ............................................................................... 3
PHIL 112: Biomedical Ethics ............................................................... 3
PHIL 113: Business Ethics ................................................................. 3
PHIL 114: Environmental Ethics .......................................................... 3
PHIL 207: Critical Thinking ............................................................... 3
PHIL 208: Logic ................................................................................ 3
PHIL 231: World Religions ................................................................. 3

Major Requirements*

Technical Specialties (60 hours)
CMCET 133: Construction Graphics .................................................... 3
CMCET 234: The Construction Industry .............................................. 3
CMCET 235: Methods of Construction-Light Frame and Finishes .......... 2
CMCET 330: Mechanical Systems (HVAC) ......................................... 3
CMCET 331: Electrical Systems .......................................................... 3
CMCET 334: Methods of Construction-Sitework and Steel ................. 3
CMCET 335: Methods of Construction-Concrete and Masonry .......... 3
CMCET 337: Construction Materials Testing and Inspection ............... 2
CMCET 350: Mechanical Systems (Plumbing) .................................... 2
CMCET 431: Structural Loads ............................................................. 1
CMCET 434: Civil Construction .......................................................... 3
CMCET 530: Construction Cost Management ..................................... 3
CMCET 536: Temporary Structures .................................................... 2
CMCET 537: Construction Surveying I ............................................... 3
CMCET 631: Construction Estimating I ............................................... 3
CMCET 632: Steel and Wood Structures ............................................. 3
CMCET 633: Concrete Structures ....................................................... 3
CMCET 634: Construction Management ............................................ 3
CMCET 635: Contract Administration ............................................... 3
CMCET 637: Construction Surveying II .............................................. 3
CMCET 638: Foundation and Soil Mechanics ....................................... 3
CMCET 639: Construction Estimating II ............................................. 2
CMCET 690: Professional Construction Certification Seminar ............ 1
CMCET 691: Senior Project ................................................................ 3

CMCET 234 The Construction Industry meets general education requirements.

*A grade of "C" or better is required for credit toward graduation and to satisfy pre-requisite requirements in all CMCET courses, MATH 122 Plane Trigonometry (or equivalent).

Support Courses (27-28 hours)**
PHYS 101: College Physics II ............................................................... 4
PHYS 131: Elementary Physics Laboratory II ...................................... 1
PHYS 105: Engineering Physics II ..................................................... 4
or CHEM 112: Essentials of Chemistry ............................................. 3
and CHEM 113: Essentials of Chemistry Laboratory ......................... 1
or CHEM 215: General Chemistry I .................................................. 3
and CHEM 216: General Chemistry I Laboratory ............................... 2
MATH 122: Plane Trigonometry ...................................................... 3
MATH 143: Elementary Statistics ..................................................... 3
MATH 150: Calculus I ................................................................. 5
MECET 220: Statics ..................................................................... 3
or PHYS 220: Engineering Mechanics I-Statics .................................. 3
MECET 423: Mechanics of Materials .............................................. 3
ENGL 301: Technical/Professional Writing ....................................... 3
ACCTG 201: Financial Accounting ................................................. 3
EST 396: Introduction to Construction Safety .................................... 3
CMCET 200: Cooperative Education (___) ................................. 1-6
or CMCET 300: Cooperative Education (___) ................................. 3-6
or CMCET 400: Cooperative Education (___) ................................. 3-6

Total hours for Bachelor of Science Degree with a Major in Construction Engineering Technology (129-136 hours)

CMCET 200, 300 or 400 should be taken for at least 3 hours.

MATH 143 Elementary Statistics and ACCTG 201
Financial Accounting meet general education requirements.

** Mathematics classes below MATH 122 Plane
Trigonometry do not count towards degree
requirements.

Bachelor of Science in Technology Degree
with a Major in Construction Management

Basic Skills (12 hours)

COMM 207: Speech Communication ............................................. 3
ENGL 101: English Composition ................................................... 3
ENGL 190: Honors English Composition ....................................... 3
or ENGL 299: Introduction to Research Writing ............................. 3
MATH 113: College Algebra ......................................................... 3

General Education Electives (35-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)

BIOL 111: General Biology .......................................................... 3
and BIOL 112: General Biology Laboratory ..................................... 2
BIOL 113: Environmental Life Science .......................................... 4
BIOL 211: Principles of Biology I .................................................. 4

Physical Sciences (Select one)

PHYS 160: Physical Geology ....................................................... 3
and PHYS 165: Physical Geology Laboratory ................................. 1
PHYS 166: Meteorology .............................................................. 3
and PHYS 167: Meteorology Laboratory ........................................ 1
PHYS 171: Physical Science ......................................................... 3

and PHYS 172: Physical Science Laboratory .................................. 1
PHYS 175: Descriptive Astronomy ............................................... 3
and PHYS 176: Astronomy Laboratory .......................................... 1
PHYS 375: Solar System Astronomy ............................................. 3
and PHYS 176: Astronomy Laboratory .......................................... 1

Social Studies (Select one) (3 hours)

SOC 100: Introduction to Sociology .............................................. 3
WGS 200: Introduction to Women's Studies .................................. 3

Political Studies (Select one) (3 hours)

POLS 101: U.S. Politics .............................................................. 3
POLS 103: Comparative Political Institutions ................................ 3

Producing and Consuming (6 hours)

Economy

ECON 191: Issues in Today's Economy ....................................... 3

Business

ACCTG 201: Financial Accounting ............................................. 3

Fine Arts and Aesthetic Studies (select one)
(2-3 hours)

ART 155: Printmaking and Paper Arts ......................................... 3
ART 178: Introduction to the Visual Arts ...................................... 3
ART 188: The Designed World .................................................... 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I ......................................................... 3
ART 233: Drawing I .............................................................. 3
ART 244: Ceramics I .............................................................. 3
ART 266: Sculpture I .............................................................. 3
ART 277: Painting I ............................................................... 3
ART 288: Introduction to Art History I ........................................ 3
ART 289: Introduction to Art History II ....................................... 3
ART 311: Art Education ............................................................ 3
ART 351: Printmaking, Papermaking, Bookarts and the
Letterpress ................................................................. 3
ART 430: Automotive: Art and Design ....................................... 3
COMM 105: Performance Appreciation ...................................... 3
COMM 205: Performance Studies ............................................... 3
COMM 295: Theatre History (___) ............................................. 3
ENGL 250: Introduction to Creative Writing ............................... 3
HHP 151: Dance Appreciation .................................................. 3
MUSIC 120: Music Appreciation (___) ..................................... 3
MUSIC 121: Introduction to Music Literature ............................. 2

Cultural Studies (Select one) (3 hours)

ANTH 101: Introduction to Cultural Anthropology .......................... 3
MLL 114: Chinese Language and Culture I ................................ 3
MLL 124: French Language and Culture I .................................. 3
MLL 154: Spanish Language and Culture I .................................. 3
MLL 184: Russian Language and Culture I ................................. 3
MLL 194: Korean Language and Culture I ................................. 3
GEOG 108: World Regional Geography ..................................... 3
GEOG 300: Elements of Geography ......................................... 3
GEOG 304: Human Geography .................................................. 3
WGS 399: Global Women's Issues ............................................. 3
Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ...................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ......................................................... 3
FCS 301: Nutrition .......................................................................... 3
HHP 150: Lifetime Fitness Concepts ................................................ 3
NURS 303: Introduction to Public Health ........................................... 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .................................................... 3
HIST 102: World History from 1500 ................................................ 3
HIST 201: American History to 1865 ................................................. 3
HIST 202: American History from 1865 ............................................. 3

Literature
ENGL 113: General Literature ............................................................ 3
ENGL 114: General Literature (Genre) ................................................. 3
ENGL 116: General Literature (Theme) ................................................. 3
ENGL 120: Literature and Film .............................................................. 3
ENGL 315: Mythology .................................................................. 3
ENGL 320: Literature and Film .............................................................. 3

Philosophy
PHIL 103: Introduction to Philosophy ................................................ 3
PHIL 105: Ethics ........................................................................... 3
PHIL 112: Biomedical Ethics .............................................................. 3
PHIL 113: Business Ethics ................................................................. 3
PHIL 114: Environmental Ethics ......................................................... 3
PHIL 207: Critical Thinking ............................................................... 3
PHIL 208: Logic ....................................................................... 3
PHIL 231: World Religions ................................................................. 3

Major Requirements*

Technical Specialties (51 hours)
CMCET 133: Construction Graphics .................................................. 3
CMCET 234: The Construction Industry ............................................. 3
CMCET 235: Methods of Construction-Light Frame and Finishes .......... 2
CMCET 330: Mechanical Systems (HVAC) ......................................... 3
CMCET 331: Electrical Systems .......................................................... 3
CMCET 333: Theory of Structures ...................................................... 3
CMCET 334: Methods of Construction-Sitework and Steel ................. 3
CMCET 335: Methods of Construction-Concrete and Masonry ........... 3
CMCET 337: Construction Materials Testing and Inspection ............... 2
CMCET 350: Mechanical Systems (Plumbing) ..................................... 2
CMCET 434: Civil Construction .......................................................... 3
CMCET 530: Construction Cost Management ..................................... 3
CMCET 537: Construction Surveying I ............................................. 3
CMCET 631: Construction Estimating I ............................................. 3
CMCET 634: Construction Management .......................................... 3

CMCET 635: Contract Administration .............................................. 3
CMCET 639: Construction Estimating II .......................................... 2
CMCET 690: Professional Construction Certification Seminar ............ 1
CMCET 691: Senior Project ............................................................... 3

* A grade of “C” or better is required for credit toward graduation and to satisfy pre-requisite requirements in all CMCET courses, MATH 113 College Algebra (or equivalent), MATH 122 Plane Trigonometry (or equivalent).

Emphases (choose one) (12 hours)

Company Management Emphasis
MGT 101: Introduction to Business .................................................. 3
MGT 330: Management and Organizational Behavior ....................... 3
MGMKT 444: Legal and Social Environment of Business ................. 3
MGT 540: Human Resources Management ..................................... 3

or Approved Leadership course#

#Approved Leadership courses include:
LDSP 600 Foundations of Leadership
TM 520 Leadership in the Workplace
MIL 303 Leadership Assessment and Development Course

Field Management Emphasis
MGRET 162: Welding Processes and Procedures ............................... 3
TM 606: Industrial Supervision ......................................................... 3

- Approved Technical Elective (3 hours)
- Approved Leadership course# (3 hours)

#Approved Leadership courses include:
LDSP 600 Foundations of Leadership
TM 520 Leadership in the Workplace
MIL 303 Leadership Assessment and Development Course

Residential Construction Emphasis
CMCET 332: Residential Design ...................................................... 3
CMCET 336: Residential Land Development ...................................... 3
CMCET 338: Residential Codes/Inspection ...................................... 3
CMCET 435: Residential Construction Methods and Management ....... 3

Safety Management Emphasis
EST 512: Risk Assessment ............................................................... 3
EST 630: Safety Management ......................................................... 3

Select 6 hours from
EST 204: Introduction to Fire Safety ................................................ 3
EST 326: Basic Electrical Safety ....................................................... 3
EST 514: Industrial Hygiene ............................................................... 3
Civil Construction Emphasis
CMCET 637: Construction Surveying II ......................................................... 3
CMCET 650: Civil Virtual Design and Construction ...................................... 3
CMCET 651: Heavy/Highway/Bridge Construction ........................................ 3
CMCET 652: Utility Construction .................................................................. 3

Building Information Modeling (BIM) Emphasis
CMCET 340: Building Information Modeling (BIM) ............................................. 3
CMCET 640: BIM Management ...................................................................... 3
GIT 334: 3D Graphics .................................................................................. 3
GIT 530: 3D Animation and Rendering ........................................................ 3

Support Courses (18 hours)
CMCET 200: Cooperative Education (___) .................................................... 1-6
or CMCET 300: Cooperative Education (___) .............................................. 3-6
or CMCET 400: Cooperative Education (___) ................................................ 3-6
CMCET 410: Technical Construction Spanish for the Jobsite ... Supervisor ............ 3
MATH 122: Plane Trigonometry .................................................................. 3
ENGL 301: Technical/Professional Writing .................................................... 3
EST 396: Introduction to Construction Safety .............................................. 3
EST 496: Construction Safety ....................................................................... 2
and EST 497: Construction Safety Laboratory ............................................ 1

Bachelor of Science in Technology Degree with a Major in Environmental and Safety Management

Basic Skills (12 hours)
COMM 207: Speech Communication ............................................................ 3
ENGL 101: English Composition .................................................................. 3
ENGL 190: Honors English Composition ..................................................... 3
or ENGL 299: Introduction to Research Writing .......................................... 3
MATH 113: College Algebra .......................................................................... 3

General Education Electives (35-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)
BIOL 111: General Biology .......................................................................... 3
and BIOL 112: General Biology Laboratory ............................................... 2
BIOL 113: Environmental Life Science .......................................................... 4
BIOL 211: Principles of Biology I .................................................................. 4

Physical Sciences
PHYS 171: Physical Science .......................................................................... 3
and PHYS 172: Physical Science Laboratory ............................................... 1
(or other approved Physical Science course)

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology .............................................................. 3
WGS 200: Introduction to Women's Studies ................................................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics .................................................................................. 3
POLS 103: Comparative Political Institutions ............................................ 3

Producing and Consuming (6 hours)

Economy
ECON 191: Issues in Today's Economy ....................................................... 3

General Education Electives (35-39 hours)
ACCTG 201: Financial Accounting .............................................................. 3

Fine Arts and Aesthetic Studies (select one) (2-3 hours)
ART 155: Printmaking and Paper Arts .......................................................... 3
ART 178: Introduction to the Visual Arts ....................................................... 3
ART 188: The Designed World ................................................................... 3
ART 217: Crafts I ......................................................................................... 3
ART 222: Jewelry Design I .......................................................................... 3
ART 233: Drawing I ...................................................................................... 3
ART 244: Ceramics I .................................................................................... 3
ART 266: Sculpture I ................................................................................... 3
ART 277: Painting I ..................................................................................... 3
ART 288: Introduction to Art History I ......................................................... 3
ART 289: Introduction to Art History II ....................................................... 3
ART 311: Art Education .............................................................................. 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress ............... 3
ART 430: Automotive: Art and Design ....................................................... 3
COMM 105: Performance Appreciation ...................................................... 3
COMM 205: Performance Studies ............................................................... 3
COMM 295: Theatre History (___) ............................................................... 3
ENGL 250: Introduction to Creative Writing ............................................. 3
HHP 151: Dance Appreciation ................................................................. 3
MUSIC 120: Music Appreciation (___) ........................................................ 3
MUSIC 121: Introduction to Music Literature ............................................. 2

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ................................... 3
MLL 114: Chinese Language and Culture I ................................................. 3
MLL 124: French Language and Culture I ................................................... 3
MLL 154: Spanish Language and Culture I ................................................. 3
MLL 184: Russian Language and Culture I ............................................... 3
MLL 194: Korean Language and Culture I .................................................. 3
GEOG 106: World Regional Geography .................................................... 3
GEOG 300: Elements of Geography ........................................................... 3
GEOG 304: Human Geography ................................................................. 3
WGS 399: Global Women's Issues .............................................................. 3
Health and Well Being (4-6 hours)

Select one of the following tracks: (21-27 hours)

PSYCH 155: General Psychology .......................................................... 3

Physical (Select one)

FCS 203: Nutrition and Health .......................................................... 3
FCS 301: Nutrition ........................................................................... 3
HHP 150: Lifetime Fitness Concepts ................................................. 1
NURS 303: Introduction to Public Health ........................................... 3

Human Heritage (Select Philosophy PLUS one course from History or Literature) (6 hours)

Philosophy

PHIL 105: Ethics ................................................................. 3

History

HIST 101: World History to 1500 ....................................................... 3
HIST 102: World History from 1500 .................................................. 3
HIST 201: American History to 1865 ................................................ 3
HIST 202: American History from 1865 ............................................ 3

Literature

ENGL 113: General Literature .......................................................... 3
ENGL 114: General Literature (Genre) ............................................... 3
ENGL 116: General Literature (Theme) ............................................. 3
ENGL 315: Mythology .................................................................... 3
ENGL 120: Literature and Film .......................................................... 3
ENGL 320: Literature and Film .......................................................... 3

Major Requirements

Technical Specialties* (44 hours)

EST 101: The Environmental and Safety Industry ................................ 3
EST 204: Introduction to Fire Safety .................................................. 3
EST 215: Introduction to Environmental Compliance ........................ 3
EST 326: Basic Electrical Safety ....................................................... 3
EST 393: Introduction to Industrial Safety .......................................... 3
EST 396: Introduction to Construction Safety .................................... 3
EST 400: Cooperative Education/Internship (___) ............................... 3-6
EST 505: Water Quality and Solid Waste Management ..................... 3
EST 512: Risk Assessment ............................................................... 3
EST 514: Industrial Hygiene ............................................................. 3
EST 516: Hazardous Materials ........................................................ 3
EST 614: Environmental and Safety Program Development ............... 2
EST 621: Ergonomics/Human Factors .............................................. 3
EST 624: Risk Control ................................................................... 3
EST 630: Safety Management ........................................................ 3

Emphases* (choose one) (12 hours)

Human Resource Management Emphasis

HRD 596: Introduction to Human Resource Development ................. 3
TM 606: Industrial Supervision ......................................................... 3
TM 390: Trade and Job Analysis ....................................................... 3
or TM 520: Leadership in the Workplace ........................................ 3
TM 653: Workforce Preparation ....................................................... 3

Construction Emphasis

CMCET 235: Methods of Construction-Light Frame and Finishes ........ 2
CMCET 334: Methods of Construction-Sitework and Steel .............. 3
CMCET 335: Methods of Construction-Concrete and Masonry ........ 3
EST 496: Construction Safety ......................................................... 2
EST 497: Construction Safety Laboratory ......................................... 1

General Industry Emphasis

EST 403: Industrial Safety ............................................................. 3
MFGET 263: Manufacturing Methods I ............................................ 2
and MFGET 268: Manufacturing Methods I Laboratory .................... 1
TM 606: Industrial Supervision ......................................................... 3

• Approved Tech elective or leadership# course (3 hours)

#Approved Leadership courses include:

MIL 303 Leadership Assessment and Development
TM 520 Leadership in the Workplace
LDSP 600 Foundations of Leadership

Environmental Management Emphasis

BIOL 313: Principles of Conservation ............................................. 3
BIOL 615: Environmental Protection ............................................. 3
EST 498: Environmental Safety ..................................................... 3
EST 629: Legal Issues in Environmental Health and Safety ............... 3

Fire Safety Emphasis

Approved fire safety transfer courses

Support Courses* (20 hours)

CHEM 215: General Chemistry I ..................................................... 3
and CHEM 216: General Chemistry I Laboratory ............................ 2
ENGL 301: Technical/Professional Writing ...................................... 3
TM 679: Presentation Skills ............................................................ 3

Safety Electives (chosen from:) (9 hours)

EST 404: Fire Protection Systems .................................................. 3
EST 524: Emergency Planning & Emergency Response .................... 3
EST 605: Special Topics in Environmental and Safety (___) ............. 1-3
HRD 575: Instructional Media in Human Resource Development ....... 3

*A grade of C or better is required in all technical specialties, emphasis and support course requirements.
Total minimum hours required for Bachelor of Science in Technology Degree with a Major in Environmental and Safety Management (124 hours)

- Approved Course by Instructor (3 hours)

**Bachelor of Applied Science Degree with a Major in Technology (Construction emphasis or Environment and Safety emphasis)**

This program offers students who have graduated from a two-year Associate of Applied Science degree technical program the opportunity to extend their education and training. All Associate of Applied Science degree graduates (with a minimum of 2.50 GPA) can automatically transfer up to 64 college credits to Pittsburg State University. Graduates receive a Bachelor of Applied Science degree with a major in technology and a selected emphasis by completing an additional minimum of 60 hours from Pittsburg State University. The degree program content is based on previous academic and technical preparation.

Like two-year technical programs, this bachelor degree gives students complete, hands-on training for a real-world job. Students learn technology, theory, logic, leadership, and business skills to broaden their knowledge, and to better prepare them for management opportunities.

Coursework is both specialized and comprehensive. Emphasis areas are similar to the programs completed in the associate degrees. Technical emphases are Construction Emphasis and Environment and Safety Emphasis.

**Basic Skills**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 301: Technical/Professional Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

COMM 207 as well as ENGL 301 can have other courses substituted in their place.

**Behavioral, Social, History & Political Studies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 155: General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYCH 575: Industrial and Organizational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>or POLS 101: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 201: American History to 1865</td>
<td>3</td>
</tr>
<tr>
<td>or GT 350: Technology and Civilization</td>
<td>3</td>
</tr>
</tbody>
</table>

or TM 350: Societal Influence of Technology ................. 3
or Social Science and/or Political Studies Elective (3 hours)

**Mathematics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 113: College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 114: Elements of Technical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MATH 143: Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

MATH 113 as well as MATH 143 can be substituted by another mathematics course.

**Sciences (Minimum of 6 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

BIOL 113 can be substituted by another natural science course.

PHYS 171 can be substituted by another physical science course.

**Producing and Consuming**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCTG 201: Financial Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

or Approved business substitute (3 hours)

**Fine Arts (choose one)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 178: Introduction to the Visual Arts</td>
<td>3</td>
</tr>
<tr>
<td>COMM 105: Performance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>COMM 205: Performance Studies</td>
<td>3</td>
</tr>
<tr>
<td>HHP 151: Dance Appreciation</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 120: Music Appreciation (___)</td>
<td>3</td>
</tr>
</tbody>
</table>

- Approved Humanities (e.g., Ethics) (3 hours)

**Cultural Studies (choose one)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 300: Elements of Geography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 304: Human Geography</td>
<td>3</td>
</tr>
</tbody>
</table>

- Approved elective from cultural studies (3 hours)

**Business Support Courses**

**Business Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGT 330: Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MGMKT 444: Legal and Social Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>MGT 540: Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>or MKTG 330: Principles of Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>
Technical Courses

Construction and Environment and Safety Emphasis Courses

Workforce Development/Organization and Leadership courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM 606: Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 400: Cooperative Education (____)</td>
<td>3-6</td>
</tr>
<tr>
<td>TM 520: Leadership in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>ETECH 502: Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>EST 396: Introduction to Construction Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

* CMCET 400 Cooperative Education must be taken for three hours.

Technical Specialization, Support and Electives

Constrution Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMCET 334: Methods of Construction-Sitework and Steel</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 335: Methods of Construction-Concrete and Masonry</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 434: Civil Construction</td>
<td>3</td>
</tr>
</tbody>
</table>

Technical Electives (Select 12 hours from below)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMCET 330: Mechanical Systems (HVAC)</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 331: Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 337: Construction Materials Testing and Inspection</td>
<td>2</td>
</tr>
<tr>
<td>CMCET 530: Construction Cost Management</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 537: Construction Surveying I</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 631: Construction Estimating I</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 634: Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 635: Contract Administration</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 639: Construction Estimating II</td>
<td>2</td>
</tr>
</tbody>
</table>

* CMCET 537 Requires Trigonometry

Environment and Safety Emphasis (Select 15 hours from below)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EST 204: Introduction to Fire Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 512: Risk Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EST 514: Industrial Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>EST 516: Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>EST 604: Occupational Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 621: Ergonomics/Human Factors</td>
<td>3</td>
</tr>
<tr>
<td>EST 627: Modern Transportation Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 629: Legal Issues in Environmental Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 630: Safety Management</td>
<td>3</td>
</tr>
<tr>
<td>TTED 308: Laboratory and Shop Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (selected in consultation with advisor)**

Safety courses not taken to meet those credit hour requirements may be taken as Technical Electives.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EST 393: Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 396: Introduction to Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 403: Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 406: Construction Safety Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>EST 496: Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 497: Construction Safety Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

**Actual number of credit hours per program component area is dependent on coursework previously completed as part of AAS, individual’s career goals, corporate partner requirements, and/or a combination of all these factors. All course selection decisions are made in consultation with academic advisor.

Minor in Construction Technology

Total for minor in Construction Technology (23 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMCET 133: Construction Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 234: The Construction Industry</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 235: Methods of Construction-Light Frame and Finishes</td>
<td>2</td>
</tr>
<tr>
<td>CMCET 334: Methods of Construction-Sitework and Steel</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 335: Methods of Construction-Concrete and Masonry</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 434: Civil Construction</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 332: Residential Design</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 631: Construction Estimating I</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 634: Construction Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Minor in Construction Technology for Interior Design

Total for Minor in Construction Technology for Interior Design (20 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMCET 133: Construction Graphics</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 234: The Construction Industry</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 235: Methods of Construction-Light Frame and Finishes</td>
<td>2</td>
</tr>
<tr>
<td>CMCET 330: Mechanical Systems (HVAC)</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 331: Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>CMCET 332: Residential Design</td>
<td>3</td>
</tr>
<tr>
<td>or WT 682: Residential Construction Software: Planning and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Approved elective selected from one of the following

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIT 240: Page Layout Software</td>
<td>3</td>
</tr>
<tr>
<td>WT 301: Finishing</td>
<td>3</td>
</tr>
<tr>
<td>WT 523: Computer Applications in Cabinetmaking</td>
<td>3</td>
</tr>
<tr>
<td>WT 691: Furniture Design and Development</td>
<td>3</td>
</tr>
</tbody>
</table>
Minor in Construction Management

Total for minor in Construction Management (22-23 hours)

CMCET 133: Construction Graphics ................................................. 3
CMCET 234: The Construction Industry ........................................... 3
CMCET 235: Methods of Construction-Light Frame and Finishes .......... 2
CMCET 334: Methods of Construction-Sitework and Steel ................. 3
CMCET 335: Methods of Construction-Concrete and Masonry ........... 3
CMCET 631: Construction Estimating I ............................................. 3
CMCET 634: Construction Management ........................................... 3
or CMCET 635: Contract Administration ........................................ 3
CMCET 639: Construction Estimating II .......................................... 2
or EST 396: Introduction to Construction Safety ............................. 3

Minor in Interior Design

Interior Design (21 hours)

IND 110: Interior Design Fundamentals ........................................... 3
IND 120: Interior Design Studio Fundamentals .................................. 3
IND 312: History of Design I ............................................................. 3
or IND 313: History of Design II ....................................................... 3
IND 315: Interior Design: Studio I ..................................................... 3
IND 323: Interior Design Materials and Resources ............................ 3
FCS 356: Textiles ................................................................. 3
CMCET 133: Construction Graphics ................................................. 3

Minor in Safety, Health and Environmental Management

Choose between General Industry or Construction

Total for Minor in Safety, Health and Environmental Management (21 hours)

General Industry Emphasis

EST 393: Introduction to Industrial Safety ....................................... 3
EST 603: Industrial Safety ............................................................ 3

Construction Emphasis

EST 396: Introduction to Construction Safety .................................... 3
EST 496: Construction Safety ......................................................... 2
and EST 497: Construction Safety Laboratory ................................... 1

(Select 15 hours)

EST 512: Risk Assessment ............................................................ 3
EST 514: Industrial Hygiene ........................................................... 3
EST 516: Hazardous Materials ....................................................... 3
EST 604: Occupational Health and Safety ....................................... 3
EST 621: Ergonomics/Human Factors .......................................... 3
EST 629: Legal Issues in Environmental Health and Safety ............. 3
EST 630: Safety Management ........................................................ 3

Master of Engineering Technology

The Master of Engineering Technology degree is offered under the direction of the Department of Engineering Technology and offers programs in Construction, Electronics, Manufacturing, Mechanical, and Plastics. In addition to completing a set of core courses, the students have the option of expanding their knowledge in a specialty area or of conducting research concluding with a thesis. Emphasis is placed on “real-world” activities, projects, and interactions.

Our mission is to establish the Master in Engineering Technology program at Pittsburg State University as the premier graduate curriculum in engineering technology in the Midwest region. We are committed to assisting the University and the region in technology development by providing a professional multi-disciplinary team and project oriented approach to graduate education. In order to accommodate working professionals, the Master of Engineering Technology degree is also offered through online course work. Students completing their degree requirements online receive the same educational value as students physically present on campus in a prolonged course of study.

Goals and Objectives

The main goal for the program is to endow the graduates of the Master of Engineering Technology degree with improved opportunities in their professional careers and to better prepare them for leadership positions.

Objective 1: Graduates will have acquired leadership skills. They will be more flexible, able to take initiative and have improved competence in problem solving and communication.

Objective 2: Graduates will have expanded their skills and knowledge in one or more of their specialty areas: Construction, Electronics, Manufacturing, Mechanical and Plastics.

Objective 3: Graduates will have improved their knowledge and appreciation of management practices, business decisions, professionalism and ethics.

Admission Requirements

Admission to the graduate program requires an undergraduate degree in Engineering, Engineering Technology or in a closely related area. Students must
meet the University graduate admission requirements detailed in the University Catalog. International students must have a TOEFL score of 540 or higher. A minimum undergraduate grade point average of 2.70 is required unless the applicant has significant industrial experience. All transcripts will be evaluated prior to admission into the program.

**Core Courses (Group 1- Required)**

ETECH 804: Quality: Management and Control ........................................... 3  
ETECH 805: Current Issues in Engineering Technology ............................. 3  
ETECH 807: Systems Engineering and Analysis ........................................... 3  
ETECH 809: Engineering Project Management ............................................ 3  
ETECH 810: Collaborative Projects for Engineering Technology ................ 3  
ETECH 831: Value Engineering ................................................................. 3

**Core Courses (Group 2- Select one course)**

ETECH 852: Integrated Design and Manufacturing Concepts .................... 3  
ETECH 899: Quantitative Decision Making in Industry .............................. 3

**Construction Technical Emphasis**

**Emphasis Courses (minimum of 12 hours)**

**Option I: Research/Development/Thesis**

ETECH 890: Research and Thesis ............................................................... 3-6  
TTED 891: Methods of Research .............................................................. 3  
ETECH 895: Advanced Topics in Engineering Technology ....................... 1-6  
or CMCET 895: Advanced Topics in Engineering Technology (___) ............... 1-6

ETECH 895 and CMCET 895 should be taken for 3-6 hours.

**Option III: Technical Specialty Courses**

CMCET 833: Estimating and Bidding Strategy ............................................ 3  
CMCET 834: Advanced Construction Management .................................... 3  
CMCET 836: Virtual Design and Construction (VDC) .............................. 3

- Approved Elective (3 hours)

Two options are available: Option I, a core of 15 credits is complemented by the required thesis (6 credits) and 9 credits of emphasis/electives courses for a total of 30 credit hours; Option II includes a core of 15 credits which are required and 18 credits of enrichment/emphasis electives courses. The final plan would be worked out between the student and their advisor.

**Total minimum hours required for Master of Engineering Technology (33 hours)**

**Master of Science Degree with a Major in Technology: Construction Management Emphasis**

The Master of Science degree with a major in Technology, with an emphasis in Construction Management is offered through the Department of Technology and Workforce Learning. (See Master of Science- Technology.)
Engineering Technology

Chairperson: Greg Murray  
Professor(s): Kailash Chandra*, Paul Herring, David Lomshek, James A. Lookadoo**, Erik Mayer*, Philip McNew, Russell Rosmaity*, Robert Susnik, Timothy Thomas, Randy Winzer  
Associate Professor(s): Rebeca Book, Ronny Galloway, Jacob Lehman, David J. Miller*, Greg Murray, Clark Shaver  
Assistant Professor(s): Daniel Maxwell*, Jeanne Norton*  
Instructors: Patrick Foyet, F. Brock Skaggs  
*Graduate Faculty  
**University Professor  

Room W215 Kansas Technology Center  
Telephone: 620-235-4350  
Fax: 620-235-4004  
http://www.pittstate.edu/department/engineering-tech/  
E-mail: etech@pittstate.edu

Undergraduate

Bachelor of Science in Engineering Technology Degree  
with a Major in Electronics Engineering Technology  
Bachelor of Science in Engineering Technology Degree  
with a Major in Manufacturing Engineering Technology  
Bachelor of Science in Engineering Technology Degree  
with a Major in Mechanical Engineering Technology  
Bachelor of Science in Engineering Technology Degree  
with a Major in Plastics Engineering Technology  
Bachelor of Applied Science Degree with a Major in Technology  
Minor in Electronic Technology  
Minor in Manufacturing Management  
Minor in Manufacturing Technology  
Minor in Mechanical Technology  
Minor in Plastics Technology

Graduate

Master of Engineering Technology  

Introduction

The vision of the Department of Engineering Technology is to provide the highest quality engineering technology education to our students in preparation for professional careers in the engineering and technology industry, and to prepare our students to be active and responsible members of society. The department must be responsive to our key constituents' interest through student and faculty interactions. The department recognizes the necessity to recruit the highest quality students, to provide a quality and safe educational experience, and to ultimately provide quality career opportunities for our graduates.

Mission

The Department of Engineering Technology provides undergraduate and graduate Engineering Technology education and services to the State of Kansas, to the surrounding Midwest region, and to expanding national and international regions. This is accomplished through the combined efforts of Engineering Technology programs in Electronics, Manufacturing, Mechanical, and Plastics. The Department of Engineering Technology is committed to assist the University in fulfilling its statewide mission in technology and economic development by providing applied research, training and consulting services to businesses and industries, and by developing, and providing educational associations with secondary/postsecondary educational institutions.

Programs

The Department of Engineering Technology offers four undergraduate engineering technology programs which are accredited by the Technology Accreditation Commission of ABET, http://www.abet.org.

Electronics Engineering Technology  
Manufacturing Engineering Technology  
Mechanical Engineering Technology  
Plastics Engineering Technology

Graduates of the program receive a Bachelor of Science in Engineering Technology degree. They usually enter into middle management/technical/engineering related careers in plastics, mechanical design, manufacturing, and electronics. Graduates typically have several job offers upon graduation.

The Master of Engineering Technology program is intended to help graduates improve management and leadership skills and decision making abilities in support of technology based industry.

Engineering Technology

Engineering technology is considered to be part of the overall engineering education spectrum and is commonly defined as that part of the technological field that requires the application of scientific and
engineering knowledge and methods combined with technology skills in support of design and manufacturing activities. Pittsburg State University offers an "Engineering Technology" program as an alternative engineering education program.

Laboratories

The curriculum for engineering technology requires considerable applied experience in various industrial processes and software applications. To support this experience, each technical area is served by supporting laboratories that utilize current technology, software and equipment.

Faculty/Students

The faculty in the Department of Engineering Technology must have an earned baccalaureate and masters degree in engineering, engineering technology or a closely related field, and a minimum of three years industrial experience in technical areas related to the subjects they are teaching. Each technical area in the Department of Engineering Technology has a minimum of three full-time faculty members. Presently, there are eighteen (18) full-time faculty members in the department. The department has approximately 350 undergraduate and graduate majors.

Professional Affiliations

The faculty members are members of various professional organizations including:

American Society for Engineering Education (ASEE)
Society of Plastics Engineers (SPE)
Society for the Advancement of Materials and Process Engineers (SAMPE)
Society of Manufacturing Engineers (SME)
American Society of Mechanical Engineers (ASME)
IEEE
International Society of Automation (ISA)
Society of Women Engineers (SWE)
American Foundry Society (AFS)
Investment Casting Institute (ICI)
American Welding Society (AWS)
SAE International (SAE)
Foundry Educational Foundation (FEF)

Student Organizations

Students in the Department of Engineering Technology have the opportunity to be involved with numerous student organizations. These student organizations/chapters include:

Society of Women Engineers (SWE)
IEEE
International Society of Automation (ISA)
Society of Manufacturing Engineers (SME)
Society of Plastics Engineers (SPE)
Society for the Advancement of Materials and Process Engineering (SAMPE)
American Foundry Society (AFS)
SAE International

Advisory Councils

Each program in the Department of Engineering Technology has its own industrial advisory board. The board members represent various industries and many are Pittsburg State University alumni. The boards meet each semester to provide direction and input on program and curriculum issues.

Technology Minors

The technology minors in the Department of Engineering Technology require a minimum of 21 semester hours in a technical area. Minors are available in the following technical areas: electronics technology, manufacturing technology, mechanical technology, and plastics technology.

Changes in Requirements

Baccalaureate degree curriculums offered by the Department of Engineering Technology are periodically revised and updated. Such revisions will be communicated by the department to currently enrolled students majoring in its programs. Each student is required to graduate under the most recent curriculum in effect at the time of that student's graduation unless those revisions would extend the student's graduation date. Requests for exceptions to such curriculum revisions should be filed in writing with the department chairperson.

Prefixes for the Engineering Technology Department Programs:

EET - Electronics Engineering Technology courses.
ETECH - Engineering Technology courses.
MFGET - Manufacturing Engineering Technology courses.
MECET - Mechanical Engineering Technology courses.
PET - Plastics Engineering Technology courses.
Bachelor of Science in Engineering Technology Degree with a Major in Electronics Engineering Technology

Introduction

The Electronics Engineering Technology (EET) program strives to produce graduates who work in all segments of the electronics industry throughout the world. Electronics Engineering Technology graduates are valued for a wide variety of positions. On-going industry feedback insures we fulfill our mission to provide quality degrees for the electronics field. An important mechanism employed to assure this quality is our capstone experience. The capstone experience is a two semester sequence of designing and building a project that has market relevance and elements of the student’s own intellectual property. This helps assure that our graduates leave Pittsburg State University as competitors in their chosen field of study.

Facilities

The Electronics Engineering Technology program is housed in the Kansas Technology Center. The Kansas Technology Center provides modern classroom and laboratory facilities supporting program focus areas in telecommunications, controls, embedded systems and aerospace electronics.

Mission

Our mission is to offer undergraduate education leading to a quality Bachelor of Science in Engineering Technology degree in electronics.

Vision Statement

Graduates of Pittsburg State University’s Electronic Engineering Technology program enjoy a prima facie assumption as creative and effective technology implementers with the ability to successfully to solve industry problems. Our graduating seniors are recruited as key industry investments for success.

Program Educational Objectives/Student Outcomes

Educational Objectives refer to common characteristics expected of program graduates in the first few years after graduation. Student Outcomes represent specific capabilities of students measured at appropriate times while in the program. These elements are periodically reviewed by the program's industrial advisory committee for relevance to regional industry needs.

Program Educational Objectives

The Electronics Engineering Technology program educational objectives state that Electronics Engineering Technology program graduates at a minimum will:

1. be sought after and employed by local and regional industry.

2. demonstrate the technical skills to support industry needs and/or solve technical problems.

3. demonstrate the knowledge and skill to operate across the breadth of the Electronics Engineering Technology discipline.

Student Outcomes

Each course in Electronics Engineering Technology has defined specific measurable outcomes. In general, the outcomes support the following eleven capabilities that are expected of our graduates:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.

b. an ability to select and apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.

c. an ability to conduct standard tests and measurement; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.

d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.

e. an ability to function effectively as a member or leader on a technical team.

f. an ability to identify, analyze, and solve broadly-defined engineering technology problems.

g. an ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
h. an understanding of the need for and an ability to engage in self-directed continuing professional development.

i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.

j. a knowledge of the impact of engineering technology solutions in a societal and global context.

k. a commitment to quality, timeliness, and continuous improvement.

A detailed list of the specific Student Outcomes for each course is available on the Engineering Technology Department website at [http://www.pittstate.edu/department/engineering-tech/electronics/educational-objectives.dot](http://www.pittstate.edu/department/engineering-tech/electronics/educational-objectives.dot)

**Scholarships and Awards**

A number of scholarships are available, provided by both University and private funding. Students can apply for these scholarships through the campus information system, GUS. Student achievement is recognized through the annual awards process within the College of Technology.

**Faculty**

The faculty members of the Electronics Engineering Technology program have both teaching and industrial experiences within the electronics field. They routinely pursue professional development opportunities and are actively engaged with memberships in professional societies such as the IEEE, the American Society for Engineering Education and the International Society of Automation. The minimum requirements for faculty in the department are a master’s degree in an appropriate field and suitable industrial experience.

**Student Organizations**

Many students choose to participate in student organizations such as:

Instrumentation Systems and Automation Society (ISA)
Society of Women Engineers (SWE)
IEEE

Members of these organizations have the opportunity for scholarships and to attend seminars of major companies.

**Advisory Committee**

The Electronics Engineering Technology program maintains an Industrial Advisory Committee composed of leaders from regional industry stakeholders. This committee meets twice a year to advise the program on industry trends and to provide feedback to students on their capstone projects. The current roster of this committee includes representatives from industries focused upon: Aircraft, Telecommunications, Manufacturing, Energy, Biotechnology, and many others.

**Basic Skills (12 hours)**

ENGL 101: English Composition .......................................................... 3
ENGL 190: Honors English Composition ........................................... 3
or ENGL 299: Introduction to Research Writing ............................. 3
COMM 207: Speech Communication ............................................... 3
MATH 143: Elementary Statistics .................................................... 3

**General Education Electives (30-34 hours)**

**Sciences (9-10 hours)**

**Natural Sciences (Select one)**

BIOL 111: General Biology .............................................................. 3
and BIOL 112: General Biology Laboratory .................................... 2
BIOL 113: Environmental Life Science ........................................... 4
BIOL 211: Principles of Biology I .................................................... 4

**Physical Sciences (Select one)**

PHYS 100: College Physics I ........................................................... 4
or PHYS 104: Engineering Physics I ............................................... 4
PHYS 130: Elementary Physics Laboratory I ................................ 1

PHYS 104 Engineering Physics I is preferred.

**Social Studies (Select one) (3 hours)**

SOC 100: Introduction to Sociology ............................................... 3
WGS 200: Introduction to Women’s Studies ................................... 3

**Political Studies (Select one) (3 hours)**

POLS 101: U.S. Politics ................................................................. 3
POLS 103: Comparative Political Institutions .............................. 3

**Producing and Consuming (6 hours)**

**Technology**

MFGET 263: Manufacturing Methods I ........................................ 2
MFGET 268: Manufacturing Methods I Laboratory ...................... 1
EET 247: Computer Programming for Electronic Systems ........... 3
Fine Arts and Aesthetic Studies/Cultural Studies (Select one) (2-3 hours)

ART 155: Printmaking and Paper Arts ................................................. 3  
ART 178: Introduction to the Visual Arts ........................................... 3  
ART 188: The Designed World ........................................................... 3  
ART 217: Crafts I .............................................................................. 3  
ART 222: Jewelry Design I ................................................................. 3  
ART 233: Drawing I ........................................................................... 3  
ART 244: Ceramics I .......................................................................... 3  
ART 266: Sculpture I ......................................................................... 3  
ART 277: Painting I ............................................................................ 3  
ART 288: Introduction to Art History I .............................................. 3  
ART 289: Introduction to Art History II .......................................... 3  
ART 311: Art Education ................................................................... 3  
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress ......................................................... 3  
ART 430: Automotive: Art and Design .............................................. 3  
COMM 105: Performance Appreciation ......................................... 3  
COMM 205: Performance Studies .................................................... 3  
COMM 295: Theatre History (___) .................................................... 3  
ENGL 250: Introduction to Creative Writing ................................... 3  
HHP 151: Dance Appreciation ....................................................... 3  
MUSIC 120: Music Appreciation (___) ............................................ 3  
MUSIC 121: Introduction to Music Literature ................................ 2  
ANTH 101: Introduction to Cultural Anthropology ................................. 3  
MLL 114: Chinese Language and Culture I .................................... 3  
MLL 124: French Language and Culture I ...................................... 3  
MLL 154: Spanish Language and Culture I ..................................... 3  
MLL 184: Russian Language and Culture I .................................... 3  
MLL 194: Korean Language and Culture I ..................................... 3  
GEOG 106: World Regional Geography ....................................... 3  
GEOG 300: Elements of Geography ............................................. 3  
GEOG 304: Human Geography ...................................................... 3  
WGS 399: Global Women's Issues ................................................. 3

Health and Well Being (4-6 hours)

Psychological

PSYCH 155: General Psychology ....................................................... 3

Physical (Select one)

FCS 203: Nutrition and Health .......................................................... 3  
FCS 301: Nutrition (___) ................................................................ 1  
HHP 150: Lifetime Fitness Concepts ............................................... 1  
NURS 303: Introduction to Public Health ......................................... 3

Human Heritage (Select one course from one of the following three categories) (3 hours)

History

HIST 101: World History to 1500 .................................................. 3  
HIST 102: World History from 1500 .............................................. 3  
HIST 201: American History to 1865 .......................................... 3  
HIST 202: American History from 1865 ...................................... 3

Literature

ENGL 113: General Literature ....................................................... 3  
ENGL 114: General Literature (Genre) .......................................... 3  
ENGL 116: General Literature (Theme) ........................................ 3  
ENGL 120: Literature and Film ....................................................... 3  
ENGL 315: Mythology .................................................................. 3  
ENGL 320: Literature and Film ....................................................... 3

Philosophy

PHIL 103: Introduction to Philosophy ........................................ 3  
PHIL 105: Ethics ........................................................................... 3  
PHIL 112: Biomedical Ethics ......................................................... 3  
PHIL 113: Business Ethics .............................................................. 3  
PHIL 114: Environmental Ethics .................................................. 3  
PHIL 207: Critical Thinking .......................................................... 3  
PHIL 208: Logic ............................................................................ 3  
PHIL 231: World Religions ............................................................. 3

Major Requirements (36 hours)

EET 100: Prolog to Electronics ...................................................... 2  
EET 144: D.C. Circuit Analysis Methods ....................................... 3  
EET 244: Logic Circuits ................................................................. 3  
EET 245: Electronic Devices and Circuits ..................................... 3  
EET 246: A.C. Circuit Analysis Methods ....................................... 3  
EET 299: Electronics Core Exam .................................................. 1  
EET 341: Signals and Systems ....................................................... 3  
EET 344: Microcomputer Systems ............................................... 3  
EET 349: Analog Integrated Circuits ............................................ 3  
EET 540: Electronic Design Proposal ........................................... 3  
EET 546: Electronic Controls ......................................................... 3  
EET 640: Application Design Problems ....................................... 2  
EET 641: Electric Power ............................................................... 3  
EET 642: Electronic Technology Seminar .................................... 1

Support Courses (28-29 hours)

MECET 121: Engineering Graphics I ............................................ 3  
ETECH 502: Engineering Economy ............................................... 3  
ETECH 694: Engineering Technology Laboratory Internship (___) ................................................................. 1-4  
MATH 126: Pre-Calculus ............................................................... 4  
MATH 150: Calculus I ................................................................. 5  
MATH 155: Calculus II ................................................................. 5  
or MATH 154: Engineering Calculus II ....................................... 4  
ENGL 301: Technical/Professional Writing .................................. 3  
PHYS 105: Engineering Physics II .............................................. 4  
and PHYS 131: Elementary Physics Laboratory II ................. 1

- EET 247 Computer Programming for Electronic Systems (satisfied by general education) (3 hours)
- MFGET 263 Manufacturing Methods I (satisfied by general education) (2 hours)
- MFGET 268 Manufacturing Methods I Laboratory (satisfied by general education) (1 hour)
- MATH 143 Elementary Statistics (satisfied by general education) (3 hours)
- EETECH 694 Engineering Technology Laboratory Internship must be taken for 1 hour.
One Required Emphasis (12 hours)

Electronic Embedded Systems Emphasis
EET 449: Programmable Logic Devices .............................................. 3
EET 549: Advanced Microcontrollers .................................................... 3
EET 647: Digital Signal Processing .......................................................... 3

- An additional course chosen from another Electronics Engineering Technology emphasis area (3 hours)

Telecommunications Emphasis
EET 448: Network Systems ................................................................. 3
EET 547: Electronic Communications Systems ....................................... 3
EET 648: Data Communications Systems ............................................... 3

- An additional course chosen from another Electronics Engineering Technology emphasis area (3 hours)

Aerospace Electronics Emphasis
EET 547: Electronic Communications Systems ....................................... 3
EET 548: Aerospace Electronic Systems ................................................. 3
EET 648: Data Communications Systems ............................................... 3

- An additional course chosen from another Electronics Engineering Technology emphasis area (3 hours)

Controls Emphasis
EET 340: Introduction to Industrial Automation ..................................... 3
EET 646: Control Systems ................................................................... 3
EET 649: Advanced Programmable Logic Controllers .......................... 3

- An additional course chosen from another Electronics Engineering Technology emphasis area (3 hours)

Custom Emphasis

- 6 hours chosen from other emphases options
- 6 hours upper division electives with advisor’s consent

Approved Electives Selected From
CIS 230: Visual Basic Programming ...................................................... 3
CIS 345: Object Oriented Programming Using Java ................................ 3
CIS 470: Computer Networking ............................................................ 3
CMCET 331: Electrical Systems ............................................................. 3
EET 644: Renewable Power Conversion ................................................. 3
ETECH 300: Cooperative Education (___) .............................................. 3-6
MATH 212: Matrix Algebra ................................................................. 2
MATH 513: Discrete Structures .............................................................. 3
MATH 543: Probability and Statistics .................................................... 3
MATH 553: Differential Equations ......................................................... 3
MATH 569: Numerical Analysis ............................................................. 3

MATH 617: Linear Algebra .................................................................. 3
MGET 363: Principles of Tool Design .................................................... 3
MGET 405: Quality Control ................................................................. 3
MECET 420: Kinematics .................................................................. 2
MECET 423: Mechanics of Materials ................................................... 3
MECET 424: Mechanics of Materials Laboratory .................................. 1
MECET 524: Fluid Mechanics .............................................................. 3
MECET 525: Fluid Mechanics Laboratory ............................................. 1
MKTG 330: Principles of Marketing ...................................................... 3
PHYS 512: Electricity and Magnetism I ................................................ 3
PHYS 516: Modern Physics I ............................................................... 3
PHYS 532: Electronic Circuits I ............................................................. 3
PHYS 743: Solid State Electronics ........................................................ 3

or

- Upper division courses from the following
  - Mathematics, Physics, others by consent of advisor

In order to meet the requirements of the Engineering Technology Accreditation Commission of ABET, [http://www.abet.org/](http://www.abet.org/), partial waivers for the Pittsburg State University general education requirements have been allowed.

MATH 126 Pre-Calculus is preferred for support courses. MATH 113 College Algebra and MATH 122 Plane Trigonometry may be substituted.

Bachelor of Science in Engineering Technology Degree with a Major in Manufacturing Engineering Technology

Introduction

The goal of the Manufacturing Engineering Technology Program is to become the leading source of manufacturing graduates, and to provide manufacturing knowledge for the state of Kansas, the region and the nation. The program will continue to generate graduates who quickly become valuable resources and leaders in their companies. The students, faculty and staff will be actively engaged in modern educational methods and applied research through interactions with industry, government agencies, and the community.

The graduates of the Manufacturing Engineering Technology program work in all segments of manufacturing and industry throughout the world. Many companies recruit on campus and at annual career fairs both on and off campus. Our Manufacturing graduates are highly sought after for a variety of positions. One of the tools we employ to assure quality is our Senior Project or Capstone experience. This two semester, year long sequence is a
design and build exercise with real world relevance. This helps assure that our graduates leave Pittsburg State University with tangible skills and are very competitive in the marketplace.

The Manufacturing program is housed in the Kansas Technology Center. It provides modern classroom and laboratory facilities including: Welding, Fabrication, Metal Casting, Material Analysis, Machine Tools and CNC Laboratories. The courses in Manufacturing Engineering Technology emphasize application more than theoretical development and enhances classroom studies with hands-on, high-tech laboratories. A dedicated space is also provided for seniors to work on their Capstone projects.

**Manufacturing Engineering Technology Program Educational Objectives**

Manufacturing Engineering Technology Program graduates will:

1. be sought after and employed by local and regional industry.

2. demonstrate the technical skills to support industry needs and/or solve technical problems.

3. demonstrate the knowledge and skill to operate across the breadth of the manufacturing engineering technology discipline.

**Manufacturing Engineering Technology Program Student Outcomes**

Manufacturing Engineering Technology Program students will demonstrate:

a. an appropriate mastery of the knowledge, techniques, skills, and modern tools to support design, analysis, manufacture, and test of mechanical systems.

b. an ability to apply fundamental principles of math and science, current theoretical knowledge, and adapt to the rapidly changing applications of engineering and technology.

c. an ability to evaluate and improve product performance by conducting, analyzing and interpreting experiments.

d. ingenuity and resourcefulness in the design, modification and improvement of manufacturing systems, components, or processes.

e. teamwork to support the conceptual design, development, analysis, and manufacture (implementation) of a product (or process).

f. an ability to identify, analyze, and solve technical problems associated with the design and manufacture.

g. the ability to support information exchange (vs. communicate) on technical and project management topics through data files, reports and presentations.

h. an understanding of the need for and participation in continuing education and enhancement of professional knowledge.

i. awareness of professional, ethical and social responsibilities as it applies to careers in engineering technology.

j. a consideration for diversity and an idea of how their decisions could impact professional, societal, and global issues today and in the future.

k. a commitment to getting a job done right, on time, and with a vision of improvement for the next generation product or process.

l. the ability to use castings in appropriate applications.

m. the manufacturing machining ability to develop and deploy a CNC machining process including tooling selection and CNC program creation utilizing CAD/CAM software.

**Scholarships and Awards**

Student achievement is recognized through the annual awards process within the College of Technology. A number of scholarships are available, provided by both the University and private funding. Scholarships are awarded through the department by the Society of Manufacturing Engineers (SME), The Foundry Educational Foundation (FEF), and several other supporting organizations.

**Student Organizations**

Many students choose to participate in student organizations such as:

American Foundry Society (AFS)
Society of Automotive Engineers (SAE)
Society of Women Engineers (SWE)
Society of Manufacturing Engineers (SME)
Members of these organizations have the opportunity for scholarships and the opportunity to attend seminars of major companies, such as the Foundry Education Foundation sponsored College Industry Conference in Chicago, IL.

**Industrial Advisory Committee (IAC)**

The Manufacturing Engineering Technology program maintains an Industrial Advisory Committee (IAC) composed of leaders from local and national industries. This committee meets twice a year to advise the program on industry trends and to provide feedback to students on their Capstone projects. The current roster of this committee includes representatives from such companies as AGCO, Bombardier, Caterpillar, Ducommunn, Honeywell, General Motors, and many others.

**Basic Skills (12 hours)**
- COMM 207: Speech Communication ................................................. 3
- ENGL 101: English Composition ....................................................... 3
- ENGL 190: Honors English Composition ........................................... 3
- or ENGL 299: Introduction to Research Writing ................................. 3
- MATH 143: Elementary Statistics ................................................... 3

**General Education Electives (34-39 hours)**

**Sciences (8 hours)**

**Natural Sciences**
- BIOL 113: Environmental Life Science ............................................. 4

**Physical Sciences**
- CHEM 105: Introductory Chemistry .................................................. 3
- and CHEM 106: Introductory Chemistry Laboratory ............................ 1

**Social Studies (3 hours)**
- SOC 100: Introduction to Sociology ................................................. 3

**Political Studies (3 hours)**
- POLS 101: U.S. Politics ................................................................. 3
- POLS 103: Comparative Political Institutions ................................. 3

**Producing and Consuming (6 hours)**

**Technology**
- MFGET 263: Manufacturing Methods I ............................................ 2
- MFGET 268: Manufacturing Methods I Laboratory ............................ 1

**Economy/Business (select one)**
- ACCTG 201: Financial Accounting .................................................. 3
- MGT 101: Introduction to Business .................................................. 3

**Fine Arts and Aesthetic Studies (select one)**

**(3 hours)**
- ART 155: Printmaking and Paper Arts ............................................. 3
- ART 178: Introduction to the Visual Arts .......................................... 3
- ART 188: The Designed World ......................................................... 3
- ART 217: Crafts I ............................................................................ 3
- ART 222: Jewelry Design I .............................................................. 3
- ART 233: Drawing I .............................................................. 3
- ART 244: Ceramics I ...................................................................... 3
- ART 266: Sculpture I ..................................................................... 3
- ART 277: Painting I ........................................................................ 3
- ART 288: Introduction to Art History I ............................................ 3
- ART 289: Introduction to Art History II .......................................... 3
- ART 311: Art Education ................................................................. 3
- ART 351: Printmaking, Papermaking, Bookarts and the Letterpress .......................... 3
- ART 430: Automotive: Art and Design ............................................ 3
- COMM 105: Performance Appreciation ............................................ 3
- COMM 205: Performance Studies .................................................. 3
- COMM 295: Theatre History (____) .................................................. 3
- ENGL 250: Introduction to Creative Writing ..................................... 3
- HHP 151: Dance Appreciation ....................................................... 3
- MUSIC 120: Music Appreciation (____) ............................................ 3
- MUSIC 121: Introduction to Music Literature .................................... 2

**Cultural Studies (3 hours)**
- GEOG 106: World Regional Geography .......................................... 3

**Health and Well Being (4 hours)**

**Psychological**
- PSYCH 155: General Psychology ................................................... 3

**Physical**
- HHP 150: Lifetime Fitness Concepts .............................................. 1

**Human Heritage (3 hours)**

**Philosophy**
- PHIL 105: Ethics ................................................................. 3

**Major Requirements (16 hours)**

**Technical Sciences**
- MECET 220: Statics ........................................................................ 3
- or PHYS 220: Engineering Mechanics I-Statics ................................ 3
- MECET 420: Kinematics ............................................................... 2
- MECET 423: Mechanics of Materials ............................................. 3
- MECET 424: Mechanics of Materials Laboratory ............................ 1
- MECET 524: Fluid Mechanics ....................................................... 3
- MECET 525: Fluid Mechanics Laboratory ....................................... 1
- MFGET 564: Heat Treatment and Metallurgy I ................................ 3
Technical Specialties (Planned Sequences)

Tool Design
MFGET 160: Manufacturing Graphics .................................................. 3
MFGET 261: Computer Aided Part Design .......................................... 3
MFGET 363: Principles of Tool Design .............................................. 3

Manufacturing Processes
- MFGET 263 Manufacturing Methods I (satisfied by general education) (2 hours)
- MFGET 268 Manufacturing Methods I Laboratory (satisfied by general education (1 hour)

MFGET 367: Manufacturing Methods II ............................................. 4
MFGET 661: Computer Aided Manufacturing .................................... 3
MFGET 662: Computer Aided Manufacturing II .................................. 2
MFGET 690: Manufacturing Production Control and Management .......... 3

Metalcasting
MFGET 567: Principles of Metalcasting ............................................. 3
MFGET 568: Metalcasting Processing Laboratory .................................. 2
MFGET 569: Casting Design and Simulation ....................................... 3

Capstone Experience
MFGET 666: Manufacturing and Design Project I ............................... 2
MFGET 669: Manufacturing and Design Project II ............................... 3

Technical Specialties
MFGET 162: Welding Processes and Procedures .................................. 3
MFGET 405: Quality Control .............................................................. 3
ETECH 502: Engineering Economy ................................................... 3
EET 141: Introductory Electronics ..................................................... 3
EET 340: Introduction to Industrial Automation ................................... 3

Support Courses (19 hours)
- MATH 143 Elementary Statistics (satisfied by general education) (3 hours)

PHYS 100: College Physics I .............................................................. 4
or PHYS 104: Engineering Physics I .................................................. 4
PHYS 130: Elementary Physics Laboratory I ...................................... 1
MATH 122: Plane Trigonometry .......................................................... 3
MATH 150: Calculus I ........................................................................ 5
ENGL 301: Technical/Professional Writing ........................................ 3

PHYS 104 Engineering Physics I is the preferred physics support course.

Bachelor of Science in Engineering Technology Degree with a Major in Mechanical Engineering Technology

Introduction
The program is planned as a four year Bachelor of Science in Engineering Technology degree with a Mechanical Engineering Technology major and design, manufacturing, or electromechanical emphasis. Thirty percent of the courses are general education requirements, twenty percent are basic mathematics/science requirements, and fifty percent of the courses are technical requirements. Classes are accomplishment oriented. The goal of instruction is to convert textbook information into real world solutions.

Mission
Our primary mission is to foster an alliance between students, faculty and industry, that will provide an ethical, efficient and knowledgeable graduate who has the ability to excel in a Mechanical Engineering Technology career. The Mechanical Engineering Technology program provides an applications oriented academic major that meets the ever-increasing requirements of an engineering education program, emphasizing topics generally considered a part of mechanical engineering technology, drafting, machine design, thermal science, fluid power, etc. Instruction focus includes 1) fundamental math, science and engineering subjects, 2) use of concepts and tools available to industry to support design and manufacturing, 3) production of parts, components, or finished products and simulation of systems, 4) problem solving skills, and 5) team participation.

Career Opportunities
The Mechanical Engineering Technology program has had at or near 100% placement throughout the program’s history. Graduates typically take jobs with engineering titles working in product design, tool design, liaison, NC programming, manufacturing planning, system design/integration, etc. The graduates are popular with the aircraft, fluid power, equipment manufacturing, and automotive industry. Most job offers are from companies in Kansas and Missouri, however graduates from the program are working across the U.S. and around the world. Companies that have regularly recruited and employed our graduates.

In order to meet the requirements of the Engineering Technology Accreditation Commission of ABET, http://www.abet.org, partial waivers for the Pittsburg State University general education requirements have been allowed.
include AGCO, Black & Veatch, ConocoPhillips, EN Engineering, La Barge, Inc., Lockheed Martin, and Hawker Beechcraft.

Faculty

The faculty are required to have appropriate degrees and industrial work experience. The group’s expertise covers the areas of machine design, heat transfer, fluid systems, rapid prototyping, graphic communications, and more. Their industrial experience includes aircraft system design and research and development, and industrial product design and manufacture, natural gas distribution systems design and installation.

Education Objectives/Outcomes

Pittsburg State University Mechanical Engineering Technology Objectives and Outcomes, approved on October 15, 2010.

Objectives

Mechanical Engineering Technology Program graduates will:

1. be sought after and employed by local and regional industry
2. demonstrate the technical skills to support industry needs and/or solve technical problems
3. demonstrate the knowledge and skill to operate across the breadth of the mechanical engineering technology discipline.

Outcomes

Mechanical Engineering Technology Program students will demonstrate:

a. an appropriate mastery of the knowledge, techniques, skills, and modern tools to support design, analysis, manufacture and test of mechanical systems.

b. an ability to apply fundamental principles of math and science, current theoretical knowledge and adapt to the rapidly changing applications of engineering, and technology.

c. an ability to evaluate and improve system performance by conducting, analyze and interpret experiments, and evaluating experimental results.

d. ingenuity and resourcefulness in the modification and improvement of, or creation of designs of systems, components, or processes.

e. teamwork to support the conceptual design and development, and detailed design, analysis and manufacture (implementation) of a product (or process).

f. an ability to identify, analyze and solve technical problems associated with the design and manufacture of mechanical systems.

g. the ability to support information exchange on technical and project management topics through data files, reports and presentations.

h. an understanding of the need for and participation in continuing education and enhancement of professional knowledge.

i. awareness of professional, ethical and social responsibilities as it applies to careers in engineering technology.

j. a consideration for diversity and an idea of how their decisions could impact professional, societal and global issues today and in the future.

k. a commitment to getting a job done right, on time, and with a vision of improvement for the next generation product or process.

l. the ability to apply the principles of engineering graphics and machine design to the design, analysis and production of mechanical systems.

m. the awareness of varied applications in the mechanical engineering technology discipline and potential for integration of systems and processes with automotive, construction, electronics, manufacturing and plastics disciplines.

Advisory Council

The Mechanical Engineering Technology program maintains an Industrial Advisory Committee (IAC) composed of leaders from local and national industries. This committee meets twice a year to advise the program on industry trends and to provide feedback to students on their Capstone projects. The current roster of this committee includes representatives from such companies as Black & Veatch, Boeing, Cessna, Garmin International, John Deere, PowerFlame, Leggett & Platt, Lockheed Martin, and many others.
Basic Skills (13 hours)
  COMM 207: Speech Communication .............................................. 3
  ENGL 101: English Composition ..................................................... 3
  ENGL 190: Honors English Composition ........................................ 3
  or ENGL 299: Introduction to Research Writing ......................... 3
  MATH 126: Pre-Calculus .................................................................. 4

General Education Electives (24-27 hours)

Sciences (9-10 hours)

Natural Sciences^
  BIOL 113: Environmental Life Science ....................................... 4

Physical Sciences (Select one)
  PHYS 100: College Physics ............................................................. 4
or PHYS 104: Engineering Physics ..................................................... 4
  PHYS 130: Elementary Physics Laboratory ...................................... 1

Social Studies (Select one) (3 hours)
  SOCI 100: Introduction to Sociology ............................................. 3
  WGS 200: Introduction to Women’s Studies ............................... 3

Health and Well Being (4-6 hours)

Psychological
  PSYCH 155: General Psychology .................................................. 3

Physical (Select one)
  FCS 203: Nutrition and Health ..................................................... 3
  FCS 301: Nutrition ....................................................................... 3
  HHP 150: Lifetime Fitness Concepts ............................................. 1
  NURS 303: Introduction to Public Health ..................................... 3

Producing and Consuming (5 hours)

Technology
  MFGET 263: Manufacturing Methods I ...................................... 2

Economy/Business (select one)
  ACCTG 201: Financial Accounting ............................................... 3
  MGT 101: Introduction to Business ............................................... 3
  MGT 105: Introduction to Entrepreneurship ................................... 3
  ECON 191: Issues in Today’s Economy ......................................... 3
  ECON 200: Principles of Microeconomics .................................... 3
  or ECON 201: Principles of Macroeconomics .............................. 3

Select one course from Political Studies, Fine Arts and Aesthetic Studies, Cultural Studies or Human Heritage (3 hours)

Political Studies
  POLS 101: U.S. Politics ................................................................. 3
  POLS 103: Comparative Political Institutions ................................. 3

Fine Arts and Aesthetic Studies
  ART 155: Printmaking and Paper Arts ........................................... 3
  ART 178: Introduction to the Visual Arts ........................................ 3
  ART 188: The Designed World ..................................................... 3
  ART 217: Crafts I ........................................................................ 3
  ART 222: Jewelry Design I ............................................................. 3
  ART 233: Drawing I ...................................................................... 3
  ART 244: Ceramics I ..................................................................... 3
  ART 266: Sculpture I .................................................................... 3
  ART 277: Painting I ...................................................................... 3
  ART 288: Introduction to Art History I .......................................... 3
  ART 289: Introduction to Art History II ......................................... 3
  ART 311: Art Education ................................................................. 3
  ART 351: Printmaking, Papermaking, Bookarts and the Letterpress ......................................................... 3
  ART 376: Automotive: Art and Design ........................................... 3
  COMM 105: Performance Appreciation ........................................ 3
  COMM 205: Performance Studies ................................................ 3
  COMM 295: Theatre History .......................................................... 3
  ENGL 250: Introduction to Creative Writing .................................. 3
  HHP 151: Dance Appreciation ..................................................... 3
  MUSIC 120: Music Appreciation .................................................. 3
  MUSIC 121: Introduction to Music Literature ................................ 2

Cultural Studies
  ANTH 101: Introduction to Cultural Anthropology .......................... 3
  MLL 114: Chinese Language and Culture I .................................... 3
  MLL 124: French Language and Culture I ...................................... 3
  MLL 154: Spanish Language and Culture I .................................... 3
  MLL 184: Russian Language and Culture I .................................... 3
  MLL 194: Korean Language and Culture I ..................................... 3
  GEOG 106: World Regional Geography ....................................... 3
  GEOG 300: Elements of Geography ............................................. 3
  GEOG 304: Human Geography ................................................... 3
  WGS 399: Global Women’s Issues .............................................. 3

Human Heritage

History
  HIST 101: World History to 1500 ................................................ 3
  HIST 102: World History from 1500 ............................................. 3
  HIST 201: American History to 1865 ........................................... 3
  HIST 202: American History from 1865 ...................................... 3

Literature
  ENGL 113: General Literature ...................................................... 3
  ENGL 114: General Literature (Genre) .......................................... 3
  ENGL 116: General Literature (Theme) ......................................... 3
  ENGL 120: Literature and Film .................................................... 3
  ENGL 315: Mythology ................................................................. 3
  ENGL 320: Literature and Film .................................................... 3

Philosophy
  PHIL 103: Introduction to Philosophy .......................................... 3
  PHIL 105: Ethics ........................................................................... 3
  PHIL 112: Biomedical Ethics ....................................................... 3
Major Requirements

Technical Sciences (43 hours)

- MFGET 263 Manufacturing Methods I (satisfied by general education) (2 hours)

MECET 121: Engineering Graphics I ................................................. 3
MECET 220: Statics ........................................................................... 3
or PHYS 220: Engineering Mechanics I-Statics .............................. 3
MECET 226: Computer Aided Design ............................................... 3
MFGET 268: Manufacturing Methods I Laboratory .............................. 1
ETECH 296: Materials in Industry ...................................................... 3
MECET 323: Advanced Engineering Graphics ................................... 3
EET 340: Introduction to Industrial Automation ................................ 3
MECET 420: Kinematics ................................................................ 2
MECET 423: Mechanics of Materials ................................................ 3
MECET 424: Mechanics of Materials Laboratory .............................. 1
MECET 428: Thermodynamics .......................................................... 3
or PHYS 514: Applied Thermodynamics .......................................... 3
ETECH 502: Engineering Economy .................................................. 3
MECET 523: Mechanical Design I ..................................................... 3
MECET 524: Fluid Mechanics ............................................................ 3
MECET 525: Fluid Mechanics Laboratory ......................................... 1
MFGET 666: Manufacturing and Design Project I .............................. 2
MFGET 669: Manufacturing and Design Project II ............................ 3

MECET 220 Statics and MECET 428 Thermodynamics is preferred.

Technical Specialties (Choose an emphasis)*

Emphasis I- Design (12 hours)

MECET 522: Dynamics .................................................................. 3
or PHYS 522: Engineering Mechanics II—Dynamics ...................... 3
MECET 528: Computer Aided Modeling ......................................... 3
MECET 623: Mechanical Design II ................................................. 3
MECET 682: Heat Transfer ............................................................... 3

MECET 522 Dynamics is preferred.

Emphasis II- Manufacturing (13 hours)

MFGET 363: Principles of Tool Design ............................................ 3
MFGET 367: Manufacturing Methods II .......................................... 4
MFGET 567: Principles of Metalcasting .......................................... 3
MFGET 661: Computer Aided Manufacturing ................................ 3

Emphasis III- Electromechanical (12 hours)

EET 141: Introductory Electronics ................................................ 3
EET 244: Logic Circuits .................................................................. 3
EET 448: Network Systems ............................................................. 3
EET 649: Advanced Programmable Logic Controllers ............... 3

Emphasis IV- Automotive (12 hours)**

Choose 12 hours from the following:

AT 301: Fundamentals of Collision Technology .......................... 3
AT 314: Manual Transmission and Drivelines ............................ 3
AT 340: Diesel Engine Fundamentals ........................................... 3
AT 414: Automatic Transmissions ................................................. 3
AT 418: Failure Analysis ................................................................. 3
AT 515: Engine Performance ......................................................... 3

Emphasis V- Biomedical (12 hours)^+

MECET 522: Dynamics ................................................................. 3
MECET 528: Computer Aided Modeling ....................................... 3
MECET 627: Introduction to Biomedical Engineering Technology .................................................. 3
MECET 682: Heat Transfer ............................................................. 3

*Student must declare either design, manufacturing, electromechanical, automotive or biomedical emphasis and follow emphasis sequence.

**It is recommended Approved Technical Electives be completed from the Automotive area for this emphasis.

In order to meet the requirements of the Engineering Technology Accreditation Commission of ABET, http://www.abet.org., partial waivers for the Pittsburg State University general education requirements have been allowed.

^Biomedical emphasis requires that students take BIOL 111 General Biology and BIOL 112 General Biology Laboratory instead of BIOL 113 Environmental Life Science for general education.

Support Courses (25-26 hours)

PHYS 101: College Physics II ......................................................... 4
or PHYS 105: Engineering Physics II ............................................. 4
PHYS 131: Elementary Physics Laboratory II .............................. 1
CHEM 215: General Chemistry I .................................................... 3
CHEM 216: General Chemistry I Laboratory ............................... 2
MATH 150: Calculus I ................................................................. 5
MATH 155: Calculus II ................................................................. 5
or MATH 154: Engineering Calculus II ....................................... 4
ENGL 301: Technical/Professional Writing ................................. 3
CIS 230: Visual Basic Programming ............................................ 3
or CIS 240: C ++ Programming ................................................. 3

PHYS 105 Engineering Physics II and MATH 154 Engineering Calculus II are preferred.

Approved Technical Electives (requires advisor’s approval) (10 hours)+

Biomedical Technical Electives:

BIOL 257: Anatomy and Physiology ........................................... 3
Bachelor of Science in Engineering Technology Degree with a Major in Plastics Engineering Technology

Introduction

The Plastics Engineering Technology major has two emphases: Manufacturing and Design which involve comprehensive coursework, involving practical and theoretical lectures with a strong emphasis on applied laboratory efforts in the areas of processing, resins, testing and design.

The coursework is designed to provide graduates for industry who are prepared to use their knowledge and skills of plastic materials, processes and related technology to help create the best possible quality products at the most economical cost. It is hoped that these same graduates will provide the continuation of this knowledge to colleagues and new employees as well as giving back to the Plastics Engineering Technology program in the future with their skills and other resources.

There is a continuing effort to encourage and provide students with internship opportunities and jobs, often during the summer, where they can increase their knowledge and experience and open doors for employment after graduation.

Student organizations where students can combine educational, career, social and leadership skill opportunities include SPE (Society of Plastics Engineers) and SAMPE (Society for the Advancement of Material and Process Engineering). These organizations have been very generous over the years in aiding students and programs with scholarship, monetary and educational support. SWE (Society of Women Engineers) is a third student organization that does an excellent job of supporting students.

Opportunities for employment in the Plastics Engineering Technology program include supervision/management, sales, process and design engineering, quality control, research and development and several other interesting and fulfilling careers.

Mission

To provide plastics graduates for industry who are prepared to use their knowledge and skills of plastic materials, processes and related technology.

Vision Statement

It is the vision of the Plastics Engineering Technology Program to provide the students with a quality education that will prepare them for a successful career in the Plastics industry.

Educational Objectives/Outcomes

Pittsburg State University Plastics Engineering Technology Objectives and Outcomes were approved in March 2009.

Objectives

Plastics Engineering Technology Program graduates will have the ability to:

1. support and manage plastic manufacturing operations including product development, plastics processing, project management, equipment selection, tooling selection.

2. work effectively in diverse teams and as individuals.

3. use appropriate scientific/mathematical and computational skills necessary for plastics applications.

4. use oral, graphical, and written communications skills to present and exchange information effectively, and to direct plastics processing operations.

5. think critically and identify, evaluate and solve complex technical and non-technical problems.

6. understand and apply professional, ethical, and quality standards of excellence consistent with the plastics industry (SPE code of Ethics).

Outcomes

Plastic Engineering Technology Program students will be able to demonstrate desired attributes before graduation (related to the TAC/ABET Criteria 3 a-k). The graduate will have:

a. an ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to
broadly-defined engineering technology activities common to the plastics industry;

b. an ability to select and apply a knowledge of mathematics, chemistry, physics, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies;

c. an ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes;

d. an ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives;

e. an ability to function effectively as a member or leader on a technical team;

f. an ability to identify, analyze, and solve broadly-defined engineering technology problems;

g. an ability to apply written, oral, and graphical communication in both technical and nontechnical environments; and an ability to identify and use appropriate technical literature;

h. an understanding of the need for and an ability to engage in self-directed continuing professional development;

i. an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity;

j. a knowledge of the impact of engineering technology solutions in a societal and global context; and

k. a commitment to quality, timeliness, and continuous improvement.

Basic Skills (12 hours)
COMM 207: Speech Communication ................................................. 3
ENGL 101: English Composition ...................................................... 3
ENGL 190: Honors English Composition .............................................. 3
or ENGL 299: Introduction to Research Writing .................................... 3
MATH 143: Elementary Statistics ...................................................... 3

General Education Electives (24-27 hours)

Natural Sciences (Select one)
BIOL 111: General Biology .............................................................. 3
Biol 112: General Biology Laboratory ............................................... 2
BIOL 113: Environmental Life Science .............................................. 4
BIOL 211: Principles of Biology I ....................................................... 4

Physical Sciences (Select one)
PHYS 100: College Physics .............................................................. 4
or PHYS 104: Engineering Physics ................................................... 4
PHYS 130: Elementary Physics Laboratory I ........................................ 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology .................................................. 3
WGS 200: Introduction to Women's Studies ....................................... 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ..................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ....................................................... 3
FCS 301: Nutrition ........................................................................... 3
HHP 150: Lifetime Fitness Concepts ................................................. 1
NURS 303: Introduction to Public Health ............................................ 3

Producing and Consuming (5 hours)

Technology
MFGET 263: Manufacturing Methods I ............................................. 2

Economy/Business (select one)
ACCTG 201: Financial Accounting .................................................. 3
MGT 101: Introduction to Business .................................................... 3
MGT 105: Introduction to Entrepreneurship ......................................... 3
ECON 191: Issues in Today's Economy .............................................. 3

Select one course from Political Studies,
Fine Arts and Aesthetic Studies, Cultural Studies or Human Heritage (3 hours)

Political Studies
POLS 101: U.S. Politics ................................................................. 3
POLS 103: Comparative Political Institutions .................................... 3

Fine Arts and Aesthetic Studies
ART 155: Printmaking and Paper Arts ............................................. 3
ART 178: Introduction to the Visual Arts .......................................... 3
ART 188: The Designed World ......................................................... 3
ART 217: Crafts I ............................................................................. 3
ART 222: Jewelry Design I ............................................................... 3
ART 233: Drawing I ......................................................................... 3
### Technical Specialties (36 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET 180</td>
<td>General Plastics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PET 185</td>
<td>General Plastics</td>
<td>3</td>
</tr>
<tr>
<td>PET 272</td>
<td>Plastics Processing I Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PET 273</td>
<td>Plastics Processing I</td>
<td>3</td>
</tr>
<tr>
<td>PET 281</td>
<td>Plastics Testing Technology</td>
<td>3</td>
</tr>
<tr>
<td>PET 370</td>
<td>Thermoplastic Resins Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PET 371</td>
<td>Thermoplastic Resins</td>
<td>3</td>
</tr>
<tr>
<td>PET 374</td>
<td>Thermoset Resins Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PET 375</td>
<td>Thermoset Resins</td>
<td>3</td>
</tr>
<tr>
<td>PET 376</td>
<td>Plastic Processing II Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PET 377</td>
<td>Plastic Processing II</td>
<td>3</td>
</tr>
<tr>
<td>PET 585</td>
<td>Part and Mold Design I</td>
<td>2</td>
</tr>
<tr>
<td>PET 586</td>
<td>Senior Project I</td>
<td>3</td>
</tr>
<tr>
<td>PET 684</td>
<td>Part and Mold Design II</td>
<td>3</td>
</tr>
<tr>
<td>PET 685</td>
<td>Composites</td>
<td>3</td>
</tr>
<tr>
<td>PET 687</td>
<td>Senior Project II</td>
<td>2</td>
</tr>
<tr>
<td>MFGET 268</td>
<td>Manufacturing Methods I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MFGET 160</td>
<td>Manufacturing Graphics</td>
<td>3</td>
</tr>
<tr>
<td>MFGET 261</td>
<td>Computer Aided Part Design</td>
<td>3</td>
</tr>
<tr>
<td>EET 141</td>
<td>Introductory Electronics</td>
<td>3</td>
</tr>
<tr>
<td>EET 340</td>
<td>Introduction to Industrial Automation</td>
<td>3</td>
</tr>
<tr>
<td>EST 393</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>EST 403</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>MFGET 405</td>
<td>Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>ETECH 502</td>
<td>Engineering Economy</td>
<td>3</td>
</tr>
<tr>
<td>MECET 524</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MECET 525</td>
<td>Fluid Mechanics Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

### Support Courses (25-27 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 301</td>
<td>Technical/Professional Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 126</td>
<td>Pre-Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MATH 150</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 215</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 216</td>
<td>General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 320</td>
<td>Introductory Organic Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 326</td>
<td>Organic Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 360</td>
<td>Introduction to Polymer Science and Technology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 625</td>
<td>Polymer Synthesis and Characterizations</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 626</td>
<td>Polymer Synthesis and Characterizations Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

### Human Heritage

**History**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 101</td>
<td>World History to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 102</td>
<td>World History from 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 201</td>
<td>American History to 1865</td>
<td>3</td>
</tr>
<tr>
<td>HIST 202</td>
<td>American History from 1865</td>
<td>3</td>
</tr>
</tbody>
</table>

**Literature**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 113</td>
<td>General Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 114</td>
<td>General Literature (Genre)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 116</td>
<td>General Literature (Theme)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 120</td>
<td>Literature and Film</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 315</td>
<td>Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 320</td>
<td>Literature and Film</td>
<td>3</td>
</tr>
</tbody>
</table>

**Philosophy**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 103</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 105</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 112</td>
<td>Biomedical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 113</td>
<td>Business Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 114</td>
<td>Environmental Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 207</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 208</td>
<td>Logic</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 231</td>
<td>World Religions</td>
<td>3</td>
</tr>
</tbody>
</table>

### Technical Requirements

**Technical Sciences (25 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECET 121</td>
<td>Engineering Graphics I</td>
<td>3</td>
</tr>
<tr>
<td>MECET 226</td>
<td>Computer Aided Design</td>
<td>3</td>
</tr>
<tr>
<td>and MECET 226</td>
<td>Computer Aided Design</td>
<td>3</td>
</tr>
</tbody>
</table>

In order to meet the requirements of the Engineering Technology Accreditation Commission of ABET, [http://www.abet.org](http://www.abet.org), partial waivers for the Pittsburg State University general education requirements have been allowed.

PHYS 104 Engineering Physics I is the preferred physical science course.
Bachelor of Applied Science Degree with a Major in Technology

This program offers students who have graduated from a two-year associate degree technical program the opportunity to extend their education and training. All associate degree graduates (with a minimum of 2.50 GPA) can automatically transfer up to 64 college credits to Pittsburg State University. Graduates receive a Bachelor of Applied Science degree with a major in technology and a selected emphasis by completing an additional minimum of 60 hours from Pittsburg State University. The degree program content is based on previous academic and technical preparation.

Like two-year technical programs, this bachelor degree gives students complete, hands-on training for a real-world job. Students learn engineering technology, theory, logic, leadership, and business skills to broaden their knowledge, and to better prepare them for management opportunities.

Coursework is both specialized and comprehensive. Emphasis areas are similar to the programs completed in the associate degrees. Technical emphases areas through the Engineering Technology department are Electronics Emphasis, Manufacturing Emphasis, Mechanical Emphasis, and Plastics Emphasis.

Basic Skills
COMM 207: Speech Communication .................................................. 3
ENGL 101: English Composition ......................................................... 3
ENGL 299: Introduction to Research Writing ......................................... 3
or ENGL 301: Technical/Professional Writing ....................................... 3

COM 207 as well as ENGL 301 can have other courses substituted in their place.

Behavioral, Social, History & Political Studies
PSYCH 155: General Psychology ......................................................... 3
SOC 100: Introduction to Sociology ...................................................... 3
or POLS 101: U.S. Politics .................................................................... 3
or HIST 201: American History to 1865 .............................................. 3
or GT 350: Technology and Civilization ............................................... 3
or TM 350: Societal Influence of Technology ........................................ 3
or Social Science and/or Political Studies Elective (3 hours)

Mathematics
MATH 143: Elementary Statistics ......................................................... 3
or MATH 113: College Algebra ............................................................. 3
MATH 114: Elements of Technical Analysis ......................................... 3

MATH 113 as well as MATH 143 can be substituted by another mathematics course.

Sciences (Minimum of 6 hours)
BIOL 113: Environmental Life Science ............................................. 4
PHYS 171: Physical Science ............................................................... 3
PHYS 172: Physical Science Laboratory ............................................. 1

BIOL 113 can be substituted by another natural science course.

PHYS 171 can be substituted by another physical science course.

Producing and Consuming
ACCTG 201: Financial Accounting .................................................... 3
or Approved business substitute (3 hours)

Fine Arts (choose one)
ART 178: Introduction to the Visual Arts ............................................ 3
COMM 105: Performance Appreciation ............................................. 3
COMM 205: Performance Studies ...................................................... 3
HHP 151: Dance Appreciation ........................................................... 3
MUSIC 120: Music Appreciation (___) ............................................... 3

• Approved Humanities (e.g., Ethics) (3 hours)

Cultural Studies (choose one)
GEOG 300: Elements of Geography ................................................ 3
GEOG 304: Human Geography ......................................................... 3

• Approved elective from cultural studies (3 hours)

Business Support Courses

Business Courses
MGT 330: Management and Organizational Behavior ....................... 3
MGT 444: Legal and Social Environment of Business ....................... 3
MGT 540: Human Resources Management ..................................... 3
or MKTG 330: Principles of Marketing ............................................. 3

• Approved 300 and above business elective (e.g. TQM) (3 hours)

Technical Courses

Electronics Emphasis Courses

Workforce Development/Organization and Leadership courses (Electronics Emphasis)
TM 606: Industrial Supervision ......................................................... 3
ETECH 400: Cooperative Education (___) ......................................... 3-6
Mechanical Emphasis Courses

Workforce Development/Organization and Leadership courses (Mechanical Emphasis)

- TM 606: Industrial Supervision ......................................................... 3
- ETECH 400: Cooperative Education (___) ........................................ 3-6
- ETECH 502: Engineering Economy .................................................. 3
- TM 520: Leadership in the Workplace .............................................. 3
- EST 393: Introduction to Industrial Safety ....................................... 3
- or approved substitute safety course

ETECH 400 Cooperative Education must be taken for three hours.

Technical Specialization, Support and Electives

Mechanical Core Courses

- MECET 528: Computer Aided Modeling .......................................... 3

Technical Electives (15 hours) chosen from

- MFGET 363: Principles of Tool Design ........................................... 3
- MFGET 405: Quality Control .............................................................. 3
- MFGET 567: Principles of Metalcasting ............................................ 3
- MFGET 568: Metalcasting Processing Laboratory .............................. 2
- MFGET 569: Casting Design and Simulation .................................... 3
- MFGET 694: Engineering Technology Laboratory Internship .......... 3

  - Approved Electives (3-6 hours)

(Approved Electives depend on mathematics and science prerequisites)

Plastics Emphasis Courses

Workforce Development/Organization and Leadership courses (Plastics Emphasis)

- TM 606: Industrial Supervision ......................................................... 3
- ETECH 400: Cooperative Education (___) ........................................ 3-6
- ETECH 502: Engineering Economy .................................................. 3
- TM 520: Leadership in the Workplace .............................................. 3
- EST 393: Introduction to Industrial Safety ....................................... 3
- or approved substitute safety course

ETECH 400 Cooperative Education must be taken for three hours.

Technical Specialization, Support and Electives

Plastics Core Courses

- PET 272: Plastics Processing I Laboratory ........................................ 1
Technical Electives (Choose 5 hours from the following):

- PET 374: Thermoset Resins Laboratory ........................................ 1
- PET 375: Thermoset Resins ....................................................... 3
- PET 376: Plastic Processing II Laboratory .................................... 1
- PET 377: Plastic Processing II .................................................... 3

Minor in Electronic Technology

- Electronics Elective (3 hours)
- EET 300 Level or Higher Course (3 hours)

Pet 141: Introductory Electronics ................................................. 3
EET 144: D.C. Circuit Analysis Methods ........................................ 3
EET 244: Logic Circuits ............................................................... 3
EET 245: Electronic Devices and Circuits ....................................... 3
EET 246: A.C. Circuit Analysis Methods ........................................ 3

Minor in Manufacturing Management

- MFGET 160: Manufacturing Graphics .......................................... 3
- MFGET 263: Manufacturing Methods I ......................................... 2
- MFGET 268: Manufacturing Methods I Laboratory ....................... 1
- ETECH 296: Materials in Industry ............................................. 3
- MFGET 367: Manufacturing Methods II ....................................... 4
- MFGET 405: Quality Control ..................................................... 3
- MFGET 661: Computer Aided Manufacturing ................................. 3
- MFGET 690: Manufacturing Production Control and Management ................................................................. 3

Minor in Manufacturing Technology

- Other Manufacturing Courses (10 hours)
- MFGET 263: Manufacturing Methods I ......................................... 2
- MFGET 268: Manufacturing Methods I Laboratory ....................... 1
- MFGET 564: Heat Treatment and Metallurgy I ............................. 3
- MFGET 567: Principles of Metalcasting ....................................... 3
- MFGET 568: Metallurgical Processing Laboratory ......................... 2
- MFGET 661: Computer Aided Manufacturing ................................. 3

Minor in Mechanical Technology

- MECET 121: Engineering Graphics I ........................................... 3
- MECET 220: Statics ................................................................. 3
- MECET 226: Computer Aided Design ......................................... 3
- MECET 420: Kinematics ........................................................... 2
- MECET 423: Mechanics of Materials ........................................... 3
- MECET 523: Mechanical Design I ............................................ 3
- MECET 623: Mechanical Design II ............................................ 3

Minor in Plastics Technology

- PET 185: General Plastics ...................................................... 3
- and PET 180: General Plastics Laboratory ................................... 1

Pick 6 hours of electives from the following:

- PET 281: Plastics Testing Technology ........................................... 3
- PET 375: Thermoset Resins ..................................................... 3
- and PET 374: Thermoset Resins Laboratory ................................ 1
- PET 377: Plastic Processing II ................................................... 3
- and PET 376: Plastic Processing II Laboratory ............................. 1
- PET 673: Advanced Injection Molding ....................................... 3
- PET 684: Part and Mold Design II ............................................ 3
- PET 685: Composites ............................................................. 3

Master of Engineering Technology

The Department of Engineering Technology offers a Master of Engineering Technology degree. This is accomplished through the combined efforts of Engineering Technology programs in Construction, Electronics, Manufacturing, Mechanical, and Plastics. In addition to completing a set of core courses, the students have the option of expanding their knowledge in a specialty area or of conducting research concluding with a thesis. Emphasis is placed on “real-world” activities, projects, and interactions. The completion of the program will prepare students for professional careers in engineering technology.

Our mission is to establish the Master in Engineering Technology program at Pittsburg State University as the premier graduate curriculum in engineering technology in the Midwest region. We are committed to assisting the University and the region in technology development by providing a professional multi-disciplinary team and project oriented approach to graduate education. In order to accommodate working professionals, the Master of Engineering Technology degree is also offered through online course work. Students completing their degree requirements online receive the same educational value as students physically present on campus in a prolonged course of study.

Program Objectives

The Program Educational Objectives (PEO's) for the Master of Engineering Technology Program are to produce graduates who will:

1. be sought after for leadership or decision making positions.
2. participate in continuing education or graduate studies.

3. incorporate state-of-the-art-technology and new technology in their chosen profession.

Student Learning Outcomes

1. Students demonstrate an ability to apply multidisciplinary knowledge, and modern tools to complex engineering technology activities.

2. Students demonstrate an ability to apply advanced mathematics, science and engineering technology to business and engineering technology problems as required.

3. Students demonstrate an ability to design, conduct studies and simulations and apply results to general advanced business and engineering technology problems consistent with program objectives.

4. Students demonstrate an ability to provide project leadership, apply management skills, and support complex decision making.

5. Students demonstrate the ability to communicate effectively in both technical and general business setting.

6. Students demonstrate understanding of environmental, social and ethical issues in a world wide business setting.

Admission Requirements

Admission to the graduate program requires an undergraduate degree in Engineering, Engineering Technology or in a closely related area. Students must meet the University graduate admission requirements detailed in the University Catalog. International students must have a TOEFL score of 540 or higher. A minimum undergraduate grade point average of 2.70 is required unless the applicant has significant industrial experience. All transcripts will be evaluated prior to admission into the program.

Core Courses (Group 1- Required)

ETECH 804: Quality: Management and Control ......................... 3
ETECH 805: Current Issues in Engineering Technology ................ 3
ETECH 807: Systems Engineering and Analysis ......................... 3
ETECH 809: Engineering Project Management ......................... 3
ETECH 810: Collaborative Projects for Engineering Technology ......................... 3
ETECH 831: Value Engineering .............................................. 3

ETECH 895: Advanced Topics in Engineering Technology (minimum of 12 hours)

Option I: Research/Development/Thesis

ETECH 890: Research and Thesis ........................................... 3-6
TTED 891: Methods of Research ........................................... 3
ETECH 895: Advanced Topics in Engineering Technology ....... 1-6
or CMCET 895: Advanced Topics in Engineering Technology (minimum of 12 hours)

ETECH 895 and CMCET 895 should be taken for 3-6 hours.

Option III: Technical Specialty Courses

Construction Technical Emphasis

CMCET 833: Estimating and Bidding Strategy ......................... 3
CMCET 834: Advanced Construction Management ................... 3
CMCET 836: Virtual Design and Construction (VDC) .............. 3

- Approved Elective (3 hours)

Electronics Technical Emphasis

EET 842: Programmable Logic Devices .................................. 3
EET 845: Advanced Microprocessor Systems and Applications .... 3

- Approved Elective (3 hours)

Manufacturing Technical Emphasis

ETECH 852: Integrated Design and Manufacturing Concepts ....... 3
ETECH 888: Design of Experiments ....................................... 3

- Approved Elective (3 hours)

Mechanical Technical Emphasis

ETECH 852: Integrated Design and Manufacturing Concepts ....... 3
MECT 861: Mechanics of Composites and Structures ................. 3
MECT 862: Alternative Energy Concepts ................................. 3

- Approved Elective (3 hours)

Plastics Technical Emphasis

PET 885: Composite Materials and Testing ............................... 3
ETECH 888: Design of Experiments ....................................... 3

- Approved Elective (6 hours)

Total minimum hours required for Master of Engineering Technology (33 hours)
Graphics and Imaging Technologies

Chairperson: Barry J. Wilson
Professor(s): Doug Younger*
Associate Professor(s): Christel Benson, Chris Huitt, David Oldham, Barry J. Wilson
Assistant Professor(s): Rion Huffman, Andrea Kent-McConnaughey, Jason Reid, Rocky Restivo, Jason R. Ward
Instructors: Robert L. Ferro, Traci A. Hughes
*Graduate Faculty

Room E116 KTC
Telephone: 620-235-4419
Fax: 620-235-4413
http://www.pittstate.edu/department/graphics/
E-mail: bjwilson@pittstate.edu

Undergraduate

Bachelor of Science in Technology Degree with a Major in Graphic Communications: Digital Media Emphasis
Bachelor of Science in Technology Degree with a Major in Graphic Communications: Graphic Design Emphasis
Bachelor of Science in Technology Degree with a Major in Graphic Communications: Graphics Management Emphasis
Bachelor of Science in Technology Degree with a Major in Graphic Communications: Packaging Graphics Emphasis
Bachelor of Science in Technology Degree with a Major in Graphic Communications: Print Media Emphasis
Bachelor of Science in Technology Degree with a Major in Graphic Communications: Web/Interactive Media Emphasis
Bachelor of Applied Science Degree with a Major in Technology: Digital and Print Media Emphasis
Minor in Digital Media
Minor in Graphic Design
Minor in Packaging Graphics
Minor in Photography
Minor in Print Media
Minor in Web/Interactive Media

Graduate

Master of Science Degree with a Major in Technology: Graphics Management Emphasis or Graphics Design Emphasis

Introduction

The Department of Graphics and Imaging Technologies provides the future workforce for the graphics and imaging industries. It is our intent to provide students with the type of education that makes them marketable anywhere in these industries.

Mission

The mission of the Department of Graphics and Imaging Technologies is to be the leading educational institution in the Central United States for the advancement of technical knowledge for the graphics and imaging industries.

Vision

The vision of the Department of Graphics and Imaging Technologies is to provide a technical, hands-on curriculum involving the input, manipulation, output and administration of images and information.

Laboratories

The Kansas Technology Center houses the Department of Graphics and Imaging Technologies. The Center is enhanced with state-of-the-art equipment in laboratories available for the education of future professionals. There are specific laboratories for computer graphics, digital media, audio/video software and hardware, graphic design, graphics management, traditional and digital printing, screen printing, photography, and web/interactive media.

Student-Faculty Ratio

A ratio of 20 to 1 (students to faculty) is maintained to allow for separate work stations and intensive individualized instruction. It also provides the time for in-depth discussion, student review and advisement that defines a quality program. The department expects students to be committed to their studies and motivated to gain the knowledge needed for a career in the graphics and imaging industries.

Awards and Scholarships

Student achievement is recognized through annual awards and scholarships. In addition to departmental recognition, a number of students receive grants and awards from the College of Technology, the university, and from outside sources. Outside sources of scholarships and grants include the Print and Graphics Scholarship Foundation, the Nolan Moore Foundation,
the Packaging Label and Gravure Association, the Gravure Education Foundation and the Foundation of Flexographic Technical Association. Graduate students are eligible for graduate assistantships.

Faculty

The department has ten full-time and several part-time faculty who provide the instruction necessary for a quality program. Each of the faculty has been selected for teaching effectiveness, educational qualifications and professional industrial experience in the print and digital imaging industries.

Professional Affiliations

The faculty are members of the following professional organizations:

Accrediting Council of Collegiate Graphic Communications Association of Graphic Arts Trainers
Electronic Document Systems Foundation
Flexography Technical Association
Foundation of the Flexography Technical Association
Gravure Association of America
International Association of Printing House Craftsmen
International Graphic Arts Education Association
International Publishing Management Association
National Association of Printing Leadership
National Education Association
Packaging Label and Gravure Association
Printing Industries of America
Printing and Imaging Association of MidAmerica
Specialty Graphic Imaging Association
Technical Association of the Graphic Arts
University and College Design Association

Student Organizations

The Graphic Arts Club brings students together through extracurricular activities that enhance the academic experience. Club activities may include field trips, symposiums, service to the department and fundraising for the club.

The Iota Chapter of the Gamma Epsilon Tau (GET) is a national graphic arts honorary society limited to students who have completed 15 hours within the Department of Graphics and Imaging Technologies, 45 hours overall, and maintain a 3.25 GPA. Membership in GET is by invitation only. Activities of this group include service to the department.

Industry Partnerships

As a program particularly tied to current technology (hardware and software), the department maintains a constant and on-going relationship with industry. This “partnership” with industry benefits all parties considered – particularly the student.

Initiatives directed to specific business regarding consulting, research and development and equipment placement have had a proven track record. Maintaining a close relationship with industry professionals keeps the program current and meets the continual changing skills needed as students enter the workforce.

National Advisory Council

The National Advisory Council for Printing Education at Pittsburg State University serves the department by providing advice and direction. This Council is comprised of representatives from all segments of the graphics industry, and provides input in the areas of curriculum development, equipment acquisition, and overall promotion and direction of the department.

Degree Options

Bachelor of Science in Technology Degree with a Major in Graphic Communications

The Bachelor of Science in Technology degree is offered with a major in Graphic Communications. Students select an area of emphasis based on their area of interest from one of the following choices: Digital Media, Graphic Design, Graphics Management, Print Media, Packaging Graphics, and Web/Interactive Media. Career opportunities vary depending upon the area of interest but may include creative, technical, supervisory or management areas. The curriculum stresses the application of the technical aspects of graphics to the solution of practical problems. A foundation in a core set of graphics courses is complimented by advanced study in the chosen area of emphasis.

Bachelor of Applied Science Degree with a Major in Technology with a Digital and Print Media Emphasis

The Bachelor of Applied Science Degree with a Major in Technology, with an emphasis in Digital and Print Media, is offered for students transferring to Pittsburg State University with an earned Associate of Applied Science degree in a graphics-related curriculum. This option accepts all technical coursework and general education from a two-year program and pairs it with upper division technical and managerial courses to
complete a four-year degree. This degree is offered through the Department of Technology and Workforce Learning.

Master of Science Degree with a Major in Technology with a Printing Management Emphasis

The Master of Science Degree with a Major in Technology, with an emphasis in Printing Management, offers advanced instruction in technical, managerial, creative and supervisory areas related to the graphics industry.

Students may choose one of two options. Option 1 requires 15 credits of core courses, 6 credits of thesis and 9 credits of emphasis/elective courses for a total of 30 credit hours of instruction. Option 2 requires 18 credits of core courses and 15 hours of emphasis/elective courses for a total of 33 credit hours of instruction. A final plan would be worked out between the student and his/her advisor.

Admission to the graduate program requires an undergraduate major in printing, graphic arts, graphic design, or another related field with a Grade Point Average of 2.7 or better. This degree is offered through the Department of Technology and Workforce Learning.

Departmental Minors

Students outside of the Graphics and Imaging Technologies department, who wish to develop a specialization related to their major, may choose to minor in a select area within the Graphics and Imaging Technologies department. Students may select a minor in Digital Media, Graphic Design, Photography, Print Media, or Web/Interactive Media. Other majors closely allied to the graphics industry that might benefit from a graphics minor include business, marketing, art, communications, interior design and technology education.

Bachelor of Science in Technology Degree with a Major in Graphic Communications: Digital Media Emphasis

The Digital Media emphasis area focuses on digital graphics, which includes digital photography, video and audio editing, special effects and 3D rendering and animation. Students will develop skills for creating and manipulating 2D and 3D graphics audio and video for use in television, digital signage and video games.

Basic Skills (12-14 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 207: Speech Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101: English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 190: Honors English Composition</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 299: Introduction to Research Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

Mathematics (select one) (3-5 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 110: College Algebra with Review</td>
<td>5</td>
</tr>
<tr>
<td>MATH 113: College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 133: Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>MATH 143: Elementary Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

General Education Electives (34-39 hours)

Sciences (8-9 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 111: General Biology</td>
<td>3</td>
</tr>
<tr>
<td>and BIOL 112: General Biology Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>BIOL 113: Environmental Life Science</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 211: Principles of Biology</td>
<td>4</td>
</tr>
</tbody>
</table>

Physical Sciences (Select one) (4 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 105: Introductory Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 106: Introductory Chemistry Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 107: Chemistry for the Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>and CHEM 108: Chemistry for the Life Sciences Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 160: Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 165: Physical Geology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 166: Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 167: Meteorology Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 171: Physical Science</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 172: Physical Science Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 175: Descriptive Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 176: Astronomy Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 375: Solar System Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>and PHYS 176: Astronomy Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Social Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 100: Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>WGS 200: Introduction to Women's Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Political Studies (Select one) (3 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 101: U.S. Politics</td>
<td>3</td>
</tr>
<tr>
<td>POLS 103: Comparative Political Institutions</td>
<td>3</td>
</tr>
</tbody>
</table>

Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

Economy

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 191: Issues in Today’s Economy</td>
<td>3</td>
</tr>
<tr>
<td>FCS 230: Consumer Education and Personal Finance</td>
<td>3</td>
</tr>
</tbody>
</table>
Technology
EET 247: Computer Programming for Electronic Systems .................. 3
GT 190: Introduction to Technological Systems ................................. 3
GT 350: Technology and Civilization ............................................. 3
EDTH 330: Technology for the Classroom ...................................... 3
TE 551: Integrated Technology for Educators ................................. 3
TM 350: Societal Influence of Technology ...................................... 3

Business
ACCTG 201: Financial Accounting .................................................. 3
CIS 130: Computer Information Systems ....................................... 3
MGT 101: Introduction to Business ................................................... 3
MGT 105: Introduction to Entrepreneurship .................................... 3

Fine Arts and Aesthetic Studies (3 hours)
ART 178: Introduction to the Visual Arts ........................................ 3

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology .......................... 3
MLL 114: Chinese Language and Culture I ..................................... 3
MLL 124: French Language and Culture I ....................................... 3
MLL 154: Spanish Language and Culture I ..................................... 3
MLL 184: Russian Language and Culture I ..................................... 3
MLL 194: Korean Language and Culture I ...................................... 3
GEOG 106: World Regional Geography ........................................ 3
GEOG 300: Elements of Geography ............................................. 3
GEOG 304: Human Geography .................................................. 3
WGS 399: Global Women's Issues ............................................. 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology .................................................. 3

Physical (Select one)
FCS 203: Nutrition and Health ..................................................... 3
FCS 301: Nutrition ........................................................................ 3
HHP 150: Lifetime Fitness Concepts ............................................. 1
NURS 303: Introduction to Public Health ...................................... 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .................................................... 3
HIST 102: World History from 1500 ............................................. 3
HIST 201: American History to 1865 .......................................... 3
HIST 202: American History from 1865 ...................................... 3

Literature
ENGL 113: General Literature ..................................................... 3
ENGL 114: General Literature (Genre) .......................................... 3
ENGL 116: General Literature (Theme) ......................................... 3
ENGL 120: Literature and Film .................................................... 3
ENGL 315: Mythology ............................................................... 3
ENGL 320: Literature and Film .................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy ............................................ 3
PHIL 105: Ethics .......................................................................... 3
PHIL 112: Biomedical Ethics ....................................................... 3
PHIL 113: Business Ethics .......................................................... 3
PHIL 114: Environmental Ethics .................................................. 3
PHIL 207: Critical Thinking ....................................................... 3
PHIL 208: Logic .......................................................................... 3
PHIL 231: World Religions .......................................................... 3

GIT Core Courses (23 hours)
GIT 100: Introduction to Graphics Technologies ............................... 3
GIT 141: Vector Based Graphics .................................................... 3
GIT 142: Raster Graphics Software ............................................ 3
GIT 230: Graphic Design ............................................................. 3
GIT 240: Page Layout Software .................................................... 3
GIT 301: Graphics Career Development ....................................... 2
GIT 600: Graphics Internship ...................................................... 3
GIT 650: Production Graphics ..................................................... 3
or GIT 690: Senior Project .......................................................... 3

Digital Media Emphasis Courses (24 hours)
GIT 231: Audio/Video Software .................................................... 3
GIT 310: Photography .................................................................. 3
GIT 311: Product Photography ..................................................... 3
GIT 334: 3D Graphics ................................................................. 3
GIT 411: Portrait Photography ..................................................... 3
GIT 432: Digital Media Design ..................................................... 3
GIT 511: Commercial Photography ............................................. 3
GIT 530: 3D Animation and Rendering ....................................... 3

Digital Media Electives (13 hours)
GIT 221: Web Graphics Software .................................................. 3
GIT 270: Introduction to Packaging Technologies ............................ 3
GIT 322: Web Site Design ........................................................... 3
GIT 323: Web and Motion Graphics ............................................. 3
GIT 342: Print File Preparation and Preflighting .............................. 3
GIT 350: Printing Technologies ..................................................... 3
GIT 355: Specialty Graphics ....................................................... 3
GIT 400: Investigations ................................................................ 1-4
GIT 401: Graphics Work Experience ........................................... 1-3
GIT 421: Interactive Media Design ............................................. 3
GIT 521: Mobile Media Development ........................................... 3
GIT 523: Web Content Management Systems ............................... 3
GIT 531: Publication Graphics ..................................................... 3
GIT 552: Digital and Variable Data Technologies ............................. 3
GIT 570: Flexible Packaging ....................................................... 3
GIT 571: Rigid Packaging ............................................................. 3
GIT 572: Paperboard Packaging .................................................... 3
GIT 580: Sales and Customer Service .......................................... 3
GIT 590: Special Topics (____) ..................................................... 1-3
GIT 601: Laboratory Practicum ..................................................... 1-4
GIT 630: Portfolio Management .................................................. 3
GIT 640: Color Reproduction ...................................................... 3
GIT 670: Packaging Materials and Processes ................................. 3
GIT 680: Graphics Administration ............................................... 3

Total Technical Courses (60 hours)
Support Courses (9 hours)
- ENGL 301: Technical/Professional Writing ............................................. 3
- MKTG 330: Principles of Marketing ......................................................... 3
- COMM 200: Introduction to Mass Communication .................................... 3
- Electives (by advisement) (0-8 hours)

Total hours for Bachelor of Science in Technology Degree with a Major in Graphic Communications: Digital Media Emphasis (124 hours)

Bachelor of Science in Technology Degree with a Major in Graphic Communications: Graphic Design Emphasis

The Graphic Design emphasis area blends the art and creative side with the technical aspects of graphics production. Students will learn the fundamentals of art and design and apply those fundamentals in a production setting, following the design from initial concept through digital file development and end with the final output of the graphic product.

Basic Skills (12-14 hours)
- COMM 207: Speech Communication ...................................................... 3
- ENGL 101: English Composition ............................................................. 3
- ENGL 190: Honors English Composition .................................................. 3
- or ENGL 299: Introduction to Research Writing ...................................... 3

Mathematics (select one) (3-5 hours)
- MATH 110: College Algebra with Review ................................................ 5
- MATH 113: College Algebra ..................................................................... 3
- MATH 133: Quantitative Reasoning .......................................................... 3
- MATH 143: Elementary Statistics .............................................................. 3

General Education Electives (32-36 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)
- BIOL 111: General Biology .................................................................... 3
- BIOL 112: General Biology Laboratory ................................................... 2
- BIOL 113: Environmental Life Science ..................................................... 4
- BIOL 211: Principles of Biology I ............................................................. 4

Physical Sciences (Select one)
- CHEM 105: Introductory Chemistry ....................................................... 3
- CHEM 106: Introductory Chemistry Laboratory ...................................... 1
- CHEM 107: Chemistry for the Life Sciences .............................................. 3
- and CHEM 108: Chemistry for the Life Sciences Laboratory .................... 1
- PHYS 160: Physical Geology ................................................................. 3
- and PHYS 165: Physical Geology Laboratory .......................................... 1
- PHYS 166: Meteorology .......................................................................... 3
- and PHYS 167: Meteorology Laboratory ................................................. 1
- PHYS 171: Physical Science ................................................................. 3
- and PHYS 172: Physical Science Laboratory .......................................... 1

PHYS 175: Descriptive Astronomy ............................................................ 3
and PHYS 176: Astronomy Laboratory ....................................................... 1
PHYS 375: Solar System Astronomy .......................................................... 3
and PHYS 176: Astronomy Laboratory ....................................................... 1

Social Studies (Select one) (3 hours)
- SOC 100: Introduction to Sociology .......................................................... 3
- WGS 200: Introduction to Women's Studies ............................................. 3

Political Studies (Select one) (3 hours)
- POLS 101: U.S. Politics ........................................................................... 3
- POLS 103: Comparative Political Institutions ......................................... 3

Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

Economy
- ECON 191: Issues in Today’s Economy .................................................. 3
- FCS 230: Consumer Education and Personal Finance .......................... 3

Technology
- EET 247: Computer Programming for Electronic Systems ..................... 3
- GT 190: Introduction to Technological Systems ...................................... 2
- GT 350: Technology and Civilization ..................................................... 3
- EDTH 330: Technology for the Classroom .............................................. 3
- TE 551: Integrated Technology for Educators ....................................... 3
- TM 350: Societal Influence of Technology .............................................. 3

Business
- ACCTG 201: Financial Accounting .......................................................... 3
- CIS 130: Computer Information Systems ................................................. 3
- MGT 101: Introduction to Business ......................................................... 3
- MGT 105: Introduction to Entrepreneurship ............................................. 3

Fine Arts and Aesthetic Studies (0 hours)
- ART 233 Drawing I (0 hours)
(satisfied by Support course)

Cultural Studies (Select one) (3 hours)
- ANTH 101: Introduction to Cultural Anthropology .................................. 3
- MLL 114: Chinese Language and Culture I ............................................. 3
- MLL 124: French Language and Culture I .............................................. 3
- MLL 154: Spanish Language and Culture I ............................................. 3
- MLL 184: Russian Language and Culture I ............................................. 3
- MLL 194: Korean Language and Culture I .............................................. 3
- GEOG 106: World Regional Geography ............................................... 3
- GEOG 300: Elements of Geography ...................................................... 3
- GEOG 304: Human Geography ............................................................. 3
- WGS 399: Global Women's Issues .......................................................... 3

329
Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology .............................................. 3

Physical (Select one)
FCS 203: Nutrition and Health ...................................................... 3
FCS 301: Nutrition ........................................................................ 3
HHP 150: Lifetime Fitness Concepts ............................................. 1
NURS 303: Introduction to Public Health ...................................... 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 ................................................. 3
HIST 102: World History from 1500 .............................................. 3
HIST 201: American History to 1865 ........................................... 3
HIST 202: American History from 1865 ...................................... 3

Literature
ENGL 113: General Literature .......................................................... 3
ENGL 114: General Literature (Genre) ........................................... 3
ENGL 116: General Literature (Theme) .......................................... 3
ENGL 120: Literature and Film ......................................................... 3
ENGL 315: Mythology .................................................................... 3
ENGL 320: Literature and Film ......................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy ............................................ 3
PHIL 105: Ethics ............................................................................. 3
PHIL 112: Biomedical Ethics .......................................................... 3
PHIL 113: Business Ethics ............................................................... 3
PHIL 114: Environmental Ethics ..................................................... 3
PHIL 207: Critical Thinking ............................................................ 3
PHIL 208: Logic .............................................................................. 3
PHIL 231: World Religions .............................................................. 3

GIT Core Courses (23 hours)
GIT 100: Introduction to Graphics Technologies .......................... 3
GIT 141: Vector Based Graphics .................................................. 3
GIT 142: Raster Graphics Software ............................................. 3
GIT 230: Graphic Design ............................................................... 3
GIT 240: Page Layout Software ................................................... 3
GIT 301: Graphics Career Development ..................................... 2
GIT 600: Graphics Internship ....................................................... 3
GIT 650: Production Graphics ...................................................... 3
or GIT 690: Senior Project ............................................................. 3

Graphic Design Emphasis Courses (24 hours)
GIT 221: Web Graphics Software ................................................. 3
GIT 270: Introduction to Packaging Technologies ....................... 3
GIT 310: Photography ................................................................... 3
GIT 323: Web and Motion Graphics ............................................. 3
GIT 342: Print File Preparation and Preflighting ......................... 3

GIT 350: Printing Technologies ..................................................... 3
GIT 630: Portfolio Management .................................................... 3
GIT 640: Color Reproduction ....................................................... 3

Graphic Design Electives (15 hours)
GIT 231: Audio/Video Software ..................................................... 3
GIT 311: Product Photography ..................................................... 3
GIT 322: Web Site Design ............................................................. 3
GIT 334: 3D Graphics ................................................................. 3
GIT 355: Specialty Graphics .......................................................... 3
GIT 400: Investigations ................................................................. 1-4
GIT 401: Graphics Work Experience ........................................... 1-3
GIT 411: Portrait Photography ..................................................... 3
GIT 421: Interactive Media Design .............................................. 3
GIT 432: Digital Media Design ..................................................... 3
GIT 511: Commercial Photography .............................................. 3
GIT 521: Mobile Media Development ......................................... 3
GIT 523: Web Content Management Systems ............................. 3
GIT 530: 3D Animation and Rendering ....................................... 3
GIT 531: Publication Graphics ..................................................... 3
GIT 552: Digital and Variable Data Technologies ....................... 3
GIT 562: Graphics Cost Analysis and Estimating ....................... 3
GIT 570: Flexible Packaging ....................................................... 3
GIT 571: Rigid Packaging .............................................................. 3
GIT 572: Paperboard Packaging .................................................. 3
GIT 580: Sales and Customer Service ......................................... 3
GIT 590: Special Topics (____) .................................................... 1-3
GIT 601: Laboratory Practicum ................................................... 1-4
GIT 670: Packaging Materials and Processes ............................. 3
GIT 680: Graphics Administration ............................................... 3

Total Technical Courses (62 hours)

Support Courses (12 hours)
ENGL 301: Technical/Professional Writing .................................. 3
MKTG 330: Principles of Marketing ............................................. 3
ART 100: Visual Thinking: 2D Processes ................................. 3
ART 233: Drawing I .................................................................... 3

• Electives (by advisement) (0-6 hours)

Total hours for Bachelor of Science in Technology Degree with a Major in Graphic Communications: Graphic Design Emphasis (124 hours)

Bachelor of Science in Technology Degree with a Major in Graphic Communications: Graphics Management Emphasis

The Graphics Management emphasis area combines a program of hands-on experiences in graphics production with application of managerial functions. Courses reflect current technology and application, including entrepreneurship, management, sales and customer service, estimating, production control and scheduling. A minor in Business Administration is earned with this emphasis.
Basic Skills (12-14 hours)
COMM 207: Speech Communication ........................................... 3
ENGL 101: English Composition .................................................. 3
ENGL 190: Honors English Composition ...................................... 3
or ENGL 299: Introduction to Research Writing ........................... 3

Mathematics (select one) (3-5 hours)
MATH 110: College Algebra with Review ...................................... 5
MATH 113: College Algebra ....................................................... 3
MATH 133: Quantitative Reasoning ............................................. 3
MATH 143: Elementary Statistics ................................................ 3

General Education Electives (30-33 hours)

Sciences (8-9 Hours)

Natural Sciences (Select one)
BIOL 111: General Biology .......................................................... 3
and BIOL 112: General Biology Laboratory ................................... 2
BIOL 113: Environmental Life Science ......................................... 4
BIOL 211: Principles of Biology I .................................................. 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry ............................................. 3
and CHEM 106: Introductory Chemistry Laboratory ..................... 1
CHEM 107: Chemistry for the Life Sciences ............................... 3
and CHEM 108: Chemistry for the Life Sciences Laboratory .......... 1
PHYS 160: Physical Geology ...................................................... 3
and PHYS 165: Physical Geology Laboratory ............................... 1
PHYS 166: Meteorology ............................................................. 3
and PHYS 167: Meteorology Laboratory ...................................... 1
PHYS 171: Physical Science ....................................................... 3
and PHYS 172: Physical Science Laboratory ............................... 1
PHYS 175: Descriptive Astronomy ............................................. 3
and PHYS 176: Astronomy Laboratory ....................................... 1
PHYS 375: Solar System Astronomy ............................................ 3
and PHYS 176: Astronomy Laboratory ....................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ............................................. 3
WGS 200: Introduction to Women's Studies ................................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics .............................................................. 3
POLS 103: Comparative Political Institutions ............................ 3

Producing and Consuming (0 hours)

Economy
ECON 200: Principles of Microeconomics ................................... 3

Business
ACCTG 201: Financial Accounting ............................................. 3

(above courses satisfied by Major Support Courses) (0 hours)

Fine Arts and Aesthetic Studies (select one) (3 hours)
ART 178: Introduction to the Visual Arts ..................................... 3

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ..................... 3
MLL 114: Chinese Language and Culture I .............................. 3
MLL 124: French Language and Culture I ............................... 3
MLL 154: Spanish Language and Culture I .............................. 3
MLL 184: Russian Language and Culture I .............................. 3
MLL 194: Korean Language and Culture I .............................. 3
GEOG 106: World Regional Geography ................................... 3
GEOG 300: Elements of Geography ......................................... 3
GEOG 304: Human Geography ................................................ 3
WGS 399: Global Women's Issues ............................................. 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ............................................... 3

Physical (Select one)
FCS 203: Nutrition and Health .................................................. 3
FCS 301: Nutrition .................................................................... 3
HHP 150: Lifetime Fitness Concepts ........................................... 1
NURS 303: Introduction to Public Health ................................... 3

Human Heritage (Select one from two of
the following three categories) (6 hours)

History
HIST 101: World History to 1500 ............................................. 3
HIST 102: World History from 1500 ........................................... 3
HIST 201: American History to 1865 ....................................... 3
HIST 202: American History from 1865 ................................... 3

Literature
ENGL 113: General Literature ................................................. 3
ENGL 114: General Literature (Genre) ....................................... 3
ENGL 116: General Literature (Theme) ...................................... 3
ENGL 120: Literature and Film ................................................ 3
ENGL 315: Mythology ............................................................. 3
ENGL 320: Literature and Film ................................................ 3

Philosophy
PHIL 103: Introduction to Philosophy ......................................... 3
PHIL 105: Ethics ...................................................................... 3
PHIL 112: Biomedical Ethics .................................................... 3
PHIL 113: Business Ethics ....................................................... 3
PHIL 114: Environmental Ethics ................................................................. 3
PHIL 207: Critical Thinking ......................................................................... 3
PHIL 208: Logic .......................................................................................... 3
PHIL 231: World Religions ......................................................................... 3

**GIT Core Courses (23 hours)**

GIT 100: Introduction to Graphics Technologies ........................................ 3
GIT 141: Vector Based Graphics .................................................................. 3
GIT 142: Raster Graphics Software ............................................................. 3
GIT 230: Graphic Design .............................................................................. 3
GIT 240: Page Layout Software ................................................................. 3
GIT 301: Graphics Career Development ................................................... 2
GIT 600: Graphics Internship ........................................................................ 3
GIT 650: Production Graphics ....................................................................... 3
or GIT 690: Senior Project .......................................................................... 3

**Graphics Management Emphasis Courses**

**21 hours**

GIT 342: Print File Preparation and Preflighting ........................................ 3
GIT 350: Printing Technologies ................................................................... 3
GIT 562: Graphics Cost Analysis and Estimating ......................................... 3
GIT 580: Sales and Customer Service .......................................................... 3
GIT 640: Color Reproduction ...................................................................... 3
GIT 680: Graphics Administration ............................................................... 3
TM 606: Industrial Supervision ..................................................................... 3

**Graphics Management Electives (8 hours)**

GIT 221: Web Graphics Software ............................................................... 3
GIT 231: Audio/Video Software .................................................................... 3
GIT 270: Introduction to Packaging Technologies ........................................ 3
GIT 310: Photography .................................................................................. 3
GIT 311: Product Photography .................................................................... 3
git 322: Web Site Design ............................................................................ 3
GIT 323: Web and Motion Graphics ............................................................. 3
GIT 334: 3D Graphics .................................................................................. 3
GIT 355: Specialty Graphics ......................................................................... 3
GIT 400: Investigations ................................................................................ 1-4
GIT 401: Graphics Work Experience ............................................................ 1-3
GIT 411: Portrait Photography ..................................................................... 3
GIT 421: Interactive Media Design ............................................................... 3
GIT 432: Digital Media Design ..................................................................... 3
GIT 511: Commercial Photography ............................................................. 3
GIT 521: Mobile Media Development ........................................................... 3
GIT 523: Web Content Management Systems ............................................ 3
GIT 530: 3D Animation and Rendering ....................................................... 3
GIT 531: Publication Graphics ..................................................................... 3
GIT 552: Digital and Variable Data Technologies ........................................ 3
GIT 570: Flexible Packaging ....................................................................... 3
GIT 571: Rigid Packaging ............................................................................ 3
GIT 572: Paperboard Packaging ................................................................. 3
GIT 590: Special Topics (___) ....................................................................... 1-3
GIT 601: Laboratory Practicum ..................................................................... 1-4
GIT 630: Portfolio Management .................................................................. 3
GIT 670: Packaging Materials and Processes ............................................. 3

**Total Technical Courses (52 hours)**

**Support Courses (24 hours)**

ENGL 301: Technical/Professional Writing ............................................... 3
ACCTG 201: Financial Accounting ............................................................ 3
ACCTG 202: Managerial Accounting .......................................................... 3

ECON 200: Principles of Microeconomics ................................................... 3
ECON 200: Principles of Microeconomics ................................................... 3
FIN 326: Business Finance ........................................................................... 3
MGT 330: Management and Organizational Behavior .................................. 3
MKTG 330: Principles of Marketing ............................................................. 3
MGMKT 444: Legal and Social Environment of Business ................................. 3

- Electives (by advisement) (0-6 hours)

Total hours for Bachelor of Science in Technology Degree with a Major in Graphic Communications: Graphics Management Emphasis (124 hours)

**Bachelor of Science in Technology Degree with a Major in Graphic Communications: Packaging Graphics Emphasis**

The Packaging Graphics emphasis will cover areas in the packaging industry ranging from creative and design to science and engineering to marketing and consumer behavior.

**Basic Skills (12-14 hours)**

COMM 207: Speech Communication ............................................................ 3
ENGL 101: English Composition ................................................................... 3
ENGL 190: Honors English Composition .................................................... 3
or ENGL 299: Introduction to Research Writing ........................................... 3

**Mathematics (select one)**

MATH 110: College Algebra with Review .................................................... 5
MATH 113: College Algebra ........................................................................... 3
MATH 126: Pre-Calculus .............................................................................. 4
MATH 133: Quantitative Reasoning ............................................................. 3
MATH 143: Elementary Statistics ................................................................. 3

**General Education Electives (34-39 hours)**

**Sciences (8-9 Hours)**

**Natural Sciences (Select one)**

BIOL 111: General Biology ......................................................................... 3
and BIOL 112: General Biology Laboratory ................................................. 2
BIOL 113: Environmental Life Science ...................................................... 4
BIOL 211: Principles of Biology I ................................................................. 4

**Physical Sciences (Select one)**

CHEM 105: Introductory Chemistry ............................................................. 3
and CHEM 106: Introductory Chemistry Laboratory ..................................... 1
CHEM 107: Chemistry for the Life Sciences ................................................ 3
and CHEM 108: Chemistry for the Life Sciences Laboratory ........................ 1
PHYS 160: Physical Geology ....................................................................... 3
and PHYS 165: Physical Geology Laboratory ................................................. 1
PHYS 166: Meteorology .......................................................................... 3
and PHYS 167: Meteorology Laboratory ..................................................... 1
PHYS 171: Physical Science ..................................................................... 3
and PHYS 172: Physical Science Laboratory ................................................. 1
PHYS 175: Descriptive Astronomy .............................................................. 3
and PHYS 176: Astronomy Laboratory ......................................................... 1
PHYS 375: Solar System Astronomy ........................................... 3
and PHYS 176: Astronomy Laboratory ......................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ........................................... 3
WGS 200: Introduction to Women's Studies ............................... 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ............................................................. 3
POLS 103: Comparative Political Institutions ........................... 3

Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

Economy
ECON 191: Issues in Today's Economy .................................... 3
FCS 230: Consumer Education and Personal Finance ............... 3

Technology
EET 247: Computer Programming for Electronic Systems ......... 3
GT 190: Introduction to Technological Systems .......................... 2
GT 350: Technology and Civilization ......................................... 3
EDTH 330: Technology for the Classroom ................................. 3
TE 551: Integrated Technology for Educators ............................ 3
TM 350: Societal Influence of Technology ................................. 3

Business
ACCTG 201: Financial Accounting ........................................... 3
CIS 130: Computer Information Systems ................................... 3
MGT 101: Introduction to Business ............................................. 3
MGT 105: Introduction to Entrepreneurship ............................... 3

Fine Arts and Aesthetic Studies (Select one) (2-3 hours)
ART 155: Printmaking and Paper Arts ...................................... 3
ART 178: Introduction to the Visual Arts ................................... 3
ART 188: The Designed World .................................................. 3
ART 217: Crafts I ..................................................................... 3
ART 222: Jewelry Design I ....................................................... 3
ART 233: Drawing I .................................................................. 3
ART 244: Ceramics I ............................................................... 3
ART 266: Sculpture I ............................................................... 3
ART 277: Painting I ................................................................. 3
ART 288: Introduction to Art History I ...................................... 3
ART 289: Introduction to Art History II ..................................... 3
ART 311: Art Education ............................................................ 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress .......................................................... 3
ART 430: Automotive: Art and Design ..................................... 3
COMM 105: Performance Appreciation ...................................... 3
COMM 205: Performance Studies ............................................. 3
COMM 295: Theatre History (____) ........................................... 3
ENGL 250: Introduction to Creative Writing ............................. 3
HHP 151: Dance Appreciation ................................................ 3
MUSIC 120: Music Appreciation (____) .................................... 3
MUSIC 121: Introduction to Music Literature ............................ 2

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ................. 3
MLL 114: Chinese Language and Culture I .............................. 3
MLL 124: French Language and Culture I .............................. 3
MLL 154: Spanish Language and Culture I .............................. 3
MLL 184: Russian Language and Culture I ............................. 3
MLL 194: Korean Language and Culture I ............................. 3
GEOG 106: World Regional Geography .................................. 3
GEOG 300: Elements of Geography ....................................... 3
GEOG 304: Human Geography .............................................. 3
WGS 399: Global Women's Issues .......................................... 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ............................................ 3

Physical (Select one)
FCS 203: Nutrition and Health .............................................. 3
FCS 301: Nutrition ................................................................. 3
HHP 150: Lifetime Fitness Concepts ....................................... 3
NURS 303: Introduction to Public Health ................................. 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 ........................................... 3
HIST 102: World History from 1500 ....................................... 3
HIST 201: American History to 1865 ...................................... 3
HIST 202: American History from 1865 .................................. 3

Literature
ENGL 113: General Literature ................................................ 3
ENGL 114: General Literature (Genre) ..................................... 3
ENGL 116: General Literature (Theme) ..................................... 3
ENGL 120: Literature and Film ................................................ 3
ENGL 315: Mythology ............................................................. 3
ENGL 320: Literature and Film ................................................ 3

Philosophy
PHIL 103: Introduction to Philosophy ..................................... 3
PHIL 105: Ethics .................................................................... 3
PHIL 112: Biomedical Ethics .................................................. 3
PHIL 113: Business Ethics ...................................................... 3
PHIL 114: Environmental Ethics ............................................. 3
PHIL 207: Critical Thinking .................................................... 3
PHIL 208: Logic .................................................................... 3
PHIL 231: World Religions ...................................................... 3

GIT Core Courses (23 hours)
GIT 100: Introduction to Graphics Technologies ..................... 3
GIT 141: Vector Based Graphics ............................................. 3
GIT 142: Raster Graphics Software ......................................... 3
GIT 230: Graphic Design ........................................................ 3
GIT 240: Page Layout Software .............................................. 3
Bachelor of Science in Technology Degree with a Major in Graphic Communications: Print Media Emphasis

The Print Media Technology emphasis area focuses on graphics production as it relates to the printing industry within the larger scope of the graphics industry. Students will learn all facets of input, manipulation and output as they relate to printed products.

Basic Skills (12-14 hours)
COMM 207: Speech Communication .............................................. 3
ENGL 101: English Composition ...................................................... 3
ENGL 190: Honors English Composition ......................................... 3
or ENGL 299: Introduction to Research Writing ................................. 3

Mathematics (select one) (3-5 hours)
MATH 110: College Algebra with Review ......................................... 5
MATH 113: College Algebra .............................................................. 3
MATH 133: Quantitative Reasoning .................................................... 3
MATH 143: Elementary Statistics ....................................................... 3

General Education Electives (32-36 hours)

Sciences (8-9 Hours)
Natural Sciences (Select one)
BIOL 111: General Biology ............................................................ 3
and BIOL 112: General Biology Laboratory ...................................... 2
BIOL 113: Environmental Life Science ............................................. 4
BIOL 211: Principles of Biology I ...................................................... 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry .................................................. 3
and CHEM 106: Introductory Chemistry Laboratory ........................ 1
CHEM 107: Chemistry for the Life Sciences .................................... 3
and CHEM 108: Chemistry for the Life Sciences Laboratory ............. 1
PHYS 160: Physical Geology ............................................................ 3
and PHYS 165: Physical Geology Laboratory ................................... 1
PHYS 166: Meteorology ................................................................. 3
and PHYS 167: Meteorology Laboratory .......................................... 1
PHYS 171: Physical Science ............................................................. 3
and PHYS 172: Physical Science Laboratory .................................... 1
PHYS 175: Descriptive Astronomy .................................................. 3
and PHYS 176: Astronomy Laboratory ............................................ 1
PHYS 375: Solar System Astronomy ................................................ 3
and PHYS 176: Astronomy Laboratory ............................................ 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology .................................................. 3
WGS 200: Introduction to Women's Studies .................................... 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ................................................................. 3
POLS 103: Comparative Political Institutions ................................... 3

Packaging Graphics Electives (16 hours)
GIT 221: Web Graphics Software ................................................... 3
GIT 231: Audio/Video Software ....................................................... 3
GIT 301: Graphics Career Development .......................................... 2
GIT 300: Graphics Internship ......................................................... 3
GIT 650: Production Graphics ....................................................... 3
or GIT 690: Senior Project ............................................................. 3

Support Courses (9 hours)
MKTG 330: Principles of Marketing ................................................. 3
MKTG 510: Consumer Behavior ..................................................... 3

Choose one of the following:
MKTG 440: Advertising Management ........................................... 3
MKTG 450: Personal Selling and Sales Management ........................ 3
MGMKT 532: Marketing Channel Management ............................... 3

• Electives (by advisement) (0-6 hours)

Total Hours for Bachelor of Science in Technology Degree with a Major in Graphic Communications: Packaging Graphics Emphasis (124 hours)
Producing and Consuming (select ECON 200 and one from the remaining two categories) (2-3 hours)

Economy
ECON 200: Principles of Microeconomics .................................................. 3
(satisfied by Major Support courses) (0 hours)

Technology
EET 247: Computer Programming for Electronic Systems .......................... 3
GT 190: Introduction to Technological Systems ........................................... 2
GT 350: Technology and Civilization .......................................................... 3
EDTH 330: Technology for the Classroom ................................................ 3
TE 551: Integrated Technology for Educators ........................................... 3
TM 350: Societal Influence of Technology ................................................... 3

Business
ACCTG 201: Financial Accounting .............................................................. 3
CIS 130: Computer Information Systems ................................................... 3
MGT 101: Introduction to Business .............................................................. 3
MGT 105: Introduction to Entrepreneurship ................................................... 3

Fine Arts and Aesthetic Studies (select one) (3 hours)
ART 178: Introduction to the Visual Arts .................................................... 3

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ..................................... 3
MLL 114: Chinese Language and Culture I .................................................. 3
MLL 124: French Language and Culture I .................................................... 3
MLL 154: Spanish Language and Culture I ................................................... 3
MLL 184: Russian Language and Culture I ................................................... 3
MLL 194: Korean Language and Culture I .................................................... 3
GEOG 106: World Regional Geography ..................................................... 3
GEOG 300: Elements of Geography ........................................................... 3
GEOG 304: Human Geography ................................................................. 3
WGS 399: Global Women’s Issues ............................................................... 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ................................................................. 3

Physical (Select one)
FCS 203: Nutrition and Health ................................................................. 3
FCS 301: Nutrition ..................................................................................... 3
HHP 150: Lifetime Fitness Concepts ........................................................... 3
NURS 303: Introduction to Public Health .................................................... 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 ............................................................... 3
HIST 102: World History from 1500 ........................................................... 3
HIST 201: American History to 1865 ........................................................ 3
HIST 202: American History from 1865 .................................................... 3

Literature
ENGL 113: General Literature ................................................................. 3
ENGL 114: General Literature (Genre) ....................................................... 3
ENGL 116: General Literature (Theme) ...................................................... 3
ENGL 120: Literature and Film ................................................................... 3
ENGL 315: Mythology ................................................................................. 3
ENGL 320: Literature and Film ................................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy ........................................................ 3
PHIL 105: Ethics ......................................................................................... 3
PHIL 112: Biomedical Ethics ...................................................................... 3
PHIL 113: Business Ethics ......................................................................... 3
PHIL 114: Environmental Ethics ............................................................... 3
PHIL 207: Critical Thinking ....................................................................... 3
PHIL 208: Logic .......................................................................................... 3
PHIL 231: World Religions ........................................................................... 3

GIT Core Courses (23 hours)
GIT 100: Introduction to Graphics Technologies .......................................... 3
GIT 141: Vector Based Graphics ................................................................. 3
GIT 142: Raster Graphics Software ............................................................ 3
GIT 230: Graphic Design ........................................................................... 3
GIT 240: Page Layout Software ................................................................. 3
GIT 301: Graphics Career Development .................................................... 2
GIT 600: Graphics Internship ..................................................................... 3
GIT 650: Production Graphics ................................................................. 3
or GIT 690: Senior Project ......................................................................... 3

Print Media Emphasis Courses (24 hours)
GIT 270: Introduction to Packaging Technologies ....................................... 3
GIT 342: Print File Preparation and Preflighting ......................................... 3
GIT 350: Printing Technologies ................................................................. 3
GIT 355: Specialty Graphics ....................................................................... 3
GIT 531: Publication Graphics ................................................................. 3
GIT 552: Digital and Variable Data Technologies ...................................... 3
GIT 562: Graphics Cost Analysis and Estimating ...................................... 3
GIT 640: Color Reproduction .................................................................... 3

Print Media Electives (13 hours)
GIT 221: Web Graphics Software .............................................................. 3
GIT 231: Audio/Video Software ................................................................. 3
GIT 310: Photography ................................................................................. 3
GIT 311: Product Photography ................................................................. 3
GIT 322: Web Site Design .......................................................................... 3
GIT 323: Web and Motion Graphics ........................................................... 3
GIT 334: 3D Graphics ................................................................................. 3
GIT 400: Investigations ............................................................................... 1-4
GIT 401: Graphics Work Experience ........................................................ 1-3
GIT 411: Portrait Photography ................................................................. 3
GIT 421: Interactive Media Design ............................................................. 3
GIT 432: Digital Media Design ................................................................. 3
GIT 511: Commercial Photography .......................................................... 3
GIT 521: Mobile Media Development ....................................................... 3
GIT 523: Web Content Management Systems ......................................... 3
GIT 530: 3D Animation and Rendering .................................................... 3
GIT 570: Flexible Packaging ................................................................. 3
GIT 571: Rigid Packaging ................................................................. 3
GIT 572: Paperboard Packaging ......................................................... 3
GIT 580: Sales and Customer Service .................................................. 3
GIT 590: Special Topics (____) ............................................................ 1-3
GIT 601: Laboratory Practicum ............................................................ 1-4
GIT 630: Portfolio Management .......................................................... 3
GIT 670: Packaging Materials and Processes ......................................... 3
GIT 680: Graphics Administration ........................................................ 3

Total Technical Courses (60 hours)

Support Courses (12 hours)
ECON 200: Principles of Microeconomics .................................................. 3
ENGL 301: Technical/Professional Writing ................................................. 3
MGT 330: Management and Organizational Behavior .................................. 3
MKTG 330: Principles of Marketing ........................................................ 3

• Electives (by advisement) (0-8 hours)

Total Hours for Bachelor of Science in Technology
Degree with a Major in Graphic Communications: Print Media Emphasis (124 hours)

Bachelor of Science in Technology Degree
with a Major in Graphic Communications: Web/Interactive Media Emphasis

The Web/Interactive Media emphasis area provides students with both development and design skills for creating design rich, interactive content for both traditional and mobile web devices. Students will develop skills for creating, manipulating and managing, dynamic websites, web animations/games, mobile media and effective user interactions.

Basic Skills (12-14 hours)
COMM 207: Speech Communication ...................................................... 3
ENGL 101: English Composition .......................................................... 3
ENGL 190: Honors English Composition ................................................. 3
or ENGL 299: Introduction to Research Writing ....................................... 3

Mathematics (select one) (3-5 hours)
MATH 110: College Algebra with Review .................................................. 5
MATH 113: College Algebra ................................................................. 3
MATH 133: Quantitative Reasoning ......................................................... 3
MATH 143: Elementary Statistics .......................................................... 3

General Education Electives (35-39 hours)

Sciences (8-9 Hours)

Natural Sciences (Select one)
BIOL 111: General Biology ................................................................. 3
and BIOL 112: General Biology Laboratory ............................................. 2

BIOL 113: Environmental Life Science ................................................... 4
BIOL 211: Principles of Biology ............................................................ 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry ....................................................... 3
and CHEM 106: Introductory Chemistry Laboratory ................................ 1
CHEM 107: Chemistry for the Life Sciences ........................................... 3
and CHEM 108: Chemistry for the Life Sciences Laboratory .................. 1
PHYS 160: Physical Geology ................................................................. 3
and PHYS 165: Physical Geology Laboratory ........................................... 1
PHYS 166: Meteorology ...................................................................... 1
and PHYS 167: Meteorology Laboratory ................................................ 1
PHYS 171: Physical Science ................................................................. 1
and PHYS 172: Physical Science Laboratory .......................................... 1
PHYS 175: Descriptive Astronomy ....................................................... 3
and PHYS 176: Astronomy Laboratory .................................................. 1
PHYS 375: Solar System Astronomy ..................................................... 3
and PHYS 176: Astronomy Laboratory .................................................. 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ..................................................... 3
WGS 200: Introduction to Women's Studies ........................................... 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ................................................................. 3
POLS 103: Comparative Political Institutions ......................................... 3

Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

Economy
ECON 191: Issues in Today's Economy ................................................. 3
FCS 230: Consumer Education and Personal Finance ............................ 3

Technology
EET 247: Computer Programming for Electronic Systems ....................... 3
GT 190: Introduction to Technological Systems ..................................... 2
GT 350: Technology and Civilization .................................................. 3
EDTH 330: Technology for the Classroom ............................................ 3
TE 551: Integrated Technology for Educators ....................................... 3
TM 350: Societal Influence of Technology ............................................ 3

Business
ACCTG 201: Financial Accounting ..................................................... 3
CIS 130: Computer Information Systems ............................................. 3
MGT 101: Introduction to Business ..................................................... 3
MGT 105: Introduction to Entrepreneurship .......................................... 3

Fine Arts and Aesthetic Studies (3 hours)
ART 178: Introduction to the Visual Arts ............................................. 3

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ................................ 3
MLL 114: Chinese Language and Culture I .......................................... 3
MLL 124: French Language and Culture I ............................................ 3
MLL 154: Spanish Language and Culture I ............................................ 3
Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology .............................................. 3

Physical (Select one)
FCS 203: Nutrition and Health .............................................. 3
FCS 301: Nutrition ................................................................. 3
HHP 150: Lifetime Fitness Concepts ........................................ 1
NURS 303: Introduction to Public Health ................................ 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .............................................. 3
HIST 102: World History from 1500 ......................................... 3
HIST 201: American History to 1865 ...................................... 3
HIST 202: American History from 1865 .................................. 3

Literature
ENGL 113: General Literature ................................................ 3
ENGL 114: General Literature (Genre) ..................................... 3
ENGL 116: General Literature (Theme) ................................... 3
ENGL 120: Literature and Film ............................................... 3
ENGL 315: Mythology ......................................................... 3
ENGL 320: Literature and Film ............................................... 3

Philosophy
PHIL 103: Introduction to Philosophy ..................................... 3
PHIL 105: Ethics ................................................................. 3
PHIL 112: Biomedical Ethics ................................................ 3
PHIL 113: Business Ethics .................................................... 3
PHIL 114: Environmental Ethics ........................................... 3
PHIL 207: Critical Thinking ................................................ 3
PHIL 208: Logic ................................................................. 3
PHIL 231: World Religions .................................................. 3

GIT Core Courses (23 hours)
GIT 100: Introduction to Graphics Technologies ..................... 3
GIT 141: Vector Based Graphics .......................................... 3
GIT 142: Raster Graphics Software ..................................... 3
GIT 230: Graphic Design ................................................... 3
GIT 240: Page Layout Software .......................................... 3
GIT 301: Graphics Career Development ......................... 2
GIT 600: Graphics Internship ............................................ 3
GIT 650: Production Graphics ............................................. 3
or GIT 690: Senior Project ................................................. 3

Web/Interactive Emphasis Courses (21 hours)
GIT 221: Web Graphics Software ........................................ 3
GIT 231: Audio/Video Software ............................................ 3
GIT 322: Web Site Design .................................................. 3
GIT 323: Web and Motion Graphics .................................... 3
GIT 421: Interactive Media Design ....................................... 3
GIT 521: Mobile Media Development .................................. 3
GIT 523: Web Content Management Systems .................... 3

Web/Interactive Electives (13 hours)
GIT 270: Introduction to Packaging Technologies ................ 3
GIT 310: Photography ........................................................ 3
GIT 311: Product Photography ............................................ 3
GIT 334: 3D Graphics ........................................................ 3
GIT 342: Print File Preparation and Preflighting ................... 3
GIT 350: Printing Technologies ........................................... 3
GIT 355: Specialty Graphics ............................................... 3
GIT 400: Investigations ..................................................... 1-4
GIT 401: Graphics Work Experience ................................. 1-3
GIT 411: Portrait Photography ........................................... 3
GIT 432: Digital Media Design .......................................... 3
GIT 511: Commercial Photography .................................... 3
GIT 530: 3D Animation and Rendering ................................ 3
GIT 531: Publication Graphics ........................................... 3
GIT 552: Digital and Variable Data Technologies ............... 3
GIT 562: Graphics Cost Analysis and Estimating ............... 3
GIT 570: Flexible Packaging ............................................ 3
GIT 571: Rigid Packaging .................................................. 3
GIT 572: Paperboard Packaging ........................................ 3
GIT 580: Sales and Customer Service .................................. 3
GIT 590: Special Topics (_____ ) ................................. 1-3
GIT 601: Laboratory Practicum ......................................... 1-4
GIT 630: Portfolio Management ........................................ 3
GIT 640: Color Reproduction ............................................. 3
GIT 670: Packaging Materials and Processes ....................... 3
GIT 680: Graphics Administration ...................................... 3

Total Technical Courses (57 hours)

Support Courses (12 hours)
ENGL 301: Technical/Professional Writing ............................. 3
MKTG 330: Principles of Marketing ..................................... 3
MKTG 440: Advertising Management ................................ 3
MKTG 510: Consumer Behavior ........................................ 3

- Electives (by advisement) (0-8 hours)

Total hours for Bachelor of Science in Technology Degree with a Major in Graphic Communications:
Web/Interactive Media Emphasis (124 hours)
Bachelor of Applied Science Degree with a Major in Technology: Digital and Print Media Emphasis

The Bachelor of Applied Science in Technology offers students who have graduated from a community college or technical college with an Associate of Applied Science (AAS) degree an opportunity to pursue a professional career path and extend their education. The AAS degree must have a technical emphasis related to graphics and imaging and a GPA of 2.50. Students with an earned AAS degree can transfer up to 64 college credits. After taking an additional 60 hours from Pittsburg State University students graduate with a Bachelor of Applied Science (BAS) with a major in Technology and an emphasis in Digital and Print Media.

The two years needed to complete the BAS provides hands-on experiences for a real-world job. In addition, this program gives additional orientation to the graphics industry, theory, logic, leadership, and marketing skills, in preparation for professional opportunities.

Program requirements may vary based upon the student’s Associate of Applied Science degree. Consult an academic advisor in the graphics department for specific degree requirements.

**Basic Skills**

ENGL 101: English Composition ......................................................... 3
ENGL 299: Introduction to Research Writing ........................................ 3
COMM 207: Speech Communication .................................................. 3

COMM 207 as well as ENGL 299 can have other courses substituted in their place.

**Behavioral, Social, History & Political Studies**

PSYCH 155: General Psychology ....................................................... 3
SOC 100: Introduction to Sociology ..................................................... 3
or POLS 101: U.S. Politics ................................................................. 3
or HIST 101: World History to 1500 ..................................................... 3
or HIST 201: American History to 1865 .............................................. 3
or GT 350: Technology and Civilization ............................................ 3
or Social Science and/or Political Studies Elective (3 hours)

**Mathematics**

MATH 113: College Algebra ............................................................. 3
MATH 143: Elementary Statistics ....................................................... 3

MATH 113 or substitute

MATH 143 required for MFGET 405

**Natural Sciences (Minimum of 6 hours)**

BIOL 113: Environmental Life Science ............................................. 4
PHYS 171: Physical Science ............................................................. 3
and PHYS 172: Physical Science Laboratory .................................... 1

BIOL 113 can be substituted by another natural science course.

PHYS 171 can be substituted by another physical science course.

**Producing and Consuming**

ACCTG 201: Financial Accounting .................................................... 3
or Approved business substitute (3 hours)

**Fine Arts (Humanity course)**

ART 178: Introduction to the Visual Arts .......................................... 3
or fine arts substitute

**Languages and Cultures (choose one)**

GEOG 106: World Regional Geography ............................................. 3
or GEOG 300: Elements of Geography ............................................. 3
or GEOG 304: Human Geography .................................................... 3
or Language or Cultural Studies substitute

**Support Courses**

**Business Courses**

MGT 330: Management and Organizational Behavior ....................... 3
MKTG 330: Principles of Marketing .................................................. 3
MGMKT 444: Legal and Social Environment of Business .................. 3

**Technical Courses**

**Tech Management (Organization & Leadership) (12 hours)**

GIT 562: Graphics Cost Analysis and Estimating ............................... 3
GIT 680: Graphics Administration .................................................... 3
TM 606: Industrial Supervision ....................................................... 3
EST 393: Introduction to Industrial Safety ........................................ 3

**Technical Specialization, Support and Electives**

**Technical Specialization (40 hours)**

- Technical courses from 2-Year associate degree (40 hours)
### Technical Electives (13-14 hours)
- Select 13-14 hours of upper division GIT courses not already taken (13-14 hours)

### Electives (0-4 hours)
- Select 0-4 hours of General, Business or Technical Electives (0-4 hours)

Total hours required for Bachelor of Applied Science Degree with a Major in Technology with an emphasis in Digital and Print Media (124 hours)

### Minor in Digital Media

#### Digital Media (21 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIT 100: Introduction to Graphics Technologies</td>
<td>3</td>
</tr>
<tr>
<td>GIT 142: Raster Graphics Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 231: Audio/Video Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 310: Photography</td>
<td>3</td>
</tr>
<tr>
<td>GIT 334: 3D Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GIT 432: Digital Media Design</td>
<td>3</td>
</tr>
<tr>
<td>GIT 530: 3D Animation and Rendering</td>
<td>3</td>
</tr>
</tbody>
</table>

### Minor in Graphic Design

#### Graphic Design (21 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIT 100: Introduction to Graphics Technologies</td>
<td>3</td>
</tr>
<tr>
<td>GIT 141: Vector Based Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GIT 142: Raster Graphics Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 230: Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>GIT 240: Page Layout Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 342: Print File Preparation and Preflighting</td>
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</tbody>
</table>

### Choose one of the following GIT courses

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>GIT 221: Web Graphics Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 231: Audio/Video Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 270: Introduction to Packaging Technologies</td>
<td>3</td>
</tr>
<tr>
<td>GIT 310: Photography</td>
<td>3</td>
</tr>
<tr>
<td>GIT 334: 3D Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GIT 355: Specialty Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GIT 531: Publication Graphics</td>
<td>3</td>
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<tr>
<td>GIT 640: Color Reproduction</td>
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</tbody>
</table>

### Minor in Packaging Graphics

#### Packaging Graphics (21 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>3</td>
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<tr>
<td>GIT 270: Introduction to Packaging Technologies</td>
<td>3</td>
</tr>
<tr>
<td>GIT 570: Flexible Packaging</td>
<td>3</td>
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<tr>
<td>GIT 571: Rigid Packaging</td>
<td>3</td>
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<tr>
<td>GIT 572: Paperboard Packaging</td>
<td>3</td>
</tr>
<tr>
<td>GIT 670: Packaging Materials and Processes</td>
<td>3</td>
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</tbody>
</table>

### Minor in Photography

#### Photography (21 hours)

<table>
<thead>
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<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
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<td>3</td>
</tr>
<tr>
<td>GIT 310: Photography</td>
<td>3</td>
</tr>
<tr>
<td>GIT 311: Product Photography</td>
<td>3</td>
</tr>
<tr>
<td>GIT 411: Portrait Photography</td>
<td>3</td>
</tr>
<tr>
<td>GIT 511: Commercial Photography</td>
<td>3</td>
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</tbody>
</table>

### Minor in Print Media

#### Print Media (21 hours)

<table>
<thead>
<tr>
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</thead>
<tbody>
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<tr>
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<td>3</td>
</tr>
<tr>
<td>GIT 342: Print File Preparation and Preflighting</td>
<td>3</td>
</tr>
<tr>
<td>GIT 350: Printing Technologies</td>
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</tr>
</tbody>
</table>

### Choose one of the following GIT courses

<table>
<thead>
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<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
<td>GIT 531: Publication Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GIT 552: Digital and Variable Data Technologies</td>
<td>3</td>
</tr>
</tbody>
</table>

### Minor in Web/Interactive Media

#### Web/Interactive Media (21 hours)

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
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<td>3</td>
</tr>
<tr>
<td>GIT 231: Audio/Video Software</td>
<td>3</td>
</tr>
<tr>
<td>GIT 322: Web Site Design</td>
<td>3</td>
</tr>
<tr>
<td>GIT 323: Web and Motion Graphics</td>
<td>3</td>
</tr>
<tr>
<td>GIT 421: Interactive Media Design</td>
<td>3</td>
</tr>
<tr>
<td>GIT 521: Mobile Media Development</td>
<td>3</td>
</tr>
<tr>
<td>GIT 523: Web Content Management Systems</td>
<td>3</td>
</tr>
</tbody>
</table>
Master of Science Degree with a Major in Technology: Graphics Management Emphasis or Graphics Design Emphasis

The Master of Science degree with a major in Technology, with an emphasis in Graphics Management or Graphics Design offers advanced instruction in technical, managerial and supervisory areas related to the graphics and imaging industries. The degree is offered through the Department of Technology and Workforce Learning. (See Master of Science- Technology.)

Two options are available: Option I, a core of 15 credits is complemented by the required thesis (6 credits) and 9 credits of emphasis/electives courses for a total of 30 credit hours; Option II includes a core of 15 credits which are required and 18 credits of enrichment/emphasis electives courses. The final plan would be worked out between the student and their advisor.

Admission to the graduate program with a major in Technology and an emphasis in Graphics Management or Graphics Design requires an undergraduate major in printing, graphic arts, graphic design or a related field.
Technology and Workforce Learning

Chairperson: John L. Iley*
Professor(s): Gregory Belcher*, Jeffrey Brooks, Andrew M. Klenke*, John L. Iley*;**, Mark Johnson*;**, Vernon L. Morton*
Associate Professor(s): Julie D. Dainty*
Assistant Professor(s): Eli Aba*, Jordan Backs, Kevin Elliott*; Tatiana V. Goris*, Jon Jones, Byron McKay, Charles E. Phillips, Melissa Rogers*; Judy Smetana*
Instructors: Matthew D. Brown, Krissy Lewis, Ed Moore Coordinator: Kelley Manley
*Graduate Faculty
**University Professor

Room E222 KTC
Telephone: 620-235-4371
Fax: 620-235-4020
http://www.pittstate.edu/twl/
E-mail: jiley@pittstate.edu

Undergraduate

Two-Year Technical Certificate in Electrical Technology
Associate of Applied Science Degree with a Major in Electrical Technology
Associate of Applied Science Degree with a Major in Wood Technology
Bachelor of Applied Science Degree with a Major in Technology
Bachelor of Science Degree with a major in Workforce Development
Bachelor of Science in Technology Degree with a Major in Wood Technology
Bachelor of Science in Education Degree with a Major in Technology and Engineering Education
Second Teaching Option
Bachelor of Science in Career and Technical Education
Minor in Human Resource Development
Minor in Industrial Management and Supervision
Minor in Technology Education (Non-Teaching)
Minor in Technological Literacy
Minor in Wood Technology
Technical Teacher Certificate

Graduate

Master of Science Degree with a Major in Career and Technical Education
Master of Science Degree with a Major in Technology

Master of Science Degree with a Major in Human Resource Development
Career and Technical Education Administrator Certificate
Specialist in Education Degree with a Major in Workforce Development and Education
Cooperative Doctoral Programs

Course Prefixes
AVT - Aviation Technology Courses
ET - Electrical Technology
GRT - Graduate Technology Courses
GT - General Technology Courses
HRD – Human Resource Development
IE - Innovation Engineering
TE - Technology Education
TM – Technology Management
TTED – Technical Teacher Education Courses
TWL – Technology and Workforce Learning Professional Courses
WT - Wood Technology

Scholarship Applications

Students may qualify for the scholarships offered by Pittsburg State University. On-line applications for national, state, campus and off-campus scholarships can be accessed at http://www.pittstate.edu/affordability/scholarships/.
The campus deadline for scholarship applications is February 1 of each year, and students need only to register once for any of the campus scholarships. Any questions regarding scholarships may be directed to the departmental office, 620-235-4632, or http://www.pittstate.edu/twl.

TWO-YEAR INDUSTRIAL TECHNOLOGY PROGRAMS

These curricula lead to either a Certificate in Technical Competence or a degree of Associate of Applied Science. A Certificate in Technical Competence or a two-year Associate of Applied Science degree is offered in electrical technology. An Associate of Applied Science degree is offered in wood technology. Successful graduates of Associate of Applied Science degree and technical certificate programs are employed as technicians in their respective technical field. Programs for these follow.

Electrical Technology (Electricity)

Electrical Technology is an instructional program that prepares individuals to become residential, commercial,
and industrial electricians or technicians. It includes the design, development, installation, testing and troubleshooting of electrical systems and equipment. From wiring a residential single-family home, to installing the large switchgear, conduits, wiring and data systems in a multi-million dollar commercial building, to the system installation, analysis, design, and troubleshooting of industrial automated control systems with programmable logic controllers, variable frequency drives and robotics, program graduates are prepared for a wide range of employment opportunities. Emphasis is given to preparing graduates to become certified electricians by attaining the Journeyman Electrical License.

**Baccalaureate Programs**

These curricula lead to degrees of Bachelor of Applied Science, Bachelor of Science in Education, Bachelor of Science in Technology, and Bachelor of Science in Vocational - Technical Education, and are designed to prepare individuals for employment in education and industry. Graduates in technology education may be certified for teaching in middle schools, junior high schools, and/or high schools. Graduates of the technology programs find employment in administrative or supervisory positions in industrial organizations and assume responsibilities in areas of product development, manufacturing, sales and distribution, training or in teaching. They have the practical skills, technical knowledge, and organizational competence required of mid-level management personnel.

**Two-Year Technical Certificate in Electrical Technology**

The two-year technical certificate is for those individuals who want the electrical training and certification without taking general education courses.

**First Year**

**First Semester (13 hours)**

ET 181: Residential Wiring Methods ................................................. 5
ET 182: Residential Wiring Methods Laboratory I ............................ 3
ET 183: Fundamentals of Electricity .................................................. 3
ET 184: Special Project ............................................................... 2

**Second Semester (13 hours)**

ET 185: Electrical Machinery and Equipment ................................. 5
ET 186: Electrical Machinery and Equipment Laboratory I ............... 3
ET 187: Electrical Estimating and Blueprint Reading ....................... 3
ET 188: Special Project ............................................................... 2

**Summer Session (6 hours)**

ET 299: Cooperative Industrial Training (Electrical Internship) ........... 6

*Note: The "on-the-job" Internship (ET 299) is required of all Electrical Technology students.

**Second Year**

**Fourth Semester (13 hours)**

ET 282: Motor Control Fundamentals .............................................. 5
ET 283: Motor Control Fundamentals Laboratory I ............................ 3
ET 284: National Electrical Code .................................................... 3
ET 285: Special Project .................................................................... 2

**Fifth Semester (14 hours)**

ET 286: Industrial and Commercial Wiring Methods ....................... 5
ET 287: Industrial and Commercial Wiring Methods Laboratory I ........ 3
ET 288: Journeyman Electrical Certification ...................................... 3
ET 289: Special Project ............................................................... 3

Total hours for Two-Year Technical Certificate in Electrical Technology (59 hours)

**Associate of Applied Science Degree with a Major in Electrical Technology**

The Associate of Applied Science Degree is for those individuals who seek electrical training and certification plus additional preparation for advancement into management, engineering, sales or other related areas.

**General Education (14-18 hours)**

**Basic Skills (6 hours)**

ENGL 101: English Composition ...................................................... 3
COMM 207: Speech Communication ................................................ 3

**Core Courses (3 hours)**

PSYCH 155: General Psychology ..................................................... 3
or POLS 101: U.S. Politics ............................................................. 3
or PHIL 208: Logic ........................................................................ 3

**Approved General Education Electives for Electrical Technology Program, chosen from two different programs [prefixes]:**

**Minimum**

MATH 110: College Algebra with Review ........................................... 5
MATH 113: College Algebra ............................................................. 3
MATH 133: Quantitative Reasoning .................................................. 3
MATH 143: Elementary Statistics ................................................... 3
PHYS 171: Physical Science ............................................................ 3
and PHYS 172: Physical Science Laboratory ...................................... 1
MGT 101: Introduction to Business .................................................. 3
MGT 105: Introduction to Entrepreneurship ...................................... 3

342
ACCTG 201: Financial Accounting ...................................................... 3
CIS 130: Computer Information Systems ............................................ 3
GT 190: Introduction to Technological Systems .................................. 2
ECON 191: Issues in Today's Economy .............................................. 3

First Year

First Semester (16 hours)
ET 181: Residential Wiring Methods .................................................. 5
ET 182: Residential Wiring Methods Laboratory I ............................... 3
ET 183: Fundamentals of Electricity ..................................................... 3
ET 184: Special Project ..................................................................... 2
ENGL 101: English Composition ....................................................... 3

Second Semester (16 hours)
ET 185: Electrical Machinery and Equipment ..................................... 5
ET 186: Electrical Machinery and Equipment Laboratory I .................. 3
ET 187: Electrical Estimating and Blueprint Reading ........................... 3
ET 188: Special Project ..................................................................... 2
COMM 207: Speech Communication .................................................. 3

Summer Session (8-9 hours)
ET 299: Cooperative Industrial Training (Electrical Internship) .......... 6
  • Approved general education elective (2-3 hours)

General Education (18-19 hours)
ENGL 101: English Composition ....................................................... 3
COMM 207: Speech Communication .................................................. 3
MATH 113: College Algebra ............................................................ 3
CIS 130: Computer Information Systems ........................................... 3
MATH 113 or approved substitute
CIS 130 or demonstrated computer proficiency

Core Courses (3 hours)
PSYCH 155: General Psychology ....................................................... 3

Approved General Education Electives chosen from: (3-4 hours)
MATH 122: Plane Trigonometry ......................................................... 3
ACCTG 201: Financial Accounting .................................................... 3
CHEM 105: Introductory Chemistry ................................................... 3
and CHEM 106: Introductory Chemistry Laboratory ....................... 1
  • Electives approved by advisor (3-4 hours)

Technical Courses (33 hours)

Wood Technology Area
WT 182: Wood Science ................................................................. 3
WT 185: Fundamentals of Wood Technology ..................................... 3
WT 282: Machine Woodworking ...................................................... 3
WT 286: Primary Wood Processing .................................................. 3
WT 300: Wood Internship (____) ....................................................... 3-6
WT 301: Finishing ......................................................................... 3
WT 333: Tool Technology ............................................................... 3
WT 383: Computer-Aided Manufacturing in Wood Technology ....... 3
WT 412: Overlay and Laminate Materials ......................................... 3
WT 511: Production Techniques in Woods ....................................... 3
WT 525: Cabinets and Fixtures ......................................................... 3-5

Associate of Applied Science Degree with a Major in Wood Technology

The degree prepares graduates in traditional and modern production practices associated with the furniture manufacturing, store fixture, and architectural wood working industries.

The Associate of Applied Science in Wood Technology major may choose between either a specialization in Wood Product Manufacturing or Residential Construction. The degree provides graduates with technical information and skills for working in these industries.

Students may enter the program at the first or second semester, per space availability.
At Least One Of The Following Two Emphasis Areas Must Be Completed:

**Emphasis Area One: Wood Product Manufacturing (15 hours)**
- WT 326: CAD for Wood Product Development II .................................. 3
- WT 454: CNC Application for Wood Industry .................................... 3
- WT 585: Wood Production Estimating ............................................. 3
- WT 691: Furniture Design and Development .................................... 3
- WT 692: Furniture Manufacturing .................................................. 3-5

**Emphasis Area Two: Residential Construction (15 hours)**
- CMCET 133: Construction Graphics ................................................ 3
- WT 382: Construction Methods and Materials .................................. 3
- CMCET 631: Construction Estimating I .......................................... 3
- WT 682: Residential Construction Software: Planning and Management .................................................. 3
  - Approved technology elective (construction, wood, or safety) (3 hours)

Total hours for Associate of Applied Science Degree with a Major in Wood Technology (66-67 hours)

**Bachelor of Applied Science Degree with a Major in Technology**

This program offers students who have graduated from an accredited two-year associate degree technical program the opportunity to extend their education and training. All associate degree graduates (with a minimum GPA of 2.50) can automatically transfer up to 64 college credits to Pittsburg State University. Graduates receive a Bachelor of Applied Science degree with a major in technology and a selected emphasis by completing an additional minimum of 60 hours from Pittsburg State University. The degree program content is based on previous academic and technical preparation.

Like two-year technical programs, this bachelor degree gives students complete, hands-on training for a real-world job. Students learn engineering technology, theory, logic, leadership, and business skills to broaden their knowledge, and to better prepare them for management opportunities. Coursework is both specialized and comprehensive. Emphasis areas are similar to the programs completed in the associate degrees. The technical emphasis in the Technology and Workforce Learning department are Wood Emphasis, Technology Management and Technical Teacher Education Emphasis.

**Degree Requirements**

**General Education (Minimum 36 hours)**

**Basic Skills (9 hours)**
- ENGL 101: English Composition .................................................... 3
- ENGL 299: Introduction to Research Writing .................................. 3
- or ENGL 301: Technical/Professional Writing .................................. 3
- COMM 207: Speech Communication ............................................. 3
- ENGL 301 or substitute
- COMM 207 or substitute

**Behavioral, Social, History & Political Studies (6 hours)**
- SOC 100: Introduction to Sociology ............................................... 3
- or POLS 101: U.S. Politics ............................................................... 3
- or HIST 201: American History to 1865 ....................................... 3
- or GT 350: Technology and Civilization ...................................... 3
- or TM 350: Societal Influence of Technology ............................... 3
- PSYCH 155: General Psychology .................................................. 3
- or PSYCH 575: Industrial and Organizational Psychology .......... 3
- TM 350 or Social Science and/or Political Studies Elective

**Mathematics (6 hours)**
- MATH 113: College Algebra ......................................................... 3
- or MATH 114: Elements of Technical Analysis ............................. 3
- or MATH 143: Elementary Statistics ............................................ 3
- MATH 114 or mathematics substitute
- MATH 143 or math substitute (MATH 143 required for MFGET 405 Quality Control)

**Sciences (Minimum 6 hours) (8 hours)**
- BIOL 113: Environmental Life Science ....................................... 4
- PHYS 171: Physical Science .......................................................... 3
- PHYS 172: Physical Science Laboratory ....................................... 1
- BIOL 113 or natural science substitute
- PHYS 171 or physical science substitute

**Producing and Consuming (3 hours)**
- ACCTG 201: Financial Accounting ............................................. 3
- ACCTG 201 or approved business substitute

**Fine Arts (Choose one) (3 hours)**
- ART 178: Introduction to the Visual Arts ...................................... 3
- COMM 105: Performance Appreciation ........................................ 3
- COMM 205: Performance Studies ............................................... 3
- HHP 151: Dance Appreciation .................................................... 3
MUSIC 120: Music Appreciation (___) ......................................................... 3

- Approved Humanities (e.g., Ethics) (3 hours)

**Cultural Studies (choose one) (3 hours)**
GEOG 300: Elements of Geography ......................................................... 3
GEOG 304: Human Geography ................................................................. 3

- Approved elective from cultural studies (3 hours)

**Business Support Courses**

**Business Courses (9 hours)**
MGT 330: Management and Organizational Behavior ................................ 3
MGMTK 444: Legal and Social Environment of Business ............................. 3
MGT 540: Human Resources Management .................................................. 3
or MKTG 330: Principles of Marketing ...................................................... 3

MKTG 330 or approved 300 and above business-related elective (e.g. TQM)

**Wood Emphasis Courses**

**Technology Management (Organization and Leadership)**
TM 606: Industrial Supervision .................................................................... 3
or MFGET 405: Quality Control .................................................................. 3
EST 393: Introduction to Industrial Safety .................................................. 3
WT 426: Millwork and Casework ............................................................... 3
WT 691: Furniture Design and Development ............................................. 3
WT 602: Manufacturing Facility Maintenance and Management ............... 3

**Technical Specialization, Support and Electives**

**Wood Tech Emphasis Core Courses (9 hours)**
WT 300: Wood Internship (___) ................................................................. 3-6
WT 399: Wood Technology Professional Development ............................ 2
WT 585: Wood Production Estimating ....................................................... 3
WT 699: Wood Technology Senior Seminar ............................................. 1

**Technical Specialization (36+ hours)**
(These are community college transfer credits; technical component of AAS degree)

**Wood Tech Electives (Select 15 hours from below)**
WT 182: Wood Science .............................................................................. 3
WT 383: Computer-Aided Manufacturing in Wood Technology ............... 3
WT 400: Wood Internship (___) ................................................................. 3-6
WT 454: CNC Application for Wood Industry ........................................... 3
WT 511: Production Techniques in Woods ................................................. 3

WT 523: Computer Applications in Cabinetmaking .................................... 3
WT 525: Cabinets and Fixtures ................................................................. 3-5
WT 691: Furniture Design and Development ............................................ 3
WT 692: Furniture Manufacturing ............................................................ 3-5

- Technical elective approved by advisor (3 hours)

WT 525 Cabinets and Fixtures and WT 692 Furniture Manufacturing must be taken for three hours each if they are chosen.

###Training (Technical-Related Education and Education) courses, may be substituted for candidates interested in more of a "training emphasis".

**Technology Management Emphasis Courses**

**Technology Management (Organization and Leadership)# (12 hours)**
TM 606: Industrial Supervision .................................................................... 3
TM 503: Facility Maintenance and Management .......................................... 3
or WT 602: Manufacturing Facility Maintenance and Management ............ 3
EST 393: Introduction to Industrial Safety .................................................. 3
or EST 396: Introduction to Construction Safety ......................................... 3
or EST 512: Risk Assessment ..................................................................... 3
or EST 604: Occupational Health and Safety ............................................ 3
or EST 630: Safety Management ............................................................... 3
TM 500: Industrial Organization and Technology Management ............... 3

EST 393 or approved substitute safety course

**Technical Specialization, Support and Electives**

**Technical Specialization Courses (40 hours)**
(These are community college transfer credits; technical component of AAS degree)

**Technology Management Support Courses (15 hours)**
TM 399: Technology Management Professional Development .................. 2
MFGET 405: Quality Control ..................................................................... 3
TM 501: Work Measurement and Efficiency Methods ............................... 3
TM 520: Leadership in the Workplace ....................................................... 3
TM 683: Internship in Technology Management ....................................... 3-6
TM 699: Senior Assessment in Technology Management .......................... 1

MFGET 405 or approved substitute
Electives (Business, Education, and Technology classes selected in consultation with advisor) (12 hours)

Total minimum hours required for Bachelor of Applied Science Degree with a Major in Technology (124 hours)

Technical Teacher Education Emphasis

General Education (Minimum 41 hours)

Basic Skills (9 hours)
ENGL 101: English Composition ................................................. 3
ENGL 299: Introduction to Research Writing ................................. 3
or ENGL 301: Technical/Professional Writing ............................... 3
COMM 207: Speech Communication ........................................... 3

ENGL 301 or substitute

COMM 207 or substitute

Behavioral, Social, History & Political Studies (9 hours)
GT 350: Technology and Civilization ........................................... 3
or TM 350: Societal Influence of Technology ................................. 3
PSYCH 155: General Psychology .................................................. 3
PSYCH 263: Developmental Psychology ....................................... 3

TM 350 or approved social science or history substitute

Mathematics (6 hours)
MATH 113: College Algebra ....................................................... 3
MATH 143: Elementary Statistics .................................................. 3

MATH 113 or approved mathematics substitute

MATH 143 or math substitute

Sciences (Minimum 6 hours) (8 hours)
BIOL 113: Environmental Life Science ....................................... 4
PHYS 171: Physical Science ....................................................... 3
PHYS 172: Physical Science Laboratory ....................................... 1

BIOL 113 or natural science substitute

PHYS 171 or physical science substitute

Producing and Consuming (3 hours)
ACCTG 201: Financial Accounting ............................................ 3

ACCTG 201 or approved business substitute

Fine Arts (3 hours)
• Approved Art, Music or Theater Elective (3 hours)

Cultural Studies (3 hours)
• Approved Geography or Foreign Language elective (3 hours)

Business Support Courses

Business courses (9 hours)
MGT 330: Management and Organizational Behavior .................... 3
MGMKT 444: Legal and Social Environment of Business ............... 3
MKTG 330: Principles of Marketing ............................................. 3

MKTG 330 or approved substitution

Technical Teacher Education Emphasis Courses

Core Courses (14 hours)
TTED 308: Laboratory and Shop Safety ....................................... 3
TTED 483: Teaching Internship ................................................... 3-6
TM 606: Industrial Supervision ................................................... 3
TTED 619: Planning Shop Layout for Career and Technical Education .............................................................. 3

TM 606 or approved substitution

Technical Specialization, Support and Electives

Technical Specialization Courses (40 hours)
(These are community college transfer credits; technical component of AAS degree)

Technical Teacher Education Emphasis Courses (20 hours)
TTED 193: Workshop for Beginning Career and Technical Education Teachers ................................................... 3
TTED 391: Student Assessment Development in Career and Technical Education ................................................... 3
TTED 395: Task Analysis for Technical Teachers .......................... 1
TTED 396: Curriculum Usage in Technical Education .................... 2
TTED 479: Techniques for Teaching Career and Technical Education .............................................................. 3
TTED 608: Components of Work-based Learning in Career and Technical Education ................................................... 3
TTED 695: Using Technology as an Instructional Tool .................... 2
TTED 780: Classroom Management in Career and Technical Education .............................................................. 3
Technical Teacher Education/College of Technology elective(s) approved and assigned by advisor (e.g., This allows flexibility if students have completed similar course elsewhere).

Total minimum hours required for Bachelor of Science Degree with a Major in Technology, Technical Teacher Education Emphasis (124 hours)

**Note:** Three additional courses are required for certification in Kansas:
- PSYCH 357: Educational Psychology .................................................. 3
- TTED 694: Foundations of Career and Technical Education .................. 3
- TTED 697: Identification and Instruction of Students with Special Needs ................................................................. 3

**Bachelor of Science Degree with a major in Workforce Development**

- Emphasis I. Supervision and Leadership
- Emphasis II. Human Resources

The Bachelor of Science in Workforce Development is an online bachelor's degree completion program designed for busy working adults seeking flexible and convenient way to finish their degree. Students who have completed an associate's degree or a minimum of 64 hours of undergraduate coursework can complete this 60-hour degree program to earn their Bachelor of Science degree. Students who have not completed an associate's degree must have completed 64 hours of undergraduate work, including the Pittsburg State University general education requirements for the Bachelor of Science degree.

All of the 60-hours of coursework are available online and are sequenced over two and a half years with three courses (nine hours) each semester during the fall and spring semesters and two courses (six hours) each summer. Students who do not follow the schedule sequence will require additional time to complete the degree since many courses are not offered each semester. The 60-hours of coursework cannot be substituted by similar coursework. Students enrolled in this program are considered part-time students but can still receive financial aid if eligible at the part-time rate.

The Bachelor of Science in Workforce Development program has two emphasis areas from which to choose:

- **Supervision & Leadership:** For those seeking mid-level management positions in all industry areas
- **Human Resource:** For those interested in the human resource development field

To be eligible for the program, students must have completed 64-hours or more in an associate degree or in undergraduate coursework, and must include the 25-hour general education requirement listed below.

**General Education Requirements**

If the following General Education requirements have not been fulfilled as part of the student’s Associate Degree program or undergraduate coursework, then prior to completion of the Bachelor of Science degree, the student must have completed each of the following General Education requirements, any of which may have been part of the Associate Degree or undergraduate coursework. Students not possessing an associate degree must complete a minimum of 64 credit hours and the current general education requirements associated with the traditional Bachelor of Science degree at Pittsburg State University. These courses are in addition to the 60 hours offered by Pittsburg State University.

- ENGL 101: English Composition ......................................................... 3
- ENGL 299: Introduction to Research Writing ........................................ 3
- COMM 207: Speech Communication ................................................ 3
- MATH 113: College Algebra .............................................................. 3
- SOC 100: Introduction to Sociology .................................................. 3
- POLS 101: U.S. Politics ....................................................................... 3
- or PSYCH 155: General Psychology .................................................. 3
- PSYCH 575: Industrial and Organizational Psychology ....................... 3
- CORE 310: Introduction to Sociology ................................................ 3
- or PSYCH 555: Industrial and Organizational Psychology ....................... 3
- or MATH 113: College Algebra .......................................................... 3
- MATH 113 or approved math substitute course

**Core Requirements (to be taken from Pittsburg State University) (27 hours)**

**General Education-Related Courses (18 hours)**

- TM 350: Societal Influence of Technology ............................................ 3
- or GT 350: Technology and Civilization .............................................. 3
- TM 555: Diversity in Technology Management ..................................... 3
- PSYCH 575: Industrial and Organizational Psychology ....................... 3
- SOC 360: Community Sociology ........................................................ 3
- JUST 223: Basic Interviewing and Counseling Skills .............................. 3
- COMM 629: Theories of Human Communication .................................. 3
Business Related Courses (9 hours)
MATH 143: Elementary Statistics .............................................. 3
MKTG 330: Principles of Marketing ............................................. 3
MGMT 444: Legal and Social Environment of Business ............. 3

Workforce Development Courses (12 hours)
EST 393: Introduction to Industrial Safety .................................. 3
or EST 512: Risk Assessment ..................................................... 3
TM 390: Trade and Job Analysis .................................................. 3
TM 399: Technology Management Professional Development .... 2
TM 520: Leadership in the Workplace ........................................ 3
TM 699: Senior Assessment in Technology Management ........... 1

Emphasis I. Supervision & Leadership Courses (21 hours)
MFG 405: Quality Control ............................................................ 3
MGT 330: Management and Organizational Behavior .................. 3
EST 630: Safety Management ...................................................... 3
TM 500: Industrial Organization and Technology Management .... 3
TM 501: Work Measurement and Efficiency Methods ............... 3
TM 503: Facility Maintenance and Management ......................... 3
TM 606: Industrial Supervision .................................................... 3

OR

Emphasis II. Human Resource Courses (21 hours)
HRD 575: Instructional Media in Human Resource Development .... 3
HRD 596: Introduction to Human Resource Development ............. 3
TM 653: Workforce Preparation ................................................. 3
TM 679: Presentation Skills .......................................................... 3
HRD 597: Organizational Staffing ................................................. 3
HRD 598: Talent Management ..................................................... 3
HRD 630: Employee and Labor Relations .................................... 3

Total hours required for Bachelor of Science with a major in Workforce Development degree (124 hours)

Bachelor of Science in Technology Degree with a Major in Wood Technology

The Bachelor of Science in Technology in Wood Technology majors may pursue one or more of the three specializations: Wood Product Manufacturing, Residential Construction and Wood Teacher Training. Program prepares students with technical and management courses for success in a variety of wood industry-related professional positions.

General Education*

Basic Skills (12 hours)
ENGL 101: English Composition .................................................. 3

ENGL 190: Honors English Composition ..................................... 3
or ENGL 299: Introduction to Research Writing ......................... 3
COMM 207: Speech Communication .......................................... 3
MATH 110: College Algebra with Review .................................... 5
or MATH 113: College Algebra .................................................... 3
or MATH 133: Quantitative Reasoning ....................................... 3

General Education Electives (34-39 hours)

Sciences (8-9 Hours)

Natural Sciences (Select one)
BIOL 111: General Biology ....................................................... 3
and BIOL 112: General Biology Laboratory ................................. 2
BIOL 113: Environmental Life Science ....................................... 4
BIOL 211: Principles of Biology I ................................................ 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry ............................................ 3
and CHEM 106: Introductory Chemistry Laboratory .................... 1
CHEM 107: Chemistry for the Life Sciences ............................... 3
and CHEM 108: Chemistry for the Life Sciences Laboratory ....... 1
PHYS 160: Physical Geology ....................................................... 3
and PHYS 165: Physical Geology Laboratory ............................... 1
PHYS 171: Physical Science ....................................................... 3
and PHYS 172: Physical Science Laboratory ............................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ............................................ 3
WGS 200: Introduction to Women's Studies .................................. 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ............................................................... 3
POLS 103: Comparative Political Institutions ............................... 3

Producing and Consuming (5-6 hours)
GT 190: Introduction to Technological Systems ......................... 2
or GT 350: Technology and Civilization .................................... 3
ACCTG 201: Financial Accounting ............................................ 3
or CIS 130: Computer Information Systems ............................... 3
or MGT 101: Introduction to Business ........................................ 3
or MGT 105: Introduction to Entrepreneurship ............................ 3

Fine Arts and Aesthetic Studies (Select one) (2-3 hours)
ART 155: Printmaking and Paper Arts ....................................... 3
ART 178: Introduction to the Visual Arts ..................................... 3
ART 188: The Designed World ................................................... 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I ....................................................... 3
ART 233: Drawing I ............................................................... 3
ART 244: Ceramics I ............................................................... 3
ART 266: Sculpture I ............................................................... 3
ART 277: Painting I ............................................................... 3
ART 288: Introduction to Art History I ....................................... 3
ART 289: Introduction to Art History II ...................................... 3
ART 311: Art Education ........................................................... 3
Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ........................................... 3
MLL 114: Chinese Language and Culture I .......................................................... 3
MLL 124: French Language and Culture I ............................................................ 3
MLL 154: Spanish Language and Culture I .......................................................... 3
MLL 184: Russian Language and Culture I .......................................................... 3
MLL 194: Korean Language and Culture I ............................................................ 3
GEOG 106: World Regional Geography .............................................................. 3
GEOG 300: Elements of Geography .................................................................. 3
GEOG 304: Human Geography ......................................................................... 3
WGS 399: Global Women's Issues ................................................................... 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology .................................................................... 3

Physical (Select one)
FCS 203: Nutrition and Health ....................................................................... 3
FCS 301: Nutrition ............................................................................................... 3
HHP 150: Lifetime Fitness Concepts ................................................................. 1
NURS 303: Introduction to Public Health ............................................................. 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 ................................................................. 3
HIST 102: World History from 1500 ............................................................... 3
HIST 201: American History to 1865 ............................................................... 3
HIST 202: American History from 1865 ............................................................ 3

Literature
ENGL 113: General Literature ......................................................................... 3
ENGL 114: General Literature (Genre) ............................................................. 3
ENGL 116: General Literature (Theme) ............................................................. 3
ENGL 120: Literature and Film ........................................................................... 3
ENGL 315: Mythology ......................................................................................... 3
ENGL 320: Literature and Film ........................................................................... 3

Philosophy
PHIL 103: Introduction to Philosophy ............................................................... 3
PHIL 105: Ethics ................................................................................................. 3
PHIL 112: Biomedical Ethics ............................................................................. 3

PHIL 113: Business Ethics .................................................................................. 3
PHIL 114: Environmental Ethics ....................................................................... 3
PHIL 207: Critical Thinking .............................................................................. 3
PHIL 208: Logic ................................................................................................. 3

PHIL 231: World Religions ................................................................................. 3

Total General Education Requirements (46-53 hours)

*For specific courses see general education degree requirements, General Education Requirements for All Baccalaureate Degrees.

Support Courses (12 hours)
MATH 122: Plane Trigonometry ........................................................................ 3
or MATH 143: Elementary Statistics ................................................................ 3
ECON 200: Principles of Microeconomics ...................................................... 3
ENGL 301: Technical/Professional Writing ......................................................... 3

Technical Courses

Wood Technology Area
WT 182: Wood Science .................................................................................... 3
WT 185: Fundamentals of Wood Technology ................................................... 3
WT 226: CAD for Wood Product Development .............................................. 3
or GT 360: Computer Aided Drafting ............................................................... 3
or GT 361: Technical Graphics with AutoCAD ................................................ 2
and GT 362: AutoCAD Applications (___) ...................................................... 1
WT 282: Machine Woodworking ..................................................................... 3
WT 286: Primary Wood Processing .................................................................. 3
WT 301: Finishing ............................................................................................... 3
WT 333: Tool Technology .................................................................................. 3
WT 383: Computer-Aided Manufacturing in Wood Technology ...................... 3
WT 399: Wood Technology Professional Development .................................. 3
WT 412: Overlay and Laminate Materials ......................................................... 3
WT 426: Millwork and Casework .................................................................... 3
WT 511: Production Techniques in Woods ...................................................... 3
WT 523: Computer Applications in Cabinetmaking ......................................... 3
WT 525: Cabinets and Fixtures ........................................................................ 3
WT 602: Manufacturing Facility Maintenance and Management .................... 3
WT 699: Wood Technology Senior Seminar ................................................... 1

WT 525 Cabinets and Fixtures must be taken for three hours.

General Technology Support Courses

Choose between Wood Product Manufacturing or Residential Construction Emphasis or Wood Teacher Training- Technical Education Emphasis.

Wood Product Manufacturing or Residential Construction Emphasis (select two) (6 hours)
EST 393: Introduction to Industrial Safety ....................................................... 3
EST 396: Introduction to Construction Safety .................................................... 3
MFGET 405: Quality Control ......................................................................... 3
Wood Teacher Training - Technical
Education Emphasis (8 hours)
TTED 479: Techniques for Teaching Career and Technical Education 3
TTED 695: Using Technology as an Instructional Tool 2
TTED 698: Leadership and Professionalism in Career and Technical Education 3

At Least One of the Following Emphasis Areas Must Be Completed

Emphasis Area One: Wood Product Manufacturing (18 hours)
WT 300: Wood Internship (____) 3-6
WT 326: CAD for Wood Product Development II 3
WT 454: CNC Application for Wood Industry 3
WT 585: Wood Production Estimating 3
WT 691: Furniture Design and Development 3
WT 692: Furniture Manufacturing 3-5

WT 300 Internship should be taken as Product Manufacturing.
WT 692 Furniture Manufacturing must be taken for three hours.

Emphasis Area Two: Residential Construction (15 hours)
WT 300: Wood Internship (____) 3-6
WT 382: Construction Methods and Materials 3
CMCET 537: Construction Surveying I 3
CMCET 631: Construction Estimating I 3
WT 682: Residential Construction Software: Planning and Management 3

WT 300 Wood Internship should be taken as Residential Construction.
CMCET 631 or approved CMCET or WT substitute.

Emphasis Area Three: Wood Teacher Training (18 hours)
Technical Education**
TTED 391: Student Assessment Development in Career and Technical Education 3
TTED 395: Task Analysis for Technical Teachers 1
TTED 396: Curriculum Usage in Technical Education 2
TTED 608: Components of Work-based Learning in Career and Technical Education 3
TTED 694: Foundations of Career and Technical Education 3
TTED 697: Identification and Instruction of Students with Special Needs 3

or SPED 510: Overview of Special Education 3
TTED 780: Classroom Management in Career and Technical Education 3

Total minimum hours required for degree (124 hours).

**Those seeking teacher certification, additional coursework is required. See Technical Teacher Education advisor for more information.

Bachelor of Science in Education Degree with a Major in Technology and Engineering Education

The curriculum leads to the degree of Bachelor of Science in Education with a major in technology and engineering education. The student needs to complete the thirty-two hour technology education core and meet the teacher education and general education requirements for a teaching certificate. A minimum of thirty hours of technology education course work needs to be completed at Pittsburg State University. Students in technology and engineering education can take any course in the College of Technology for which they have the necessary prerequisites. Students successfully completing this program can receive a Kansas teaching license for Technology Education (typically middle school and entry-level high school technology courses). Technology and engineering education majors must apply to the College of Education, Room 115 Hughes Hall, for admission to teacher education during the second semester of their sophomore year. Students transferring in as juniors must apply during their first semester on campus. Refer to the Teacher Education section of this University Catalog for criteria for admission to teacher education and to the professional semester.

General Education Degree Requirements for Students Preparing to Teach*

Basic Skills (12 hours)
ENGL 101: English Composition 3
ENGL 190: Honors English Composition 3
or ENGL 299: Introduction to Research Writing 3
COMM 207: Speech Communication 3
MATH 113: College Algebra 3
or MATH 110: College Algebra with Review 5

Must have a grade of "C" or better in each of the basic skills courses.
General Education Electives (35-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)
BIOL 111: General Biology ...................................................... 3
and BIOL 112: General Biology Laboratory ................................... 2
BIOL 113: Environmental Life Science ........................................ 4
BIOL 211: Principles of Biology I ................................................. 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry .............................................. 3
and CHEM 106: Introductory Chemistry Laboratory .................... 1
PHYS 150: Physical Geology ....................................................... 3
and PHYS 165: Physical Geology Laboratory ................................ 1
PHYS 166: Meteorology ............................................................. 3
and PHYS 167: Meteorology Laboratory ....................................... 1
PHYS 171: Physical Science ......................................................... 3
and PHYS 172: Physical Science Laboratory ................................ 1
PHYS 175: Descriptive Astronomy ............................................... 3
and PHYS 176: Astronomy Laboratory ......................................... 1
PHYS 375: Solar System Astronomy ............................................. 3
and PHYS 176: Astronomy Laboratory ......................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ............................................. 3
WGS 200: Introduction to Women's Studies ................................ 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ............................................................... 3
POLS 103: Comparative Political Institutions ............................... 3

Producing and Consuming (6 hours)
TE 551: Integrated Technology for Educators .............................. 3
ACCTG 201: Financial Accounting ............................................. 3
or CIS 130: Computer Information Systems ................................ 3
or ECON 191: Issues in Today's Economy .................................... 3
or FCS 230: Consumer Education and Personal Finance ............. 3
or MGT 101: Introduction to Business ........................................ 3
or MGT 105: Introduction to Entrepreneurship ............................. 3

Fine Arts and Aesthetic Studies (select one)
(2-3 hours)
ART 155: Printmaking and Paper Arts ......................................... 3
ART 178: Introduction to the Visual Arts ...................................... 3
ART 188: The Designed World .................................................... 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I ....................................................... 3
ART 233: Drawing I .............................................................. 3
ART 244: Ceramics I ............................................................. 3
ART 266: Sculpture I ........................................................... 3
ART 277: Painting I ............................................................. 3
ART 288: Introduction to Art History I ....................................... 3
ART 289: Introduction to Art History II .................................... 3
ART 311: Art Education .......................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the
Letterpress ................................................................. 3
ART 430: Automotive: Art and Design ...................................... 3

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ....................... 3
MLL 114: Chinese Language and Culture I ................................. 3
MLL 124: French Language and Culture I .................................. 3
MLL 154: Spanish Language and Culture I .................................. 3
MLL 184: Russian Language and Culture I .................................. 3
MLL 194: Korean Language and Culture I .................................. 3
GEOG 106: World Regional Geography ..................................... 3
GEOG 300: Elements of Geography ....................................... 3
GEOG 304: Human Geography ............................................. 3
WGS 399: Global Women's Issues ........................................... 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ............................................. 3

Physical (Select one)
FCS 203: Nutrition and Health ................................................. 3
FCS 301: Nutrition ............................................................... 3
HHP 151: Lifetime Fitness Concepts .......................................... 3
NURS 303: Introduction to Public Health ................................... 3

Human Heritage (Select one from two of
the following three categories) (6 hours)

History
HIST 101: World History to 1500 ............................................ 3
HIST 102: World History from 1500 ......................................... 3
HIST 201: American History to 1865 ....................................... 3
HIST 202: American History from 1865 ................................... 3

Literature
ENGL 113: General Literature .................................................. 3
ENGL 114: General Literature (Genre) ....................................... 3
ENGL 116: General Literature (Theme) ..................................... 3
ENGL 120: Literature and Film ................................................. 3
ENGL 315: Mythology ............................................................. 3
ENGL 320: Literature and Film ................................................. 3

Philosophy
PHIL 103: Introduction to Philosophy ........................................ 3
PHIL 105: Ethics ................................................................. 3
PHIL 112: Biomedical Ethics .................................................... 3
PHIL 113: Business Ethics ....................................................... 3
PHIL 114: Environmental Ethics ............................................... 3
PHIL 207: Critical Thinking .................................................... 3
PHIL 208: Logic ................................................................. 3
PHIL 231: World Religions ..................................................... 3
Total General Education Requirement hours (47-53
hours)

*For specific courses see general education degree
requirements, General Education Requirements for
Students Preparing to Teach Secondary School.

Education and Psychology Requirements*
(32 hours)

PSYCH 263: Developmental Psychology ...................... 3
EDUC 261: Explorations in Education ............................ 3
PSYCH 357: Educational Psychology ............................ 3
SPED 510: Overview of Special Education .................. 3
EDUC 520: Methods and Materials for Academic Literacy 3
TE 579: Supervised Student Teaching and Follow-Up of
Teachers ........................................................................... 2

  • Professional Semester (including TE 579) (17
  hours)

*See Admission to Professional Semester for
professional education grade point requirements.

Must be admitted to Teacher Education to enroll in
PSYCH 357 and EDUC 520.

Technology and Engineering Education

Core (32 hours)

GT 130: Applications in STEM ................................. 3
GT 191: Foundations of Technology and Engineering .... 2
GT 300: Engineering Design and Problem Solving ....... 3
GT 310: Contextual Topics in Technology and Engineering 3
GT 320: Communication Systems in Technology ......... 3
GT 330: Engineering Materials and Processes ............... 3
GT 340: Power/Energy/Transportation Systems .......... 3
GT 360: Computer Aided Drafting ............................. 3
GT 370: Construction Systems Technology ................. 3
GT 380: Manufacturing Enterprise ......................... 3
GT 390: Automated Systems ................................. 3

Technology and Engineering Education

Professional Core (11 hours)

TE 420: Professional Development 1 ......................... 2
TE 421: Professional Development 2 ......................... 2
TE 479: Teaching Techniques for Technology and Engineering Education .......... 3
TE 496: Organization and Management for Technology and Engineering Education ........................................ 3
TE 551: Integrated Technology for Educators ............. 3
TE 679: Senior Assessment in Technology and Engineering Education ........................................ 1

Total hours required for degree (124 hours)*

GT 350 and TE 551: 3 hours not included in core total; 3
hours of GT 350 or TE 551 can be taken as General
Education requirement.

Must be admitted to Teacher Education to enroll in TE
479.

Bachelor of Science in Career and
Technical Education

The Bachelor of Science in Career and Technical Educa-
tion degree curriculum is organized with two emphases
which are designed to meet the needs of persons with
different work experience backgrounds.

*Electives may be needed to meet 124 hour
requirement.

Students planning to teach should become familiar with
the current Regulations for Certifying School Personnel,
issued by The State Board of Education. Information
concerning these regulations may be obtained from the
Director of Teacher Education, 110 Hughes Hall,
Pittsburg State University.

Second Teaching Option

For students who major in other teaching areas, this
option can open additional teaching positions. Students
successfully completing this second teaching option can
receive a teaching license for General Technology
Education (typically middle school and entry-level high
school technology courses). Interested teaching
candidates should contact the chairperson of the
Department of Technology and Workforce Learning, or
the Certification Specialist in the College of Education,
Room 110 Hughes Hall, for specific requirements.

Course for Second Teaching Option (31
hours)

GT 300: Engineering Design and Problem Solving .......... 3
GT 320: Communication Systems in Technology ........... 3
GT 330: Engineering Materials and Processes ............... 3
TE 331: Overview of Technology and Engineering in STEM Education ...................................................... 3
GT 340: Power/Energy/Transportation Systems ............. 3
GT 350: Technology and Civilization ........................ 3
GT 370: Construction Systems Technology .................. 3
GT 380: Manufacturing Enterprise ............................. 3
TE 479: Teaching Techniques for Technology and Engineering Education ........................................ 3
TE 496: Organization and Management for Technology and Engineering Education ........................................ 3
TE 551: Integrated Technology for Educators ............. 3
TE 679: Senior Assessment in Technology and Engineering Education ........................................ 1

GT 350 and TE 551: 3 hours not included in core total; 3
hours of GT 350 or TE 551 can be taken as General
Education requirement.

Must be admitted to Teacher Education to enroll in TE
479.
Private Sector Teaching Emphasis of the curriculum is designed for persons who have completed a career and technical education program in an accredited public sector institution who have less than two years of work experience above the learner's level in one of the industrial or technical occupations taught in Kansas.

Public Sector Teaching Emphasis of the curriculum is designed to provide specialized teacher education for persons teaching or preparing to teach in trade and industrial and technical programs.

Credit of up to 24 semester hours is granted on an individual basis in the two options based on occupational competency.

Baccalaureate Degree Requirements for Private Sector Teaching Emphasis

General Education Requirements for students preparing to teach in a private sector setting

Basic Skills (12-13 hours)
COMM 207: Speech Communication ........................................... 3
ENGL 101: English Composition ................................................... 3
ENGL 190: Honors English Composition ................................. 3
or ENGL 299: Introduction to Research Writing ...................... 3

Mathematics (select one) (3-4 hours)
MATH 110: College Algebra with Review ............................... 5
MATH 113: College Algebra ......................................................... 3
MATH 126: Pre-Calculus ......................................................... 4
MATH 133: Quantitative Reasoning ........................................ 3
MATH 143: Elementary Statistics ........................................... 3

Mathematics Electives (select one) (3-4 hours)
MATH 114: College Algebra ......................................................... 3
MATH 126: Pre-Calculus ......................................................... 4
MATH 133: Quantitative Reasoning ........................................ 3
MATH 143: Elementary Statistics ........................................... 3

General Education Electives (34-39 hours)

Sciences (8-9 hours)

Natural Sciences (Select one)
BIOL 111: General Biology ......................................................... 3
and BIOL 112: General Biology Laboratory .......................... 2
BIOL 113: Environmental Life Science .................................. 4
BIOL 211: Principles of Biology I ............................................. 4

Physical Sciences (Select one)
CHEM 105: Introductory Chemistry ........................................ 3
and CHEM 106: Introductory Chemistry Laboratory ............. 1
CHEM 107: Chemistry for the Life Sciences ......................... 3
and CHEM 108: Chemistry for the Life Sciences Laboratory .... 1
PHYS 160: Physical Geology ..................................................... 3

and CHEM 165: Physical Geology Laboratory ......................... 1
PHYS 166: Meteorology .......................................................... 3
and PHYS 167: Meteorology Laboratory ................................... 1
PHYS 171: Physical Science ..................................................... 3
and PHYS 172: Physical Science Laboratory .......................... 1
PHYS 175: Descriptive Astronomy ......................................... 3
and PHYS 176: Astronomy Laboratory ................................... 1
PHYS 375: Solar System Astronomy ........................................ 3
and PHYS 176: Astronomy Laboratory ................................... 1

Social Studies (Select one) (3 hours)
SOC 100: Introduction to Sociology ....................................... 3
WGS 200: Introduction to Women's Studies ......................... 3

Political Studies (Select one) (3 hours)
POLS 101: U.S. Politics ............................................................. 3
POLS 103: Comparative Political Institutions ....................... 3

Producing and Consuming (Select one from two of the following three categories) (5-6 hours)

Economy
ECON 191: Issues in Today's Economy ................................ 3
FCS 230: Consumer Education and Personal Finance .......... 3

Technology
EET 247: Computer Programming for Electronic Systems .... 3
GT 190: Introduction to Technological Systems .................... 2
GT 350: Technology and Civilization ................................... 3
TM 350: Societal Influence of Technology ............................... 3
TE 551: Integrated Technology for Educators ..................... 3

Business
ACCTG 201: Financial Accounting ......................................... 3
CIS 130: Computer Information Systems ............................ 3
MGT 101: Introduction to Business ....................................... 3
MGT 105: Introduction to Entrepreneurship ......................... 3

Fine Arts and Aesthetic Studies (select one) (2-3 hours)
ART 155: Printmaking and Paper Arts ................................. 3
ART 178: Introduction to the Visual Arts ............................. 3
ART 188: The Designed World ............................................... 3
ART 217: Crafts I ................................................................. 3
ART 222: Jewelry Design I ...................................................... 3
ART 233: Drawing I .............................................................. 3
ART 244: Ceramics I .............................................................. 3
ART 266: Sculpture I ............................................................. 3
ART 277: Painting I .............................................................. 3
ART 288: Introduction to Art History I ................................. 3
ART 289: Introduction to Art History II ............................... 3
ART 311: Art Education ......................................................... 3
ART 351: Printmaking, Papermaking, Bookarts and the Letterpress ................................................... 3
ART 430: Automotive: Art and Design .............................. 3
COMM 105: Performance Appreciation ............................. 3
COMM 205: Performance Studies ......................................... 3

353
COMM 295: Theatre History (___) ...................................................... 3
ENGL 250: Introduction to Creative Writing .................................... 3
HHP 151: Dance Appreciation ....................................................... 3
MUSIC 120: Music Appreciation (____) ......................................... 3
MUSIC 121: Introduction to Music Literature ............................. 2

Cultural Studies (Select one) (3 hours)
ANTH 101: Introduction to Cultural Anthropology ....................... 3
MLL 114: Chinese Language and Culture I .................................. 3
MLL 124: French Language and Culture I .................................. 3
MLL 154: Spanish Language and Culture I .................................. 3
MLL 184: Russian Language and Culture I .................................. 3
MLL 194: Korean Language and Culture I .................................. 3
GEOG 106: World Regional Geography ...................................... 3
GEOG 300: Elements of Geography ............................................ 3
GEOG 304: Human Geography .................................................. 3
WGS 399: Global Women's Issues .............................................. 3

Health and Well Being (4-6 hours)

Psychological
PSYCH 155: General Psychology ............................................... 3

Physical (Select one)
FCS 203: Nutrition and Health .................................................. 3
FCS 301: Nutrition ................................................................. 3
HHP 150: Lifetime Fitness Concepts ......................................... 1
NURS 303: Introduction to Public Health .................................... 3

Human Heritage (Select one from two of the following three categories) (6 hours)

History
HIST 101: World History to 1500 .............................................. 3
HIST 102: World History from 1500 ......................................... 3
HIST 201: American History to 1865 ....................................... 3
HIST 202: American History from 1865 ................................... 3

Literature
ENGL 113: General Literature ................................................... 3
ENGL 114: General Literature (Genre) ....................................... 3
ENGL 116: General Literature (Theme) ..................................... 3
ENGL 120: Literature and Film .................................................. 3
ENGL 315: Mythology .............................................................. 3
ENGL 320: Literature and Film .................................................. 3

Philosophy
PHIL 103: Introduction to Philosophy ....................................... 3
PHIL 105: Ethics ................................................................. 3
PHIL 112: Biomedical Ethics .................................................... 3
PHIL 113: Business Ethics ...................................................... 3
PHIL 114: Environmental Ethics .............................................. 3
PHIL 207: Critical Thinking ..................................................... 3
PHIL 208: Logic ................................................................. 3
PHIL 231: World Religions ...................................................... 3

Career and Technical Education Major for Private Sector Teaching Emphasis (30 hours)
Selected from the following courses

ET 299: Cooperative Industrial Training (Electrical Internship) ........... 6
TM 390: Trade and Job Analysis ............................................... 3
TTED 391: Student Assessment Development in Career and Technical Education ...................................................... 3
EST 393: Introduction to Industrial Safety .................................... 3
TTED 395: Task Analysis for Technical Teachers ......................... 1
EST 396: Introduction to Construction Safety ................................ 3
TTED 396: Curriculum Usage in Technical Education .................... 2
TTED 445: Development of a Unit Study Guide ......................... 3
TTED 479: Techniques for Teaching Career and Technical Education ...................................................... 3
TM 606: Industrial Supervision .................................................. 3
TTED 619: Planning Shop Layout for Career and Technical Education ...................................................... 3
TTED 695: Using Technology as an Instructional Tool .................... 2
TTED 698: Leadership and Professionalism in Career and Technical Education ...................................................... 3
TTED 780: Classroom Management in Career and Technical Education ...................................................... 3

TM 390, TTED 391, TTED 445 and TTED 479 are required of all majors.

Area of Support Requirements for Private Sector Teaching Emphasis (21 hours)

Requires study in no more than two departments outside the major selection of courses, as this area should give consideration to study that supports a student’s professional development objectives. Examples of outside departments are Chemistry, Computer Information Systems, Military Science, Psychology and Counseling, and Technology and Workforce Learning.

Technical Elective Requirements for Private Sector Teaching Emphasis (24 hours)

Technical electives may total 24 hours of technical courses that are directly related to the student’s career objective. (Maximum transfer credit of 24 hours in this area)

General Electives (0-3 hours)

Total minimum hours required (124 hours)
Baccalaureate Degree Requirements for Public Sector Teaching Emphasis

General Education Requirements for students preparing to teach in a private sector setting

Communication (9 hours)
- English Composition (6 hours)
- Speech Communication (3 hours)

Social and Behavioral Science (6 hours)
- Economics, geography, political science, psychology, sociology

Mathematics and Science (6 hours)
- Biology, chemistry, mathematics, physics (MATH 017 Elementary Algebra, MATH 019 Intermediate Algebra, or two hours of MATH 110 College Algebra with Review are not accepted for the mathematics and science area of concentration.)

Humanities (6 hours)
- Art, foreign language, history, literature, music, philosophy, theatre

Electives (16 hours)
- To be selected from any course taken outside the College of Technology.

Total (43 hours)

Career and Technical Education Major for Public Sector Teaching Emphasis (45 hours)
Selected from the following courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTED 193</td>
<td>Workshop for Beginning Career and Technical</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education Teachers</td>
<td></td>
</tr>
<tr>
<td>TTED 201</td>
<td>Occupational Work Experience</td>
<td>3-12</td>
</tr>
<tr>
<td>TTED 306</td>
<td>Laboratory and Shop Safety</td>
<td>3</td>
</tr>
<tr>
<td>TM 390</td>
<td>Trade and Job Analysis</td>
<td>3</td>
</tr>
<tr>
<td>TTED 391</td>
<td>Student Assessment Development in Career and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Technical Education</td>
<td></td>
</tr>
<tr>
<td>EST 393</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>TTED 395</td>
<td>Task Analysis for Technical Teachers</td>
<td>1</td>
</tr>
<tr>
<td>EST 396</td>
<td>Introduction to Construction Safety</td>
<td>3</td>
</tr>
<tr>
<td>TTED 396</td>
<td>Curriculum Usage in Technical Education</td>
<td>2</td>
</tr>
<tr>
<td>TTED 401</td>
<td>Occupational Work Experience</td>
<td>3-12</td>
</tr>
<tr>
<td>PSYCH 263</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 357</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>TTED 445</td>
<td>Development of a Unit Study Guide</td>
<td>3</td>
</tr>
<tr>
<td>TTED 479</td>
<td>Techniques for Teaching Career and Technical</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>TTED 479</td>
<td>Identification and Instruction of Students with</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Special Needs</td>
<td></td>
</tr>
<tr>
<td>TTED 608</td>
<td>Components of Work-based Learning in Career and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Technical Education</td>
<td></td>
</tr>
<tr>
<td>TTED 610</td>
<td>Seminar (___)</td>
<td>1-6</td>
</tr>
<tr>
<td>TTED 619</td>
<td>Planning Shop Layout for Career and Technical</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>TTED 691</td>
<td>Overview of Special Education</td>
<td>3</td>
</tr>
<tr>
<td>TTED 694</td>
<td>Foundations of Career and Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>TTED 695</td>
<td>Using Technology as an Instructional Tool</td>
<td>2</td>
</tr>
<tr>
<td>TTED 697</td>
<td>Leadership and Professionalism in Career and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Technical Education</td>
<td></td>
</tr>
<tr>
<td>TTED 619</td>
<td>Planning Shop Layout for Career and Technical</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>TTED 780</td>
<td>Classroom Management in Career and Technical</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>TTED 401</td>
<td>Occupational Work Experience</td>
<td>3-12</td>
</tr>
</tbody>
</table>

TTED 201 Occupational Work Experience and TTED 401 Occupational Work Experience must both be taken for 12 hours each.

TTED 201, TTED 401, TTED 694, and TTED 697 or SPED 510 are required of all majors.

Professional Education and Support Requirements for Public Sector Teaching Emphasis (14 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 263</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 357</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>TTED 479</td>
<td>Techniques for Teaching Career and Technical</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>TTED 483</td>
<td>Teaching Internship</td>
<td>3-6</td>
</tr>
</tbody>
</table>

Electives (22 hours)

Total (124 hours)

@On December 18, 1989 the Faculty Senate adopted the General Education Committee's recommendation to grant an exception from the general education requirements as stated in this current catalog for the Bachelor of Science in Career and Technical Education degree candidates and permit these students to meet the requirements for graduation by meeting the general education requirements listed in the 1984-86 Pittsburg State University Catalog, on page 31, with an additional 16 hours of general education electives. Students enrolled as on-campus students are required to meet the current University Catalog general education requirements. This policy was reaffirmed by the General Education Committee on October 15, 2004, and the Faculty Senate on November 22, 2004.
Credit for Work Experience

A maximum of twenty-four semester hours of work experience credit may be granted to qualified students working toward meeting requirements for the Bachelor of Science in Career and Technical Education degree. Applicants are expected to meet the minimum work experience time for industrial, technical, or health occupation teachers established by the Division of Community Colleges and Vocational Education as specified in the Kansas State Teacher Certification Standards. Two years of experience above the learning level are required. One year of the experience is to be full-time, continuous work.

Applicants who hold a license or certificate will not be required to take the written or skill sections of the examination, but will take the classification test and oral interview. University credit is granted by enrolling in the work experience courses TTED 201 and TTED 401 Occupational Work Experience for a total of twenty-four semester hours. The following procedure should be followed by persons desiring to qualify for vocational, industrial or technical certification and to become eligible for university credit:

1. Make application for the Competency Examination with the Area Test Center Coordinator, Department of Technology and Workforce Learning, Pittsburg State University, Pittsburg, Kansas 66762.

2. Complete the examination form with documented record of work experience.

3. Schedule examinations and pay required fee.

4. Satisfactorily complete the following examinations with a grade of "C" or better.
   a. A written examination relating to information of the occupation.
   b. A performance examination in the skill area.

5. Persons who pass the examination may enroll in the courses TTED 201 and TTED 401 Occupational Work Experience. Persons who have completed a baccalaureate degree may not enroll for work experience credit.

Skill Competency Examinations are scheduled on demand.

Minor in Human Resource Development

No matter what your major—psychology, business, communications, social services, education or political science—choosing a Human Resource Development minor is a great way to accentuate your education. Focusing on human resources can give you career skills vital to working with, developing and leading individuals and teams. In today's business world, both public and private organizations are increasing their emphasis on employee education, learning and performance. Many professional and technical jobs now include the responsibilities of orienting new employees and cross-training others within their department.

The minor requires satisfactory completion of 21 semester hours of college work chosen from the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM 390</td>
<td>Trade and Job Analysis</td>
<td>3</td>
</tr>
<tr>
<td>TM 520</td>
<td>Leadership in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>HRD 575</td>
<td>Instructional Media in Human Resource Development</td>
<td>3</td>
</tr>
<tr>
<td>HRD 596</td>
<td>Introduction to Human Resource Development</td>
<td>3</td>
</tr>
<tr>
<td>HRD 597</td>
<td>Organizational Staffing</td>
<td>3</td>
</tr>
<tr>
<td>HRD 598</td>
<td>Talent Management</td>
<td>3</td>
</tr>
<tr>
<td>TM 606</td>
<td>Industrial Supervision</td>
<td>3</td>
</tr>
<tr>
<td>HRD 630</td>
<td>Employee and Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>TM 653</td>
<td>Workforce Preparation</td>
<td>3</td>
</tr>
<tr>
<td>TM 679</td>
<td>Presentation Skills</td>
<td>3</td>
</tr>
</tbody>
</table>

Minor in Industrial Management and Supervision

The industrial management and supervision minor is available to all majors interested in enhancing their degree with skills in supervision and performance improvement. Employees with these basic skills will have a much greater opportunity for advancement in their chosen career field. The minor is comprised of a minimum of 21 semester hours including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 326</td>
<td>Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>MGT 330</td>
<td>Management and Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>EST 393</td>
<td>Introduction to Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>TM 501</td>
<td>Work Measurement and Efficiency Methods</td>
<td>3</td>
</tr>
<tr>
<td>TM 520</td>
<td>Leadership in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>HRD 596</td>
<td>Introduction to Human Resource Development</td>
<td>3</td>
</tr>
<tr>
<td>TM 606</td>
<td>Industrial Supervision</td>
<td>3</td>
</tr>
</tbody>
</table>

Minor in Technology Education (Non-Teaching)

A minor in technology education provides an understanding of industrial materials and processes which could prove beneficial to business, management, communications, and other majors.
Courses for Technology Education (Non-Teaching) Minor (24 hours)

GT 300: Engineering Design and Problem Solving .............................. 3
GT 320: Communication Systems in Technology .............................. 3
GT 330: Engineering Materials and Processes .................................. 3
GT 340: Power/Energy/Transportation Systems .............................. 3
GT 350: Technology and Civilization .............................................. 3
GT 370: Construction Systems Technology ...................................... 3
GT 380: Manufacturing Enterprises .................................................. 3
TE 331: Overview of Technology and Engineering in STEM
  Education ......................................................................................... 3

Minor in Technological Literacy

The minor in Technological Literacy is available to all appropriate majors. The minor combines Educational Technology courses with Technology and Engineering Education courses to provide a comprehensive approach to the practical use and implementation of computer skills, design and problem solving skills and teaming concepts into real world practices and experiences.

Required Courses (19 hours)

TE 301: STEM Experiences for Elementary Education ...................... 1
EDTH 330: Technology for the Classroom ........................................ 3
TE 331: Overview of Technology and Engineering in STEM
  Education ......................................................................................... 3
EDUC 345: Topics in (__) ................................................................. 1-3
TE 403: Current Topics in Technology Education (__) .................... 1-3
TE 551: Integrated Technology for Educators .................................. 3
EDTH 551: Instructional Technology for Educators .......................... 3

EDUC 345 Topics in Education the topic should be STEM
  Integration. TE 403 Current Topics in Technology
  Education the topic should be STEM Delivery
  Techniques.

Minor in Wood Technology

The minor consists of a minimum of 24 semester hours in one technical field.

Wood Technology Minor

WT 182: Wood Science .................................................................... 3
WT 185: Fundamentals of Wood Technology ................................... 3
WT 226: CAD for Wood Product Development .............................. 3
or GT 360: Computer Aided Drafting ............................................ 3
WT 282: Machine Woodworking ..................................................... 3
WT 301: Finishing ............................................................................ 3
WT 333: Tool Technology ............................................................... 3
WT 525: Cabinets and Fixtures ....................................................... 3-5

Select one course (3 hours) from the following

WT 383: Computer-Aided Manufacturing in Wood Technology ....... 3
WT 412: Overlay and Laminate Materials ........................................ 3

TECHNOLOGY AND WORKFORCE LEARNING

Technical Teacher Certificate

Specifically for those individuals who are obtaining coursework with the Technical Teacher Education unit for the purpose of certification within the states of Kansas, Oklahoma and Missouri.

TTED 308: Laboratory and Shop Safety ............................................ 3
TTED 391: Student Assessment Development in Vocational/Technical
  Education ......................................................................................... 3
TTED 395: Task Analysis for Technical Teachers ............................ 1
TTED 396: Curriculum Usage in Technical Education .................... 2
TTED 479: Techniques for Teaching Vocational-Technical
  Education ......................................................................................... 3
TTED 694: Foundations of Vocational/Technical Education ............ 3
TTED 695: Using Technology as an Instructional Tool .................... 2
TTED 697: Identification and Instruction of Students with Special Needs ........................................................................ 3
TTED 698: Leadership and Professionalism in Career and Technical
  Education ......................................................................................... 3
TTED 731: Adult Learners ............................................................... 3
TTED 780: Classroom Management in Career and Technical
  Education ......................................................................................... 3

Master of Science Degree with a Major in Career and Technical Education

Emphases: Family and Consumer Sciences
  College Teaching
  Technology Education
  Technical Teacher Education

The Departments of Technology and Workforce Learning and Family and Consumer Sciences offer an interdisciplinary Master of Science degree with a Major in Career and Technical Education that provides emphases in Family and Consumer Sciences, College Teaching, Technology Education, and Technical Teacher Education. The program provides a core of research, philosophy, and teacher preparation courses, and specializations in emphasis areas applicable to their specific career goals—teaching in public schools, colleges, business and industry, supervision, curriculum and instruction and/or research. Description of each emphasis area follows.

Family and Consumer Sciences Emphasis is for graduates with a degree in Family and Consumer Sciences Teacher Education that want to complete a graduate degree. For Option I (Thesis), candidates complete 14-15 credit hours of core courses; 6 hours of thesis; and select 9-10 credit hours of advanced course work in the discipline for a total of 30 credit hours. Students pursuing Option III (Course Work), complete 14-15 credit hours of core courses; 6 hours of Option III
courses; and select 11-12 credit hours of courses to total at least 32 credit hours.

**College Teaching Emphasis** is designed to prepare individuals interested in teaching career and technical courses (e.g., interior design, graphics, automotive, construction, etc.) at the community college or four-year university. However, it does not certify someone to teach these subjects as part of a non-vocational program at the secondary level, because it does not require teacher education certification as a condition of entrance. This emphasis requires a minimum total of 32 hours in graduate core courses; teacher preparation courses and practicum experiences in college teaching; and additional career and technical courses selected in consultation with the candidate’s advisor. Only Option III may be pursued.

**Technology Education Emphasis.** Candidates for this degree typically have a Bachelor of Science degree with an undergraduate major in Technology Education, Industrial Arts or Industrial Education from an accredited institution. This emphasis provides the candidate with maximum flexibility in pursuing career goals related to Technology Education, such as certification, research, curriculum and instruction, administration, and technical specialization leading to vocational certification. For Option I (Thesis), candidates complete 14-15 credit hours of core courses; 6 hours of thesis; and select 9-10 credit hours of advanced course work in the discipline for a minimum total of 30 credit hours. Students pursuing Option III (Course Work) complete 14-15 credit hours of core courses; 6 hours of Option III courses; and select 11-12 credit hours of courses applicable to their specific career goals to total a minimum of 32 credit hours.

Students desiring to teach Technology Education in the public schools may choose to develop a program leading to Technology Education (General) certification and licensing to teach in middle schools and high schools (grades 6-12). This program may require additional education, psychology, and technical foundation courses, depending on undergraduate preparation.

**Technical Teacher Education Emphasis.** The graduate program is for candidates that have already completed Technical Teacher Education certification or another bachelor degree. It also provides certification opportunity for persons interested in qualifying for teaching in health occupations, business, family and consumer sciences, and other career and technical fields in career and technical approved high school and post-secondary programs—technical colleges, community colleges, universities, business and industry. Persons who hold the baccalaureate degree in allied health, agriculture, business, data processing, engineering, nursing, technology or related professional and technical areas may meet teacher certification and degree requirements by completing the degree. Candidates seeking certification are required to have completed two years of work experience in their profession, and may be required to take foundation courses that may exceed the minimum 32 credit hours associated with Option III.

The emphasis also provides a high degree of flexibility for certified career and technical education teachers pursuing goals related to Technical Teacher Education, such as: research, curriculum and instruction, as well as opportunities to gain additional technical expertise in a specialized area or broadening one’s scope of technical knowledge. For Option I (Thesis), candidates complete 14-15 credit hours of core courses; 6 hours of thesis; and select 9-10 credit hours of advanced course work in the discipline for a minimum total of 30 credit hours. Students pursuing Option III (Course Work), complete 14-15 credit hours of core courses; 6 hours of Option III courses; and select 11-12 credit hours of courses to total at least 32 credit hours.

All graduate students pursuing the Master of Science with a Major in Career and Technical Education are required to take a comprehensive examination over the major departmental course work of study. The Master of Science with a Major in Career and Technical Education program consists of the following course work:

**Required Core Courses (14-15 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTED 695</td>
<td>Using Technology as an Instructional Tool</td>
<td>2</td>
</tr>
<tr>
<td>or TE 756</td>
<td>Communication Systems Technology</td>
<td>3</td>
</tr>
<tr>
<td>or TE 864</td>
<td>Topics in Communication Technology (____)</td>
<td>3</td>
</tr>
<tr>
<td>TTED 779</td>
<td>Instructional Methods in Career and Technical Education</td>
<td></td>
</tr>
<tr>
<td>or TE 882</td>
<td>Instructional Strategies for Technology Education</td>
<td>3</td>
</tr>
<tr>
<td>TTED 887</td>
<td>Data Analysis and Interpretation in Technology</td>
<td>3</td>
</tr>
<tr>
<td>or TCHL 824</td>
<td>Educational Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>TTED 891</td>
<td>Methods of Research</td>
<td></td>
</tr>
<tr>
<td>or TTED 894</td>
<td>Fundamental Principles of Career and Technical Education</td>
<td>3</td>
</tr>
<tr>
<td>or TE 850</td>
<td>Contemporary Developments in Technology Education</td>
<td>3</td>
</tr>
</tbody>
</table>

TCHL 824 or approved statistics course

TCHL 891 or approved research course
Program Options (6 hours)

Option I (Thesis)

- Thesis (6 hours)

Option III (Course Work)

TE 807: Problem Solving and Creative Thinking ........................................ 3
or TE 806: Studies in Technology Education (____) ............................... 1-3
- Elective approved by advisor (3 hours)

TE 806 Studies in Technology Education (high interest current topics) and must be taken for three hours.

Program Emphasis

Select one of the following four emphases areas:

Emphasis A. Family and Consumer Sciences (9-12 hours)

TE 851: Integrated Technology for Educators ................................. 3
FCS 740: Special Topics: (____) ............................... 1-4

Select 3-6 credit hours from the following

FCS 581: Aging and the Family ......................................................... 3
FCS 730: Independent Study (____)................................................ 1-3
FCS 771: Directed Readings in Family and Consumer Sciences ................................. 1-3
FCS 780: Family Violence and Child Abuse ........................................ 3
FCS 792: Advanced Exploration of Issues in Youth and Adolescence ....... 3
TTED 893: Student Assessment Development in Career and Technical Education .. 3

FCS 740 Special Topics must be taken for 3 hours.

Emphasis B. College Teaching* (11-12 hours)

TE 881: Orientation to College Teaching ........................................... 3
TE 892: College Teaching Internship ................................................. 3
TCHL 882: College Teaching Internship ........................................... 3

Select 5-6 credit hours from the following

- Education-related or Family and Consumer Sciences courses as approved by Family and Consumer Sciences advisor, or
- Education or technical courses as approved by Technology Education or Technical Teacher Education advisor

FCS 740 Special Topics must be taken for 3 hours.

Emphasis C. Technology Education# (9-12 hours)

Select 9 credit hours from the following

GRT 750: Technology and Society ................................................. 3
TE 753: Special Topics in Technology Education (____) ............. 1-3
TE 806: Studies in Technology Education (____) ..................... 1-3
TE 840: Production Technology: Construction (____) ....................... 3
TE 841: Production Technology: Manufacturing (____) ................. 3
TE 881: Integrated Technology for Educators ................................. 3
TE 862: Topics in Power/Energy/Transportation Systems Technology (____) ......................................................... 3
TE 893: Seminar in Technology Education (____) ......................... 1-3

Select 2-3 credit hours of electives as approved by Technical Education advisor for Option III

FCS 740 Special Topics must be taken for 3 hours.

Emphasis D. Technical Teacher Education# (9-12 hours)

Select 9-10 credit hours from the following

TTED 698: Leadership and Professionalism in Career and Technical Education ................................................. 3
TTED 780: Classroom Management in Career and Technical Education ......................................................... 3
TTED 805: Special Problems (____) .................................................... 1-3
TTED 808: Work-based Learning in Career and Technical Education ................................................. 3
TTED 810: Seminar (____) ......................................................... 1-6
TTED 845: Instructional System Design and Curriculum Development ................................................. 3
TTED 893: Student Assessment Development in Career and Technical Education ......................................................... 3
TTED 897: Teaching Special Career and Technical Education Students ................................................. 3

Select 2-3 credit hours of electives as approved by Technical Education advisor for Option III

FCS 740 Special Topics must be taken for 3 hours.

Option I Total Minimum Required Hours (30 hours)

Option III Total Minimum Required Hours (32 hours)

* Option I is NOT available for Emphasis B, College Teaching; only Option III is available.
Option I Thesis (30 hours)

Foundation Courses/Requirements
MATH 143: Elementary Statistics ......................................................... 3

- or equivalent

The number of credits required depends upon the background of each individual candidate. This degree requires an undergraduate degree or minor or minimum of 15 credit hours in a specific technology or engineering subject area. Advisor will assign technology foundation courses if this requirement is not met.

Core Courses

Required (15 hours)

Research (Select one) (3 hours)
GRT 891: Research Methods in Technology ........................................... 3
TTED 891: Methods of Research ......................................................... 3
HRD 891: Methods of Research ......................................................... 3

Statistical Measures (Select one) (3 hours)
GRT 887: Statistical Applications in Technology Research ...................... 3
TTED 887: Data Analysis and Interpretation in Technology ..................... 3
ETECH 899: Quantitative Decision Making in Industry ......................... 3

Quality (Select one) (3 hours)
ETECH 804: Quality: Management and Control .................................... 3
MGT 520: Quality Management ......................................................... 3

Global Issues (Select one) (3 hours)
GRT 801: Interdisciplinary Perspectives in Technology ........................... 3
GRT 750: Technology and Society ....................................................... 3

Leadership
HRD 804: Fundamentals of Front Line Supervision ............................... 3

Thesis (6 hours)
GRT 890: Research and Thesis ......................................................... 3-6

Emphasis/Electives Areas (9 hours)

- See advisor for Emphasis/Electives Area course listings

# Note: Candidates seeking certification for teaching Technology Education in the public schools (Emphasis C) or Career and Technical Education Certification (Emphasis D) will be required to take additional foundation courses in education, psychology, and/or technical courses beyond the 32 hours required for the Master of Science in Career and Technical Education degree. Candidates’ undergrad preparation varies; therefore an advisor should be consulted to determine additional requirements.

Master of Science Degree with a Major in Technology

The Master of Science degree with a major in technology provides advanced instruction in technical, scientific, managerial and supervisory areas for those working in technical and management positions in business and industry. Graduate faculty members for the program are from the Department of Engineering Technology, the Department of Graphics and Imaging Technologies, and the Department of Technology and Workforce Learning.

Candidates for this degree must meet the requirements for Option I or Option II as described Graduate Degrees and Options of this catalog. The degree requires completion of 9 to 12 credit hours of emphasis area/elective courses (depending on Option I or Option II) and 21 credit hours of core courses. Other aspects of the curriculum are determined by individual needs in consultation with the student’s advisor. Areas of interest in which the student may gain additional strength include product design and development, manufacturing and production, sales and distribution, maintenance and service, or a technical area within the curricula of the Department of Engineering Technology, the Department of Graphics and Imaging Technologies, and/or the Department of Technology and Workforce Learning.

Admission to the graduate program requires an undergraduate major in technology or equivalent. Students with degrees in business, industrial education, the sciences, engineering, and other areas are considered for admission. However, transcripts are evaluated and certain foundation courses may be required to be completed as prerequisites to the core courses.
Automotive Technology Emphasis:

Select 9 hours from the following for emphasis:
AT 879: Emerging and Future Power Systems in the Transportation Industry .................................................. 3
AT 890: Transportation Industry Service Management and Product Support .................................................. 3
AT 795: Special Topics in Automotive Technology (___) .................................................. 1-3

- Approved Automotive elective courses (3 to 9 hours)

Construction Management Emphasis:

Select 9 hours from the following for emphasis:
CMCET 833: Estimating and Bidding Strategy .................................................. 3
CMCET 834: Advanced Construction Management .................................................. 3
CMCET 836: Virtual Design and Construction (VDC) .................................................. 3

- Approved Construction elective courses (3 to 9 hours)

Graphics Design Emphasis:

Select 9 hours from the following for emphasis:
GIT 810: Special Topics (___) .................................................. 1-3
GIT 890: Graphic Arts Seminar (___) .................................................. 1-6

- Approved Graphics Design elective courses (3 to 9 hours)

Graphics Management Emphasis:

Select 9 hours from the following for emphasis
GIT 810: Special Topics (___) .................................................. 1-3
GIT 880: Graphics Administration .................................................. 3
GIT 890: Graphic Arts Seminar (___) .................................................. 1-6

- Approved Graphics Management elective courses (3 to 9 hours)

Information Technology Emphasis:

Select 9 hours from the following for emphasis:
CIS 615: Database Management .................................................. 3

- Approved elective courses in data analytics or related computer studies (3 to 9 hours)

Innovation Engineering Emphasis:

Select 9 hours from the following for emphasis:
IE 780: Innovation Engineering: Creating Ideas .................................................. 3
IE 790: Innovation Engineering: Communicating Ideas .................................................. 3
IE 880: Innovation Engineering: Commercializing the Idea .................................................. 3
IE 890: Innovation Engineering: Using the System to Make a Decision .................................................. 3

- Approved innovation-related elective courses (3 to 6 hours)

Personnel Development Emphasis:

Select 9 hours from the following for emphasis:
HRD 706: Personnel Development in Business and Industry .................................................. 3
HRD 780: Globalization of Human Resource Development .................................................. 3
HRD 790: Occupational Analysis .................................................. 3
HRD 753: Workforce Development .................................................. 3
HRD 852: Organizational Development and Change .................................................. 3

- Approved Technology Management elective courses (3 to 9 hours)

No Emphasis:

- Approved Graduate Technology elective courses (9 hours)
Option III Non-Thesis - Coursework (33-35 hours)

Foundation Courses/Requirements
MATH 143: Elementary Statistics ......................................................... 3

- or equivalent

The number of credits required depends upon the background of each individual candidate. This degree requires an undergraduate degree or minor or minimum of 15 credit hours in a specific technology or engineering subject area. Advisor will assign technology foundation courses if this requirement is not met.

Core Courses

Required (15 hours)

Research (Select one) (3 hours)
GRT 891: Research Methods in Technology ....................................... 3
TTED 891: Methods of Research ...................................................... 3
HRD 891: Methods of Research ......................................................... 3

Statistical Measures (Select one) (3 hours)
GRT 887: Statistical Applications in Technology Research .............. 3
TTED 887: Data Analysis and Interpretation in Technology ............ 3
ETECH 899: Quantitative Decision Making in Industry .................. 3

Quality (Select one) (3 hours)
ETECH 804: Quality: Management and Control ............................... 3
MGT 520: Quality Management ......................................................... 3

Global Issues (Select one) (3 hours)
GRT 750: Technology and Society ...................................................... 3
GRT 801: Interdisciplinary Perspectives in Technology .................... 3

Leadership
HRD 804: Fundamentals of Front Line Supervision ........................... 3

Enrichment Electives - Select any 8-9 hours from the following:

Product/Project Improvement
ETECH 831: Value Engineering .......................................................... 3
ETECH 899: Quantitative Decision Making in Industry .................. 3

Professional Development
HRD 856: Diversity in the Workplace ................................................... 3
HRD 879: Professional Presentations ..................................................... 3

Innovation and Creativity
TE 807: Problem Solving and Creative Thinking .............................. 3

Technical Specialization/Other Electives (3-9 hours)
Graduate candidacy-level courses from technical specialization area or special topics or other elective courses selected in consultation with advisor. A maximum of 6 hours of 500/600-level coursework may be applied to the MST degree.

Assessment
GRT 895: MST Graduate Review and Assessment ........................... 1

Emphasis/Electives Areas (9 hours)

- See advisor for Emphasis/Electives Area course listings

Automotive Technology Emphasis:

Select 9 hours from the following for emphasis:
AT 795: Special Topics in Automotive Technology (___) .................. 1-3
AT 879: Emerging and Future Power Systems in the Transportation Industry ......................................................... 3
AT 890: Transportation Industry Service Management and Product Support ................................................................. 3

- Approved Automotive elective courses (3 to 9 hours)

Construction Management Emphasis:

Select 9 hours from the following for emphasis:
CMCET 833: Estimating and Bidding Strategy .................................. 3
CMCET 834: Advanced Construction Management .......................... 3
CMCET 836: Virtual Design and Construction (VDC) ..................... 3

- Approved Construction elective courses (3 to 9 hours)

Graphics Design Emphasis:

Select 9 hours from the following for emphasis:
GIT 810: Special Topics (___) ............................................................... 1-3
GIT 890: Graphic Arts Seminar (___) ............................................... 1-6
• Approved Graphics Design elective courses (3 to 9 hours)

Graphics Management Emphasis:

Select 9 hours from the following for emphasis
GIT 810: Special Topics (___) .............................................................1-3
GIT 880: Graphics Administration .................................................. 3
GIT 890: Graphic Arts Seminar (___) ..............................................1-6

• Approved Graphics Management elective courses (3 to 9 hours)

Information Technology Emphasis:

Select 9 hours from the following for emphasis:
CIS 615: Database Management ..................................................... 3
CIS 640: Software Engineering ....................................................... 3
CIS 670: Information Assurance and Computer Security I ............... 3
CIS 671: Information Assurance and Computer Security II ............. 3
CIS 801: Topics: (___) ....................................................................1-3

• Approved elective courses in data analytics or related computer studies (3 to 9 hours)

Innovation Engineering Emphasis:
IE 780: Innovation Engineering: Creating Ideas ............................. 3
IE 790: Innovation Engineering: Communicating Ideas ................ 3
IE 880: Innovation Engineering: Commercializing the Idea .......... 3
IE 890: Innovation Engineering: Using the System to Make a Decision ...............................................................................3

Innovation in Technology Emphasis:

Select 9 hours from the following for emphasis:
TE 807: Problem Solving and Creative Thinking .......................... 3
GRT 790: Innovation in Technology Project ................................. 3

• Approved innovation-related elective courses (3 to 6 hours)

Personnel Development Emphasis:

Select 9 hours from the following for emphasis:
HRD 706: Personnel Development in Business and Industry .......... 3
HRD 753: Workforce Development .............................................. 3
HRD 780: Globalization of Human Resource Development .......... 3
HRD 790: Occupational Analysis .................................................. 3

HRD 852: Organizational Development and Change .................... 3

Technology Management Emphasis:

Select 9 hours from the following for emphasis:
GRT 888: Product Design and Management .................................. 3
ETECH 899: Quantitative Decision Making in Industry ............... 3
HRD 852: Organizational Development and Change .................... 3

• Approved Technology Management elective courses (3 to 9 hours)

No Emphasis:

• Approved Graduate Technology elective courses (9 hours)

Master of Science Degree with a Major in Human Resource Development

The Department of Technology and Workforce Learning offers courses leading to the Master of Science degree with a major in Human Resource Development. The program is nationally accredited by the Human Resource Development Accreditation Association. The curriculum is planned to provide graduate-level preparation for individuals involved in employee training, education and development, performance improvement, and organizational development in business, industry and private or public service organizations. Candidates must have an undergraduate degree in human resources, education, business, or a related area.

Candidates for the degree must meet requirements for either Option I, Option II or Option III as found on Graduate Degrees and Options of this catalog. A minimum of 18 semester hours must be completed in 800-level courses and 29 hours in courses numbered from 700-899. A maximum of six semester hours may be approved in 500 and 600-level courses. Candidates under Options II and III are required to satisfactorily pass comprehensive examinations. Candidates under Option I must satisfactorily defend a thesis.

Emphasis 1 is designed for individuals interested in Human Resource Development management or consulting. Emphasis 2 is for individuals interested in Human Resource Development program development and delivery. The candidate’s program of study will be developed based upon their education and work
experience as well as their present and future career goals.

Core Courses (16 hours)

HRD 716: Behavior Analysis for HRD Professionals .............................. 3
HRD 753: Workforce Development ...................................................... 3
HRD 796: HRD Foundations and Applications ..................................... 3
HRD 850: Graduate Study in Human Resource Development ............... 1
HRD 852: Organizational Development and Change ......................... 3
HRD 899: Planning and Implementing a Human Resource Development Program ......................................................... 3

Elective may be substituted for HRD 796 HRD Foundations and Applications if HRD 596 Introduction to Human Resource Development is taken earlier.

Emphasis Courses (12 hours)

HRD 706: Personnel Development in Business and Industry ................ 3
HRD 804: Fundamentals of Front Line Supervision ............................. 3
HRD 845: Designing HRD Interventions ............................................ 3
HRD 879: Professional Presentations .................................................. 3

Emphasis 2: Human Resource Development Program Development and Delivery
HRD 775: Instructional Technology .................................................... 3
HRD 785: Video Lesson Development ................................................. 3
HRD 790: Occupational Analysis ...................................................... 3
HRD 845: Designing HRD Interventions ............................................ 3

Research Courses* (6-12 hours)

Option I - Thesis
HRD 890: Research and Thesis ......................................................... 3-6
TTED 891: Methods of Research ....................................................... 3
or HRD 891: Methods of Research .................................................... 3

Option II - Applied Research
TTED 891: Methods of Research ....................................................... 3
or HRD 891: Methods of Research .................................................... 3
HRD 892: Research and Writing for HRD Professionals ..................... 3

Minimum Total Hours (Option I and II) (34 hours)

Career and Technical Education Administration Certificate

Required Courses:

Total of 18 credit hours

TTED 708: Laboratory and Tool Safety in Occupational Education .............................................................. 3
TTED 801: Organization and Administration of Career and Technical Education ....................................................... 3
TTED 802: Adaptive Leadership in CTE ............................................. 3
TTED 807: Career and Technical Education Student Organizations ................................................................. 3
TTED 819: Planning Facilities for Career and Technical Education ........ 3
TTED 894: Fundamental Principles of Career and Technical Education ................................................................. 3

NOTE: All 18 hours will transfer into a Master of Science degree with a major in Career and Technical Education or the Specialist in Education degree with a major in Workforce Development. These 18 hours are NOT transferable for the Master of Science Degree with a major in Educational Leadership, emphasis in Building Level Leader (principal licensure). However, nine of the 18 hours could be considered for transfer to the Master of Science degree with a major in Educational Leadership, emphasis Educational Leader (non-licensure) and nine of the 18 hours would be considered for transfer for the Specialist in Education degree with a major in Advanced Studies in Leadership, emphasis in General School Administration. These hours do NOT fulfill the articulation agreement as defined through the partnership with University of Arkansas for admission in the Ed.D. in Educational Leadership.

Specialist in Education Degree with a Major in Workforce Development and Education

The Specialist in Education degree (Ed.S.) with a major in workforce development and education is designed to provide graduate level preparation for persons interested in advanced study and research in professions such as human resource development, industrial education, technology education, and technical teacher education. Students will specialize in an area such as technology management, vocational administration, or in such Human Resource Development fields as management, consulting, facilitation or instructional design and technology.

The Specialist in Education degree may be used to develop specialization in an area to support a following doctoral program, or it may be considered as a terminal professional degree. Students who plan to pursue a doctoral program should check with the university where they plan to attend as to their transfer policy. Some universities will not transfer Ed.S. credit for a doctoral degree as they consider it a terminal degree.
The Ed.S. program in the College of Technology requires at least one year of specialized graduate study beyond the Master of Science degree. The program is developed on the basis of the student’s academic background and professional interests. Coursework selected should support this specialization. Independent study is often part of the program as the Ed.S. candidate is expected to take responsibility for their professional development.

All candidates are required to complete 12 credit hour core covering four areas: research, statistical-based analysis, leadership, and current problems and trends. If one or more of the core course requirements for research, statistics, or leadership were met by a previous graduate degree, candidate and advisor can substitute specialty/elective graduate course(s) necessary to further candidate’s career goals.

The Ed.S. degree may be completed under Option I: Thesis, or Option II: Problem. Option I students will defend their thesis. Option II students will take comprehensive examinations over their course of study.

Option I: Thesis

Option I requires the completion of from four to six hours in 990 Special Research Project, in which students must conduct and report in written form the results of field studies or research project in their specialization. An advisory committee consisting of three members, with one member from outside the college, will be appointed to evaluate the final research project. Other coursework should help support this research.

Option II: Problem

Option II places less emphasis upon formal research and correspondingly more emphasis upon activities related to the professional objectives of the student. Option II does require a three-hour course in some aspect of research. The nature of the research study will be determined by the department and advisor.

Students interested in pursuing the Ed.S. degree should review the pages related to the Specialist in Education degree Graduate Degrees and Options in the Pittsburg State University Catalog for more detailed information.

Cooperative Doctoral Programs

The Department of Technology and Workforce Learning is participating in a cooperative doctoral program with the University of Arkansas. Persons admitted to the program may complete approximately one year of advanced study at Pittsburg State University toward meeting requirements for the doctoral degree offered by the university.
DESCRIPTION OF COURSES

Accounting

ACCTG 201. Financial Accounting. 3 hours. Emphasizes the basic economic concepts underlying general-purpose external financial statements and the uses of this information by producers and consumers.

ACCTG 202. Managerial Accounting. 3 hours. A study of the tools utilized in understanding, analyzing and interpreting accounting data used in developing plans and objectives, in controlling operations and in making management decisions. Emphasis is placed on critical thinking skills, professional judgment and ethics. Prerequisite: ACCTG 201 Financial Accounting.

ACCTG 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ACCTG 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ACCTG 315. Intermediate Managerial Accounting. 3 hours. An in-depth study of the concepts and methods utilized in understanding, analyzing, interpreting and reporting accounting data for manufacturing and service industries. This data is used in developing plans and objectives, in controlling operations and in making management decisions. Emphasis is placed on critical thinking skills, professional judgment and ethics. Topics include job order and process costing, standard costing, activity based costing, cost behavior, cost allocation, and budgeting. Prerequisite: ACCTG 202 Managerial Accounting and junior standing.

ACCTG 318. Intermediate Financial Accounting I. 3 hours. A study of the conceptual framework and generally accepted accounting principles (GAAP) underlying the preparation and interpretation of the three major financial statements with emphasis on proper asset valuation, the principles of revenue recognition, and the importance of professional judgment and ethical decision making in the financial reporting process. Prerequisite: ACCTG 201 Financial Accounting and junior standing.


ACCTG 411. Individual Taxation. 3 hours. An introduction to the practice and theory of federal and state income tax for individuals in relation to gross income, deductions, and credits; property transactions; business forms of organizations. Prerequisite: ACCTG 201 Financial Accounting and junior standing.

ACCTG 420. Accounting Information Systems. 3 hours. An introduction to the systems for recording, summarizing, classifying and reporting of accounting information to internal and external users. The course explores the relationship between business processes and transaction processing using a transaction cycle approach. Students are introduced to expected accounting documents, document flow, and internal control activities. The course includes a systems understanding aid which simulates an accounting information system. Prerequisite: ACCTG 318 Intermediate Financial Accounting I and junior standing.

ACCTG 422. Internal Auditing. 3 hours. Process of obtaining and evaluating internal audit evidence and communicating audit results. Includes methods to assess organizational risks, controls and performance, professional auditing standards and auditors' ethical responsibilities. Prerequisites: ACCTG 201 Financial Accounting and junior standing; or permission of instructor.

ACCTG 520. Advanced Managerial Accounting. 3 hours. A study of control systems and decision making within manufacturing and service organizations. Topics include cost systems, capital budgeting, decentralized operations, and multinational considerations. Prerequisite: ACCTG 315 Intermediate Managerial Accounting or equivalent and junior standing.

ACCTG 522. Information Systems Auditing and Controls. 3 hours. An in-depth study of auditing computerized information systems. Coverage includes auditors' assessments of risks and controls in an electronic data processing environment and computer-assisted audit techniques. Prerequisite: ACCTG 420 Accounting Information Systems or CIS 420 Management Information Systems and ACCTG 422 Internal Auditing.

ACCTG 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ACCTG 585. Accounting Law. 3 hours. An in-depth study of legal issues of primary interest to professional accountants. Prerequisite: MGMKT 444 Legal and Social Environment of Business and junior standing.

ACCTG 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ACCTG 600. Topics in Accounting (___). 1-3 hours. Study of specific advanced topics in accounting. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: ACCTG 422 Internal Auditing and junior standing.

ACCTG 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

ACCTG 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

ACCTG 610. External Auditing and Assurance Services. 3 hours. An applied study of the basic concepts underlying an audit of financial statements and evaluation of internal control over financial reporting including how and why audits are performed, professional auditing standards, audit planning, audit risk, materiality, evidence, professional conduct and legal liability. A case-study approach will be used to apply concepts to the various business processes and complete an audit. Prerequisite: ACCTG 410 Intermediate Financial Accounting II and junior standing.

ACCTG 611. Advanced Taxation. 3 hours. An in-depth study of tax credits (business and individual); property transactions; C corporations, S corporations, and partnerships. An introduction to transfer taxes (gifts and estates); income taxes on estates, trusts, and tax-exempt organizations. Prerequisite: ACCTG 411 Individual Taxation and junior standing.

ACCTG 614. Internship in Accounting. 3-6 hours. Work experience in public, private, governmental, or not-for-profit accounting. The work experience must be approved by the internship committee. May be repeated for a maximum of six hours. Prerequisite: permission of instructor required and junior standing.

ACCTG 825. Fraud Examination. 3 hours. Fraud examination focuses on the prevention, detection, investigation, and resolution of fraud and white collar crime. The course will utilize a combination of lectures, videos, guest speakers, and case studies. Prerequisite: ACCTG 422 Internal Auditing and senior standing.

ACCTG 805. Internship in Accounting. 1-3 hours. Work experience in public, private, governmental, or not-for-profit accounting. The work experience must be approved by the internship committee. Prerequisite: Permission of instructor required.

ACCTG 811. Seminar in Accounting (___). 1-3 hours. Directed readings, research and discussion of selected areas of accounting. Scope, depth, and area of concentration to be arranged. May be repeated for a maximum of 6 hours if subject matter is different. Prerequisite: 12 hours of accounting or permission of instructor.

ACCTG 812. Tax Research. 3 hours. The tax research process and the sources of tax authorities are focused upon to provide the tools to answer specific federal tax questions. Prerequisite: Permission of instructor.

ACCTG 813. Financial Statement Analysis. 3 hours. A case-study course that focuses on using corporate financial statements to make business and investment decisions. Emphasis is on practical application and special attention is given to analyzing financial statements, analytical skills, and the ability to effectively communicate analyses to interested parties. Prerequisite: ACCTG 318 Intermediate Financial Accounting I or permission of instructor.

ACCTG 814. Management Control Systems. 3 hours. Focuses on the design, evaluation, and effective implementation of management control systems using a case-based format. Prerequisite: Six hours of accounting.

ACCTG 815. Financial Statement Auditing. 3 hours. An applied study of the financial statement auditing process. Includes assessment of financial accounting system risks and controls, professional auditing standards, auditors' ethical and legal responsibilities, and other assurance services provided by public accountants. Prerequisite: ACCTG 422 Internal Auditing or equivalent or permission of instructor.

ACCTG 819. Cost Management. 3 hours. Managing costs in the manufacturing and service industries. Topics include activity based costing, computer integrated manufacturing, flexible manufacturing systems, just-in-time, cost planning and control, quality costs, performance management, cost management, and other contemporary issues.

Anthropology

ANTH 101. Introduction to Cultural Anthropology. 3 hours. Introduces students to the science of Cultural Anthropology, its terminology, theory, practice and subject matter. Students are encouraged to visit other cultures to find similarities and connections, not differences and separation. This class is about human beings, around the world and next door, creating a medley of adaptations to common problems.

ANTH 102. Introduction to Physical Anthropology/Archaeology. 3 hours. Two major subfields of Anthropology, Physical Anthropology and Archaeology, are distinguished by their primary focus on material remains of hominids, humans, and their "stuff". Introduces the fundamental theories and concepts of these fields in chronological order and analyses the scientific approach to the study of the hominid and human past, comparing that approach to contemporary popular ideas of the human past and its meaning for the present. In contrast to Biology and Paleontology, the anthropological study of our past centers on culture as the primary human tool; previous course work in the former two fields is desirable, but not required for this class.

ANTH 105. Social Thought. 3 hours. From Machiavelli and Marx to Steinem and Foucault, this course explores some of the major historical and contemporary theoretical works and authors in selected social sciences. The focus is on the cultural framework in which these thoughts emerged and the impact they had on society.

ANTH 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ANTH 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ANTH 301. Food and Culture. 3 hours. Food is more than just nutrition; in every culture, past and present, food is central to building and maintaining economic and political systems, social relationships among family members and between friends and enemies, religious taboos, ethnic identities, and gender norms. The trade in food stuff is at the heart of colonization and globalisation, the lack of food at the heart of labor migrations and the horrors of malnutrition and starvation. The science of food drives biogenetic engineering to either profit for some or life for many. In this course, we will examine these issues, ranging from seemingly universal meals (think stew!) to mass-produced hamburgers, counting the human, animal, and environmental costs of each, and maybe even sharing a few recipes. Prerequisite: ENGL 101 English Composition.

ANTH 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ANTH 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

Art

ART 100. Visual Thinking: 2D Processes. 3 hours. Study of studio practices through formal and conceptual explorations within the two-dimensional art making process. Emphasis placed on the creative process and working method, composition and spatial organization, 2D materials and media.

ART 150. Art Practices I: Health, Safety and Sustainability. 1 hour. An introduction to health, safety and sustainability issues for the visual artist. Required in first semester of study as art major.

ART 155. Printmaking and Paper Arts. 3 hours. Lectures and studio experiences dealing with the techniques of printmaking and the paper arts such as: etching/intaglio, solar etching, reductive woodcuts, papermaking and bookmaking. Fall only.

ART 178. Introduction to the Visual Arts. 3 hours. Principles of art from a non-chronological, multicultural perspective. Emphasis on differing roles the artist plays in diverse societies, on parallels across the arts, and on the analysis of art objects as items of material culture.

ART 188. The Designed World. 3 hours. Design of art objects as related to problem solving processes and creative thinking. Art ideas, techniques, and media through studio experiences. Media will vary. For Non-Art Majors.

ART 200. Visual Thinking: 3D Processes. 3 hours. Study of studio practices through formal and conceptual explorations in the three-dimensional art making process. Emphasis placed on the process of developing form as a precursor to final artwork. Specific topics will include structural design and development, kinetics, work methods and process, and 3D materials and media. Prerequisite: ART 100 Visual Thinking: 2D Processes.

ART 205. Introduction to Visual Storytelling. 3 hours. This course will serve as an exploration of narrative illustration as a means of communicating ideas and stories. Students will develop drafting skills as they learn to create characters and integrate them into environments, implementing narrative techniques in composition and overall design. Emphasis will be placed on the process required to produce artwork viable for the professional market place, from initial concept to the finished product. Prerequisites: ART 100 Visual Thinking: 2D Processes and ART 236 Perspective Drawing or concurrent enrollment.

ART 217. Crafts I. 3 hours. An exploration of various materials such as metals, fibers, paper and dyes, with studies of their use in contemporary crafts and their relationship to the fine arts. Emphasis on design and experimental approaches.

ART 220. Art of Photography I. 3 hours. Introduction to photographic foundations covering theory, history, and practice. Studio course concerned with visual phenomena and the communication of ideas using the exploration of basic tools, techniques and aesthetics of photography. Course emphasis is placed on the creative use of traditional and digital camera controls, exposure, and digital imaging software.

ART 222. Jewelry Design I. 3 hours. Basic processes and design problems in jewelry and metalsmithing: forging, constructing and other techniques.

ART 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ART 236 Perspective Drawing or concurrent enrollment.

ART 236 Perspective Drawing or concurrent enrollment.
ART 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ART 233. Drawing I. 3 hours. Studio experiences in processes, media, and techniques used in the art of drawing. Gesture, shape, value, line, color, composition, and spatial illusion are explored as a means toward developing skill and individual expression.

ART 236. Perspective Drawing. 3 hours. Study of linear perspective systems and spatial illusion through drawing. Emphasis placed on providing a working knowledge of theory and application of linear perspective conventions as an essential part of the drawing process. Prerequisite: ART 233 Drawing I.

ART 244. Ceramics I. 3 hours. Concepts, methods, techniques and studio experiences in hand building and throwing ceramic forms on the potter's wheel. Introduction to sculptural and functional uses of clay. Includes lectures on clay, glazes, loading and firing kilns.

ART 250. Color Theory and Application. 3 hours. Study of Studio practices in the art making process with a focus integrating color media into artworks. Specific topics will include color theory and systems, light and its application for artists, color as a formal component through composition and spatial organization, and color as a conceptual component through symbolism. Prerequisite: ART 100 Visual Thinking: 2D Processes and ART 233 Drawing I.

ART 266. Sculpture I. 3 hours. The elements of sculpture, including various media, methods, techniques, processes, composition, and evaluation.

ART 277. Painting I. 3 hours. Studio experience examining the technical questions and formal issues that arise at the beginning level. Exploration of how an artist organizes elements in a visual field to make a dynamic, coherent and digitally painted compositions through a variety of apps. Within the variety of subjects color, composition, subject matter, and concept will be the emphasis. Prerequisite: ART 277 Painting I.

ART 288. Introduction to Art History I. 3 hours. The history of world art from Paleolithic times through the late twentieth century. Contributions of various cultures to world civilization. Emphasis on social context and parallels between arts, literature, and the history of ideas. Writing to learn course. Fall only.

ART 289. Introduction to Art History II. 3 hours. The history of world art from the thirteenth century through 1900. Contributions of various cultures to world civilization. Emphasis on social context and parallels between arts, literature, and the history of ideas. Writing to learn course. Spring only.

ART 305. Commercial Art II. 3 hours. Introduction to different avenues of commercial art. Emphasis on creative imagery showing a variety of visual ideas that satisfy professional objectives, idea development, originality, aesthetics and technical proficiency. Prerequisites: ART 205 Introduction to Visual Storytelling and ART 250 Color Theory and Application.

ART 311. Art Education. 3 hours. Introductory survey of concepts and theories relevant to understanding visual art.

ART 320. Art of Photography II. 3 hours. Theory, history and practice of photography relate to the contemporary artist. Emphasis is placed on understanding the physical aesthetic principles of light through the use of artificial lighting, darkroom practices and extending students' exploration of the use of the photographic medium for personal expression.

ART 322. Jewelry Design II. 3 hours. A continued exploration of jewelry design, techniques and processes. Further study of historical and contemporary jewelry concepts and their relationship to society. Prerequisite: ART 222 Jewelry Design I.

ART 325. Art Practices II: Presentation of Artist Works. 1 hour. An introduction to the fundamental skills necessary to professionally present an artistic body of work in an exhibition format.

ART 333. Drawing III. 3 hours. In depth exploration of drawing media, form, and content. Visual problems emphasizing unique and expressive solutions. Prerequisite: ART 236 Perspective Drawing. May be repeated for a maximum of six hours.

ART 336. Drawing With Ink. 3 hours. This course is designed to familiarize students with the inking tools and techniques employed by professional artists. Using traditional tools such as sable-hair brushes and crow quill nibs, students will develop a portfolio of inked drawings over the course of the semester. Projects will provide students the opportunity to work in a wide range of styles, and an emphasis is placed on developing a personal approach to inking. Prerequisite: ART 205 Introduction to Visual Storytelling.

ART 338. Hand-Lettering for Illustration and Comics. 3 hours. Students in this course will be introduced to traditional and contemporary practices of creating hand-lettering and typography. A variety of applications will be addressed, including narrative text in comics, books covers, logos, poster design, and signage. Projects are designed to help students build the skills necessary to create a synthesis of word and image in their work. Prerequisite: ART 205 Introduction to Visual Storytelling.

ART 342. iPad for the Artist. 3 hours. Studio experiences creating artworks utilizing iPad. Exploration of how an artist organizes elements in a visual field to make a dynamic, coherent and digitally painted compositions through a variety of apps. Within the variety of subjects color, composition, subject matter, and concept will be the emphasis. Prerequisite: ART 277 Painting I.

ART 344. Ceramics II. 3 hours. Continued exploration of clay materials and processes. More complex problems with hand built and thrown forms. Prerequisite: ART 244 Ceramics I.

ART 346. Traditional Watercolor. 3 hours. Studio experiences with principles and techniques of watercolor painting through exercises in still life, portraiture, and the landscape. Development and demonstration of skills in transparent techniques will allow students with particular interests in the possibilities of watercolor to focus intensively on its expressive and depictive capacities. Prerequisite: ART 277 Painting I.

ART 348. Advanced Oil Painting. 3 hours. Studio experiences examining the technical questions and formal issues that arise in the traditional indirect method of painting in oil. Focus will be placed on the craft of painting from the underdrawing through the finished glaze layers and varnish within paintings. Subject matter will vary. Prerequisite: ART 277 Painting I.

ART 350. Art Practices III: Studio Critique I (Sophomore Level). 1 hour. Introductory seminar/critique course that assists students in developing a personal artistic direction while receiving guidance and criticism from multiple viewpoints and contexts. Prerequisite: ART 325 Art Practices II: Presentation of Artist Works.

ART 351. Printmaking, Papermaking, Bookarts and the Letterpress. 3 hours. Students will learn printmaking, papermaking and a variety of book structures from simple folded books to more complex bindings, and sculptural books. This course will also serve as an introduction to letterpress printing with the Vandercook proof press. Prerequisite or Corequisite: ART 100 Visual Thinking: 2D Processes.

ART 361. Fabrication Techniques. 3 hours. Studio practice in basic fabrication techniques for metal, wood, and fiber. Taught through a series of demonstrations and hands-on experiences, students will learn various methods of working with each material individually, as well as in combination. Skills will be applied directly in creating small sculptural and functional objects. Prerequisite: ART 200 Visual Thinking: 3D Processes.

ART 363. Ceramics: Handbuilding. 3 hours. Continued exploration of clay materials, design and construction of sculptural clay forms. A non-functional or functional emphasis on individual expressivity. Prerequisite or Corequisite: ART 200 Visual Thinking: 3D Processes. Prerequisite: ART 244 Ceramics I.

ART 365. Ceramics: Wheel Throwing. 3 hours. Continued exploration of clay materials and processes. A wheel throwing course only involving more complex problems on the potter's wheel. Prerequisite: ART 244 Ceramics I.

ART 367. Ceramics: Tile Making. 3 hours. This studio course will cover concepts, methods, techniques and studio experiences in hand made tile forms. Introduction to the sculptural and functional uses of clay tiles including introductory demonstrations on clay, alternative finishing processes and the loading of firing of kilns. Prerequisite or Corequisite: ART 250 Color Theory and Application. Prerequisite: ART 244 Ceramics I.

ART 377. Painting II. 3 hours. Studio experience in painting with emphasis on color and compositional problems. Use of various painting media. Prerequisites: ART 277 Painting I.
ART 379. Art Education: Elementary. 3 hours. Examination of the fundamental theories, practices, and purposes of art education in pre-kindergarten and elementary education. Studies to understand art education methods, to develop awareness of the creative process and to design appropriate curriculum for PK-8 students. Fall only.

ART 401. Independent Studies (____). 1-3 hours. Directed readings and/or special investigations as determined in conference between student and faculty member. Project proposal must be submitted within three weeks after beginning of semester. May be repeated. Permission of department chairperson is required.

ART 405. Electronic Art Studio I. 3 hours. Advanced drawing, design, and layout for visual professions. Emphasis on original aesthetic imagery and ideas. Use of both traditional and various electronic digital media. Prerequisites: ART 305 Commercial Art II.

ART 406. Electronic Art Studio II. 3 hours. Continued study of the skills presented in ART 405 Electronic Art Studio I. Prerequisite: ART 405 Electronic Art Studio I.

ART 412. Senior Art Seminar. 3 hours. Professional business practices for the visual artist. Strategies for interviewing, portfolio preparation and advanced development of personal imagery in preparation for Senior Exhibit. Emphasis on fine and commercial art professions. Prerequisite: Successful completion of 55 credit hours of art coursework. Permission of instructor required.

ART 420. Alternative and Historical Photographic Processes. 3 hours. This is an advanced photography course that explores studio photography and software as well as the traditional and non-traditional illustration art media used in order to produce a narrative or editorial topic.

ART 421. Automotive: Art and Design. 3 hours. A course to explore the basic principles of art and design, and to learn to draw cars. Skills are applied to the industrial objectives of automobile design. A car model is created from appropriate materials to represent the retro car, concept car, car of the future or art car. Prerequisite or Corequisite: ART 233 Drawing I.

ART 422. Jewelry Design III. 3 hours. Design and creation of contemporary jewelry. Emphasis on individual expressivity. Prerequisites: ART 322 Jewelry Design II.

ART 423. Jewelry Design IV. 3 hours. Continued development of skills in jewelry. Prerequisite: ART 422 Jewelry III.

ART 425. Photographic Illustration and Mixed Media. 3 hours. This is an advanced photography course that explores studio photography and software as well as the traditional and non-traditional illustration art media used in order to produce a narrative or editorial topic.

ART 430. Life Sculpture. 3 hours. Studio experience examining the technical elements of sculptural ceramics, including various mixed media, methods, techniques, processes, composition, and evaluation while focusing on the techniques of hand-building within the tradition of narrative ceramics. Prerequisite: ART 200 Visual Thinking: 3D Processes.

ART 431. Ceramics: Sculptural. 3 hours. The elements of sculptural ceramics, including various mixed media, methods, techniques, processes, composition, and evaluation while focusing on the techniques of hand-building within the tradition of narrative ceramics. Prerequisite: ART 200 Visual Thinking: 3D Processes.

ART 432. Life Sculpture. 3 hours. This studio course will cover concepts, methods, techniques and studio experiences in utilizing the human form as the primary focus of study. This course will be an introduction to sculptural uses of clay to depict the figure utilizing armatures and free standing non-armature studies of the form. Prerequisites: ART 420 Visual Thinking: 3D Processes, ART 266 Sculpture I or ART 361 Fabrication Techniques.

ART 433. Structural Anatomy and Figure Drawing. 3 hours. Analysis of the human figure with an emphasis on structural anatomy through drawing; study of the skeleton and muscle groups as they affect volume and outward appearance. Drawing from model, skeleton, anatomical casts and memory.

ART 434. Advanced Figure Drawing. 3 hours. Integration of the figure into composition through principles of drawing as a visual language. Class will involve an in-depth study of the human figure. Students will make a series of drawings and sketches in a variety of mediums, including graphite, charcoal, etc. Students will study from a live model and will use the human figure as a vehicle to better understand the fundamentals of organic form, proportion, and balance within completed compositions. Prerequisite: ART 433 Structural Anatomy & Figure Drawing.

ART 435. Black and White Photographic Processes. 3 hours. This is an advanced photography course that focuses on the procurement, exposure and development of black and white film and the silver print. Emphasis is also placed on how they relate to the contemporary artist. Prerequisite: ART 220 Art of Photography I.

ART 436. Concept Design. 3 hours. This course will provide students with an introduction to concept design for various entertainment industries. Concept designers working in fields such as film, animation, and video game development create pre-production imagery and designs before the details of a project become finalized. Students will work in both two- and three-dimensional media to create designs for characters, environments, vehicles, and props for an invented project of their own creation. Prerequisite: ART 205 Introduction to Visual Storytelling.

ART 441. Art Education: Theory and Practice. 3 hours. An overview of the historical and philosophical approaches to art education, including a comprehensive study of current pedagogical theories, research and contemporary issues related to teaching art in PK-12. For art education majors only. Prerequisite: ART 379 Art Education: Elementary. Fall only.

ART 444. Ceramics III. 3 hours. Design and construction of functional and sculptural clay forms. Emphasis on individual expressivity. Prerequisite: ART 344 Ceramics II.

ART 445. Ceramics IV. 3 hours. Continued development of skills in ceramics. Prerequisite: ART 444 Ceramics III.

ART 448. Portrait Painting. 3 hours. Studio experience examining the technical questions and formal issues that arise in the traditional method of portrait painting in oil. Building form through the value of color in the chiaroscuro tradition, accuracy in color and developing the likeness of the model will be emphasized. Prerequisite: ART 277 Painting I.

ART 450. Research Methods and Writing for Artists. 3 hours. A critical introduction to the fundamental skills necessary to professionally present an artistic body of work focusing on research, evaluation and writing. Prerequisite: Sophomore standing.

ART 461. Casting and Moldmaking. 3 hours. This course is designed to introduce the fundamental principles of mold making and casting while exploring more complex concepts, materials, and techniques. Through demonstrations and hands-on exploration, students will pursue individual projects that reflect upon themes in sculpture that require casting processes for their realization. Prerequisite: ART 200 Visual Thinking: 3D Processes.

ART 467. Ceramics: Sculptural. 3 hours. The elements of sculptural ceramics, including various mixed media, methods, techniques, processes, composition, and evaluation while focusing on the techniques of hand-building within the tradition of narrative ceramics. Prerequisite: ART 200 Visual Thinking: 3D Processes.

ART 469. Soft Sculpture. 3 hours. This class will explore the potential of soft materials such as fibers and plastic for both functional forms and sculptures. Prerequisites: ART 200 Visual Thinking: 3D Processes, ART 266 Sculpture I or ART 361 Fabrication Techniques.

ART 470. Topics in Art (____). 1-3 hours. Intensive study of selected topics in art. A specific subtitle will be listed in the schedule of classes. May be repeated when topic is different. Lecture and/or studio-group study only. Pre-requisite: ART 100 Visual Thinking: 2D Processes.

ART 471. Life Sculpture. 3 hours. This studio course will cover concepts, methods, techniques and studio experiences in utilizing the human form as the primary focus of study. This course will be an introduction to sculptural uses of clay to depict the figure utilizing armatures and free standing non-armature studies of the form. Prerequisites: ART 200 Visual Thinking: 3D Processes and ART 233 Drawing I.

ART 472. Portrait Painting. 3 hours. Studio experience directed toward giving greater scope to compositional problems and the development of a personal imagery. Earlier achievements are reconsidered with the exception that advanced painting problems will be based on new experiences. Improved technical skills are balanced with increased freedom of expression. Prerequisite: ART 377 Painting II.

ART 478. Painting IV. 3 hours. Continued development of skills in painting with an emphasis on personal expression and growth. Prerequisite: ART 477 Painting III.

ART 479. Art Education: Secondary. 3 hours. Examination of the fundamental theories, practices, and purposes of art education in secondary schools. Development of curriculum, discipline plans, safety policies, classroom design and management, with accompanying field observations and research. Preparation for employment, including teaching portfolio development, job search and interview techniques. To be taken before the professional semester. Prerequisites: ART 379 Art Education: Elementary (with a grade of B or better), Admission to Teacher Education and PSYCH 357 Educational Psychology. Spring only.

ART 490. Senior Exhibit. 1 hour. Materials, techniques and procedures in presenting student's senior exhibit. Framing, matting, hanging and lighting, poster, brochures and other means of advertisement student's senior exhibit. For art majors only. Prerequisite: Senior standing. Permission of instructor required.
ART 505. Commercial Art III. 3 hours. Advanced development of technique, style and personal resolutions of illustration problems. The business of researching, packaging and pinpointing potential markets and the development of a body of work for that market. Prerequisites: ART 405 Electronic Art Studio I.


ART 523. Jewelry Design VI. 3 hours. Continued development of jewelry skills in a studio setting. Prerequisite: ART 522 Jewelry Design V.

ART 525. Internships in Studio and Creative Industry. 1-3 hours. Provides students with supervised opportunities to work with professional practitioners in the creative fields or in a creative industry setting. Credit allowed will depend on the nature of the internship assignment. May be repeated for a maximum of six hours of credit. Prerequisite: Permission of the department.

ART 526. Internship in Museum Studies and Gallery Practice. 1-3 hours. Provides students with supervised opportunities in museum and gallery situations that allow relevant practical experience in a specific area of museum work. Preparation for professional situation, studies or careers in fields which lead to jobs in museums, galleries, historical sites, cultural centers. Credit allowed will depend on the nature of the internship assignment. May be repeated for a maximum of six hours of credit. Prerequisite: Permission of the department.

ART 530. Editorial Illustration. 3 hours. Newspapers, magazines, and other publications often print illustrations alongside text to illuminate or elaborate on some concept for their readers. Students in this course will explore different ways to "draw ideas" and engage with texts to create illustrations appropriate for a variety of publications and platforms. Various traditional and nontraditional materials and techniques will be used. Prerequisite: ART 205 Introduction to Visual Storytelling.

ART 532. Comics: Theory and Practice. 3 hours. Students in this course will study the theory, history, and production methods of comics. In addition to drawing projects, students will be introduced to a broad range of visual works by established and emerging cartoonists, allowing students to view their creating and critiquing our own work, they will also read and discuss selected literature. Prerequisite: ART 205 Introduction to Visual Storytelling.

ART 534. Scientific Illustration. 3 hours. Introduction to the field of Scientific Illustration. The scientific illustrator must organize scientific information in an efficient, clear, and visually compelling manner. It must satisfy the needs of the scientist, the format and the audience. Major areas of concern will be in developing strong composition, craftsmanship, and nuanced observational skills. Students will be expected to produce several portfolio quality pieces. Prerequisite: ART 205 Introduction to Visual Storytelling.

ART 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ART 542. Mural Painting. 3 hours. Experience in the procurement, design, and execution of interior and exterior murals and large-scale painting. Projects provide an opportunity for students to take part in the diverse process of planning, creating, and exhibiting larger scale, public and private projects. This course introduces students to historical and contemporary approaches to mural painting. Materials, techniques, as well as business aspects of mural painting will be addressed. Studio practice will be supplemented by lecture, critiques and on-site work. Prerequisite or co-requisite: ART 250 Color Theory and Application. Prerequisite: ART 277 Painting I.

ART 544. Ceramics V. 3 hours. Advanced study in the design and construction of functional and sculptural forms in clay. Students will be encouraged to develop their own concepts. Includes study of the practical and theoretical aspects of clay, glazes, and firing of kilns. Prerequisite: ART 445 Ceramics IV.

ART 545. Ceramics VI. 3 hours. Continued development of skills in ceramics in a studio setting. Prerequisite: ART 544 Ceramics V.

ART 546. Plein Air Painting. 3 hours. Studio experience examining the technical questions and formal issues that arise with on-site, plein-air landscape and interior painting. Exploration of how an artist organizes elements quickly in a visual field to make a dynamic, coherent and paintable composition. Color theory, composition and quick painting techniques as well as light, atmosphere and depth-crucial elements in achieving believability will be emphasized. Prerequisites: ART 250 Color Theory and Application and ART 277 Painting I.

ART 550. Art Practices V: Studio Critique II (Junior Level). 1 hours. Intermediate seminar/critique course that assists students in developing a sustained body of work while receiving guidance and criticism from multiple viewpoints and contexts. Prerequisite: ART 450 Research Methods and Writing for Artists.

ART 551. Art Education in Cultural Institutions. 3 hours. Introduction to the foundations of art education in the setting of cultural institutions such as museums, art centers, libraries, and community organizations. Focus is on the role of the educator and the development of relevant and accessible educational programming. Prerequisites: ART 288 Introduction to Art History I and ART 289 Introduction to Art History II.

ART 558. Art for the Body. 3 hours. Studio practice in designing and creating artwork for the body. Course will explore historical and contemporary trends and cultural roles of a broad range of body-related art forms with focus on designing innovative, original new pieces. Topics will include jewelry and other wearable forms, as well as tattoos and other body modifications. Prerequisites: ART 200 Visual Thinking; 3D Processes and ART 433 Structural Anatomy and Figure Drawing.

ART 561. Small-Scale Metalsmithing. 3 hours. Studio practice in basic metal forming techniques. Taught through a series of demonstrations and hands-on experiences, students will learn both hot and cold processes for directly forming metal. Skills will be applied directly in creating small sculptural and functional objects. Prerequisite: ART 200 Visual Thinking; 3D Processes and ART 361 Fabrication Techniques.

ART 563. Toy Design. 3 hours. Utilizing mixed media approaches in two and three dimensional form, soft and hard sculpture, engineered and technology based design and production, students will create toys while studying the toy industry, entrepreneurial approaches to marketing and the psychology of play and the role of play and toys in contemporary culture. Prerequisites: ART 200 Visual Thinking; 3D Processes, ART 266 Sculpture I or ART 361 Fabrication Techniques.

ART 565. Site Specific Installation and Public Sculpture. 3 hours. Utilizing mixed media as required (sculpture, ceramic, photo, painting, textiles...) students will learn about creating site specific installations, or murals, collaborative works, and room size installations. Prerequisites: ART 200 Visual Thinking; 3D Processes, ART 266 Sculpture I or ART 361 Fabrication Techniques.

ART 573. Business and Self-Promotion for Artists. 3 hours. This course prepares students for the business aspects of a fine and/or commercial art career, including portfolio presentation, as well as other relevant business practices, such as record-keeping, pricing work, and understanding contracts. Students will be exposed to various employment opportunities, as well as residencies, internships, and research grants that may be beneficial to their careers. Students will develop a web-presence using a personal website as well as social media as a way of promoting themselves and their work to a larger audience. Prerequisite: Successful completion of 55 credit hours of art coursework. Permission of instructor required.

ART 577. Painting V. 3 hours. Students undertake independently selected painting problems that assist them in approaching maturity. Prerequisite: ART 478 Painting IV.

ART 578. Painting VI. 3 hours. Continued development of painting skills in a studio environment. Prerequisite: ART 577 Painting V.

ART 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

ART 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
ART 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

ART 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

ART 605. Commercial Art IV. 3 hours. This course offers advanced commercial art students an opportunity to continue building their portfolio, while learning art practices specific to commercial art area. Students echo the professional marketplace, and are encouraged to have an active role in establishing a publication. Prerequisite: ART 505 Commercial Art III and ART 405 Electronic Art Studio I (or concurrent enrollment).

ART 650. Art Practices VI: Studio Critique III (Senior Level). 1 hours. Capstone seminar/critique course that assists students in developing a sustained context in preparation for a career in studio art. Prerequisite: ART 550 Art Practices V: Studio Critique II (Senior Level).

ART 676. Exhibition Design and Development. 3 hours. Studies the diverse issues and processes involved with development of successful exhibitions. Emphasis placed on providing a working knowledge of processes required to design, construct, install, and promote professional exhibitions. This extends to communication with the visitor, accessibility issues, and dealing with group projects. Prerequisite: Senior standing. Permission of instructor required.

ART 688. History of Modern Art. 3 hours. European and American art from 1890 through post-WWII abstraction. Emphasis will be placed on the relationships between artistic production and the social fabric of the period, torn by wars, revolution, totalitarianism and worldwide depression, followed by the triumph of consumer society in the cold war era. Fall only.

ART 689. Contemporary Issues in Art. 3 hours. International art from 1960 to the present, with an emphasis on recent critical and theoretical issues in Post-Modern art and architecture. Spring only.

Automotive Service Technology

AST 101. Engine Repair. 3 hours. Foreign and domestic power plants, accessory units and reconditioning procedures. Emphasis is on operating principles of four-cycle engines and their repair. Corequisite: Concurrent enrollment in AST 122 Auto Mechanics General Laboratory I.

AST 102. Brakes. 3 hours. Foreign and domestic brake systems. Includes hydraulic theory, disc and drum systems, parking brakes, power assist units, and anti-lock braking systems. Corequisite: Concurrent enrollment in AST 122 Auto Mechanics General Laboratory I.

AST 122. Auto Mechanics General Laboratory I. 5 hours. (15 hour laboratory). Power plants, accessory units and reconditioning procedures. Practical work on electrical, fuel, cooling, and lubrication systems; brake reconditioning on modern passenger cars. Corequisite: Concurrent enrollment in AST 101 Engine Repair and AST 102 Brakes.

AST 150. Engine Performance I. 3 hours. Engine performance principles including ignition systems, carburetion, and automotive performance testing and servicing equipment. Corequisite: Concurrent enrollment in AST 102 Auto Mechanics General Laboratory II.

AST 151. Electrical Systems I. 3 hours. Automotive electrical principles including basic electrical theory, storage batteries, starting motors, alternators, and automotive electrical testing and servicing equipment. Corequisite: Concurrent enrollment in AST 152 Auto Mechanics General Laboratory II.

AST 152. Auto Mechanics General Laboratory II. 5 hours. (15 hour laboratory). Electrical system, ignition, and carburetor diagnosis. Practical work on battery, starter, charging, ignition, and carburetor systems. Corequisite: Concurrent enrollment in AST 150 Engine Performance I and AST 151 Electrical Systems I.

AST 160. Automatic Transmissions. 3 hours. Theory, operation, and service of automatic transmissions. Emphasis on diagnosis, installation, and servicing of component parts. Laboratory practice on automatic transmission and accessory systems.

AST 163. Manual Drive Train and Transaxle. 3 hours. Theory, operation and service of foreign and domestic automotive drive trains, including clutches, manual transmissions, overdrives, and various types of manual transaxes. Prerequisite: Completion of first year curriculum.


AST 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

AST 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.


AST 255. Automotive Heating and Air Conditioning. 3 hours. Basic theory, component parts and servicing of automotive heating and air conditioning systems. Corequisite: Concurrent enrollment in AST 257 Auto Mechanics General Laboratory IV.

AST 256. Suspension and Steering. 3 hours. Theory, operation, repair and service of automotive chassis and steering systems, including alignment angles, front suspension, struts, rear suspension, unibody structure, and wheel assemblies. Corequisite: Concurrent enrollment in AST 257 Auto Mechanics General Laboratory IV.

AST 257. Auto Mechanics General Laboratory IV. 5 hours. (13 hour laboratory). Heating, air conditioning, suspension and steering diagnosis. Practical work on air conditioning repair, suspension service and four-wheel alignment. Corequisite: Concurrent enrollment in AST 255 Automotive Heating and Air Conditioning and AST 256 Suspension and Steering.

AST 260. Engine Performance II. 3 hours. Theory, diagnosis, service and repair of automotive emission and electronic fuel injection systems. Prerequisite: AST 150 Engine Performance I. Corequisite: Concurrent enrollment in AST 252 Auto Mechanics General Laboratory III.

AST 264. Current Topics in Automotive Service Technology (____). 1-3 hours. Directed readings and/or individualized study related to automotive service technology. May be repeated if content is different. May be taken as Pass-Fail. Prerequisite: Permission of instructor.

AST 299. Automotive Service Coop Internship. 6 hours. Planned work experience in an automotive dealership or service center working with seasoned technicians; expected to work in all facets of automotive repair, but with emphasis in suspension, steering and alignment as well as heating and air conditioning systems. Student and dealership representative submits reports and evaluations to internship coordinator. Offered on a Pass/Fail basis only. Prerequisite: Successful completion of 30 credit hours of Automotive Service course work.
AST 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

AST 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

Automotive Technology

AT 100. Orientation to the Transportation Industry. 1 hours. Orientation issues for automotive technology majors. Emphasis is placed on program overview, industry overview, student organizations, basic service tools, capstone portfolio, laboratory environmental and safety issues.

AT 101. Automotive Maintenance for All Majors. 3 hours. This course is designed for non-automotive students to introduce them to the automotive industry through career exploration, introductory technical terms, definitions, techniques, and hands-on experiences with light mechanical and maintenance issues on their vehicles.


AT 210. Brake Systems. 3 hours. Theory and diagnosis of brake systems. Includes the following: basic brake systems, hydraulic theory, disc and drum brakes, parking brakes, and power assist units. Includes the theory and system diagnostics on anti-lock brake systems, ABS operation and traction control. Examples of ABS systems are: Bendix, Delphi, and Bosch.

AT 211. Steering, Alignment and Suspension. 3 hours. Study the theory, operation, and repair of chassis and steering systems. Including: alignment angles, front and rear suspension, struts, unibody structure, and tire and wheel balancing techniques. Advanced systems are also taught including electronic suspension, ride control, and stability control.

AT 213. Engine Systems. 3 hours. Course provides practical and experimental laboratory experience in automotive engine technology in addition to related technical information. Engine theory of operation and service is studied in detail. Engine overhaul techniques and procedures are discussed and practiced.

AT 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

AT 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

AT 300. Automotive Internship (____). 3-6 hours. A planned work experience in an automotive industry or business. The student will be employed by an automotive industry or business, and both parties will submit reports and evaluations of experiences to the department coordinator. May be repeated for up to six credit hours. Offered on a Pass/Fail basis only.

AT 331. Fall SAE Baja Team. 1 hours. Students will design and build a vehicle to participate in the Society of Automotive Engineers BAJA design competition. Using critical thinking and problem solving skills students will work together to complete the vehicle. Additionally, students will keep a journal documenting their participation, help with fundraising, and all required presentations as pertains to the current SAE Baja rule book. May be repeated if subject matter is different for a maximum of four credit hours. Prerequisite: Permission of instructor.

AT 332. Spring SAE Baja Team. 2 hours. Students will design and build a vehicle to participate in the Society of Automotive Engineers BAJA design competition. Using critical thinking and problem solving skills students will work together to complete the vehicle. Additionally, students will keep a journal documenting their participation, help with fundraising, and all required presentations as pertains to the current SAE Baja rule book. May be repeated if subject matter is different for a maximum of eight credit hours. Prerequisite: AT 331 Fall SAE Baja Team and permission of instructor.

AT 335. Industry Tours in the Transportation Industry. 1-2 hours. In-depth tours of selected automotive or diesel and heavy equipment industries. Some travel expenses and time out-of-class is associated with travel to tours out-of-state. May be repeated for a maximum of four hours credit since subject matter is different and tours vary. This is a variable credit hour course. For one credit hour the student will attend the tour and abide by all syllabus requirements. A second credit hour can be acquired by writing a reaction paper that must fulfill the rubric posted in the syllabus.

AT 340. Diesel Engine Fundamentals. 3 hours. Orientation to compression ignition engines: their history, principles of operating, design features, operational cycles, fuels, lubricants and advantages and disadvantages when compared to other prime movers. Prerequisite: Nine hours of automotive credit.

AT 399. Professional Development in the Transportation Industry. 2 hours. Preparation of students for employment in internships and full-time positions. Emphasis is placed on academic planning, certification opportunities and procedures, resume content, job search skills, job interview, business etiquette, time management and goal setting. Students will also submit a mini version of the Senior Capstone Portfolio.

AT 400. Automotive Internship (____). 3-6 hours. A planned work experience in an automotive industry or business. The student will be employed by an automotive industry or business, and both parties will submit reports and evaluations of experiences to the department coordinator. May be repeated for up to six credit hours. Offered on a Pass/Fail basis only.

AT 403. Current Topics in Automotive Technology (____). 1-3 hours. Current technical and managerial topics related to automotive business and industry are presented. Guest lecturers and presenters from industry may be utilized. May be repeated if subject matter is different for a maximum of nine credit hours. Prerequisite: Permission of instructor.

AT 405. Laboratory Teaching Internship. 3 hours. Gain teaching experience by assisting a faculty member in presenting lectures, laboratory exercises, and developing training aids. Student must have completed the course for which they are assisting. Written permission of the instructor.

AT 410. Emerging Trends in the Transportation Industry. 1 hours. The purpose of this course is to keep students well informed in the ever changing trends, technology, and business management practices related to the transportation industry. Students will be expected to attend presentations by industry representatives and/or conduct research on new trends, technology, and/or business management practices. Students will present their findings to their instructor and peers. May be repeated since subject matter is different for a maximum of six credit hours.

AT 414. Automatic Transmissions. 3 hours. (2 Hours Lecture, 2 Hours Laboratory) Theory of operation and design of automatic transmissions/transaxles and their electronic control circuits. Trouble diagnosis and service procedures. Special testing techniques. Prerequisites: AT 314 Manual Transmission and Drivelines and junior standing or permission of instructor.

AT 415. Mobile Climate Systems. 3 hours. A course on the operating principles, service, and diagnostic techniques for mobile climate systems found on the modern automobiles, trucks, and heavy equipment. Heating and cooling, new refrigerants. EPA Section 609 regulations, and hybrid climate systems are also covered in this course. Prerequisites: AT 115 Mobile Electrical/Electronics and AT 116 Mobile Electrical/Electronics Laboratory.
AT 416. Fluid Power. 3 hours. A study of the laws and theory of operation of fluid power systems; includes the study of pumps, rotary and linear actuators, valves, conductors, fittings, accumulators, reservoirs, coolers, schematics, symbols, safety, open and closed terminology, filtration, contamination control, and fluids.

AT 418. Failure Analysis. 3 hours. Study the theory for determining the root cause of a component failure as it relates to: component design, metallurgy and component operation. In-depth study will include: defining the problem, principles of fractures, principles of wear, indicators, and visual examination.

AT 462. Structural and Non-Structural Analysis. 3 hours. Analysis and repair of the following areas are covered: movable glass, stationary glass, plastic adhesive/welding repair, bolted-on part replacement, welded and adhesively bonded panel replacement, cosmetic straightening steel, measuring, unibody structure repair, and frame sectioning. Prerequisite: AT 201 Fundamentals of Collision Technology.

AT 515. Engine Performance. 3 hours. Advanced mobile equipment engine performance evaluation with emphasis on the proper testing of computer controlled fuel delivery, ignition spark control, and air management systems. Prerequisites: AT 115 Mobile Electrical/Electronics and AT 116 Mobile Electrical/Electronics Laboratory.

AT 519. Mobile Fuels, Lubricants and Alternate Fuels. 3 hours. Covers the production, distributions, testing, and use of mobile fuels, lubricants, and alternate fuels in the transportation industry. Environmental issues related to these fuels are addressed in the course.

AT 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

AT 562. Damage Analysis, Estimating, and Insurance Appraisal. 3 hours. Course includes a look at damage analysis, estimating systems and terminology, and an overview of the insurance industry with an emphasis on the automobile. Frontal, side, and rear impact analysis is covered along with mechanical systems analysis, restraints, and refinishes. Electronic estimating software and manual estimating is demonstrated and used. Determination of vehicle value, total loss status, policy coverage, parts sources, and other issues are covered as well. Prerequisites: AT 301 Fundamentals of Collision Technology.

AT 580. Dealership Service Operations. 3 hours. An introductory course in the management of an automotive or transportation related business covering basic business structure, ownership, types of business facilities, strategic planning, development of company policy, human resources management, recruiting, employee development, evaluation of employees and financial management.

AT 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

AT 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project 1. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

AT 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

AT 613. Service Techniques Laboratory. 3 hours. Practical repair shop experience in all phases of automotive servicing with related technical content devoted to diagnosis, trouble shooting, and shop management. Prerequisites: AT 115 Mobile Electrical/Electronics and AT 116 Mobile Electrical/Electronics Laboratory.

AT 615. Engine Performance Laboratory. 3 hours. Advanced automotive engine performance evaluation with emphasis on the proper testing of computer controlled fuel delivery, ignition spark control, and air management systems. Prerequisites: AT 215 Automotive Electric/Electronic Equipment and AT 216 Automotive Electric/Electronic Equipment Laboratory.

AT 620. Hybrid, Electric, and Fuel Cell Vehicles. 3 hours. Advanced mobile technologies including gasoline and diesel electronic hybrid propulsion, repair, safety and high voltaged systems, battery systems, electric vehicles, and fuel cells/fuel cell vehicles. Prerequisites: AT 213 Engine Systems, AT 115 Mobile Electrical/Electronics and AT 116 Mobile Electrical/Electronics Laboratory or permission of instructor.

AT 621. Advanced Diesel Electronics and Diesel Engine Laboratory. 3 hours. Diesel electronic controls, fuel systems, diesel engine service, maintenance, diagnostic procedures, and principles of operation. Prerequisite: AT 215 Automotive Electric/Electronic Equipment and AT 216 Automotive Electric/Electronic Equipment Laboratory.

AT 630. On Highway Systems. 3 hours. Operation and service of systems found on large trucks, which includes: air brake systems, anti-lock braking systems, transmissions, clutches, PTOs, axles, suspension systems, retarders and trailer systems.

AT 635. Advanced Engine performance. 3 hours. Theory and operation of advanced engine performance systems. The class provides an in-depth study of fuel delivery systems, emission controls, computer timing, SAE control computer standards (ODB II), engine diagnostics, hands on experience with automotive scanners, lab scopes, 5 gas analyzers, and CAN bus diagnostics. Prerequisite: AT 515 Engine Performance.

AT 640. Off Highway Systems. 3 hours. Principles of operation and identification of systems found in agricultural and construction equipment. Systems include tires, undercarriages, track steering systems, power-shift transmissions, PTOs, hitches, Ag tractors, harvesting equipment, seeding equipment, hay and forage equipment, tillage equipment, dozers, wheel loaders, excavators, scrapers, haul trucks and other systems found in off road applications. Prerequisite: AT 416 Fluid Power.

AT 641. Construction Equipment Systems. 3 hours. Study the design, operation and service of construction equipment (CE) power train including: undercarriage systems, power shift and automatic transmissions, torque converters, hybrid drives, and track steering systems. The course also includes studying the features and differences found in the common CE and industrial machines, for example: skid steers, excavators, motor graders, scrapers, wheel and track loaders, dozers, haul trucks, and cranes (including overhead lifting and rigging). Students will receive hands-on experience operating a Caterpillar 160M motor grader, a Caterpillar D6 dozer, and four Caterpillar Simulators: wheel loader, excavator, dozer, and motor grader. Students will participate in a regional CE industry tour. Students will also be broken into groups to make a formal presentation.

AT 642. Agricultural Equipment and Powertrains. 3 hours. Study of the design, operation and service of Agricultural Equipment (Ag) and powertrains including: Ag track systems, power shift transmissions, hydrostatic transmissions and continuously variable transmissions. The course also includes studying the features and differences found in the common Ag equipment, for example: seeding systems, tillage systems, cutting systems, combine harvesting systems, forage harvesting systems, hay systems, sprayers, and precision farming.

AT 650. Dynamometer and Performance Testing. 3 hours. Theory and operation of chassis and engine dynamometers. Instruction includes performance testing procedures, data acquisition, and evaluation of the purpose of testing vehicles and related systems including engines for improvement and diagnostics. Prerequisites: AT 515 Engine Performance or AT 621 Advanced Diesel Electronics and Diesel Engine Laboratory.

AT 654. Advanced Hydraulics Systems and Off Highway Systems Laboratory. 3 hours. Principles of operation and troubleshooting principles are taught for advanced hydraulic systems that include hydrostatic transmissions, load sensing hydraulic systems, and hydraulic steering systems. Overhauling techniques and system testing procedures are practiced on off-highway powertrain and hydraulic systems. Prerequisite: AT 416 Fluid Power, and AT 640 Off Highway Systems.
AT 662. Automotive Finishing and Refinishing. 3 hours. This course includes the discussion of the following: corrosion protection, hazardous materials, personnel safety, refinish safety, refining equipment, VOC regulations, surface preparation and masking, color theory, application, tinting and blending. Prerequisite: AT 361 Fundamentals of Collision Technology.

AT 663. Technical Analysis of Vehicle Collisions. 3 hours. This course will study the proper techniques for documentation and interpretation of evidence from a vehicle crash. It will include an emphasis on the importance of properly documenting both roadway and vehicle evidence in order to provide the most accurate interpretation of a vehicle collision. Discussions will be held on measuring and mapping, as well as vehicle roadway photography, vehicle dynamics, lamp examination, speed analysis and vehicle failure analysis. Prerequisite: AT 301 Fundamentals of Collision Technology.

AT 679. Future Power for Automobile Technology. 3 hours. Advanced automotive technologies including gasoline and diesel electronic hybrid propulsion, repair, safety and high voltage systems, battery systems, alternative fuels, and fuel cells. Prerequisites: AT 112 Engine Analysis, AT 215 Automotive Electrical/Electronic Equipment and AT 216 Automotive Electrical/Electronic Equipment Laboratory, or permission of instructor.

AT 682. Dealership Sales Operations. 3 hours. This course will cover the fundamentals of the retail sales side of the automotive industry from the dealer's perspective. Students will study issues relating to automotive manufacturer and their goals, the franchised dealer, selling new and used vehicles, new and used car management responsibilities, job descriptions, and pay plans. Technology and its role within the dealership, interaction between the fixed and variable side of a dealership, accounting, and the role of the F & I (Finance & Insurance) department are also covered.

AT 687. Corporate Sales, Service, and Parts Management. 3 hours. This course will identify the roles and responsibilities of the sales, service and parts team from the manufacturer's side of the business. We will examine job opportunities, job descriptions/duties, setting goals and objectives, consulting skills, planning/scheduling business contacts, organization skills, meeting presentations, preparing an expense report, budgets, and variable/fixed operating report analysis. Other sales, service and parts areas covered include customer satisfaction, new car sales, certified pre-owned sales, advertising and marketing, sales planning and distribution, business development centers, internet lead and tracking, accessory sales and marketing, sales/service training, warranty plans and coverage, warranty analysis/audit, retail and wholesale parts sales, parts inventory control and owner retention.

AT 690. Dealership and Manufacturer Management. 3 hours. An introductory course in the management of an automotive or transportation related business covering basic business structure, ownership, types of business facilities, strategic planning, development of company policy, human resources management, recruiting, employee development, evaluation of employees and financial management.

AT 692. Dealership Sales Management. 3 hours. This course will cover the fundamentals of the retail sales side of the automotive industry from the dealer's perspective. Students will study issues relating to automotive manufacturer and their goals, the franchised dealer, selling new and used vehicles, new and used car management responsibilities, job descriptions, and pay plans. Technology and its role within the dealership, interaction between the fixed and variable side of a dealership, accounting, and the role of the F & I (Finance & Insurance) department are also covered.

AT 695. Corporate Service and Part Management. 3 hours. This course will identify the roles and responsibilities of the Service employee from the manufacturer's side of the business. This course will examine Job Opportunities, Job Descriptions/Duties, Setting Goals and Objectives, Consulting Skills, Planning/Scheduling Business Contacts, and Fixed Operating Report Analysis. Service analysis including Customer Satisfaction, Repair Order Count, Number of Cars Serviced, Warranty Analysis, Claims Submission, Owner Retention, PDI, and Training will also be taught.

AT 697. Corporate Sales Management. 3 hours. This course will identify the roles and responsibilities of the sales team from the manufacturer's side of the business. This course will examine job opportunities, job descriptions/duties, setting goals and objectives, consulting skills, planning/scheduling business contacts, organizing presentations for group meetings, preparing an expense report, budgeting, and variable operating report analysis, sales analysis including customer satisfaction, new car sales planning and distribution, certified used cars, internet leads and tracking, accessory sales, training, and owner retention will also be examined.

AT 699. Senior Seminar. 1 hour. A capstone transportation course simulating situations students will encounter in employment upon graduation. Students are required to complete their Senior Capstone Portfolio in this course. Assessment in this course includes the portfolio, ASE testing, and presentations. Prerequisite: Senior standing.

AT 722. Alternate Fuels in Transportation. 3 hours. This course will cover the production, distribution, testing, and use of mobile alternate fuels in the transportation industry. Physical and chemical properties of the fuels are studied. Fuels covered: natural gas, propane, hydrogen, ethanol, methanol, bio-diesel and waste vegetable oil.

AT 795. Special Topics in Automotive Technology (___). 1-3 hours. Selected topics in automotive technology. Regularly scheduled classroom and laboratory study pertaining to a distinct body of technical knowledge. May be repeated if subject matter is different. May be taken on a pass-fail basis.

AT 879. Emerging and Future Power Systems in the Transportation Industry. 3 hours. Advanced technologies including gasoline and diesel electric hybrid drive systems and integrated systems with multiple power sources including high voltage systems, high voltage batteries, fuel cells and safety procedures. Prerequisites: AT 213 Engine Systems, AT 115 Mobile Electrical/Electronics and AT 116 Mobile Electrical/Electronics Laboratory, or permission of instructor.

AT 890. Transportation Industry Service Management and Product Support. 3 hours. This course will examine the role of service management and product support and will focus on service operations including physical and manpower resources, workflow, customer relations, and employee relations. A look at merchandising and selling service and legal issues and responsibilities are also covered. Other topics include management styles, management strategies, financial measurement and marking.

Aviation Technology

AVT 118. Private Pilot Ground School. 3 hours. Instruction information required to successfully complete the FAA Private Pilot written examination. Subject matter includes: Federal aviation regulations, navigation, aviation weather and aeronautical knowledge. A passing score on the FAA test is required for credit in the course. Offered on a Pass-Fail basis only.

AVT 119. Private Pilot Flight. 3 hours. Completion of flight training by an FAA approved flight instruction program and receipt of a private pilot's license required for credit. Offered on Pass-Fail only. Prerequisite or corequisite: AVT 118 Private Pilot Ground School.

AVT 418. Instrument Rating Ground School. 3 hours. Successful completion of the written portion of the FAA instrument rating for pilots. Offered on a Pass-Fail basis only.

Biology

BIOL 105. Pre-Health Orientation I. 1 hour. Acquaint freshman with the requirements of professional schools and guide their curricula to enable them to succeed in their chosen career path. Required for all freshmen pre-health majors. Offered on a Pass-Fail basis only.

BIOL 106. Organismic and Environmental Biology Orientation. 1 hours. Acquaint freshman with the requirements for both agency employment and advanced degrees in the field sciences. Required for all incoming Biology majors in the Field Biology and Environment, or Ecology and Organismic Biology emphasis areas. Offered on a Pass-Fail basis only.

BIOL 111. General Biology. 3 hours. Designed to acquaint the student with the fundamental principles and processes of life as found in animals and plants and their relation to the everyday life of man. Corequisite: BIOL 112 General Biology Laboratory.

BIOL 112. General Biology Laboratory. 2 hours. Laboratory exercises to accompany BIOL 111 General Biology. Corequisite: BIOL 111 General Biology.

BIOL 113. Environmental Life Science. 4 hours. A basic ecological approach to the principles and processes of life with emphasis placed on human pressures and technology, and the effect of these on the organism-environment complex. Laboratory exercises accompany lecture. Not applicable toward a biology major.

BIOL 114. Environmental Life Science Laboratory for Teachers. 1 hours. Laboratory exercises that build on BIOL 113 Environmental Life Science and focus on topics and activities primarily developed for elementary education majors.
BIOL 301. Principles of Biology I. 4 hours. An introduction to biology including principles of science, basic chemistry, origin of life, cell biology, genetics, viruses, prokaryote life, evolution, and systematics. Prerequisite: BIOL 111/112 General Biology/Laboratory or minimum ACT composite score of 23 and biology major or major requiring the course; or permission of Department.

BIOL 302. Principles of Biology II. 4 hours. (4 hours lecture and laboratory). A continuation of Principles of Biology I including biology of protista, fungi, plants, and animals. Prerequisite: BIOL 211 Principles of Biology I and biology major or major requiring the course; or permission of Department. Course will be assessed an additional class fee.


BIOL 371. General Microbiology. 3 hours. Fundamentals of morphology, physiology, growth, taxonomy, and cultivation of bacteria and related microorganisms. Prerequisite: BIOL 111/112 General Biology/Laboratory or BIOL 211 Principles of Biology I and CHEM 105/106 Introductory Chemistry/Laboratory or CHEM 215/216 General Chemistry I/Laboratory. Corequisite: BIOL 372 General Microbiology-Laboratory.

BIOL 382. Plant Diversity. 3 hours. An overview of the major groups of plants with emphasis on morphological characteristics, evolution and distribution. Prerequisites: BIOL 212 Principles of Biology II or permission of instructor.

BIOL 402. Topics in Biology (___). 1-3 hours. Intensive study of selected topics in biology. Classroom and laboratory. May be repeated if subject matter is different. Each class limited to a single topic and for a specific number of credit hours.

BIOL 404. Plant Pathology. 3 hours. Contemporary concepts of plant pathogens, disease processes, host-pathogen relationships, variation of pathogenicity, predisposition, infection and colonization phenomena, control measures and resistance to disease. Prerequisites: BIOL 371/372 General Microbiology/Laboratory.

BIOL 410. Biological and Medical Terminology. 2 hours. A self-study course. Covers the words and roots of words commonly used in the life sciences and medicine. No class meetings; 2 examinations each semester.

BIOL 450. Biological Illustration. 2 hours. Techniques of pen and ink rendering for the purposes of illustrating biological research, technical papers, or curriculum.

BIOL 479. Techniques for Teaching Biology. 3 hours. Techniques, methods, and course content used in teaching biology in the secondary school. Offered by the Department of Biology. To be taken before the professional semester. Prerequisites: Admission to teacher education.

BIOL 481. Clinical Microbiology. 1-8 hours. Theory and laboratory study of pathogenic bacteria, viruses, rickettsiae, fungi, and parasites. Introduces morphological, physiological, taxonomic, and medical significance of the various groups; methods of collecting and treating specimens for the isolation and identification of the various types.

BIOL 482. Clinical Biochemistry. 1-8 hours. Theory and laboratory study of analytical biochemistry, incorporating routine and special chemical procedures in the analysis of body fluids and their significance in clinical medicine.

BIOL 483. Clinical Immunology. 1-6 hours. Theory and laboratory study of the fundamentals of antigen-antibody reactions, blood groups and types, cross-matches, blood components, AABB-approved transfusion practices, and serological procedures used in the determination of immunologic responses.

BIOL 656/657 Human Physiology/Laboratory and BIOL 660 Human Anatomy and Dissection. Prerequisite: BIOL 111/112 General Biology/Laboratory or BIOL 211 Principles of Biology I, and CHEM 105/106 Introductory Chemistry/Laboratory or CHEM 215/216 General Chemistry I/Laboratory. Corequisite: BIOL 372 General Microbiology Laboratory.

BIOL 732. General Microbiology Laboratory. 2 hours. Laboratory experiences concerning the morphology, cultivation, physiology, and applied aspects of bacteria and related microorganisms. Prerequisite: BIOL 111/112 General Biology/Laboratory or BIOL 211 Principles of Biology I, and CHEM 105/106 Introductory Chemistry/Laboratory or CHEM 215/216 General Chemistry I/Laboratory. Corequisite: BIOL 371 General Microbiology.
BIOL 484. Clinical Hematology. 1-6 hours. Blood cell derivation, maturation; and function; principles of hemostasis and blood coagulation. Methodology used in routine and special hematology studies and in the detection of hematological disorders.

BIOL 485. Topics in Medical Technology (____). 1-6 hours. General laboratory techniques including clinical microscopy, cytogenetics, urinalysis, nuclear medicine, histology, and a special project. May be repeated for a maximum of 6 hours.

BIOL 490. Honors Research in Biology. 1-3 hours. Special research problem in one of the fields of biology. Results of this study are to be submitted in accepted form for publications as set up by American Institute of Biological Sciences. May be repeated for a total of 6 hours. A student may apply a total of 6 hours of credit in BIOL 490 Honors Research in Biology and BIOL 491 Special Problems in Biology on the 40-hour biology major. Prerequisite: 20 hours of biology, overall grade point average of 3.4, and permission of instructor.

BIOL 502. Topics in Environmental Biology (____). 1-3 hours. Intensive study of selected topics in environmental protection and resource management. Each class is limited to a single topic. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

BIOL 515. Stream Ecology. 4 hours. Survey of the biology, chemistry, ecology and geomorphology of streams and rivers. Lecture and lab. Prerequisites: BIOL 330 Principles of Ecology or permission of instructor.

BIOL 533. Ichthyology. 4 hours. Survey of the fishes of the World with special emphasis on Kansas fishes. Lecture and laboratory. Prerequisite: BIOL 212 Principles of Biology II or permission of instructor.


BIOL 535. Ornithology. 4 hours. Lecture and laboratory. Identification: life history, ecology, distribution, morphology, and evolution of birds. Emphasis on field studies of birds of southeast Kansas. Prerequisite: BIOL 212 Principles of Biology II.

BIOL 536. Mammalogy. 3 hours. Lecture and laboratory. Morphology, classification, ecology, distribution, evolution and economic importance of mammals. Emphasis given to the mammals of Kansas. Prerequisite: BIOL 212 Principles of Biology II.

BIOL 537. Regional Natural History. 3 hours. Classification, identification, ecology, and collection techniques emphasized in the survey of regional flora, fauna, and geological features. Prerequisite: BIOL 211 Principles of Biology I and BIOL 212 Principles of Biology II or permission of instructor.

BIOL 538. Aquatic Plants. 2 hours. Lecture and laboratory. Taxonomy and ecology of plants and macroalgae that are aquatic or closely associated with water. Prerequisites: BIOL 211 Principles of Biology I, BIOL 212 Principles of Biology II or permission of instructor.

BIOL 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

BIOL 548. Taxonomy of Vascular Plants. 3 hours. Lecture and laboratory. The scientific classification and identification of ferns and seed plants, with emphasis on the local flora. Methods of collection, preservation and preparation of herbarium specimens included. Prerequisite: BIOL 212 Principles of Biology II or permission of instructor.

BIOL 550. Advanced Cellular and Molecular Biology. 3 hours. Discussion of current issues in cellular and molecular research. Prerequisites: 6 courses in biology and/or chemistry.

BIOL 551. Introduction to Recombinant DNA Techniques Laboratory. 3 hours. Laboratory designed to offer experience in plasmid and genomic DNA isolation and analysis, RNA isolation and analysis, cloning, transformation, and PCR. Prerequisites: BIOL 322/323 Genetics/Laboratory, BIOL 371/372 General Microbiology/Laboratory, 10 hours of chemistry.

BIOL 561. General Entomology. 3 hours. Lecture and laboratory. Structure, classification, physiology, ecology, and economic importance of insects. Prerequisite: BIOL 212 Principles of Biology II.

BIOL 570. Pathogenic Bacteriology. 3 hours. The isolation, identification, mechanisms of pathogenesis, host relations, immunity and public health aspects of disease producing bacteria and rickettsiae. Prerequisite: BIOL 371/BIOL 372 General Microbiology/Laboratory. Corequisite: BIOL 571 Pathogenic Bacteriology Laboratory.

BIOL 571. Pathogenic Bacteriology Laboratory. 2 hours. Laboratory experiences concerning the isolation, cultivation and identification of disease-producing bacteria. Corequisite: BIOL 570 Pathogenic Bacteriology.

BIOL 572. General Virology. 3 hours. Basic concepts regarding the nature of viruses and their properties, together with techniques for their growth, characterization and identification with emphasis on the major groups of animal viruses. Prerequisite: BIOL 371/BIOL 372 General Microbiology/Laboratory.

BIOL 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

BIOL 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

BIOL 601. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

BIOL 602. Topics in Biology (____). 1-3 hours. Intensive study of selected topics in biology. Classroom and laboratory study. May be repeated if subject matter is different. Each class is limited to a single topic and for a specific number of credit hours. Prerequisite: 15 hours of biology and permission of instructor.

BIOL 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

BIOL 605. Bioethics. 3 hours. Ethical theory and analysis as it applies to biology. Ethical issues which result from our expanding scientific knowledge base, including genetic testing, bioengineering, abortion and euthanasia, patients' rights, medical/scientific ethics, and the allocation of medical resources. Course will focus on historical case studies. Prerequisite: Junior standing.

BIOL 612. Internship in Biology. 1-3 hours. A cooperative education experience in a career area in biology. Requires a formal agreement between the instructor and the immediate supervisor of the industry or agency. Prerequisite: 15 hours of biology and permission of instructor. May be repeated for a maximum of three hours.

BIOL 615. Environmental Protection. 3 hours. A review of the history of conservation and environmental law, the legal, political, social, and scientific aspects of environmental protection, and major federal environmental laws. Prerequisite: BIOL 515 Resource Conservation.
BIOL 617. Environmental Health. 3 hours. The risks of human health from pollution; the major routes of exposure in humans from environmental contaminants in air, water, and soil; human health standards; sanitation; overviews of occupational health and safety; calculations of exposures and dose/response effects; and risk assessment and management. Prerequisites: 10 hours of biology or permission of instructor.

BIOL 633. Limnology. 4 hours. Lecture and laboratory. Biotic, physical, and chemical characteristics of fresh water environments. Biological mapping of lakes and streams; productivity studies. Prerequisites: 15 hours of biology, 10 hours of chemistry.


BIOL 635. Wildlife Ecology and Management. 4 hours. Lecture and laboratory. Application of ecological principles toward the manipulation of terrestrial wildlife populations. Laboratory sessions stress techniques, local management practices and discussion with wildlife personnel. Prerequisites: BIOL 330 Principles of Ecology, BIOL 212 Principles of Biology II.

BIOL 636. Invasive Species Management. 3 hours. Review of invasive species locally and globally focusing on invasive ecology, economic costs, and approaches to their management. Prerequisites: BIOL 211 Principles of Biology I, BIOL 212 Principles of Biology II and BIOL 313 Principles of Conservation.

BIOL 639. Terrestrial Field Ecology. 4 hours. Lecture, laboratory and field. Field techniques used to determine community structure and population dynamics in terrestrial systems. Purpose of ecological assessment, design of projects, sampling, data exploration, analysis, interpretation and reporting. Addresses environmental consulting and scientific research projects. Prerequisite: BIOL 330 Principles of Ecology.

BIOL 641. Identification of Woody Plants. 2 hours. An overview of the morphology, basic anatomy, distribution, ecology, and identification of woody trees, shrubs and vines. Emphasis will be on collections, identification, and field ecological methods. Numerous field trips.

BIOL 650. Developmental Biology. 3 hours. The principles of development, early developmental processes, molecular embryology, developmental genetics and bioethics. Prerequisites: BIOL 311 Cell Biology, BIOL 322/323 Genetics/Laboratory, CHEM 215/216 General Chemistry I/Laboratory.

BIOL 653. Biology of Cancer. 3 hours. An overview of the molecular biology, cellular biology, and genetics of cancer. Topics include causes of cancer, cell-cycle control, oncogenes, tumor suppressors, metastasis, and anti-cancer treatment strategies. Prerequisite: BIOL 311 Cell Biology or permission of instructor.

BIOL 656. Human Physiology. 3 hours. Chemical and physical basis of human physiology. Emphasis on molecular mechanisms as they apply to understanding systems. Prerequisites: 10 hours of biology, 10 hours of chemistry, including organic, 5 hours of physics. Corequisite: BIOL 657 Human Physiology Laboratory.

BIOL 657. Human Physiology Laboratory. 2 hours. Laboratory exercises to accompany BIOL 656 Human Physiology. Corequisite: BIOL 656 Human Physiology.

BIOL 660. Human Anatomy and Dissection. 5 hours. The study of gross human structures. Students will dissect and study human cadavers. Anatomical models, a text, an atlas, and lecture material will be other sources of information. Prerequisite: Permission of instructor. Course will be assessed an additional class fee.

BIOL 665. Medical Entomology. 3 hours. Investigation of arthropod-vectored diseases of the world from an ecological perspective. Biology of vectors, pathogens and disease symptoms. Relationships among disease cycles, reservoirs and the ecological, social, political factors involved in epidemiology of diseases. Emphasis on human health with exposure to veterinary health. Effects of diseases on human history. Prerequisites: BIOL 111/112 General Biology/Laboratory or BIOL 211 Principles of Biology I or BIOL 212 Principles of Biology II or consent of instructor.

BIOL 667. Animal Parasitology. 3 hours. Overview of parasitic protozoans, flatworms, roundworms, and important arthropod vectors highlighting life cycles, morphology, relationships with hosts, and diagnostic techniques. Prerequisites: BIOL 111/112 General Biology/Laboratory, BIOL 330 Principles of Ecology recommended.

BIOL 671. Immunology. 3 hours. Principles of immunity and serology; immunology-chemistry and interactions of antigen and antibodies in vitro and in vivo; mechanisms of immunologic damage. Prerequisites: BIOL 570/BIOL 571 Pathogenic Bacteriology/Laboratory and 5 hours of organic chemistry or consent of instructor.

BIOL 672. Immunology Laboratory. 2 hours. Selected recent laboratory experiments to accompany BIOL 671 Immunology. Prerequisite or corequisite: BIOL 671 Immunology.

BIOL 675. Microbial Physiology. 3 hours. The metabolic processes of microorganisms with emphasis on the bacteria. Prerequisite: 10 hours of biology including BIOL 371/BIOL 372 General Microbiology/Laboratory, 10 hours of chemistry, including organic, or permission of instructor. Biochemistry strongly recommended.

BIOL 676. Microbial Physiology Laboratory. 2 hours. Laboratory experience to complement lecture and classroom work in microbial physiology, with emphasis on bacteria. Prerequisites: 10 hours of biology including BIOL 371/BIOL 372 General Microbiology/Laboratory, 10 hours of biochemistry including organic permission of the instructor. Biochemistry strongly recommended.

BIOL 685. Plant Physiology. 3 hours. The chemical and physical phenomena occurring in the living plant. Prerequisites: BIOL 211 Principles of Biology I and BIOL 212 Principles of Biology II. Ten hours of chemistry, including organic. Corequisite: BIOL 686 Plant Physiology/Laboratory.


BIOL 699. Senior Seminar and Assessment. 1 hours. Individual reports and group discussion of problems and current research in the biological sciences. Includes an examination to assess the student's general understanding and knowledge of biological principles and facts. Prerequisite: Senior Standing. Required of all graduating seniors, except BSED majors.

BIOL 730. Evolution. 3 hours. History and theory of evolutionary biology, including population genetics and phylogenetics. Prerequisite: BIOL 322/BIOL 323 Genetics/Laboratory,(10 hours of biology).

BIOL 781. Freshwater Algae. 3 hours. Descriptive, physiological and ecological aspects of locally represented algal divisions. Laboratory and field work will concentrate on collection, identification, and distribution of local algal flora. Prerequisite: BIOL 212 Principles of Biology II.

BIOL 788. Mycology. 3 hours. Lecture and laboratory. Taxonomy, morphology and physiology of representative fungi. Prerequisite: BIOL 212 Principles of Biology II, BIOL 371/BIOL 372 General Microbiology/Laboratory. Organic chemistry is recommended.

BIOL 800. Seminar. 1 hours. Individual reports and group discussion of problems and current research in biology. May be repeated. Participation required of all regularly enrolled graduate students.

BIOL 801. Introduction to Research. 3 hours. Proposal preparation, research techniques, use of library, analysis and presentation of research data. Required for all graduate students.

BIOL 802. Advanced Topics in Biology (____). 1-3 hours. Intensive study of selected topics in biology. Classroom and laboratory study. May be repeated if subject matter is different. Each class limited to a single topic and for a specific number of credit hours. Prerequisites: 15 hours of biology and permission of instructor.

BIOL 803. Biometry. 3 hours. The application of statistical methods to data from various fields of biological research. Special emphasis placed on practical computational procedures and experimental design. Prerequisites: MATH 113 College Algebra and 20 hours of biology, or equivalent, or permission of instructor.

BIOL 810. Recent Literature in Biology (____). 1 hours. A survey of recent literature in specific areas of biology (for example, ecology, genetics, immunology, physiology, etc.). May be repeated for a maximum of 3 hours. Prerequisite: Permission of instructor.

BIOL 812. Internship in Biology. 1-3 hours. A cooperative education experience in a career area in biology. Requires a formal agreement between the instructor and the immediate supervisor of the industry or agency. Prerequisite: 15 hours of biology and permission of instructor.
Examples of professional experience might include (1) for a classroom teacher, project for candidates for Option II for Master of Science in biology. May be BIOL 891. Research Problems. emphasis on those of local interest. May be repeated for a total of 6 hours. Prerequisites: BIOL 330 Principles of Biology II, BIOL 330 Principles of Ecology, BIOL 330 Limnology.

BIOL 836. Aquaculture Concepts. 3 hours. Lecture, project and field trips. The principles of aquatic animal husbandry with a primary emphasis on fish hatchery operations. Includes a project dealing with aquaculture and several field trips to a variety of fish production facilities. Prerequisites: BIOL 212 Principles of Biology II, BIOL 330 Principles of Ecology.

BIOL 874. Problems in Microbiology. 1-6 hours. Individual work on microbiological problems suited to the need and interests of the students, with emphasis on local problems. May be repeated for a total of 6 hours. Prerequisites: 25 hours of biology, including 10 hours of microbiology. Permission of instructor required.

BIOL 884. Problems in Botany. 1-6 hours. Individual work on problems of taxonomy, morphology, ecology, and physiology, or other aspects of plants with emphasis on those of local interest. May be repeated for a total of 6 hours. Prerequisites: 25 hours of biology, including 10 hours of botany.

BIOL 890. Research and Thesis. 1-6 hours. To be taken by students in Option I for Masters of Science in biology. May be repeated for a maximum of six hours.

BIOL 891. Research Problems. 1-6 hours. Field, laboratory or library research project for candidates for Option II for Master of Science in biology. May be repeated for a maximum of 6 hours.

BIOL 895. Professional Experience. 3 hours. The experience will be arranged by the student, and may be voluntary or a paid position, as long as it is deemed "professional" by the student's committee. The student and the committee will develop guidelines for the experience that may include a timeline, a detailed description of the experience(s), and a rationale for how the experience will contribute to the development of the student's expertise in his/her profession. Examples of professional experience might include (1) for a classroom teacher, developing and/or implementing a curriculum, (2) for an environmental scientist, designing and/or implementing an environmental mitigation project, (3) for a biotechnologist, developing and/or implementing a new process or product. Prerequisites: BIOL 801 Introduction to Research and BIOL 803 Biometry. May be repeated for a maximum of six hours.

Business

BUS 200. Enactus Leadership Skills. 1 hours. Emphasizes entrepreneurial and leadership skills as students create and implement projects to assist people and businesses in need. Students will keep a journal to document their experience, lessons learned, and volunteer hours. Prerequisite: Current membership in the Enactus Student Organization. May be repeated up to eight hours total credit.

BUS 201. Directed Studies in Business (___). 1-3 hours. Individual study-based research projects or field-based practicums. May be repeated under different topics. Prerequisite: Permission of instructor required.

BUS 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

BUS 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

BUS 359. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

BUS 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

BUS 805. Directed Graduate Studies in Business. 1-3 hours. Advanced individual study-based research projects or field-based practicums. May be repeated under different topics. Prerequisite: Graduate standing and permission of instructor.

Chemistry

CHEM 105. Introductory Chemistry. 3 hours. Survey of introductory chemical principles and properties of common materials. Topics include gases, crystalline solids, solutions, energy, polymers, organic compounds and biomolecules. Not intended for majors that require CHEM 215 General Chemistry I. Prerequisite or Corequisite: CHEM 106 Introductory Chemistry Laboratory.

CHEM 106. Introductory Chemistry Laboratory. 1 hours. Experiments to accompany CHEM 105 Introductory Chemistry. Prerequisite or Corequisite: CHEM 105 Introductory Chemistry.

CHEM 107. Chemistry for the Life Sciences. 3 hours. Introduction to general, organic, and biochemistry for life science majors. Meets the requirements of students of nursing, dental hygiene, physical therapy, and other allied health program. May be taken by technology majors with comparable requirements. Does not satisfy the requirements of chemistry, physics and biology majors. Corequisite: CHEM 108 Chemistry for the Life Sciences Laboratory.

CHEM 108. Chemistry for the Life Sciences Laboratory. 1 hours. Experiments to accompany CHEM 107 Chemistry for the Life Sciences. Prerequisite or Corequisite: CHEM 107 Chemistry for the Life Sciences.

CHEM 112. Essentials of Chemistry. 3 hours. Designed to review fundamental skills and knowledge needed for CHEM 215 General Chemistry I. For students without previous chemistry background. CHEM 113 Essentials of Chemistry Laboratory optional.

CHEM 113. Essentials of Chemistry Laboratory. 1 hours. Experiments to accompany CHEM 112 Essentials of Chemistry. Prerequisite or Corequisite: CHEM 112 Essentials of Chemistry.

CHEM 215. General Chemistry I. 1-3 hours. An introduction to calculations, atomic structure, atomic periodicity, molecular bonding, chemical reaction and gases. An introductory course for students planning a science major. Prerequisite: Score of 20 on Math section of ACT or College Algebra or CHEM 105 Introductory Chemistry. Prerequisite or Corequisite: CHEM 216 General Chemistry I Laboratory.

CHEM 216. General Chemistry I Laboratory. 2 hours. Experiments to accompany CHEM 215 General Chemistry I. Four hours of laboratory per week. Prerequisite or Corequisite: CHEM 215 General Chemistry I.

CHEM 225. General Chemistry II. 3 hours. A continuation of CHEM 215 General Chemistry I. Introduction to chemical kinetics, chemical equilibrium, acids and bases, and thermodynamics. Prerequisite: CHEM 215 General Chemistry I.

CHEM 226. General Chemistry II Laboratory. 2 hours. Experiments to accompany CHEM 225 General Chemistry II. Four hours of laboratory per week. Prerequisite or Corequisite: CHEM 225 General Chemistry II.

CHEM 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CHEM 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CHEM 235. Laboratory Safety and Compliance. 1 hours. This course is designed for personnel and students who will be working inside a chemistry laboratory (academic and teaching) on the matters of laboratory safety and compliance. Survey recommended best practices for safe laboratory operation, handling and disposal of hazards materials, pressurized and cryogenic gases. Introduction to first aid operation including the latest federal, state, city and campus regulations to prevent accidents or exposure that may cause injury, property damage, or interference with other works. Students cannot receive credit for both CHEM 235 and CHEM 735. Prerequisite: Permission of instructor.
<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>CHEM 270. Sophomore Research in Polymer Chemistry.</td>
<td>1 hour. Introduction to polymer chemistry research in laboratory environment, synthesis of basic polymers. Polymer research problems. Prerequisite: CHEM 215 General Chemistry I or permission of instructor.</td>
</tr>
<tr>
<td>CHEM 299. Sophomore Research in Chemistry.</td>
<td>1-3 hours. Research problems in chemistry. Prerequisite: Approval of instructor.</td>
</tr>
<tr>
<td>CHEM 320. Introductory Organic Chemistry.</td>
<td>3 hours. Survey of organic chemistry, structure, nomenclature, reactions, biomolecules, and polymers. Three lectures per week. Not open to students with credit in CHEM 325 Organic Chemistry I. Prerequisites: CHEM 105 Introductory Chemistry or CHEM 107 Chemistry for the Life Sciences or CHEM 215 General Chemistry I. Prerequisite or Corequisite: CHEM 326 Organic Chemistry Laboratory.</td>
</tr>
<tr>
<td>CHEM 325. Organic Chemistry I.</td>
<td>3 hours. Introduction to organic bonding, structure, nomenclature, mechanisms and reactions. Prerequisite: CHEM 215 General Chemistry I. CHEM 225 General Chemistry II is strongly recommended. Prerequisite or Corequisite: CHEM 326 Organic Chemistry Laboratory.</td>
</tr>
<tr>
<td>CHEM 326. Organic Chemistry Laboratory.</td>
<td>2 hours. Experiments to accompany CHEM 325 Organic Chemistry I. Four hours of laboratory per week. Prerequisite or Corequisite: CHEM 325 Organic Chemistry I or CHEM 320 Introductory Organic Chemistry.</td>
</tr>
<tr>
<td>CHEM 336. Organic Chemistry II Laboratory.</td>
<td>2 hours. Experiments to accompany CHEM 335 Organic Chemistry II. Four hours of laboratory per week. Prerequisite or Corequisite: CHEM 335 Organic Chemistry II.</td>
</tr>
<tr>
<td>CHEM 360. Introduction to Polymer Science and Technology.</td>
<td>3 hours. Definitions and fundamentals of polymer science, understanding the structural aspects of various types of polymers, precopolymers and designer monomers, introduction to polymer science, basic principles of polymer chemistry and applications. Prerequisite: CHEM 215 General Chemistry I or permission of instructor.</td>
</tr>
<tr>
<td>CHEM 369. Laboratory Assistant Practicum I.</td>
<td>3 hours. For students intending to teach chemistry in secondary schools. Assisting in preparation and instruction in one of several chemistry laboratories. A minimum of four hours assisting per week is required. Prerequisite: Needs consent of instructor.</td>
</tr>
<tr>
<td>CHEM 370. Junior Research in Polymer Chemistry.</td>
<td>1 hour. Synthesis of commercially important polymers, polymeric materials, composites and smart polymers and their characterization techniques. Polymer research problems. Prerequisite: CHEM 215 General Chemistry I or CHEM 360 Introduction to Polymer Science and Technology or permission of instructor.</td>
</tr>
<tr>
<td>CHEM 399. Junior Research in Chemistry.</td>
<td>1-3 hours. Research problems in chemistry. Prerequisite: Approval of instructor.</td>
</tr>
<tr>
<td>CHEM 413. Selected Topics in Chemistry (___).</td>
<td>2-3 hours. Lecture, laboratory, or seminar study of specific topics in chemistry. Prerequisites: 15 hours of chemistry and permission of instructor.</td>
</tr>
<tr>
<td>CHEM 445. Analytical Chemistry.</td>
<td>3 hours. Fundamental principles of gravimetric, volumetric, spectrophotometric, chromatographic, and electrochemical analysis. Prerequisite: CHEM 225 General Chemistry II. Prerequisite or Corequisite: CHEM 446 Analytical Chemistry Laboratory.</td>
</tr>
<tr>
<td>CHEM 446. Analytical Chemistry Laboratory.</td>
<td>2 hours. Experiments to accompany CHEM 445 Analytical Chemistry. Four hours of laboratory per week. Prerequisite: CHEM 226 General Chemistry II Laboratory. Prerequisite or Corequisite: CHEM 445 Analytical Chemistry.</td>
</tr>
<tr>
<td>CHEM 469. Laboratory Assistant Practicum II.</td>
<td>3 hours. For students intending to teach chemistry in secondary schools. Assisting in preparation and instruction in one of several chemistry laboratories. A minimum for four hours assisting per week is required. Prerequisite: CHEM 369 Laboratory Assistant Practicum I.</td>
</tr>
<tr>
<td>CHEM 475. Introduction to Biochemistry.</td>
<td>3 hours. Introduction to cellular and biomolecular structure and function relationships, bioenergetics, enzyme kinetics, cellular metabolism, and recombinant DNA technology. Prerequisite: CHEM 320 Introductory Organic Chemistry or CHEM 325 Organic Chemistry I.</td>
</tr>
<tr>
<td>CHEM 479. Techniques for Teaching Chemistry.</td>
<td>3 hours. Techniques, methods, and course content used in teaching chemistry in the secondary school. Offered by the Department of Chemistry. To be taken before the professional semester. Prerequisites: Admission to teacher education and PSYCH 357 Educational Psychology.</td>
</tr>
<tr>
<td>CHEM 539. Workshop (___).</td>
<td>1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.</td>
</tr>
<tr>
<td>CHEM 569. Laboratory Assistant Practicum III.</td>
<td>3 hours. For students intending to teach chemistry in secondary schools. Students are placed in charge of all instruction in a single undergraduate laboratory section. Prerequisites: CHEM 369 Laboratory Assistant Practicum I and CHEM 469 Laboratory Assistant Practicum II.</td>
</tr>
<tr>
<td>CHEM 576. Biochemistry I Laboratory.</td>
<td>2 hours. Biochemistry laboratory experiments to complement CHEM 575 Biochemistry I. Prerequisite or Corequisite: CHEM 575 Biochemistry I.</td>
</tr>
<tr>
<td>CHEM 579. Supervised Student Teaching and Follow-Up of Teachers.</td>
<td>2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.</td>
</tr>
<tr>
<td>CHEM 589. Workshop (___).</td>
<td>1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.</td>
</tr>
<tr>
<td>CHEM 593. Physical Chemistry I.</td>
<td>3 hours. An introduction to physical chemistry with an emphasis on thermodynamics. Prerequisites: CHEM 225 General Chemistry II PHYS 105 Engineering Physics II, MATH 150 Calculus I.</td>
</tr>
<tr>
<td>CHEM 594. Physical Chemistry I Laboratory.</td>
<td>2 hours. Laboratory to accompany CHEM 593 Physical Chemistry I. Four hours laboratory per week. Prerequisite or Corequisite: CHEM 593 Physical Chemistry I.</td>
</tr>
<tr>
<td>CHEM 595. Physical Chemistry II.</td>
<td>3 hours. A continuation of CHEM 593 Physical Chemistry I with an emphasis on quantum chemistry. Three lectures per week. Prerequisites: CHEM 593 Physical Chemistry I and MATH 253 Calculus III.</td>
</tr>
<tr>
<td>CHEM 596. Advanced Inorganic-Physical Chemistry Laboratory.</td>
<td>2 hours. Inorganic synthesis and the physical chemistry of inorganic compounds. Four hours of laboratory per week. Prerequisite: CHEM 594 Physical Chemistry I Laboratory. Prerequisite or Corequisite: CHEM 595 Physical Chemistry II.</td>
</tr>
<tr>
<td>CHEM 601. Chemistry Colloquium.</td>
<td>0-1 hours. Oral reports presented and accompanied by a written paper. May be repeated. Offered on a Pass-Fail basis if taken for zero hours. Offered both semesters.</td>
</tr>
<tr>
<td>CHEM 603. Senior Honors Project 1.</td>
<td>3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.</td>
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</tbody>
</table>
CHEM 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the results. Students must earn a grade of A or B to receive credit for this course. Failure to complete the coursework with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

CHEM 611. Senior Review and Assessment. 1 hours. Capstone course for undergraduate chemistry majors along with exiting assessment. Prerequisite: Senior standing.

CHEM 625. Polymer Synthesis and Characterizations. 3 hours. Introduction to the concepts of polymer chemistry and synthesis, classical, advanced and other approaches of polymer synthesis, structure-property correlation, various methods of polymer characterization. Prerequisite: CHEM 360 Introduction to Polymer Science and Technology or permission of instructor. Prerequisite or Corequisite: CHEM 626 Polymer Synthesis and Characterizations Laboratory.

CHEM 626. Polymer Synthesis and Characterizations Laboratory. 2 hours. Polymer experiments to accompany CHEM 625 Polymer Synthesis and Characterizations. Prerequisite or Corequisite: CHEM 625 Polymer Synthesis and Characterizations or permission of instructor.

CHEM 640. Polyurethanes and Their Applications. 3 hours. Introduction to polyurethanes, types of polyurethanes, structure-property correlation, various synthetic approaches for polyurethanes, elastomers, thermoplastics and foams, polyurethane composites and applications.

CHEM 650. Conducting Polymers and Their Applications. 3 hours. Definitions and basic understanding of conducting polymers, electronic properties and band theories, metallic state of conducting polymers, conjugated polymers as semiconductors, applications of conducting polymers. Prerequisites: CHEM 360 Introduction to Polymer Science and Technology and CHEM 625 Polymer Synthesis and Characterizations or permission of instructor.

CHEM 670. Senior Research in Polymer Chemistry. 1 hours. Synthesis of advanced polymers, polymeric materials, biopolymers and polyurethanes. Preparation of polyurethane composites and smart polymers. Polymer research problems. Prerequisites: CHEM 325 Organic Chemistry I or CHEM 360 Introduction to Polymer Science and Technology or permission of instructor.

CHEM 680. Physical Properties of Polymers. 3 hours. Physical chemistry of polymers, various physical states of polymers, molecular weight determination, polymers in solutions and viscosity, Flory-Huggins theory, thermodynamics of polymer in solutions, kinetics and morphology of polymers, structure-property correlation, methods of polymer characterization. Prerequisites: CHEM 360 Introduction to Polymer Science and Technology and CHEM 625 Polymer Synthesis and Characterizations or permission of instructor.

CHEM 681. Polymer Chemistry Colloquium. 1 hours. Oral presentation and discussion on selected research topics in polymer science, published peer reviewed journals, review of selected topics in polymer chemistry. Prerequisites: CHEM 325 Organic Chemistry I or CHEM 360 Introduction to Polymer Science and Technology or permission of instructor.

CHEM 683. Biopolymers. 3 hours. Structure, function, and physical properties of naturally-occurring polymers, including proteins, polysaccharides, polyelecters, DNA and lipids. The concept of nature as a model for polymers is discussed. The transformation of natural and synthetic starting materials to bio-based synthetic polymers, biodegradable polymers and other bio-based products is presented. Degradation mechanisms in polymeric materials, environmental issues when using biopolymers and synthetic polymers and various routes for recovery/reuse of plastics is reviewed. An introduction to polymers used in biomedical and other biological systems is conducted. Prerequisites: CHEM 320 Introductory Organic Chemistry, CHEM 326 Organic Chemistry Laboratory and CHEM 360 Introduction to Polymer Science and Technology or permission of instructor.

CHEM 685. Selected Topics in Polymer Chemistry (___). 1-3 hours. Variable topic course providing focus on selected topics in polymer chemistry or concepts of special polymers. May be repeated when the topic changes. Prerequisites: CHEM 325 Organic Chemistry I or CHEM 360 Introduction to Polymer Science and Technology or permission of instructor.

CHEM 687. Polymers in Nanotechnology. 3 hours. Introduction to nanotechnology, importance of polymer science in nanotechnology, biodegradable and biocompatible polymers, polymeric nanotherapeutics for targeted drug delivery, nanothearanostics, nanotoxicology, and nanobiomaging.

CHEM 690. Selected Research Projects in Polymer Chemistry. 1-3 hours. Design and synthesis of selected research projects, analysis of synthetic scheme, characterizations of synthesized polymers, and their applications. Prerequisites: CHEM 360 Introduction to Polymer Science and Technology or CHEM 625 Polymer Synthesis and Characterizations or permission of instructor.

CHEM 699. Senior Research in Chemistry. 1-3 hours. Special research in chemistry. A written report is required. Prerequisite: Permission of instructor. May be repeated.

CHEM 705. Modern Concepts of Chemistry. 1-5 hours. Fields available: (a) analytical chemistry, (b) biochemistry, (c) inorganic chemistry, (d) organic chemistry, (e) physical chemistry. Limited to 1-5 hours in each field. May be repeated if different field is selected. Prerequisite: Approval of the department.


CHEM 723. Inorganic Chemistry. 3 hours. Special topics in inorganic chemistry. Prerequisite: CHEM 593 Physical Chemistry I and CHEM 595 Physical Chemistry II.

CHEM 730. Advanced Polymer Synthesis. 3 hours. Advanced study of various methods of polymer synthesis; analysis of synthetic factors that affect the resulting polymer structure (including molecular weight, molecular weight distribution and molecular architecture) and physical properties; rationalization of polymer structure - property relationships; basic concepts of macromolecular engineering and design of materials for specifically targeted applications. Prerequisites: CHEM 625 Polymer Synthesis and Characterizations, CHEM 626 Polymer Synthesis and Characterizations Laboratory and CHEM 680 Physical Properties of Polymers, or permission of instructor.

CHEM 735. Laboratory Safety and Compliance. 1 hours. Survey of recommended best practices for safe laboratory operation, handling and disposal of hazardous materials, electricity, radiation, pressurized or cryogenic gases, and first aid, including the latest federal, state, city, and campus regulations to prevent accidents or exposures that may cause injury, property damage, or interference with other work. Recommended for Lab Assistants. Prerequisite: CHEM 225 General Chemistry II.

CHEM 745. Instrumental Analysis. 3 hours. Concepts of instrumental methods of chemical analysis. Emphasis on design, operation, and theoretical foundations of instruments and instrumental procedures. Prerequisite or Corequisite: CHEM 593 Physical Chemistry I.

CHEM 746. Instrumental Analysis Laboratory. 2 hours. Instrumental analysis experiment to accompany CHEM 745 Instrumental Analysis. Prerequisite or Corequisite: CHEM 745 Instrumental Analysis and CHEM 446 Analytical Chemistry Laboratory.

CHEM 773. Biochemistry II. 3 hours. Biochemistry of DNA and RNA, replication, transcription and translation. Recombinant DNA methodologies, polymerase chain reaction technologies and gene cloning. Prerequisites: CHEM 335 Organic Chemistry II and CHEM 593 Physical Chemistry I or permission of the instructor.

CHEM 774. Biochemistry II Laboratory. 2 hours. Experiments to accompany CHEM 773 Biochemistry II. Four hours of laboratory per week. Prerequisite or Corequisite: CHEM 773 Biochemistry II.


CHEM 790. Advanced Research in Polymer Chemistry. 3 hours. Synthesis, characterization and applications of advanced polymers. Polymer research problems. Prerequisite: CHEM 360 Introduction to Polymer Science and Technology or permission of instructor.
CHEM 793. Advanced Chemical Kinetics. 3 hours. A survey of the basic principles of chemical kinetics. Prerequisite: CHEM 593 Physical Chemistry I and CHEM 595 Physical Chemistry II.

CHEM 801. Chemistry Colloquium. 1 hour. Oral reports presented and accompanied by a written paper. May be repeated.

CHEM 815. Advanced Topics in Chemistry. 1-5 hours. Theoretical or laboratory study. Fields available: (1) analytical chemistry, (2) biochemistry, (3) electronic instrumentation, (4) inorganic chemistry, (5) organic chemistry, (6) physical chemistry. Limited 1-5 hours in each field.

CHEM 823. Advanced Inorganic Chemistry. 3 hours. Selected topics in inorganic chemistry.

CHEM 825. Graduate Review. 3 hours. A survey course covering important concepts across the various fields in chemistry.

CHEM 840. Advanced Polymers for Electrical and Electronic Applications. 3 hours. Advanced polymers for electronic and electrical applications, synthesis of advanced polymers, electrical and electronic properties, charge transport mechanism, advanced devices based on these materials such as photovoltaics, sensors, supercapacitors. Prerequisites: CHEM 360 Introduction to Polymer Science and Technology and CHEM 625 Polymer Synthesis and Characterizations.

CHEM 850. Inorganic and Architecturally Unusual Polymers. 3 hours. Advanced study of various polymers containing elements other than C, H, N and O in their structure; advanced study of selected polymers with molecular architectures different from traditional linear, crosslinked and randomly branched; analysis of synthetic factors that affect resulting polymer structure (including molecular weight, molecular weight distribution and molecular architecture) and physical properties; rationalization of polymer structure - property relationships. Prerequisites: CHEM 730 Advanced Polymer Synthesis and CHEM 785 Physical Chemistry of Polymers, or permission of instructor.


CHEM 863. Physical Organic Chemistry. 3 hours. Organic reactions and rearrangements organized according to mechanistic types, with emphasis on mechanisms, stereochemistry, and theoretical interpretations of reaction rates and driving forces.

CHEM 867. Spectroscopy. 3 hours. Theory and practice of infrared spectroscopy, mass spectrometry, and nuclear magnetic resonance spectroscopy. The emphasis is on nmr spectroscopy and the identification of organic compounds.

CHEM 875. Advanced Biochemistry. 3 hours. This course explores the thermodynamics, and structure function relationships in biomolecules. It includes a survey of molecular methods used to probe structure relationships between cellular biomolecules.

CHEM 883. Chemical Thermodynamics. 3 hours. The application of the laws of thermodynamics to chemical systems.

CHEM 885. Quantum Chemistry. 3 hours. Various topics in quantum chemistry including the hydrogen atom, harmonic oscillator, and rigid rotor.

CHEM 887. Advanced Biopolymers and Nanotechnology. 3 hours. Structure, function, and physical properties of naturally-occurring polymers, including proteins, polysaccharides, polyessters, DNA and lipids. The concept of nature as a model for polymeric materials is discussed. The transformation of natural and synthetic starting materials to bio-based synthetic polymers, biodegradable polymers, bio-compatible polymers and other bio-based products is presented. Degradation mechanisms in polymeric materials, environmental issues when using biopolymers and synthetic polymers, and various routes for recovery/reuse of plastics is reviewed. Role of nanotechnology in environment and health. Advanced application of polymer science in nanotechnology. Nano-biotechnology and Bio-nanotechnology. Applications of nanotechnology in drug delivery, cancer therapy, infectious diseases, optics and lithography. Prerequisites: CHEM 360 Introduction to Polymer Science and Technology and CHEM 625 Polymer Synthesis and Characterizations.

CHEM 889. Introduction to Chemical Research. 1-9 hours. Graduate level research, may be repeated, but only three hours may be credited towards a degree program. Prerequisite: Enrollment in the Chemistry or Polymer Chemistry graduate program. Offered on a pass/fail basis only.

CHEM 890. Research and Thesis. 1-6 hours. May be repeated. No more than six hours applies toward the master's degree, except when additional hours are determined by the Department to be required to complete the thesis and its defense.

CHEM 891. Research Problems. 1-6 hours. May be repeated. No more than six hours applies toward the master's degree, except when additional hours are determined by the Department to be required to complete the problem and report.

Computer Information Systems

CIS 130. Computer Information Systems. 3 hours. An introduction to the use of computer systems in business and industry including hands-on use of productivity software. Concepts covered include computer hardware and software, data security, and computer based information systems.

CIS 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CIS 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CIS 230. Visual Basic Programming. 3 hours. This is an introduction to the Visual Basic programming language and to the Visual Studio program development environment. It is designed as an entry level course to introduce basic programming concepts using object-oriented methodologies. Prerequisite: MATH 019 Intermediate Algebra or MATH 110 College Algebra with Review or MATH 113 College Algebra or equivalent high-school class preparation.

CIS 240. C ++ Programming. 3 hours. An introduction to programming using the C++ language. Prerequisite: MATH 019 Intermediate Algebra or MATH 110 College Algebra with Review or MATH 113 College Algebra or equivalent high-school class preparation.


CIS 345. Object Oriented Programming Using Java. 3 hours. An introduction to advanced object-oriented programming methodologies using the language Java. Prerequisite: CIS 240 C++ Programming and junior standing.

CIS 350. Introduction to System Administration. 3 hours. An introduction to the concepts and practices of computer systems administration. Topics include the installation and management of systems and applications and hardware components including network devices, access control for system resources; the role of administrative policies and procedures, identification of threats and countermeasures; operational controls, and audit practices required for system security and system recovery. Prerequisites: CIS 240 C++ Programming and junior standing.

CIS 380. Systems Analysis and Design. 3 hours. An introduction to methods used to design computer applications. The course will explore traditional and object oriented methods used for the analysis and design of large application systems. It will focus on Object Oriented Analysis (OOA) and Object Oriented Design (OOD) methodologies. Prerequisite: CIS 240 C++ Programming and junior standing.

CIS 420. Management Information Systems. 3 hours. Survey of the principle concepts with emphasis on computer-based transactional and management information system. Computer systems, files and file processing, systems analysis and design, managerial, organizational and social impacts. Prerequisites: "C" in CIS 130 Computer Information Systems, junior standing, or permission of instructor.

CIS 470. Computer Networking. 3 hours. Concepts of communications, computer networking principles, and survey of technical components of a distributed computer system. Prerequisite: CIS 350 Introduction to System Administration and junior standing.

CIS 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
CIS 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CIS 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

CIS 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

CIS 610. Internship. 1-3 hours. This course requires an in-depth involvement in on-going project under direct professional supervision. A project may be on-campus or with a business, financial institution or governmental agency. A formal report of project activities must be submitted to the course instructor. Students must apply for admission to the course and selection will be made by the course instructor. Prerequisites: Junior standing and consent of instructor.

CIS 615. Database Management. 3 hours. Analysis and design of large integrated data bases. Logical and physical representation of data. Storage and retrieval mechanisms and languages. Survey of existing systems. Roles of the Database Manager and Analyst. Prerequisite: CIS 420 C++ Programming and junior standing.

CIS 640. Software Engineering. 3 hours. Survey of methods for definition, design, development, documentation, and implementation of significant software systems. Formal theories for representation, correctness, and related reasoning. Material covered will address the administrative, technical, physical, legal, and ethical issues related to providing confidentiality, integrity, and availability of information in a networking computer environment. Prerequisites: CIS 470 Computer Networking and junior standing.

CIS 670. Information Assurance and Computer Security I. 3 hours. Overview of the central issues that impact upon information assurance and computer security. Material covered will address the administrative, technical, physical, legal, and ethical issues related to providing confidentiality, integrity, and availability of information in a networking computer environment. Prerequisites: CIS 470 Computer Networking and junior standing.

CIS 671. Information Assurance and Computer Security II. 3 hours. Information systems security models, software security and systems lifecycle management, policy development, personnel responsibilities, contingency planning, physical security and administrative controls. Prerequisite: CIS 670 Information Assurance and Computer Security I and junior standing.

CIS 690. Topics in Computer Science (___). 1-3 hours. Computing topics consistent with current interests of staff and students. May be repeated with different topics for a maximum of 6 hours. Prerequisite: CIS 420 Management Information Systems or ACCTG 420 Accounting Information Systems.

CIS 801. Topics: (___). 1-3 hours. A study of an area of Information Systems theory or applications. A specific topic will be defined each time the course is offered. May be repeated if the topic is different. Prerequisite: CIS 420 Management Information Systems and permission of instructor.

Construction Management and Construction Engineering Technology

CMCET 133. Construction Graphics. 3 hours. (1 hour lecture, 4 hours laboratory). Computer based 2D & 3D graphics used in the construction industry including CAD/REVIT based drawing development, construction drawing interpretation, site/plan/elevation/section/detail drawings, structural and MEP drawings. Residential and commercial construction based.

CMCET 200. Cooperative Education (___). 1-6 hours. A cooperative college-industry, college-business, or college-government work experience. The student is interviewed and employed by an industrial, business or government organization, then a work program is outlined. Supervision of the work experience is conducted by the employer and the college coordinator. May be repeated if subject matter is different. Written permission of department chairperson required. Offered on a Pass-Fail basis only.

CMCET 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CMCET 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CMCET 234. The Construction Industry. 3 hours. (3 hour lecture). Overview of construction as a profession and of the construction industry including NCCE core curriculum topics, types of construction, professional organizations, contract delivery systems, ethics, communication and software applications within construction.

CMCET 235. Methods of Construction-Light Frame and Finishes. 2 hours. (1 hour lecture, 2 hours laboratory). A study of the construction methods and materials associated with wood/metal structural framing, finishes, thermal and moisture protection for residential and light commercial applications including review of drawings and specifications, basic estimating, best practices, and terminology. Laboratory component required.

CMCET 300. Cooperative Education (___). 3-6 hours. A cooperative college-industry, college-business, or college-government work experience. The student is interviewed and employed by an industrial, business or government organization, then a work program is outlined. Supervision of the work experience is conducted by the employer and the college coordinator. May be repeated if subject matter is different. Written permission of department chairperson required. Offered on a Pass-Fail basis only.

CMCET 330. Mechanical Systems (HVAC). 3 hours. (3 hours lecture). Design, installation and operation of HVAC systems, materials and equipment in residential and commercial construction. Includes design projects, blueprint reading and quantification of labor and material units for productivity and cost estimation. Prerequisites: CMCET 133 Construction Graphics and a "C" or better in MATH 113 College Algebra or equivalent.

CMCET 331. Electrical Systems. 3 hours. (3 hours lecture). Design, installation and operation of materials and equipment in electrical power/lighting systems for residential and commercial construction. Includes design projects, construction drawing review, labor and material estimating, computer based design and 3D modeling. Lab experiences required. Prerequisites: CMCET 133 Construction Graphics and a "C" or better in MATH 113 College Algebra or equivalent.

CMCET 332. Residential Design. 3 hours. (1 hour lecture, 4 hours laboratory). Space utilization, circulation, structural design, energy efficient design, building costs, architect-owner-contractor relationship, exterior design, electrical/mechanical considerations and techniques for preparing architectural residential drawings using CAD. Includes NAHB Certified Green Professional Designation. Prerequisite: CMCET 133 Construction Graphics.

CMCET 333. Theory of Structures. 3 hours. (2 hours lecture, 2 hours laboratory). Fundamentals of static design, forces acting on structural systems and components, stresses in members. Not open to Engineering Technology majors. Prerequisites: MATH 122 Plane Trigonometry, MATH 126 Pre-Calculus, or MATH 150 Calculus I.

CMCET 334. Methods of Construction-Sitework and Steel. 3 hours. (3 hours lecture; laboratory experience required). Steel construction, site construction, and construction equipment. Materials, methods, constructability, drawings, specifications and software. Estimation of labor, material, and equipment. Prerequisite: CMCET 133 Construction Graphics, CMCET 224 The Construction Industry and "C" or better in MATH 113 College Algebra or equivalent.
CMCET 335. Methods of Construction-Concrete and Masonry. 3 hours. (3 hours lecture; laboratory experience required). Concrete and masonry construction materials, methods, constructability, equipment, drawings, specifications and software. Concrete mix design, formwork design. Masonry design fundamentals. Estimation of labor, material, and equipment. Prerequisite: CMCET 133 Construction Graphics, CMCET 234 The Construction Industry and "C" or better in MATH 113 College Algebra or equivalent.

CMCET 336. Residential Land Development. 3 hours. (2 hours lecture; 2 hours laboratory). Development of raw land into residential lots and homes. Basics of residential marketing, land planning concepts, and residential design standards. Prerequisite: CMCET 133 Construction Graphics.

CMCET 337. Construction Materials Testing and Inspection. 2 hours. (1 hour lecture, 2 hours laboratory). Construction materials testing and inspection procedures in laboratory and field situations using standard testing equipment, methods and field inspection techniques per ASTM and ACI standards. Laboratory reports, computer analysis, data collection and simulated field inspections. ACI Concrete Field Testing Technician - Grade I examination required. Prerequisite or Corequisite: CMCET 335 Methods of Construction-Concrete and Masonry.


CMCET 350. Mechanical Systems (Plumbing). 2 hours. Design, installation and operation of plumbing system materials and equipment in residential and commercial construction. Includes design projects, blueprint reading and quantification of labor and material units for productivity and cost estimation. Prerequisites: CMCET 334 Methods of Construction Graphics, and a "C" or better in MATH 113 College Algebra or equivalent.

CMCET 400. Cooperative Education (___). 3-6 hours. A cooperative college-industry, college-business, or college-government work experience. The student is interviewed and employed by an industrial, business or government organization, then a work program is outlined. Supervision of the work experience is conducted by the employer and the college coordinator. May be repeated if subject matter is different. Written permission of department required. Offered on a Pass-Fail basis only.

CMCET 401. Investigations in Technology (___). 1-4 hours. Special studies in technology to provide for the individual requirements of the student desiring supplemental work in the student's field of special interest. Prerequisite: Written permission of department. May be repeated if subject matter is different.

CMCET 410. Technical Construction Spanish for the Jobsite Supervisor. 3 hours. (3 lecture). Understanding and practicing construction technical conversational Spanish language concepts as it relates to task assignment, delegation, supervision, safety, training and instruction, and fundamental conversation within the construction industry. Focus on tools, tasks and processes used in the construction trades, understanding professional and construction trade vocabulary. Prerequisite: At least two CMCET Methods courses - CMCET 235 Methods of Construction-Light Frame and Finishes, CMCET 330 Cooperative Education (___), CMCET 331 Electrical Systems, CMCET 334 Methods of Construction-SiteWork and Steel, CMCET 335 Methods of Construction-Concrete and Masonry, CMCET 434 Civil Construction.

CMCET 431. Structural Loads. 1 hour. (1 hour lecture). Code requirements for structural loading, vertical loads and lateral forces commonly used in construction. Prerequisite or Corequisite: MECET 220 Statics or equivalent.

CMCET 434. Civil Construction. 3 hours. (3 hours lecture). Terminology, processes, equipment, materials, construction, and testing in the construction of water/waste water plants, utilities, streets/highways/roads, and bridges. 3D computer modeling applications. Prerequisites: CMCET 133 Construction Graphics, and "C" or better in MATH 113 College Algebra or equivalent.

CMCET 435. Residential Construction Methods and Management. 3 hours. (1 hour lecture, 4 hours laboratory). Residential construction lifecycle including planning, execution, monitoring, controlling, closing and service. Methods of residential construction including energy efficiency, wood and light-gauge steel frame construction, insulated concrete forms, systems-built and panelized construction, engineered materials. Includes NAHB Residential Construction Superintendent Designation. Prerequisite: CMCET 338 Residential Codes/Inspection.

CMCET 530. Construction Cost Management. 3 hours. (2 hours lecture; 2 hours laboratory). Study of cost management issues for the non-financial manager relevant to the construction professional, including the interpretation of financial statements, financial ratios, applications of engineering economics, managing job costs and profits, cash flow analysis, making construction financial decisions, bonding, and job cost information systems. Case studies and computerized applications to solve construction related financial decisions. Prerequisite: ACCTG 201 Financial Accounting and Junior standing.

CMCET 536. Temporary Structures. 2 hours. (2 hours lecture). Design and construction of necessary temporary structures used in construction to facilitate building of permanent structures. Includes skirting, falsework, scaffolding, work platforms, retention structures, cofferdams, etc. Computer applications and modeling. Prerequisites or Corequisites: MECET 423 Mechanics of Materials and CMCET 431 Structural Loads.

CMCET 537. Construction Surveying I. 3 hours. (2 hours lecture, 2 hours laboratory). Theory, principles, practices of construction surveying applied to instrumentation, computations, and site layout. Use of modern equipment and computer applications. Prerequisite: CMCET 133 Construction Graphics and “C” or better in MATH 122 Plane Trigonometry.

CMCET 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CMCET 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

CMCET 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) each semester. Prerequisite: CMCET 602. The Student must complete their Departmental Academic Honors in the traditional way.

CMCET 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

CMCET 631. Construction Estimating I. 3 hours. (2 hours lecture, 2 hours laboratory). Estimating techniques and methods pertaining to residential, commercial, industrial, and civil construction. Quantity take off, unit pricing, calculation of labor and material costs, cost control, and financial decision making. Prerequisites: CMCET 334 Methods of Construction-SiteWork and Steel with a grade of C or better and CMCET 335 Methods of Construction-Concrete and Masonry with a grade of C or better.

CMCET 632. Steel and Wood Structures. 3 hours. (3 hours lecture). Analysis and design of steel and wood structural components using current specifications, codes and practices reflecting practical construction procedures. Incorporates the use of computer analysis for design verification. Prerequisites or corequisites: MECET 423 Mechanics of Materials and CMCET 431 Structural Loads.
CMCET 633. Concrete Structures. 3 hours. (3 hours lecture). Analysis and design of concrete structural members using current specifications, codes and practices reflecting practical construction, formwork and scaffolding. Written and oral reports. Incorporates the use of computer analysis for design verification. Prerequisites or corequisites: MECET 423 Mechanics of Materials and CMCET 431 Structural Loads.

CMCET 634. Construction Management. 3 hours. (2 hours lecture, 2 hours laboratory). Construction management principles, practices and decisions relative to project and construction site management, project organization, project planning, scheduling, control, safety, resource allocation and quality control. Case studies and computer applications of planning/scheduling, introduction of 4D modeling concepts. Prerequisites or corequisite: CMCET 631 Construction Estimating I.

CMCET 635. Contract Administration. 3 hours. (2 hours lecture, 2 hours laboratory). Administration of construction contracts, contract documents, contract law, contract negotiation, taxes, insurance and bonds, labor relations and case studies. Prerequisite: CMCET 631 Construction Estimating I and senior standing.

CMCET 637. Construction Surveying II. 3 hours. (1 hour lecture, 4 hours laboratory). Theory and supervised field practice of engineering and construction projects, utilizing modern surveying equipment, 3D software, advanced COGO and computer applications. Prerequisite: CMCET 537 Construction Surveying I.


CMCET 640. BIM Management. 3 hours. (1 hour lecture, 4 hours laboratory). Application of BIM software from a management perspective including clash detection, 4D/5D, simulation, shop drawing development, project planning and document management and control. Prerequisites: CMCET 340 Building Information Modeling (BIM) and GIT 334 3D Graphics.

CMCET 650. Civil Virtual Design and Construction. 3 hours. (2 hours lecture, 2 hours laboratory). Functional knowledge of civil construction based CAD, BIM, simulation and collaborative software. Pre-requisite: CMCET 133 Construction Graphics, CMCET 434 Civil Construction, CMCET 537 Construction Surveying I.

CMCET 651. Heavy/Highway/Bridge Construction. 3 hours. (2 hours lecture, 2 hours laboratory). Functional knowledge of materials, methods, scheduling, estimating and management associated with highway, street, bridge, dam and other heavy construction. Prerequisite: CMCET 434 Civil Construction.

CMCET 652. Utility Construction. 3 hours. (2 hours lecture, 2 hours laboratory). Functional knowledge of materials, methods, scheduling, estimating and management associated with utility based construction. Prerequisite: CMCET 434 Civil Construction.

CMCET 690. Professional Construction Certification Seminar. 1 hour. (2 hours laboratory). Preparation for professional certification in the construction industry. Registration for and participation in the American Institute of Constructors CQE Level I (Associate Constructor) examination is required during the semester of enrollment. Meets USGBC requirements for Green Associate exam preparation. SWPPP topics. Prerequisite: Senior standing. Permission of instructor is required.

CMCET 691. Senior Project. 3 hours. (2 hours lecture, 2 hours laboratory). Capstone experience utilizing construction design, methods, cost analysis, specifications, contracts and organization in a construction project. The course employs computer applications for design, drafting, and control. Prerequisite: Senior standing. Permission of instructor is required.

CMCET 795. Special Topics in CMCET. 1-3 hours. Selected topics in construction engineering technology. Regularly scheduled classroom and laboratory study pertaining to a distinct body of technical knowledge. May be repeated if subject matter is different. Written permission of department is required.

CMCET 832. Land Development. 3 hours. Development of land for commercialization/improvement. Introduction to land development design, governmental planning and regulations, project approvals, site analysis, environmental considerations, development patterns and principles, site development, utility integration, property surveying and law. Use of case studies.

CMCET 833. Estimating and Bidding Strategy. 3 hours. (3 hours lecture). Strategy of contracting to maximize profit through overhead distribution, break-even analysis, probability and statistical technique, a realistic risk and uncertainty objective, and bid analysis both in theory and in practice. Prerequisites: CMCET 631 Construction Estimating I and CMCET 639 Construction Estimating II or equivalent, graduate standing.

CMCET 834. Advanced Construction Management. 3 hours. (3 hours lecture). Existing and emerging systems for designing, planning, and construction of projects. Changing roles, relationships, and responsibilities of the parties involved. Time-cost relationships for various construction operations.

CMCET 835. Advanced Construction Structures. 3 hours. (3 hours lecture). Methods of analysis for framed structures, trusses, rigid frames, statically indeterminate structures, composite materials. Two-dimensional and three-dimensional finite element analysis.

CMCET 836. Virtual Design and Construction (VDC). 3 hours. (3 hours lecture). Utilization of 3D/4D/5D construction software applications to develop construction models, evaluate costs, develop schedules and predict better project outcomes. Course content will include the use of Revit, Navisworks, Civil 3D, DProfiler and other current software used in the development of virtual construction models. Prerequisite or co-requisite: CMCET 833 Estimating and Bidding Strategy or CMCET 834 Advanced Construction Management.

CMCET 895. Advanced Topics in Engineering Technology. 1-6 hours. Selected topics in construction engineering technology. Study pertains to a distinct body of technical knowledge. May be repeated if subject matter is different. Research paper and presentation to CMCET faculty required. Written permission of instructor is required.

Communication

COMM 105. Performance Appreciation. 3 hours. Principles, techniques, and criteria for viewing, enjoying, and evaluating the performing arts, including live theatre performance, film, video/audioc tape, and dance.

COMM 199. Introduction to Communication Careers. 1 hour. An examination of the numerous employment opportunities available in the field of communication, including an overview of communication issues and history. To be graded pass/fail.

COMM 200. Introduction to Mass Communication. 3 hours. A general introduction to print, electronic cinema, public relations, advertising, and other forms of mass communication in their past, present, and future forms. An examination of the role of the media in society.

COMM 205. Performance Studies. 3 hours. Introduction to the field of performance studies. Content includes the study of theories of human play, forms of social and artistic role play, and the origins of human performance.

COMM 207. Speech Communication. 3 hours. An elementary course designed to give the student an understanding of the requirements for effective speaking and listening and an opportunity to increase skills in each. Both semesters. Prerequisite: ENGL 101 or 103 English Composition or equivalent, or permission of instructor.

COMM 210. Activity. 1 hour. Participation in an approved departmental activity. Permission of instructor. May be repeated for a maximum of 3 hours. To be graded Pass/Fail.

COMM 225. Reporting. 3 hours. Theory and practice in the gathering, writing, and interpretation of news for mass media.

COMM 227. Workshop. 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

COMM 228. Workshop. 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
COMM 230. Principles of Advertising. 3 hours. Basic principles of advertising including theory and production of advertisements for media. Historic development of advertising industry and impact of advertising on society.

COMM 254. Acting Studies. 3 hours. The fundamentals of acting technique through the creative approach. Emphasis on motivation, characterization, and believability. Participation in one one-act play and outside crew work required. Spring.

COMM 274. Introduction to Audio and Video Production. 3 hours. Basic audio and video techniques, as well as writing and performance for electronic media. Prerequisites: COMM 200 Introduction to Mass Communication (or may be taken concurrently) or with permission of instructor.

COMM 276. Photojournalism I. 3 hours. Basic camera and darkroom techniques; elements of lighting and composition. Use of photography in communications and reporting. Caption writing, editing, picture stories.

COMM 277. Introduction to Public Relations. 3 hours. Introduction to basic public relations skills and theories, including an overview of public relations functions and history.

COMM 295. Theatre History (___). 3 hours. Examination and analysis of representative dramatic texts, performance styles, audience reception, theatre architecture, and the societal/cultural impact of specified eras in theatre history. Original source documents (including plays), past and present histories, and past and present criticism will be utilized as key methods of inquiry and analysis. May be repeated for different eras.

COMM 307. Advanced Speech Communication. 3 hours. Relevant communication theory as applied to various communication formats including public speaking and small groups. Prerequisite: COMM 207 Speech Communication or permission of instructor.

COMM 309. Forensic Practices (___). 1-3 hours. Investigation into the area of competitive speech (debate and individual events). Focus is placed on Debate Theory, Field Experience assisting a coach of a competitive speech team (grades 6-12), or Competition at the collegiate level. May be repeated for a total of six hours. Prerequisite: Permission of instructor.

COMM 330. Advertising Copywriting. 3 hours. Basic elements of advertising copywriting including writing for the various media formats. Message structure, strategy, and development. Introduction to advertising research. Prerequisite: COMM 230 Principles of Advertising or permission of instructor.

COMM 335. Feature Writing. 3 hours. Examination, analysis and writing of feature stories, special articles and problem centered stories used by newspapers, magazines and other media which inform, entertain or investigate problems. Prerequisite: COMM 225 Reporting or permission of instructor.

COMM 340. Publications Practice. 3 hours. Practical experience as a contributor to the Collegio or Kanza staffs. Receiving reporting, writing, photojournalism, design and/or editing assignments and completing them under deadline for potential publication. Prerequisite: COMM 225 Reporting and/or COMM 276 Photojournalism I.

COMM 350. Editing. 3 hours. Theory and practice in copy editing and display of the news, primarily in newspapers and the press services. Prerequisite: COMM 225 Reporting.

COMM 363. Technical Production I. 3 hours. Introduction to the technical elements of theatre, film, open television and dance with emphasis on stage craft construction techniques and basics of lighting and sound production. Extensive hands on experience. Includes laboratory.

COMM 367. Oral Interpretation of Literature. 3 hours. Performance based analysis of various forms of literature (traditional and nontraditional) including prose, poetry, and drama. Develops interpretation into dynamic vocal and physical presentation. Prerequisite: COMM 207 Speech Communication or permission of instructor.

COMM 374. Broadcast Writing. 3 hours. The principles and practice of Aural Writing. Students will be asked to write television and radio scripts for news, commercials and promotions. Prerequisites: COMM 200 Introduction to Mass Communication and COMM 274 Introduction to Audio/Video Production or permission of instructor.

COMM 390. Sports Broadcasting I. 3 hours. Introduction to the study and practice of broadcasting live sporting events. Students will learn the art of shooting and directing sporting events by participating in a weekly sports broadcast. Prerequisites: COMM 274 Introduction to Audio and Video Production, may be taken concurrently or by permission of instructor.

COMM 399. Communication Career Development. 1 hour. Development and application of skills needed to research and acquire communication career opportunities through internship and experiential learning experiences. Prerequisites: Sophomore standing in the Communication department or permission of instructor.

COMM 405. Drama Studies (___). 3 hours. Comparative study of selected themes in dramatic literature within the context of culture, authorship and genre. May be repeated with different content for a maximum of six hours.

COMM 410. Activity. 1-3 hours. Participation in an approved department activity. Permission of instructor. May be repeated for a maximum of 3 hours. To be graded Pass/Fail.

COMM 415. Advanced Reporting. 3 hours. Challenges and techniques in reporting in-depth and issue stories, including information gathering, covering beats, and journalists' legal rights and responsibilities. Prerequisite: COMM 350 Editing or permission of instructor.

COMM 425. Studies in Scenic Arts (___). 3 hours. Advanced skills training in technical theatre which may include scene painting, project execution using specialty materials (e.g. foam, steel, plastics), welding, carving, electrical work with lighting and/or sound. Includes laboratory. Prerequisite: COMM 363 Technical Production I.

COMM 435. Photojournalism II. 3 hours. Advanced camera techniques. Introduction to digital darkroom and photography; feature; sports; news; studio assignments; editing and layout for photo stories and multi-media narrative presentations. Work is designed for use in student or professional publications. Prerequisite: COMM 276 Photojournalism I or permission of instructor.

COMM 440. Topics in Theatre (___). 1-3 hours. Special investigations in selected areas of theatre arts. May be repeated when subject matter is different for a maximum of 6 hours.

COMM 441. Topics in Communication (___). 1-3 hours. Special investigations in the field of communication. May be repeated when subject matter is different, for a maximum of 6 hours. Prerequisite: Permission of instructor.

COMM 450. Small Group Communication. 3 hours. Analysis of communication behavior in the small group, with emphasis on small group theory, research, and application to specific forms of group discussion.

COMM 460. Project in Theatre (___). 1-3 hours. Study and practical theatrical experience in a selected aspect of theatre. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

COMM 463. Technical Production II. 3 hours. Basic construction and execution techniques of costumes, makeup, properties, and special effects for theatre, film, opera, television and/or dance. Emphasis on historical styles, pattern making, and working with a variety of materials. Extensive hands-on experience. Includes laboratory.

COMM 474. Promotional Video. 3 hours. Principles and practices of conceiving, planning, and producing persuasive video programs. Advanced theory and techniques for use in advertising and public relations. Covers scriptwriting, studio and field production, computer editing, and working with clients. Prerequisites: COMM 274 Introduction to Audio and Video Production, COMM 374 Broadcast Writing or permission of instructor.

COMM 475. Audio Production. 3 hours. Study and practice in the techniques of audio production. Emphasis on new audio technologies. Prerequisite: COMM 274 Introduction to Audio and Video Production.

COMM 479. Techniques for Teaching Speech and Theatre. 3 hours. Techniques, methods, and course content used in teaching speech and theatre in the secondary school. To be taken before the professional semester. The student is strongly encouraged to take SPED 510 Overview of Special Education and EDUC 520 Methods and Materials for Academic Literacy prior to enrolling in COMM 479. Prerequisite: Admission to teacher education and PSYCH 357 Educational Psychology.
COMM 480. Exploration in Communication (___). 3 hours. Exploration of topics including current trends and emphasis-specific research, from a range of disciplines within communication. Specific content may include: broadcasting, journalism, theatre, film, and public relations. May be repeated for a maximum of six hours when content is different.

COMM 490. Sports Broadcasting II. 3 hours. Advanced study and practice of broadcasting live sporting events. Students will learn advanced skills in the art of sports production, including announcing and producing by participating in a weekly sports broadcast. Prerequisite: COMM 390 Sports Broadcasting I or permission of instructor.

COMM 511. School Publications. 3 hours. Philosophy and principles of advising and producing student newspapers, yearbooks, and magazines, along with supervising and operating photography staffs and darkrooms. Prerequisite: COMM 200 Introduction to Mass Communication or permission of instructor.

COMM 530. Interpersonal Communication. 3 hours. Survey course in interpersonal communication theory. Application of communication theory to professional and interpersonal situations.

COMM 537. Integrated Electronic Communication. 3 hours. Creation, manipulation, and use of visual imaging, infographics, desk-top publishing and electronic presentation software to create newsletters, brochures, new and photopages, and theory of publication design and information flow as related to communication.

COMM 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

COMM 544. Stage Direction. 3 hours. The fundamentals of stage direction. Emphasis on script analysis, proper blocking, preparation of the script for the actors, technicians and managers. Provides experience in directing a one-act play. Prerequisites: COMM 254 Acting Studies and COMM 363 Technical Production I or permission of instructor.

COMM 575. Television Production. 3 hours. The study and practice of fundamental skills in news, sports and feature reporting. Students will also be involved in weekly cable programs, learning all elements of studio television production. Prerequisites: COMM 274 Introduction to Audio and Video Production and COMM 374 Broadcast Writing or permission of instructor.

COMM 576. Writing for Public Relations. 3 hours. Study, analysis and practice in writing news, publicity and feature stories for public relations media or public relations use by the media.

COMM 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Dual enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

COMM 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

COMM 590. Sports, Media and Society. 3 hours. Study and analysis of sports media's role in our society. Issues such as gender equality, race, nationalism, history, ethics, law, technological/social effects and current sports media research will be discussed. Prerequisites: COMM 200 Introduction to Mass Communication or permission of instructor.

COMM 601. Intercultural Communication. 3 hours. Exploration of cultural foundations of values, perceptions and behaviors as they relate to communication across cultures.

COMM 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

COMM 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

COMM 623. History of Mass Communication. 3 hours. The history of newspapers, radio, television and magazines, and the freedom of expression they represent in the United States from the seventeenth century to the present. Prerequisite: COMM 200 Introduction to Mass Communication or permission of instructor.

COMM 625. Advanced Performance (___). 3 hours. Advanced study of various theatre performance formats. Emphasis may include acting and directing, laboratory work for groups and individuals. May be repeated if content is different. Prerequisite: COMM 254 Acting Studies and COMM 544 Stage Direction, or permission of instructor.

COMM 626. Law of Mass Communication. 3 hours. Law cases and the principles they have established for the conduct of mass communications in the United States. Prerequisite: COMM 200 Introduction to Mass Communication, junior standing, or permission of instructor.

COMM 629. Theories of Human Communication. 3 hours. Study of contemporary theoretical approaches to the multi-disciplinary study of human communication. Concentration on the application of theories to professional communication career situations.

COMM 637. Online Publishing. 3 hours. Theory, writing and design for World Wide Web publication. Introduction to basic HTML; use of Web publishing software; writing and designing for Web publication.

COMM 638. Professional Photojournalism/Picture Editing. 3 hours. Professional photo techniques, principles and practices expected of photographers in media environments and media-related organizations, theory and practice of picture editing, photo illustrations, photo stories, multi-media presentations and developing a portfolio. Prerequisite: COMM 435 Photojournalism II or permission of instructor.

COMM 640. Topics in Communication (___). 1-3 hours. Special investigation in the field of speech and communication. May be repeated when subject matter is different for a maximum of 6 hours. Prerequisite: Permission of instructor.

COMM 642. Documentary Photojournalism/Electronic Imaging. 3 hours. Documentary and in-depth photojournalism. Advanced techniques, practice and theory of digital photography for professional news organizations and media-related organizations. Prerequisite: COMM 638 Professional Photojournalism/Picture Editing or permission of instructor.

COMM 660. Project in Theatre (___). 3 hours. Advanced study and practical theatrical experience in a selected aspect of theatre. Prerequisite: Permission of instructor. May be repeated if subject matter is different.

COMM 663. Design Studies for Performance (___). 3 hours. Theoretical and practical experience in design for a variety of media with an emphasis in theatre, film and television. Topics may include scenic lighting, properties, and costume design as well as a special effect, art direction, rendering, and modeling. May be repeated for a maximum of six hours when content is different.

COMM 674. Media Buying and Selling. 3 hours. Study and analysis of commercial media buying and selling techniques, including application of various computer software programs to media decision making, media research techniques and practice in media buying and selling techniques. Prerequisite: COMM 230 Principles of Advertising or permission of instructor.

COMM 690. Internship in Applied Communication (___). 1-3 hours. A training program providing opportunity to work with professional practitioners in such fields as broadcasting, public relations, organizational communication or theatre. Credit allowed will depend on the nature of the internship assignment. May be repeated for a maximum of 4 hours. Prerequisite: Permission of the advisor.
COMM 699. Communication Careers in Society. 1 hour. Assessment of senior communication majors for preparation to enter the communication fields. Examination of ethical, technological and social implications for the communication professional environment. Submission of an assessment portfolio is required. Prerequisite: senior standing in Communication or permission of instructor.

COMM 702. Mass Media Management. 3 hours. Analysis of electronic print and persuasive media, marketing and promotion. Study of management principles and theories as well as case studies. Analysis of legal, social, and psychological elements of managing media organizations.

COMM 703. Public Relations/Advertising Production. 3 hours. Theory and principles of media production. Public relations and production of media advertising. Prerequisites: COMM 230 Principles of Advertising or COMM 274 Introduction to Audio and Video Production and COMM 277 Introduction to Public Relations or permission of instructor.

COMM 708. Problems in Teaching the Basic Speech Course. 1 hour. Problems of teaching the college course in basic speech, with particular emphasis on the evaluation of student speeches. Prerequisite: Permission of instructor. May be repeated for a total of 4 hours.

COMM 715. Documentary Filmmaking. 3 hours. Production of documentary films. Includes critiques of documentary styles and techniques and theoretical issues. Finding and developing a treatment, preparing and editing an effective news, social science, or nature documentary. Covers film theory, aesthetics and professional distribution. Prerequisites: COMM 274 Introduction to Audio Video Production, COMM 374 Broadcasting Writing or permission of instructor.

COMM 717. Research Procedures in Communication. 3 hours. Introduction to issues in data collection, research design, and data analysis, with emphasis on laboratory and field settings. Prerequisite: COMM 629 Theories of Human Communication (recommended).

COMM 721. Philosophy and Ethics in Mass Communication. 3 hours. The application of selected principles of philosophy and ethics to the practices of the mass media.

COMM 724. Editorial Writing. 3 hours. A comprehensive approach to journalistic opinion writing, including editorials, personal opinion columns and reviews. Prerequisite: COMM 225 Reporting or permission of instructor.

COMM 726. Media Analysis and Criticism (______). 3 hours. Various levels of media analysis and criticism, including production analysis, sociological, critical and ideological analysis of media form and contents. Prerequisites: COMM 200 Introduction to Mass Communication or permission of instructor. May be repeated when content is different.

COMM 730. Interpersonal Communication. 3 hours. Advanced survey course in interpersonal communication theory. Application of communication theory to professional and interpersonal situations.

COMM 731. Advertising Campaigns. 3 hours. Analysis of theorectic basis for long range advertising campaigns including formative and evaluative research. Historical development of various advertising formats. Prerequisite: COMM 230 Principles of Advertising, or permission of instructor.

COMM 733. Television Producing and Directing. 3 hours. Varied technical practice, production, planning, producing, directing, and editing. Prerequisites: COMM 274 Introduction to Audio/Video Production and COMM 575 Television Production or permission of instructor. May be repeated if content is different.

COMM 740. Topics in Communication (______). 1-3 hours. Special investigation in the field of speech communication. May be repeated when subject matter is different for a maximum of 6 hours. Prerequisite: Permission of instructor.

COMM 755. Organizational Communication. 3 hours. Structure and function of communication in organizations, with emphasis on concepts and theoretic principles needed for effective management of organizational communication processes. Review of specific techniques designed to facilitate effective organizational management. Prerequisite: COMM 629 Theories of Human Communication or permission of instructor.

COMM 765. Strategic Planning for Communication Campaigns. 3 hours. Application of communication theory to a variety of communication campaigns. Emphasis on the use of formative research in the development stage and evaluative research in the evaluation stage of the campaign. Prerequisite: COMM 717 Research Procedures in Communication.


COMM 785. International Communication. 3 hours. An examination of the role of communications in national development, and of the flow of news and information, entertainment, advertising, and other cultural products.

COMM 795. Issues in Communication (______). 3 hours. Investigation of specialized issues in communication. Topics may change depending upon the need for specific content as determined by the Department of Communication. May be repeated if content is different.

COMM 815. Introduction to Graduate Study. 3 hours. Acquaints the student with the possibilities for research in the communication field and provides some experience in research and professional writing.

COMM 840. Topics in Communication (______). 1-3 hours. Special investigation in the field of speech communication. May be repeated when subject matter is different for a maximum of 6 hours. Prerequisite: Permission of instructor.

COMM 845. Project in Theatre (______). 3 hours. Advanced study and practical theatrical experience in a selected aspect of theatre. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

COMM 865. Seminar in Applied Communication (______). 3 hours. The intensive investigation of a selected aspect of applied communication. May be repeated if subject matter is different.

COMM 870. Seminar in Mass Communication Theory. 3 hours. An examination of the focus of mass communication theory and research, from early theories to current perspectives.

COMM 871. Seminar in Human Communication Theory. 3 hours. An investigation of the foundations of human communication theory and the relationship to contemporary theoretical ideas and research outcomes. Includes communication contexts, research methods, and professional applications.

COMM 873. Seminar in Theatre (______). 3 hours. The intensive investigation of a selected aspect of theatre. May be repeated if subject matter is different.

COMM 880. Seminar in Public Communication (______). 3 hours. Intensive investigation of selected aspects of public communication such as the study of social movements, or contemporary political communication events. May be repeated if subject matter is different.

COMM 883. Readings in Theatre Art (______). 1-3 hours. Directed readings and special investigations in selected areas of theatre arts. May be repeated when subject matter is different.

COMM 884. Readings in Communication (______). 1-3 hours. Directed readings and special investigations in selected areas of communication. May be repeated when subject matter is different.

COMM 890. Research and Thesis. 1-6 hours. Provides experience in a high quality of research and in the organization and writing of a graduate thesis. May be repeated for a maximum of 6 hours.

COMM 891. Research Problem. 1-6 hours. May be repeated for a maximum of 6 hours.

Dance

DANCE 200. Dance (______). 1-3 hours. May include: Ballroom/Western Dance, Ballet, Jazz, Tap, etc. Specific topics may not be repeated.

DANCE 227. Workshop (______). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

DANCE 228. Workshop (______). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
DANCE 360. Theory and Methods of Teaching Dance. 3 hours. Course will include methodologies needed to teach rhythms and dance. Special consideration will be given to working with populations of all ages and abilities. Prerequisite: HHP 151 Dance Appreciation.

DANCE 370. Technology for Dance. 3 hours. Course will include investigation of some of the most current applications, software and equipment helpful in teaching, performing, marketing and other endeavors related to the field of dance. Prerequisite: HHP 151 Dance Appreciation.

DANCE 410. Dance Performance and Production. 3 hours. Course will focus on items that go into a performance such as costumes, makeup, props, music, technology to enhance the performance, etc. In addition, the steps that go into putting on a show or recital (ticket sales, venue selection, programs, sponsorships, group sales, stage crew, stage aspects of lighting, sound and props, etc.) will be discussed. It is anticipated that students will view various professional performances, tour venues in Pittsburgh and possibly elsewhere when feasible. Prerequisite: HHP 151 Dance Appreciation.

DANCE 420. Dance Performance. 1 hour. This is a culminating course in which students will work on choreography, artistry elements, sound, lighting, costume, makeup, etc. and present their unique work for the evaluation of the instructor, their peers and other guests. Prerequisites: HHP 151 Dance Appreciation, DANCE 370 Technology for Dance, DANCE 410 Dance Performance and Production or HHP 347 Elementary Games and Rhythms for K-6.

DANCE 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

DANCE 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

Economics

ECON 191. Issues in Today's Economy. 3 hours. An issues-oriented practical guide to introductory economics. Through examination of contemporary social issues and problems, a framework of economic analysis is developed. Topics such as world poverty and development, discrimination, pollution, monopoly power, unemployment, international trade, taxes, global competition, and social security are covered. Upon completion of the course, students will be able to view current events with an economic understanding of the issues involved. Designed for non-business students: not open to students with credit or concurrent enrollment in ECON 200 Principles of Microeconomics or above.

ECON 200. Principles of Microeconomics. 3 hours. Examination of individual economic behavior as a consumer as well as a producer. Topics include opportunity cost, the market phenomena and government interventions, budget constraint, utility theory, productivity and costs, and perfect and imperfect markets. Prerequisite: sophomore standing.

ECON 201. Principles of Macroeconomics. 3 hours. The course focuses on concepts, principles, and behavior of the macroeconomy including aggregate demand, aggregate supply, national income accounting, domestic and international trade sectors, and stabilization policies. Prerequisite: sophomore standing.

ECON 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ECON 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ECON 318. Intermediate Microeconomics. 3 hours. Theory of rational economic behavior in consumption and production. Topics include the market phenomena and government interventions, indifference curve analysis, production and cost functions, theory of the firm under different market structures, game theory. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, MGT 320 Basic Quantitative Methods, a "C" in MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus, and 55 hours completed.

ECON 319. Intermediate Macroeconomics. 3 hours. Analysis of macroeconomic performance both in the short and the long-run. This course covers GDP and national income determination, business cycles, inflation and unemployment, fiscal and monetary policy, the international sector, and economic growth models. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, and 55 hours completed.

ECON 330. Money and Banking. 3 hours. The banking system of the United States with special emphasis upon the Federal Reserve System. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Introduction to Macroeconomics, ECON 201 Introduction to Macroeconomics, and junior standing.

ECON 418. Intermediate Microeconomics. 3 hours. Consumption, production, pricing, resource allocation, and distribution. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Introduction to Macroeconomics, MGMTK 310 Basic Quantitative Business Methods, a "C" in MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus, and 55 hours completed.

ECON 419. Intermediate Macroeconomics. 3 hours. Determination of national income, employment and the price level; policies to reduce unemployment and/or inflation. Prerequisites: ECON 200 Introduction to Microeconomics, ECON 201 Introduction to Macroeconomics, and junior standing.

ECON 430. Money and Banking. 3 hours. The course broadly covers the economics of money, financial intermediaries, the US financial system, monetary policy, and monetary theory. This includes a description, the organization, operation, functioning, and importance of the US financial system; description and understanding of organization, decision-making process, and operations of the Federal Reserve System; understanding and determination of impacts associated with changes in the monetary base and other actions by the Federal Reserve on the overall macro economy; and tools are developed to analyze how the Federal Reserve stimulates the macro economy. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics and 55 hours completed.

ECON 433. Sports Economics. 3 hours. Application of economic analysis to issues related to the sports entertainment industry. Topics include sports franchises as firms, monopoly, anti-trust, competitive balance, public finance, labor markets, and college sports. Provides insight on the sports industry and methods used by economists to address economic problems applicable to many industries. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, and MATH 143 Elementary Statistics.

ECON 437. Economics of Sustainability. 3 hours. The course will examine the sustainability problems of managing growth, sustainable production levels, job growth, poverty and income distribution, and market failure impact on environmental/ecological systems through the lens of economic concepts and theory. All scarce resources will be addressed (natural resources, workers, and capital) to assure a sustainable economic future along with the role of government in environmental regulation, income redistribution, and economic growth. Prerequisites: ECON 200 Principles of Microeconomics and ECON 201 Principles of Macroeconomics.

ECON 440. International Economics. 3 hours. Application of basic economic tools to understand and analyze international economic issues. Topics include analysis of causes and effects of foreign trade in products and factor services, commercial policy, economic integration, trade and development, and multilateral trade negotiations under WTO. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, and 55 hours completed.

ECON 465. Collective Bargaining. 3 hours. Collective bargaining philosophy; bargaining strategies; formulation and administration of labor-management contracts; impact of collective bargaining on the firm, industry, and economy. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, and junior standing.

ECON 468. Labor Economics. 3 hours. Labor markets, as impacted by institutions (e.g., government) and social-cultural forces (e.g., discrimination). Labor market problems (e.g., unemployment) and corrective policies (e.g., training and relocation). Provides insights on the strategic importance of labor markets in the health and vitality of society and the economy. Prerequisite: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, and 55 hours completed.
ECON 485. Industrial Organization. 3 hours. Focusing on anti-trust law using both historical and modern landmark cases, the course is an examination of the evolution of American industry in terms of market structure and the economics of anti-trust and regulation and/or deregulation. Possible topics include monopoly, oligopoly, determinants of market structure, mergers, price discrimination, product differentiation, predatory strategies, vertical and horizontal relationships between firms, regulation and deregulation, and anti-trust policy. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics and 55 hours completed.

ECON 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ECON 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ECON 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

ECON 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

ECON 640. International Trade. 3 hours. Theory of trade, payment mechanisms, exchange and trade controls, and international cooperation. Prerequisites: ECON 200 Introduction to Microeconomics, ECON 201 Introduction to Macroeconomics, and junior standing.

ECON 650. Econometrics. 3 hours. Introduction to fundamentals of statistical inference, estimation and tests of hypothesis, regression and analysis of variance, applications using econometrics software. This is a required course for the economics capstone ECON 665 Seminar in Applied Economics. Prerequisites: ECON 200 Principles of Microeconomics, ECON 201 Principles of Macroeconomics, MGT 310 Business Statistics, and 55 hours completed.

ECON 665. Seminar in Applied Economics. 3 hours. This capstone course in economics is designed to help the student integrate the theories, concepts, and policies studied in core economics courses. The main objective is for the student to write a major research paper demonstrating his/her knowledge of economic principles and ability to apply and communicate that knowledge scientifically. Prerequisites: ECON 318 Intermediate Microeconomics, ECON 319 Intermediate Macroeconomics, ECON 650 Econometrics, and 55 hours completed.

ECON 693. Topics in Economics (___). 1-3 hours. Study of a specific topic in economics. Specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: Permission of instructor.

ECON 694. Internship in Economics. 1-6 hours. Relevant work experience in private or public institutions. The work experience must be approved by the instructor. May be repeated for a maximum of six hours. Prerequisite: Permission of the instructor required.


ECON 827. Seminar in Economics (___). 3 hours. Comprehensive reading and research in various fields of economics. May be repeated if subject matter is different. Prerequisites: ECON 318 Intermediate Microeconomics and ECON 319 Intermediate Macroeconomics or ECON 805 Economic Analysis.

Educational Technology

EDTH 330. Technology for the Classroom. 3 hours. This course is designed to introduce students to educational technology, current research on critical issues and trends within the field, and how to effectively integrate educational technology into the P-12 classroom and curriculum. Students will explore and demonstrate how educational technology can enhance personal and professional productivity and support teaching and learning in a 21st Century learning environment. This course meets a General Education Elective requirement for all students.

EDTH 551. Instructional Technology for Educators. 3 hours. This course is designed to combine instruction, courses, and instructors from the College of Education (EDTH 551-01) and the College of Technology (TE 551-01) to provide a comprehensive approach to integrating educational technology, design and problem solving skills, and team teaching concepts into real world teaching practices and experiences. The course will focus on educational technology concepts and devices which will reinforce selected curricular projects coordinated with area school districts and educators. Prerequisite: EDTH 330 Technology for the Classroom or permission of instructor.

EDTH 731. Digital Portfolio. 1 hours. Collect, curate and display material electronically. Focus will be placed on the process of preparing and defending the academic portfolio for the Ed Tech program.

EDTH 732. Topics in Educational Technology (___). 1-3 hours. Study of a specific area of educational technology through readings, reports, discussions, and practical experiences. May be repeated if subject matter is different. No more than 6 hours may be applied to the educational technology master's degree.

EDTH 733. Professional Development. 1 hours. Drawing on literature from many fields, this course will focus on exploration of issues related to professional learning such as characteristics of adult learners, analysis of needs and professional learning for educational settings.

EDTH 734. Infrastructure Networking. 1 hours. Introduces students to networked systems from local area networks (LAN) to the internet. Basic troubleshooting skills will also be introduced.

EDTH 735. Information Retrieval and Transfer. 3 hours. In this course students will study the structure of information generation, organization, transfer and retrieval through an exploration of evolving technology and traditional sources to meet the information literacy needs of the user.

EDTH 737. Cataloging and Classification. 3 hours. This course will instruct the learner in the theory and practical application of school library organization, including cataloging, classification, policy and collection development.

EDTH 805. Design and Production of Instructional Materials. 3 hours. This course emphasizes creating instructional materials using systematic design principles. Reading and discussion of research in the field of instructional design and technology will be facilitated in order for candidates to better understand the production of effective classroom instruction. Technologies will also be explored and used to create a final instructional unit.

EDTH 817. Technology Integration Specialist. 3 hours. This course is designed to introduce students to the instructional coaching model. Focus will be placed on leading the development and implementation of technology infrastructures, procedures, and policies, and supporting effective technology integration in PK-12 schools.

EDTH 818. Trends and Issues in Educational Technology. 3 hours. This course is designed to introduce students to current trends and issues in educational technology as it relates to assessment and evaluation, and social, ethical, legal, and human issues. Prerequisites: EDTH 735 Information Retrieval and Transfer and EDTH 868 Educational Technology Applications or permission of instructor.

EDTH 819. Practicum in Educational Technology. 1-6 hours. Supervised experience in selecting, classifying, designing, producing and managing instructional technology and information. Prerequisite: Permission of instructor.
EDUC 825. Administration of Instructional Systems. 3 hours. This course is designed to provide students with skills in the area of school leadership and vision and their relationship to educational technology. Skills necessary for the proper administration of educational systems will be emphasized.

EDTH 838. Educational Technology Curriculum. 3 hours. This course provides an in-depth examination of the organization, structure, and content for Kansas and related curriculum standards, including national standards for library media and technology. This course focuses on information literacy, and the learning theories and curriculum designs that enable the integration of information problem-solving models across the curriculum. Negotiating the diversity of learning audiences is an essential part of this process and is an area of emphasis.

EDTH 868. Educational Technology Applications. 3 hours. This course examines the basic principles, elements, and concepts of technology integration in the instructional setting. Emphasis is also placed on the implementation and utilization of technology through application of International Society for Technology in Education (ISTE) standards as well as Kansas and national standards for library media/technology integration specialists.

Education (Elementary Education and ECU)

EDUC 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EDUC 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EDUC 230. Introduction to Careers in Education. 1 hour. This course is designed to aid students in exploring the field of education as a profession. The course includes but is not limited to a survey of educational fields such as classroom teacher, counselor, and administrator. This course provides an overview of the Teacher Education program.

EDUC 252. Children's Literature. 3 hours. An introduction to children's literature, genres of children's literature, literature that reflects a variety of cultures, and authors and illustrators writing for today's young readers. This course studies the dynamics of reading aloud, creative techniques for presenting literature, and methods for integrating literature across the curriculum. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.

EDUC 261. Explorations in Education. 3 hours. This course is designed as the "gateway" course into the Teacher Education program for students considering teaching as a profession. The course includes a survey of the historical, philosophical, and sociological foundations of education with an introductory emphasis given to common effective teaching methodologies. An overview of the Teacher Education program and knowledge base. Incorporation within this course is a supervised clinical experience to be conducted in area schools. Prerequisites: At least 30 credit hours completed, BSEd or BME degree declared, minimum 2.50 cumulative GPA or permission of Department Chair and Teacher Education office. NOTE: Courses with the EDUC prefix may be taken concurrently with this course, if student has an ACT score of 22 or higher or has passed a Basic Skills Test but not prior to.

EDUC 360. Curriculum Development for Elementary Education. 3 hours. This course is designed to help students understand the process of designing curriculum for the classroom. The focus is on the pedagogical approaches and materials for teaching integrating themes, as well as research that documents effective integrated teaching practices. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.

EDUC 361. Elementary School Mathematics. 3 hours. The content and organization of mathematics in the elementary school and the methods of teaching mathematics. Emphasizes effective instruction strategies. Prerequisites: MATH 204 Mathematics for Education I and MATH 304 Mathematics for Education II. Requires admission to the teacher education program.

EDUC 362. Elementary School Science. 3 hours. The content, methods and materials for teaching science in the elementary school. Emphasizes hands-on science teaching and effective instructional strategies. Prerequisites: Must have completed 60 hours including eight hours in science. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test. Completion of EDUC 252 Children's Literature. Prerequisite: EDUC 261. Requires admission to the Teacher Education Program.
EDUC 366. Primary Reading and Language Arts with Practicum. 4 hours. The course provides a foundation of literacy instruction for birth through grade three in the areas of reading, writing, speaking, listening, viewing, handwriting, grammar, and spelling. The course is designed to prepare the teacher candidate to effectively organize a primary language arts program and assess, plan, teach, and monitor student progress. Additionally, this course provides hands-on teaching experiences at primary grades through a supervised, on-site practicum. Prerequisites for Elementary Education K-6, EDUC 261 Explorations in Education and EDUC 252 Children’s Literature or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test. Completion of EDUC 252 Children’s Literature, EDUC 307 Clinical Experience, EDUC 320 Early Childhood Foundations and Curriculum, EDUC 360 Curriculum Development for Elementary Education and EDUC 510 Overview of Special Education or SPED 511 Overview of Special Education (Birth thru 6th Grade). Prerequisites for ECU Program: Admission to Teacher Education and EDUC 261 Explorations in Education. EDUC 323 Literature for Young Children Birth-3rd is a prerequisite or concurrent enrollment for ECU Program.

EDUC 367. Intermediate Reading and Language Arts with Practicum. 4 hours. The foundation of literacy instruction for grades 3 through 6. Includes the areas of reading, writing, speaking, listening, viewing, visually representing, handwriting, grammar and spelling. Provides hands-on teaching experiences at intermediate grade level through supervised, on-site practicum. Prerequisites: Admission to Teacher Education; EDUC 366 Primary Reading and Language Arts with Practicum with grade of “C” or higher.

EDUC 368. Effective Classroom Management. 2 hours. Proactive classroom management concepts, strategies, and skills with management plan developed. Focus on handling problems when they occur and on strategies to decrease likelihood of repetition of classroom problems. Skills reviewed and applied in whole class settings during professional semester. Prerequisites: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.

EDUC 369. Science and Social Studies Methods K-3. 3 hours. Course focus is upon objectives, content, methods, materials, and assessments for teaching science and social studies in K-third grade classrooms. Course emphasizes a hands-on, constructivist approach to teaching the science and social science curricula. Prerequisite: EDUC 261 Explorations in Education.

EDUC 370. Organization and Management of the Middle and Secondary Classroom. 2 hours. This course is designed to give teacher candidates a broad overview of classroom organization and management at the middle and secondary level that includes research, theories, and applications in practice, in view of creating and sustaining positive and productive learning environments. Teacher candidates will examine their own values and beliefs, observe and reflect upon the experience of current educators, understand a variety of current and past methodologies of organization and management, and explore working with diverse students. Finally, each candidate will begin to develop an individual approach to building an inclusive, productive and well-structured learning environment.

EDUC 440. Early Childhood Program Organization and Management. 3 hours. The course is designed to cover the organization of early childhood programs and the administrative requirements for maintaining ongoing programs. Topics include assessing community needs, licensing and certification requirements, budgets, food services, physical facilities, staffing, parent involvement, and other administrative considerations. Emphasis placed on developmentally appropriate practices in early childhood education (birth through age 8).

EDUC 455. Elementary and Middle Level Education. 2 hours. Emphasizes the broad and complex field of public education in a democracy, purposes and philosophies of education, instructional sources, professional competence required for successful teaching, various organizational plans for grouping children, and the relationship of the teacher to administration. Prerequisite: Admission to the professional semester.

EDUC 458. Methods and Curriculum. 3 hours. Methods and techniques of teaching. Emphasis on implementation and curriculum construction, trends, and problems. Prerequisite: Admission to the professional semester or admission to student teaching during summer session.

EDUC 462. Secondary and Middle Level Education. 2 hours. Purposes of the middle and secondary school; its pupils, programs, and possibilities. Prerequisite: Admission to the professional semester.

EDUC 464. Foundations of Measurement and Evaluation. 2 hours. Evaluation of pupil progress; educational tests and their uses; techniques of using evaluative information in working with students and parents. Prerequisite: Admission to Teacher Education.

EDUC 475. Supervised Teaching in the Elementary School. 3 hours. Directed observation, participation and responsible classroom teaching; taken as part of the professional semester by students in the regular elementary sequence. Prerequisite: Admission to professional semester or admission to student teaching during summer session. Graded on Pass/Fail basis only.

EDUC 476. Supervised Teaching in the Elementary School. 5 hours. Directed observation, participation and responsible classroom teaching; taken as part of the professional semester by students in the regular elementary sequence. Prerequisite: Admission to professional semester or admission to student teaching. Graded on Pass/Fail basis only.

EDUC 477. Supervised Teaching in Foreign Languages in the Elementary Schools. 3 hours. Supervised teaching as part of the professional semester by students seeking to extend the elementary school certification to include foreign language instruction in elementary schools.

EDUC 480. Supervised Teaching in the Secondary School. 3 hours. Professional laboratory experiences under the supervision of the high school supervising teacher. Prerequisites: PSYCH 155 General Psychology, PSYCH 263 Developmental Psychology, PSYCH 357 Educational Psychology and admission to the professional semester. Graded on Pass/Fail basis only.

EDUC 482. Supervised Teaching in the Secondary School. 5 hours. Directed student teaching in the professional semester. Graded on Pass/Fail basis only.

EDUC 511. Methods and Materials in Middle Level Education. 3 hours. Designed for practicing and prospective teachers concerned with middle level education, including those who are seeking certification at that level. Emphasis on developing teaching competencies necessary to meet the physical, social, psychological, and intellectual needs of the early adolescent. Prerequisite: Junior standing, completion of EDUC 261 Explorations in Education with a grade of “C” or better, BSEd or BME degree declared, minimum 2.5000 cumulative GPA, have taken a Basic Skills Test, or score of 22 on the ACT, or permission of Teacher Education office and instructor.

EDUC 520. Methods and Materials for Academic Literacy. 3 hours. The teacher candidate will acquire the knowledge, attitudes, and behaviors necessary to meet the literacy needs of students in their content classrooms. Addresses the need for literacy instruction at the middle and secondary levels; the process of reading to learn and the comprehensiveness demands of subject matter classrooms; textbook evaluation; informal and formal assessment and evaluation of the students’ reading skills; the accommodation of individual differences; and types of reading programs at middle/secondary levels. Prerequisite: Junior standing, grade of “C” or better in EDUC 261 Explorations in Education, BSEd or BME degree declared, minimum 2.5000 cumulative GPA, and admission to Teacher Education.

EDUC 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EDUC 545. Advanced Topics in (___). 1/2 - 3 hours. Concentrated study of selected areas of education. May be repeated for credit when subject is different. No more than six hours may be taken to apply toward a degree without special permission from the department chairperson. May be taken as graded or pass-fail.

EDUC 551. Diversity in the Classroom. 3 hours. The course is designed to allow candidates to demonstrate knowledge of the cultural dynamics of themselves, individual learners, school, and community, as well as analyze the role of cultural dynamics and their influence on classroom practice and teaching. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.

EDUC 552. Culture and Language Acquisition for English Language Learners. 3 hours. The course centers on theories and research in language acquisition, including the role native literacy plays in SLA, and provides participants with a background of the stages of second language acquisition and similarities between child and adult language acquisition. The analysis of a variety of factors contributing to SLA will guide in application of appropriate instructional strategies aimed at increasing English language proficiency and literacy in the content areas. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.
EDUC 553. Assessment and the English Language Learner. 3 hours. The course discusses different assessment issues impacting ELLs. It focuses on both the language proficiency and content-based assessment and introduces different types of assessment instruments. The course is designed to provide a foundation for using a variety of language proficiency instruments and content based assessments to evaluate language and academic growth, to guide instruction, and communicate results. Includes hands-on use and interpretation of assessment items and instruments. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.

EDUC 554. Methods and Instructional Materials for English Language Learners. 3 hours. The course is centered on research-based pedagogy for the differentiation of classroom instruction that facilitates English Language Learners in meeting grade-level content and language standards. It introduces instructional approaches, methods, strategies, and techniques, as well as materials and professional resources. It allows candidates opportunities to implement what they learned and receive feedback on their performance. Prerequisite: EDUC 261 Explorations in Education or concurrent enrollment with ACT score of 22 or higher or passing score on a Basic Skills Test.

EDUC 555. Practicum with English Language Learners. 3 hours. A supervised, field-based, capstone experience in the education of English Language Learners organized according to a platform for professional practice and grounded in a best-practices framework. Specifically designed to facilitate and expand upon the student's ability to be an effective ESOL teacher. Prerequisites: EDUC 551 Diversity in the Classroom, EDUC 552 Culture and Language Acquisition for English Language Learners, EDUC 563 Assessment and the English Language Learner, EDUC 554 Methods and Instructional Materials for English Language Learners and ENGL 308 English Linguistics or permission of instructor.

EDUC 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Departmental representatives will visit each student teacher during the professional semester. Additionally, departmental representatives will follow up with each area student during the first year of teaching with assistance and support. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

Electronics Engineering Technology

EET 100. Prolog to Electronics. 2 hours. (2 hours laboratory). First course in electronics program required of all new students. Basic electronics concepts, introduction to instrumentation and preparing lab reports. Includes strategies for success in the electronics curriculum.

EET 141. Introductory Electronics. 3 hours. (2 hours lecture, 2 hours laboratory). Fundamentals of electricity and electronics including applied areas. Topics include: electricity, electromagnetism, basic laws, semiconductor theory and operation of test equipment. Laboratory experiences reinforcing essential concepts and fundamental measurements.

EET 144. D.C. Circuit Analysis Methods. 3 hours. (2 hours lecture, 2 hours laboratory). Methods and mathematical techniques of analyzing DC circuits, Kirchoff's Laws, Thévenin, Norton, superposition and maximum power transfer theorems. Branch, mesh, and nodal analysis. Prerequisite: EET 100 Prolog to Electronics and one of the following: MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus or MATH 122 Plane Trigonometry. Recommended Corequisite: MATH 150 Calculus I.

EET 245. Electronic Devices and Circuits. 3 hours. (2 hours lecture, 2 hours laboratory). Operation and characteristics of basic semiconductor devices. Study of basic electronic circuits including wave-shaping circuits, power supplies, and amplifiers. Prerequisite: EET 144 D.C. Circuit Analysis Methods.

EET 246. A.C. Circuit Analysis Methods. 3 hours. (2 hours lecture, 2 hours laboratory). Methods and mathematical techniques of analyzing A.C. circuits. Kirchoffs Laws and phaser analysis. Apparent, reactive and real power calculations. Branch, mesh and nodal analysis. Prerequisites: EET 144 D.C. Circuit Analysis Methods and MATH 126 Pre-Calculus or MATH 122 Plane Trigonometry. Recommended Corequisite: MATH 150 Calculus I.

EET 247. Computer Programming for Electronic Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Introduction to computer programming with a high-level programming language including, subroutines, functions, etc., Programming applied to technology including industrial applications and embedded processors. Prerequisites: MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus or MATH 150 Calculus I.

EET 299. Electronics Core Exam. 1 hour. (1 hour lecture). Comprehensive examination of electronics fundamentals. Includes DC and AC analysis, basic logic circuits, basic semiconductor devices, and mathematics through Calculus I. Exam must be passed prior to taking upper division courses. Prerequisites: EET 245 Electronic Devices and Circuits, EET 246 A.C. Circuit Analysis Methods, EET 244 Logic Circuits and MATH 150 Calculus I.

EET 340. Introduction to Industrial Automation. 3 hours. (2 hours lecture, 2 hours laboratory). Industry standard automation concepts based on PLCs and other hardware. Terminology, symbolism, relay and ladder logic, hardware configuration, inputs (switches, software data and transducers), outputs (digital, analog, I/O panels and actuators), PLC programming and theory of hardware interfacing. Laboratory includes real world exercises and simulations. Prerequisite: EET 100 Prolog to Electronics or EET 141 Introductory Electronics or PHY 101 College Physics II or PHYS 105 Engineering Physics II.

EET 341. Signals and Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Transfer Functions and their applications. Convolution and signal analysis in the frequency and Z domain. Laplace, Fourier and Z transforms and their applications. Prerequisites: EET 246 AC Circuit Analysis Methods and either MATH 155 Calculus II or MATH 154 Engineering Calculus II.

EET 344. Microcomputer Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Theory of computer and microcomputer architecture. Experimentation with and applications of MP's; ROM's, RAM's, PROM's, and I/O devices, both hardware and programming. Prerequisite: EET 244 Logic Circuits.

EET 349. Analog Integrated Circuits. 3 hours. (2 hours lecture, 2 hours laboratory). Theory of operation and applications of circuits for processing analog signals. Laboratory experience includes operational amplifier circuits, filters, comparators and oscillators. Prerequisite: EET 245 Electronic Devices and Circuits, EET 246 AC Circuit Analysis Methods, and MATH 150 Calculus I.

EET 447. Communications Theory and Circuits. 3 hours. (2 hours lecture, 2 hours laboratory). Theory of operation of basic circuits and equipment used in industrial and commercial communications applications with emphasis on F.M., multiplex, A.M., and sideband techniques. Prerequisites: EET 299 Electronics Core Exam.

EET 448. Network Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Theory and experimentation with the basic components of local and wide area networking. Includes cabling systems, protocols, operating systems, and interconnecting strategies. Investigations into the use of personal computers in network systems will also be performed. Prerequisite: EET 244 Logic Circuits.

EET 449. Programmable Logic Devices. 3 hours. (2 hours lecture, 2 hours laboratory). Digital logic design incorporating current technologies. Topics include state machine design and utilizing programmable logic devices, such as field programmable gate arrays (FPGAs). Prerequisite: EET 244 Logic Circuits and either EET 247 Computer Programming for Electronic Systems or CIS 240 C++ Programming.

EET 539. Workshop (J). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EET 540. Electronic Design Proposal. 3 hours. (2 hours lecture, 2 hours laboratory). Research culminating in a circuit or system design proposal. Prerequisites: EET 299 Electronics Core Exam, EET 341 Signals and Systems, EET 344 Microcomputer Systems, EET 349 Analog Integrated Circuits and three additional hours of EET credit 300 level or above.

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EET 546. Electronic Controls. 3 hours. (2 hours lecture, 2 hours laboratory). Fundamental control devices and concepts. Includes discrete semiconductor devices, microprocessors and integrated circuits in a controls setting. Prerequisite: EET 349 Analog Integrated Circuits.

EET 547. Electronic Communications Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Communication systems including antennas, transmission lines, microwave systems and fiber optics. Prerequisite: EET 341 Signals and Systems.

EET 548. Aerospace Electronic Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Theory and applications of systems supporting flight. Topics include communication and navigation systems. Prerequisite: EET 341 Signals and Systems.

EET 549. Advanced Microcontrollers. 3 hours. (2 hours lecture, 2 hours laboratory). Microcontroller concepts and principles of operation, architecture, programming, and peripheral systems. Prerequisite: EET 344 Microcomputer Systems and either EET 247 Computer Programming for Electronic Systems or CIS 240 C++ Programming.

EET 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.


EET 641. Electric Power. 3 hours. (2 hours lecture, 2 hours laboratory). This course covers electric machines, power electronics, and electric power systems. Topics discussed include: electric motors and generators, dc-dc converters, inverters, transformers, three-phase power, and renewable energy systems. Prerequisites: EET 246 AC Circuit Analysis, EET 245 Electronic Devices and Circuits and MATH 150 Calculus I or permission of instructor.


EET 644. Renewable Power Conversion. 3 hours. (2 hours lecture, 2 hours laboratory). Electrical energy conversion as it is applied to renewable energy systems such as solar power, wind power, fuel cells, and those found in electric and hybrid vehicles. Prerequisites: EET 299 Electronics Core Exam.

EET 646. Control Systems. 3 hours. (2 hours lecture, 2 hours laboratory). Control system theory and analysis. Investigations of both electronic and non-electronic control systems including magnetic, mechanical, hydraulic, pneumatic, and optical. Prerequisite: EET 341 Signals and Systems.

EET 647. Digital Signal Processing. 3 hours. (2 hours lecture, 2 hours laboratory). Theoretical and practical applications of digital signal processing techniques. Topics include z-transforms, digital filters, digital control, and utilizing hardware, such as digital signal processors (DSPs). Prerequisites: EET 344 Logic Circuits, EET 349 Analog Integrated Circuits and either EET 247 Computer Programming for Electronic Systems or CIS 240 C++ Programming.


EET 842. Programmable Logic Devices. 3 hours. Theoretical and practical application of programmable logic devices, such as field programmable gate arrays (FPGAs). Prerequisite: Undergraduate work in digital logic.

EET 845. Advanced Microprocessor Systems and Applications. 3 hours. Microcomputer systems and applications including 16/32 Bit Microprocessors, digital signal processing (DSP) and microcontrollers. Assembly language programming using development systems. Prerequisite: 6 semester hours undergraduate work in microprocessor systems (hardware and software applications).

English

ENGL 100. English Composition for International Students. 3 hours. Intensive work on the word, sentence and paragraph levels. Required of all non-native speakers of English as a prerequisite for ENGL 101 English Composition and ENGL 299 Introduction to Research Writing, but requirement can be satisfied by examination. Offered on A, B, C, No Credit basis only. Not counted toward the total hours required for a degree.

ENGL 101. English Composition. 3 hours. A laboratory approach to problems in composition and reading. Prerequisite: Non-native speakers of English must have credit in ENGL 100 English Composition for International Students. Offered on A, B, C, No Credit basis only.

ENGL 113. General Literature. 3 hours. An introduction to poetry, fiction and drama. Not open to students with credit in ENGL 304 Introduction to Writing About Literature.

ENGL 114. General Literature (Genre). 3 hours. An introduction to literature through study of a single genre: poetry, fiction, or drama. Not open to students with credit in ENGL 304 Introduction to Writing About Literature. May be repeated if subject matter is different.

ENGL 116. General Literature (Theme). 3 hours. Exploration of a significant theme through an introduction to two or more genres: poetry, fiction, or drama. Not open to students with credit in ENGL 304 Introduction to Writing about Literature.

ENGL 120. Literature and Film. 3 hours. A study of literature as adapted to film, including adaptation theory and techniques for analyzing both literature and film. Offered concurrently with ENGL 320 Literature and Film; students cannot receive credit for both ENGL 120 and ENGL 320. Meets General Education requirements.

ENGL 190. Honors English Composition. 3 hours. A course in reading, discussion, and writing. Offered spring semesters only to freshmen who have earned advanced standing in English. Honors equivalent to ENGL 299 Introduction to Research Writing. Prerequisites: ACT English score of 28 or higher, credit for ENGL 101 English Composition and completion of one Writing To Learn course.

ENGL 199. Introduction to English Studies. 2 hours. An overview of English studies (literature, writing, language, and theory) and departmental programs, including degree and assessment requirements. Exploration of career opportunities. Required of students in their first or second semester as English majors.

ENGL 202. English Grammar and Usage. 3 hours. Concepts of traditional, structural, and transformational grammars; issues of English usage; conventions of written English. Prerequisite: ENGL 101 English Composition or permission of instructor.

ENGL 215. Topics in Literature (___). 1-3 hours. Studies in literary themes of contemporary interest.

ENGL 220. World Masterpieces. 3 hours. Major works of both Eastern and Western literature. Open to all students without prerequisite.

ENGL 222. World Masterpieces Laboratory. 1 hours. Viewing and responding to video versions of works read in ENGL 220 World Masterpieces or materials related to the readings. Three contact hours per week. Prerequisite: Concurrent enrollment in ENGL 220 World Masterpieces.

ENGL 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ENGL 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ENGL 231. American Literature I. 3 hours. Representative authors and works from origins to 19th century. A survey of American literary genres, periods, and movements reflecting the diversity of American culture.

ENGL 232. American Literature II. 3 hours. Representative authors and works from the 19th century to the present. A survey of American literary genres, periods, and movements reflecting the diversity of American culture.
ENGL 241. British Literature I. 3 hours. Representative authors and works from the Old English period to the Eighteenth Century.

ENGL 242. British Literature II. 3 hours. Representative authors and works from the Romantic to the contemporary period.

ENGL 250. Introduction to Creative Writing. 3 hours. Learning methods of writing contemporary poetry and fiction; reading poetry and fiction as a writer. Prerequisite: ENGL 101 English Composition.

ENGL 299. Introduction to Research Writing. 3 hours. Research writing techniques, critical thinking and critical reading, with emphasis on rhetorical skills. Closed to students with credit in ENGL 102 or ENGL 103 English Composition. Prerequisite: ENGL 101 English Composition and two designated Writing To Learn courses. Exceptions require consent of Writing To Learn Coordinator. Offered on A,B,C. No Credit basis only.

ENGL 301. Technical/Professional Writing. 3 hours. Introduction to writing and designing technical/professional documents. Prerequisites: ENGL 101 English Composition and ENGL 299 Introduction to Research Writing or equivalent.

ENGL 302. Advanced Composition. 3 hours. Classical and contemporary rhetorical theory. Analysis of effective writing. Practice in solving standard writing problems. Prerequisites: ENGL 299 Introduction to Research Writing or equivalent and ENGL 202 English Grammar and Usage.

ENGL 304. Introduction to Writing About Literature. 3 hours. Contemporary and classical approaches to written explication of poetry, fiction, and drama.

ENGL 305. Introduction to Film Studies. 3 hours. Introduction to the basics of film aesthetics, including mise-en-scene, cinematography, editing, narrative, sound, and critical and historical approaches to film.

ENGL 306. Theories and Technologies of Writing. 3 hours. Development of research approaches to theories of the writing process, the history and materiality of writing, and technologies and the future of writing. Includes hands-on experiences with writing technologies.

ENGL 308. English Linguistics. 3 hours. Linguistic concepts, including phonology, morphology, syntax, and semantics; language acquisition; language change; regional, social, and ethnic dialects. Prerequisite: ENGL 202 English Grammar and Usage.


ENGL 320. Literature and Film. 3 hours. An upper-division study of literature as adapted to film, including adaptation theory and techniques for analyzing both literature and film. Offered concurrently with ENGL 120 Literature and Film; students cannot receive credit for both ENGL 120 and ENGL 320. Meets General Education requirements.

ENGL 346. The Craft of Poetry. 3 hours. Elements of poetry, emphasizing contemporary applications of traditional and experimental techniques.

ENGL 347. The Craft of Fiction. 3 hours. Elements of fiction, emphasizing contemporary applications of traditional and experimental techniques.

ENGL 351. Fiction Writing. 3 hours. Practicing the craft of fiction. Prerequisite: ENGL 250 Introduction to Creative Writing.

ENGL 352. Poetry Writing. 3 hours. Practicing the craft of poetry. Prerequisite: ENGL 250 Introduction to Creative Writing.

ENGL 451. Advanced Fiction Writing. 3 hours. Advanced work in fiction writing. Prerequisites: ENGL 250 Introduction to Creative Writing and ENGL 351 Fiction Writing.

ENGL 452. Advanced Poetry Writing. 3 hours. Advanced work in poetry writing. Prerequisites: ENGL 250 Introduction to Creative Writing and ENGL 352 Poetry Writing.


ENGL 479. Techniques for Teaching English in Middle and Secondary Schools. 3 hours. Concepts and strategies for teaching in the middle and secondary English classroom; roles and functions of non-verbal, written, and spoken media of communication. To be taken before the professional semester. Prerequisites: ENGL 202 English Grammar and Usage, admission to teacher education, and PSYCH 357 Educational Psychology.

ENGL 480. Internship in Teaching English. 1 hour. Field experience in the secondary classroom to complement competencies addressed in departmental methods courses. Prerequisites: Concurrent enrollment in ENGL 478 Literature for Middle and Secondary Schools or ENGL 479 Techniques for Teaching English in Middle and Secondary Schools is required. Must be taken immediately prior to ENGL 579 Supervised Student Teaching and Follow-Up of Teachers.

ENGL 506. General English Internship. 1-3 hours. Practical experience related to an English or teaching degree. International internships accepted upon approval. A minimum of 40 work hours per credit hour. Prerequisites: ENGL 199 Introduction to English Studies and permission of the instructor.


ENGL 527. Writing for the Public I (____). 3 hours. Studies in the practice of writing in the public sphere and examining public discourse.

ENGL 528. Writing for Publication I (____). 3 hours. Studies in theoretical and practical methods for writing, designing, reading, editing, and managing complex and sophisticated texts with the critical attention a writer brings to the scene of reading.

ENGL 529. The Art of Discourse I (____). 3 hours. Studies in historical and contemporary theories of composing and rhetorical canons: writing processes, style and arrangement, and relationships among writing, learning social contexts, technology, and publication.

ENGL 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ENGL 555. Topics in Literature (____). 1-3 hours. Studies in a particular period, movement, genre, theme, or writer. May be repeated if topic varies.

ENGL 556. Topics in Writing (____). 3 hours. Studies in composition, professional writing, editing, or creative writing. May be repeated if topic varies.

ENGL 557. Topics in English (____). 3 hours. Studies in rhetoric, linguistics, or some other non-literature, non-writing aspect of English studies. May be repeated if topic varies.

ENGL 558. Topics in Film and Media Studies. 3 hours. Studies in a period, movement, genre, theme, or director. May be repeated if topic varies.

ENGL 560. British Genre (____). 3 hours. A broad study of representative works in a single genre--novel, poetry, drama, short story, or non-fiction--from all major literary periods. May be repeated if genre varies.

ENGL 561. British Theme (____). 3 hours. A cross-national study of a theme or idea in two or more genres in British literature. May be repeated if topic varies.

ENGL 565. American Genre (____). 3 hours. A broad study of representative works in a single genre--novel, poetry, drama, short story, or non-fiction--from all major literary periods. May be repeated if genre varies.

ENGL 566. American Theme (____). 3 hours. A study of a theme or idea in two or more genres in American literature. May be repeated if topic varies.

ENGL 570. International Literatures Genre (____). 3 hours. A cross-national study of a single genre--novel, poetry, drama, short story, or non-fiction--with a substantial selection from literatures other than British and American. May be repeated if genre varies.

ENGL 571. International Literatures Theme (____). 3 hours. A cross-national study of a theme or idea in two or more genres, with a substantial selection from literatures other than British and American. May be repeated if topic varies.
ENGL 575. Video Laboratory. 1 hour. Viewing and responding to adaptations of literary works and related audiovisual materials. Offered in conjunction with select literature courses. Three contact hours per week. Prerequisite: Concurrent enrollment in the literature course that the laboratory accompanies.

ENGL 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required.

ENGL 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential. May be graded as pass/fail or letter grade.

ENGL 601. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

ENGL 603. History of the English Language. 3 hours. The origin and development of the English language. Prerequisites: ENGL 202 English Grammar and Usage or ENGL 308 English Linguistics or permission of instructor.

ENGL 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

ENGL 619. Shakespeare. 3 hours. An intensive reading of selected comedies, histories and tragedies. Prerequisite: ENGL 241 British Literature I or permission of instructor.

ENGL 620. Shakespeare Laboratory. 3 hours. Viewing and responding to videotaped plays of Shakespeare. Three contact hours per week. Prerequisite: Concurrent enrollment in ENGL 619 Shakespeare.

ENGL 626. Writing in Electronic Environments II (___). 3 hours. Advanced instruction in the development of digital literacies by examining and practicing digital writing. Includes student mentoring and a fieldwork project on a site of writing or a set of writing artifacts. Prerequisite: ENGL 526 Writing in Electronic Environments I (___).

ENGL 627. Writing for the Public II (___). 3 hours. Advanced studies in the practice of writing in the public sphere and examining public discourse. Includes student mentoring and a fieldwork project on a site of writing or a set of writing artifacts. Prerequisite: ENGL 527 Writing for the Public I (___).

ENGL 628. Writing for Publication II (___). 3 hours. Advanced studies in theoretical and practical methods for writing, designing, reading, editing, and managing complex and sophisticated texts with the critical attention a writer brings to the scene of reading. Includes student mentoring and a fieldwork project on a site of writing or a set of writing artifacts. Prerequisite: ENGL 528 Writing for Publication I (___).

ENGL 695. Professional Writing Internship. 1-3 hours. Practical writing experience in area business or agency. Includes the creation of a portfolio. A minimum of 40 work hours per credit hour. May be repeated for a total of six hours. Prerequisite: Permission of instructor.

ENGL 699. Senior Seminar in English. 1 hour. An assessment seminar for senior English majors. Exploration of career opportunities. Required of all senior English majors. Prerequisite: 85 credit hours or more.

ENGL 704. Advanced Technical/Professional Writing. 3 hours. Advanced instruction in applying technical writing style and in creating hypertext documents, software documentation, and Controlled English (for translation into other languages). Prerequisite: ENGL 301 Technical/Professional Writing or permission of instructor.

ENGL 714. Applied Linguistics for English for Speakers of Other Languages. 3 hours. Contrastive analysis of English phonology, morphology, syntax, and semantics with other languages. Applications for English for Speakers of Other Languages.

ENGL 715. Topics in Teaching Literature (___). 1-3 hours. Issues in teaching literature at various levels. May be repeated if topic varies.

ENGL 716. Topics in Teaching Writing (___). 1-3 hours. Issues in teaching composition at various levels. May be repeated if topic varies.

ENGL 717. Topics in Teaching English. 1-3 hours. Issues in teaching English studies at various levels. May be repeated if topic varies.

ENGL 726. Advanced Writing in Electronic Environments (___). 3 hours. Instruction in the development of digital literacies by examining and practicing digital writing. Includes student mentoring and a student-developed fieldwork project on a site of writing or a set of writing artifacts. May be repeated if topic varies.

ENGL 727. Advanced Writing for the Public (___). 3 hours. Studies in the practice of writing in the public sphere and examining public discourse. Includes student mentoring and a student-developed fieldwork project on a site of writing or a set of writing artifacts. May be repeated if topic varies.

ENGL 728. Advanced Writing for Publication (___). 3 hours. Studies in theoretical and practical methods for writing, designing, reading, editing, and managing complex and sophisticated texts with the critical attention a writer brings to the scene of reading. Includes student mentoring and a student-developed fieldwork project on a site of writing or a set of writing artifacts. May be repeated if topic varies.

ENGL 729. The Art of Discourse II (___). 3 hours. Advanced studies in historical and contemporary theories of composing and rhetorical canons: writing processes, style and arrangement, and relationships among writing, learning social contexts, technology, and publication. Includes student mentoring and a fieldwork project on a site of writing or a set of writing artifacts. May be repeated if topic varies.

ENGL 751. Senior Fiction Writing. 3 hours. Further advanced work in fiction writing. Prerequisites: ENGL 250 Introduction to Creative Writing, ENGL 351 Fiction Writing and ENGL 451 Advanced Fiction Writing or permission of Director of Creative Writing.

ENGL 752. Senior Poetry Writing. 3 hours. Further advanced work in poetry writing. Prerequisites: ENGL 250 Introduction to Creative Writing, ENGL 352 Poetry Writing and ENGL 452 Advanced Poetry Writing or permission of Director of Creative Writing.

ENGL 753. Multi-Genre Writing. 3 hours. Advanced work in traditional and experimental techniques in poetry, fiction, and other genres. Prerequisite: Completion of ENGL 351 Fiction Writing or ENGL 352 Poetry Writing or permission of the Director of Creative Writing.

ENGL 755. Topics in Literature (___). 1-3 hours. Studies in a particular period, movement, genre, theme, or writer. May be repeated if topic varies.

ENGL 756. Topics in Writing (___). 1-3 hours. Studies in composition, professional writing, editing, or creative writing. May be repeated if topic varies.

ENGL 757. Topics in English. 1-3 hours. Studies in rhetoric, linguistics, or some other non-literature, non-writing aspect of English studies. May be repeated if topic varies.

ENGL 771. Major Author(s) (___). 3 hours. Study of one or more major British or American authors. May be repeated if topic varies.

ENGL 772. Periods in Literature (___). 3 hours. Study of a major period in British or American literature. May be repeated if topic varies.
ENGL 805. Directed Study (____). 1-3 hours. Intensive individual or small-group study in literature, language or writing for persons with sufficient academic backgrounds. May be repeated if subject varies up to a total of 6 hours. Prerequisite: Permission of instructor and chairperson.

ENGL 810. Research Methods. 3 hours. Traditional and electronic methods and sources; evaluation of materials; forms of documentation; writing from sources.

ENGL 815. Writing for the Profession (____). 3 hours. Composition for professional audiences and purposes: Literary/Creative or Professional/Technical. Successful completion of the Professional/Technical version requires at least a moderate level of computer skills. May be repeated if topic varies.

ENGL 820. Theory (____). 3 hours. Study of theory of the discipline: Literary, Creative Writing, or Composition/Rhetoric. May be repeated if topic varies.

ENGL 845. Problems in Teaching of Composition. 1 hour. A consideration of the problems of teaching composition, with emphasis on rhetorical theory, current research in the teaching of composition, and evaluation of student writing. Prerequisite: Permission of instructor. May be repeated.

ENGL 850. Creative Writing Workshop (____). 3 hours. Advanced work in writing fiction, poetry, or another genre. May be repeated.

ENGL 875. Seminar (____). 3 hours. Selected authors, ideas, or issues in British, American, and/or International literatures; rhetoric and composition; or professional/technical writing. May be repeated if topic varies.

ENGL 891. Research and Thesis. 3 hours. Researching, organizing, and writing a graduate thesis. May be repeated for a maximum of 6 credit hours. Required for Option I of the Master of Arts in English.

ENGL 891. Research Problem. 3 hours. Field and library research project and appropriately documented report. May be repeated for a maximum of 6 credit hours. Required for Option II of Master of Arts in English.

ENGL 895. Internship. 3 hours. Practical experience in a business, agency, or educational institution. A minimum of 40 work hours per credit hour. May be repeated for a maximum of 6 credit hours. Prerequisite: Permission of the instructor.

ENGL 905. Readings in English. 1-3 hours. Intensive individual readings on a subject in literature; rhetoric and composition; or professional/technical writing. May be repeated if topic varies.

Environmental Safety Technology

EST 101. The Environmental and Safety Industry. 3 hours. Overview of the environmental and safety industry including issues associated with general industry and construction, the environment, and professional organizations designed to introduce good safe practices, reduce injuries and improve our way of life for a better society. Course will include numerous activities to support course objectives.

EST 204. Introduction to Fire Safety. 3 hours. A study of problems associated with the hazards of fire including the review of historic catastrophic events, the chemistry of fire, fire department resources, fire prevention, fire protection systems, and the investigation of federal, state, and local code requirements necessary to make a safer home or workplace.

EST 215. Introduction to Environmental Compliance. 3 hours. Investigate regulatory requirements legislated to protect natural resources specific to air, water and solid waste management. Students will investigate the history, the development, and the implementation of laws, regulations, standards, and practices associated with the preservation of the environment.

EST 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the topic is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EST 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the topic is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EST 326. Basic Electrical Safety. 3 hours. This course is designed to analyze and evaluate electrical standards and determine the likelihood of incidents. The course content will use current NFPA technology to better design or modify existing electrical applications with the intent to reduce risk.

EST 393. Introduction to Industrial Safety. 3 hours. A study of safety standards as established by federal safety standards for general industry. Includes topics within OSHA 1910 general industry standards and compliance issues. Thirty-hour OSHA voluntary compliance cards are available to students who qualify. (For Hybrid Course: only ten-hour OSHA voluntary compliance card is available to students who qualify.)

EST 396. Introduction to Construction Safety. 3 hours. Overview of basic safety principles and hazards relative to the construction workplace. Includes topics contained within OSHA Title 1926 standards. Ten-hour OSHA voluntary compliance cards are available to students who qualify.

EST 400. Cooperative Education/Internship (____). 3-6 hours. An internship or cooperative education experience in industry, business or government. Student is interviewed and employed by an industrial business or governmental organization with a defined work program. Supervision of the work experience is conducted by the employer and a program coordinator. May be repeated if subject matter is different. Written permission of the department is required. Offered on a pass-fail basis only.

EST 403. Industrial Safety. 3 hours. An in-depth study of varying methods used to comply with federal regulations to include: hazard analysis, accident investigation, recordkeeping and other essential topics. Prerequisite: EST 393 Introduction to Industrial Safety or EST 396 Introduction to Construction Safety.

EST 404. Fire Protection Systems. 3 hours. A study of the operational characteristics and maintenance requirements for active and passive fire protection systems including public water supplies, standpipes, automatic sprinklers, specialized extinguishment equipment, wet and dry chemical suppression appliances, fire alarm and detection systems, and smoke control devices. Prerequisite: EST 204 Introduction to Fire Safety.

EST 496. Construction Safety. 2 hours. Recognize, avoid and prevent work conditions which are unsanitary, hazardous or dangerous to workers in the construction industry using federal safety standards related to construction. Thirty-hour OSHA voluntary compliance cards are available for students who qualify. Prerequisite: EST 396 Introduction to Construction Safety. Co-requisite: EST 497 Construction Safety Laboratory.

EST 497. Construction Safety Laboratory. 1 hours. (2 hours laboratory). Construction safety labs appropriate for construction field activities including confined space, excavation and fall/scaffolding protection per OSHA regulations. Co-requisite: EST 496 Construction Safety.

EST 498. Environmental Safety. 3 hours. Review requirements designed to provide guidance and direction in phases of environmental programs, controls and regulations related to occupational safety and health, environmental, and chemical safety. Students will acquire skills enabling approved identification and control of household and industrial chemical hazards, monitor and administer hazardous waste disposal programs, while ensuring EPA and State compliance. Prerequisite: EST 215 Introduction to Environmental Compliance.

EST 505. Water Quality and Solid Waste Management. 3 hours. Explore requirements designed to protect natural resources specific to water quality and the impacts of waste associated with natural and industrial settings. Students will investigate current compliance standards, technology developed to mitigate the influence of residential, commercial, and industrial influences on the environment. Prerequisites: EST 215 Introduction to Environmental Compliance, CHEM 105 Introductory Chemistry and CHEM 106 Introductory Chemistry Laboratory or CHEM 215 General Chemistry I and CHEM 216 General Chemistry I Laboratory.

EST 512. Risk Assessment. 3 hours. Accident causation and prevention in home, traffic, public and work environments. Understanding risk management and establishment of a risk management program. Junior standing.

EST 514. Industrial Hygiene. 3 hours. Investigate processes and procedures for monitoring, regulating, and maintaining industrial hygiene in the workplace, utilizing federal, state and local guidelines. Topics include: HazComm, air monitoring, IAQ, noise, vibration, radiation, thermal stress, ventilation, PPE, toxicology, ergonomics, etc. Related laboratory experiences required.

EST 516. Hazardous Materials. 3 hours. OSHA, EPA, and DOT guidelines for the proper storage, handling, and transporting of hazardous materials. Successful completion may result in either an 8-hour, 24-hour, or 40 hour HAZWOPER certification.
EST 524. Emergency Planning & Emergency Response. 3 hours. Analyze best management practices in accordance with governmental and nongovernmental provisions in providing a systematic approach in responding to emergencies created by both natural and manmade disasters. Students will gain insights into developing and implementing proactive planning strategies structured to controlling situations in compliance with FEMA guidelines. Completion of this course results in a variety of NIMS certifications.

EST 539. Workshop (_). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EST 589. Workshop (_). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EST 603. Industrial Safety. 3 hours. An in-depth study of the organization of accident prevention programs, job hazards, analysis, accident cost control, inspections, reports, records, and safety standards as established by the federal and state governments. Thirty-hour OSHA voluntary compliance cards are available for students who qualify. Prerequisite: EST 393 Introduction to Industrial Safety, or permission of instructor.

EST 604. Occupational Health and Safety. 3 hours. This course reviews the OSHA requirements, paperwork and resources for safety professionals. Areas covered are the OSHA standards for OSHA certification, voluntary compliance industrial standards, welding safety, ladders, scaffolding, platforms steps/stairs, confined space lock out, tag out, respiratory, blood borne pathogen, rules, regulations, history, record keeping, citations, compliance requirements, elevated platforms, trips, and falls.

EST 605. Special Topics in Environmental and Safety (_). 1-3 hours. Selected topics in safety or environmental issues. Regularly scheduled classroom and laboratory studies pertaining to a distinct body of knowledge. May be repeated with different subject matter. Written permission of the department required.

EST 614. Environmental and Safety Program Development. 2 hours. Examine requirements of environmental and safety programs and how to incorporate into an organization's efforts. Students will review developed programs and create their own, which will offer knowledge that can be immediately used upon going into the environmental or safety profession. Prerequisites: EST 403 Industrial Safety or EST 496 Construction Safety or EST 498 Environmental Safety or EST 603 Industrial Safety or EST 696 Construction Safety.

EST 621. Ergonomics/Human Factors. 3 hours. Ergonomic and human factor principles that include human-machine systems, design systems, fundamentals of biomechanics, and associated problems and disorders. Open laboratory experiences required.

EST 624. Risk Control. 3 hours. Examine requirements of cost issues that impact the safety profession such as worker compensation, litigation, or return to work programs and how to incorporate these plans into the organization's efforts to comply with regulations and reduce operating costs. Students will review developed programs and create their own programs which will offer knowledge that can be immediately used in the environmental or safety profession. Prerequisites: EST 403 Industrial Safety or EST 496 Construction Safety or EST 498 Environmental Safety, Junior standing.

EST 627. Modern Transportation Safety. 3 hours. Basic transportation requirements for land forms of transportation and their safety and environmental issues. Prerequisite: EST 393 Introduction to Industrial Safety or EST 396 Introduction to Construction Safety.

EST 628. Fire Safety. 3 hours. Study of problems associated with fire prevention and to meet OSHA and local code requirements necessary to make a safer home or workplace, being able to assess the fire hazards, develop a fire safety plan, and coordinate with necessary officials.

EST 629. Legal Issues in Environmental Health and Safety. 3 hours. Legal issues are exchanged and their relationship to business, industry and the individual liabilities, the law, history of the law, purpose of the safety requirements, hazard, responsibilities, record keeping, safe work environments, citations, time frames, and employee rights and responsibilities.

EST 630. Safety Management. 3 hours. Applications and processes of management to create a safety culture within the workplace. Emphasis is put on effectively designing, implementing, and assessing a safety program. Prerequisite: At least one safety course.

EST 696. Construction Safety. 3 hours. Recognize, avoid and prevent work conditions which are unsanitary, hazardous, or dangerous to workers in the construction industry. Federal safety standards related to construction. Thirty-hour OSHA voluntary compliance cards are available for students who qualify. Prerequisite: EST 396 Introduction to Construction Safety.

Electrical Technology

ET 181. Residential Wiring Methods. 5 hours. Interpretation and use of the National Electrical Code, calculations of electrical plans, residential wiring methods, sketching as involved in the wiring of single and multi-family dwellings. Corequisite: ET 182 Residential Wiring Methods Laboratory I.

ET 182. Residential Wiring Methods Laboratory I. 3 hours. Application of knowledge in wiring methods and the National Electrical Code to the complete planning and wiring of single and multi-family dwellings, with emphasis on drawing and reading blueprints. Will include laboratory projects and on-the-job experience. Corequisite: ET 181 Residential Wiring Methods.

ET 183. Fundamentals of Electricity. 3 hours. An introductory course for electricians and electrical technicians stressing electrical basics and how they relate to the National Electrical Code and the everyday work requirements of an electrician. Includes orientation to the electrical profession and a foundation of electrical fundamentals upon which subsequent Electrical Technology courses are based.

ET 184. Special Project. 2 hours. Allows the students to research problems encountered in their profession. Corequisite: ET 181 Residential Wiring Methods.

ET 185. Electrical Machinery and Equipment. 5 hours. Theory of operation, techniques of troubleshooting, repair, and diagnostic procedures in the installation and maintenance of single-phase and three-phase motors, generators and related equipment. Corequisite: ET 186 Electrical Machinery and Equipment Laboratory I.

ET 186. Electrical Machinery and Equipment Laboratory I. 3 hours. Hands-on application of theory, calculations, and design in the troubleshooting, repair, and diagnostic procedures involved in the installation and maintenance of single-phase and three-phase motors, generators and related equipment. Special emphasis given to equipment encountered in residential, commercial, and industrial applications. Corequisite: ET 185 Electrical Machinery and Equipment.

ET 187. Electrical Estimating and Blueprint Reading. 3 hours. Electrical estimating for construction and maintenance operations, material and labor costs, methods of electrical bid calculation, reading specifications and blueprints in the field of electricity.

ET 188. Special Project. 2 hours. Allows students to research problems encountered in their profession.

ET 282. Motor Control Fundamentals. 5 hours. Machine and system's control design and installation starting with an in-depth study of basic control wiring circuits (pushbuttons, float switches, contactors, relays, sensors, etc.) and progressing into the complex circuits of modern process control including programmable controllers (PLS's), variable frequency drives (VFD's), robotics, automation, etc. Corequisite: ET 293 Motor Control Fundamentals Laboratory.


ET 284. National Electrical Code. 3 hours. Study of the National Electrical Code as applied to single and multi-family dwelling, commercial and industrial locations, specialized, and hazardous locations. Special emphasis to be given to load calculation, circuitry, service entrances, methods of installation, and proficiency in trade competency examinations.

ET 285. Special Project. 2 hours. Applied research and application to the design, documentation, and presentation of a student designed process or machine in the area of machine control and automation. Corequisite: ET 282 Motor Control Fundamentals.

ET 286. Industrial and Commercial Wiring Methods. 5 hours. Theory and installation of the special wiring methods used in commercial and industrial wiring and the national codes governing their usage. Lighting, motors, transformers and systems. Corequisite: ET 287 Industrial and Commercial Wiring Methods Laboratory I.

ET 288. Journeymen Electrical Certification. 3 hours. Study of National Electrical Code questions, problems, and calculations as a preparation for state electrical certification. Information on registration, certification, and exam time management skills.

ET 289. Special Project. 3 hours. A course to prepare the senior Electrical Technology student for successful certification and employment in their career field. Will include job search skills, interviewing techniques, electrical certification application and testing, development of a vita and resume, on-site and/or on-campus employer tours/visits, plus related information. Corequisite: ET 288 Industrial and Commercial Wiring Methods.

ET 289. Cooperative Industrial Training (Electrical Internship). 6 hours. The students serve a ten-week (400 clock hours minimum) internship “on-the-job” in the electrical field. The student is interviewed and employed by an electrical contractor, industrial employer, or other related business under provisions set forth in a training agreement. Supervision of the internship is conducted by the employer and university coordinator as outlined in the training agreement. Prerequisite: Completion of two “full-time” semesters in the Electrical Technology Program.

Engineering Technology

ETECH 200. Cooperative Education (____). 1-6 hours. A cooperative college-industry, college-business, or college-government work experience. The student is interviewed and employed by an industrial, business or government organization, then a work program is outlined. Supervision of the work experience is conducted by the employer and the college coordinator. May be repeated if subject matter is different. Written permission of department chairperson required. Offered on a Pass-Fail basis only.

ETECH 206. Seminar in Technology (____). 0.5 hours. Lectures and written reports on current topic in technology. May be repeated for a maximum of 2 hours. Written permission of instructor required. Offered on Pass/Fail basis only.

ETECH 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ETECH 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ETECH 296. Materials in Industry. 3 hours. Physical properties, structure and applications of materials used in manufacturing.

ETECH 300. Cooperative Education (____). 3-6 hours. A cooperative college-industry, college-business or college-government work experience. The student is interviewed and employed by an industrial, business, or government organization, then a work program is outlined. Supervision of the work experience is conducted by the employer and the college coordinator. May be repeated if subject matter is different. Written permission of department chairperson is required. Offered on a Pass/Fail basis only.

ETECH 400. Cooperative Education (____). 3-6 hours. A cooperative college-industry, college-business or college-government work experience. The student is interviewed and employed by an industrial, business, or government organization, then a work program is outlined. Supervision of the work experience is conducted by the employer and the college coordinator. May be repeated if subject matter is different. Written permission of department chairperson is required. Offered on a Pass/Fail basis only.

ETECH 401. Investigations in Technology (____). 1-4 hours. Special studies in technology to provide for the individual requirements of the student desiring supplemental work in the student's field of special interest. Prerequisite: Written permission of department chairperson may be repeated if subject matter is different.

ETECH 502. Engineering Economy. 3 hours. (3 hours lecture). Analysis of engineering proposals utilizing time value of money and related factors. Includes depreciation and after-tax consequences, feasibility and optimum life comparisons. Additional topics are manufacturing cost studies, estimating, sources of costs, allocation of costs and justifications.

ETECH 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ETECH 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

ETECH 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

ETECH 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B or receive credit for this course. Failure to complete the course with a grade A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

ETECH 670. Professional Certification Seminar. 1 hour. Preparation for professional certification in various industries. Registration for, and participation, in either an SME sponsored certification as required by the instructor or the NCEES Fundamentals of Engineering (FE) examination is required during the semester of enrollment. This course will be offered as Pass/Fail only. Prerequisite: Senior standing. Permission of instructor is required.

ETECH 694. Engineering Technology Laboratory Internship (____). 1-4 hours. Variable credit for one to four hours. Can be repeated. Junior/Senior engineering technology students can enroll for the course in their technical area as laboratory assistants during the semester a specific laboratory is offered. Prerequisites: Junior/Senior standing and written permission of instructor.

ETECH 795. Special Topics in Engineering Technology (____). 1-3 hours. Selected topics in engineering technology. Regularly scheduled classroom and laboratory study pertaining to a distinct body of technical knowledge. May be repeated if subject matter is different. Written permission of department chairperson is required.


ETECH 805. Current Issues in Engineering Technology. 3 hours. Study of specific activities/topics/trends impacting the various engineering technology disciplines. Case studies and current innovation emphasis. May be repeated.

ETECH 807. Systems Engineering and Analysis. 3 hours. A systems approach to product/project design. System design process from needs identification through conceptual and detail design, product/project development, systems testing and evaluation. Operational and economic feasibility, reliability, maintainability, supportability. Consideration of various project/product design aspects (mechanical, thermal, electrical/electronic, aesthetic, safety, etc.).

ETECH 809. Engineering Project Management. 3 hours. The design and control of technologically based projects. Considering theoretical and practical aspects of systems models, organizational development, project planning and control, resource allocation, team development, quantitative and qualitative decision making, financial and legal issues.
EXSCI 810. Collaborative Projects for Engineering Technology. 3 hours. Multidisciplinary capstone course incorporating aspects of design, project/product management, value engineering, quality control, current technologies and specific engineering/technology techniques to develop/design/improve projects and processes. Collaboration of multidisciplinary backgrounds to address technical issues of varying duration and magnitude. Prerequisite: Should be taken as one of the last graduate courses in program. Permission of instructor.

ETECH 831. Value Engineering. 3 hours. (3 hours lecture). Value engineering concepts, function analysis system techniques (FAST) diagramming, creativity, matrix evaluation, design-to-cost, life cycle costing, human relations and strategies for organizing, performing and implementing value engineering work.

ETECH 852. Integrated Design and Manufacturing Concepts. 3 hours. Product design and manufacturing from concept to completed project including automated design and manufacturing, solid modeling for design and analysis, prototype and mold development, and material selection, with a strong emphasis on certification of students in industry relevant design software.


ETECH 890. Research and Thesis. 3-6 hours. Development of a thesis under Option 1. Prerequisite: TTED 891 Methods of Research. May be repeated for a maximum of six hours. May be taken as graded or pass/fail.

ETECH 895. Advanced Topics in Engineering Technology. 1-6 hours. Selected topics in engineering technology. Study pertains to a distinct body of technical knowledge. May be repeated if subject matter is different. Research paper and presentation to ETECH Graduate Committee required. Prerequisite: Written permission of the instructor required.

ETECH 899. Quantitative Decision Making in Industry. 3 hours. Methods of utilizing quantitative techniques in production planning, manufacturing engineering, quality control and product marketing for modern industry.

Exercise Science

EXSCI 200. Introduction to Exercise Science. 1 hour. An introduction to the beginnings of exercise science as well as the career opportunities available within the field such as athletic training, cardiac rehab, medical, strength and conditioning, research, and personal training.

EXSCI 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EXSCI 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EXSCI 290. Introduction to Exercise Science Research Methods. 2 hours. Basic statistics will be reviewed and an introduction to recent research within the exercise science field will be covered. Refereed publications will be reviewed, analyzed and discussed. Prerequisites: BIOL 111/112 General Biology and General Biology Laboratory, BIOL 275/278 Anatomy and Physiology and Anatomy and Physiology Laboratory, CHEM 105/106 Introductory Chemistry and Introductory Chemistry Laboratory, MATH 143 Elementary Statistics, CIS 130 Computer Information Systems, PHIL 105 Ethics, FCS 203 Nutrition and Health, EXSCI 200 Introduction to Exercise Science, HHP 464 Physiology of Exercise. Co-requisite: EXSCI 510 Technology and Instrumentation in Exercise Physiology.

EXSCI 440. Topics in Exercise Science (___). 1-3 hours. Directed class or seminar study at the undergraduate level in various areas of Exercise Science. The specific topic or topics will be designated each time the course is offered. May be repeated if subject matter differs. May be offered for pass-fail or graded credit.

EXSCI 500. Physiology of Exercise II. 3 hours. A continuance of HHP 464 Physiology of Exercise with an in-depth look to the physiology of the skeletal, muscular, respiratory, and circulatory systems, with special reference to their adjustments during acute and chronic exercise. Laboratory experiences are included. Corequisite: EXSCI 510 Technology and Instrumentation in Exercise Physiology. Prerequisites: HHP 460 Kinesiology, HHP 464 Physiology of Exercise and CHEM 105/106 Introductory Chemistry and Introductory Chemistry Laboratory.

EXSCI 510. Technology and Instrumentation in Exercise Physiology. 3 hours. This course is designed to give students laboratory experience in the use of instrumentation and procedures commonly employed to assess human performance, physical fitness and cardiopulmonary health status in modern laboratories of applied exercise physiology, sports physiology, and contemporary health screening facilities. It is also designed to prepare the student to generate both written and graphical representations and descriptions of data and to get the student accustomed to writing in a scientific style/format that is worthy of publication. Corequisite: EXSCI 500 Physiology of Exercise II. Prerequisites: HHP 460 Kinesiology, HHP 464 Physiology of Exercise, CHEM 105/106 Introductory Chemistry and Introductory Chemistry Laboratory. Course will be assessed an additional class fee.

EXSCI 520. Exercise Testing and Prescription. 3 hours. This course provides a basis for understanding the process of planning and implementing exercise programs to improve the health and functional capacity of individuals. Implications of exercise related research with elderly populations will be emphasized. Prerequisites: EXSCI 500 Physiology of Exercise II and EXSCI 510 Technology and Instrumentation in Exercise Physiology.

EXSCI 530. Clinical Exercise Physiology. 3 hours. This course examines the physiologic basis for movement dysfunction and the impact of exercise on individuals with diseases and disorders. Opportunities to participate with clients and clinical professionals may be available. Prerequisites: EXSCI 500 Physiology of Exercise II, EXSCI 510 Technology and Instrumentation in Exercise Physiology and EXSCI 520 Exercise Testing and Prescription (may be taken concurrently with EXSCI 520).

EXSCI 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EXSCI 550. Research Project in Exercise Physiology. 3 hours. This course is a study in Exercise Physiology research. Students will participate in and develop research projects under the direct supervision of the instructor, lab director and/or research assistants. Prerequisites: MATH 143 Elementary Statistics, EXSCI 290 Introduction to Exercise Science Research Methods, EXSCI 500 Physiology of Exercise II, EXSCI 510 Technology and Instrumentation in Exercise Physiology.

EXSCI 559. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

EXSCI 599. Pre-Internship. 1 hour. A preparatory experience for EXSCI 600 Internship. Will require students to seek out internship sights, gather information on site requirements, and address needs and orientation for site selection. Prerequisites: EXSCI 500 Physiology of Exercise II and EXSCI 510 Technology and Instrumentation in Exercise Physiology. Note: Should be taken final semester prior to EXSCI 600 Internship.

EXSCI 600. Internship. 6-12 hours. The Internship in Exercise Science is completed under the supervision of an agency staff member with at least a Bachelor's Degree and approval of the university instructor. Enrollment provides off-campus opportunities for practical application. The student will work in private or public organizations such as hospital, clinic or laboratory. Application and instructor permission is required. Prerequisite: All other degree requirements must be completed.

Family and Consumer Sciences

FCS 100. Career Management in Family and Consumer Sciences. 1-2 hours. Lecture. Survey of professional opportunities within family and consumer sciences: history and development of the field. Career development. First year of enrollment as major/minor.

FCS 150. Introduction to Merchandising. 3 hours. Introduction to merchandising principles from product development through retailing. Emphasis on fashion and interiors.

FCS 154. Dress and Culture. 3 hours. Study of the social significance of dress in cross-cultural, historical, and contemporary contexts.

FCS 214. Space Planning and Programming. 3 hours. Lecture and Studio. Design development and planning of interior spaces. Methodology for analyzing, planning and furnishing spaces. Prerequisite: IND 110 Interior Design Fundamentals or FCS 120 Interior Design Studio Fundamentals.

FCS 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FCS 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FCS 230. Consumer Education and Personal Finance. 3 hours. Lecture. Concepts include economic foundations; consumer ethics, decision making, and protection; fraud; identity theft; and advertising. Personal finance topics include money management, banking basics, consumer credit, credit regulation and mortgage finance legislation. General Education course.

FCS 270. Practicum in Family and Consumer Sciences (____). 1 hours. Supervised work experience in family and consumer sciences occupation. Exposure to career alternatives in an applied setting. Graded on a pass-fail basis only.

FCS 285. Lifespan Human Development. 3 hours. Lecture. The process of growth from conception through death. Major theoretical approaches are applied to the developmental process in the context of family, society, and the intrapersonal dimension. Application to personal and professional settings.

FCS 301. Nutrition. 3 hours. Lecture. Principles of normal nutrition. Food values and adequate nutrient allowances for growth and maintenance. Nutritive needs of special groups. Prerequisite: One science course with laboratory.

FCS 316. FCS Lighting. 3 hours. Introduces fundamentals of lighting. Lighting design solutions and all settings and spaces. Prerequisite: FCS 110 Interior Design Fundamentals or permission of instructor.

FCS 340. Topics in (____). 1-6 hours. Intensive study in selected areas of family and consumer sciences. May be repeated if topic varies.

FCS 351. Apparel Evaluation. 3 hours. Lecture and laboratory. Critical evaluation of ready-to-wear apparel; understanding mass production techniques and industry standards; development of illustrative skills. Prerequisite: Junior standing.

FCS 352. The Fashion Industry. 3 hours. Lecture, design, production, and marketing of men's, women's, and children's apparel. Domestic and international wholesale and retail operations. Prerequisite: Junior standing.

FCS 355. Construction Techniques. 3 hours. Lecture and laboratory. Construction of basic garments and/or home furnishings with emphasis on appropriate fabric selection, and pattern choice or development; fitting and alteration; standards in basic construction. Purchase of supplies required.

FCS 356. Textiles. 3 hours. Lecture. Fibers, yarn, fabrications and finishes of fabrics affecting the selection and care of textiles.

FCS 370. Introduction to Career-Technical Education FCS. 3 hours. Introduction to Career Technical Family and Consumer Sciences Education through a historical as well as contemporary lens. Seminar includes history/philosophy of CTE, management of CTE programs, ServSafe credentialing and field experiences in community schools. Prerequisite: Minimal sophomore standing.

FCS 390. Interacting with Children. 3 hours. Applying developmental theories to guidance and management issues for infancy through adolescence. Relationship of guidance to social development. Prerequisite: FCS 285 Lifespan Human Development or PSYCH 263 Developmental Psychology. Must be taken concurrently with FCS 391 Practicum in Early Childhood.

FCS 391. Practicum in Early Childhood. 1 hours. Supervised work experience in an early childhood setting. Taken concurrently with FCS 390 Interacting with Children. May be repeated. Graded on a pass-fail basis.

FCS 392. Infant and Toddler Development. 3 hours. Lecture. An in-depth examination of infant and toddler development including physical, language, and cognition changes. Emphasis will be on development, care, and teacher training for this age. Practicum hours required. Prerequisites: FCS 285 Lifespan Human Development or PSYCH 263 Developmental Psychology.

FCS 401. Food Science and Preparation Techniques. 3 hours. Lecture and laboratory. The exploration of principles used in food preparation and food science. An examination of basic biochemistry of food and nutrition, food economics, food safety and specific types of food. Course will be assessed an additional class fee.

FCS 409. Demonstration Techniques and Instructional Technology. 3 hours. Lecture and laboratory. Exploration of instructional media and technology used for effective professional presentations. Emphasis will be placed on laboratory and field experiences using current technology. Prerequisite: Junior standing or above.

FCS 429. Career and Technical Education in the FACS Curriculum. 3 hours. Lecture, curriculum, techniques and materials to implement the career cluster curriculum into 6-12 FCS programs. Procedures for career and technical education funding at the state level and Carl Perkins funding at the federal level. Corequisite: FCS 479 Techniques for Teaching Family and Consumer Sciences.

FCS 430. Family Resource Management. 3 hours. Lecture. Management processes, techniques, technologies and resources essential to managing today's home environment. Prerequisite: FCS 230 Consumer Education and Personal Finance and junior standing.

FCS 440. Visual Merchandising. 3 hours. Lecture and laboratory. Visual merchandising of ideas and products as an art form. Laboratory experiences on campus and in local retail stores. Restricted to Fashion Merchandising and Interior Design students or permission of instructor. Prerequisite: Junior standing.

FCS 452. Fashion Buying and Merchandising. 3 hours. Planning, buying, promoting and selling of apparel. Prerequisite: FCS 352 The Fashion Industry.


FCS 470. Professional and Social Skills. 3 hours. Lecture. Development of skills contributing to success in business environments: proper attire, dining etiquette, business relationships, resumes and interviewing, conflict and job stress management, written and oral communication, and international protocol. Prerequisite: Junior standing.

FCS 479. Techniques for Teaching Family and Consumer Sciences. 3 hours. Lecture and laboratory. Techniques, methods, and course content used in teaching family and consumer sciences in the secondary school. Philosophy of vocational education, curriculum construction and implementation for Career and Technical Education (CTE) family and consumer sciences. To be taken before the professional semester. Prerequisite: Admission to teacher education and PSYCH 357 Educational Psychology.

FCS 480. Dynamics of Family Relationships. 3 hours. Lecture. Dynamics of family relationships across lifespan with focus on interaction, role, communication and structure from systemic perspective. Involvement of familial processes in routine, healthy and normal development of children and adults.

FCS 490. Developmental Planning: Preschool and Kindergarten. 3 hours. Lecture. Principles of growth, development and curriculum for the preschool and kindergarten level. Emphasis on planning, implementation, and evaluation of activities within domains to enhance all areas of development. Corequisite: FCS 491 Preschool Laboratory.

FCS 491. Preschool Laboratory. 1-2 hours. Laboratory. Participation and observation in preschool laboratory. Three hours per week (per credit). Non-majors take 1 credit. Majors enroll for 2 credits. Corequisite: FCS 490 Developmental Planning: Preschool and Kindergarten. Prerequisite: HHP 260 First Aid and CPR or permission of instructor. May be repeated for a maximum of three credits.

FCS 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
FCS 570. Professional Internship. 2-4 hours. Application of concepts and skills through work experience. Sites negotiated between student and instructor reflecting area of study. Prerequisites: Senior standing or permission of instructor. Open to FCS majors only.

FCS 571. Directed Readings in Family and Consumer Sciences. 1-3 hours. Selected readings with emphasis on contemporary problems suited to student interest. Development of research and investigative skills. Students anticipating graduate study encouraged to enroll. May be repeated for a maximum of 3 hours. Prerequisite: Junior standing.

FCS 580. Family Violence and Child Abuse. 3 hours. Lecture. Prevalence, causes, and impact of violence and abuse on individual and family; criteria for recognizing child victims; legal aspects of professional responsibilities and interventions. Prerequisite: Junior standing.

FCS 581. Aging and the Family. 3 hours. Lecture. Examination of family and kinship relations in later adulthood and old age. Prerequisites: FCS 480 Dynamics of Family Relationships or permission of instructor.

FCS 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FCS 590. Development of the Child: Birth Through Age Eight. 3 hours. Lecture. In-depth examination of child development and appropriate practices highlighting contemporary work in the field of early childhood, birth through age eight. Focus on developmentally appropriate approaches in infant, toddler, preschool and elementary school programming. Prerequisites: FCS 285 Lifespan Human Development or PSYCH 263 Developmental Psychology and Junior standing.

FCS 591. Supervised Teaching in the Early Childhood Lab. 5 hours. Laboratory. Directed student teaching within the PSU Preschool lab with the option of partial placement in other approved settings. Curriculum development, observation, interaction, instruction and assessment in a preschool setting. Prerequisites: Junior standing. Must apply within ECD program prior to enrollment. FCS 285 Lifespan Human Development or PSYCH 263 Developmental Psychology, FCS 390 Interacting with Children, FCS 490 Developmental Planning: Preschool and Kindergarten, FCS 491 Preschool Laboratory.

FCS 592. Study of Youth and Adolescence. 3 hours. Lecture. An exploration of the principles and theories of growth and development within and between stages of children in childhood and adolescence. Covers physiological, cognitive, social, and emotional domains of development. Emphasis on family and community influences and contexts in the individual and groups. Prerequisite: FCS 285 Lifespan Human Development or PSYCH 263 Developmental Psychology.

FCS 600. Study Tour. 1-3 hours. An academically based study tour experience. May combine academic course work, industry experience, travel and cultural immersion. May be repeated if the tour, region or country visited is different. Special permission of instructor required.

FCS 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

FCS 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

FCS 670. Senior Applied Learning. 1-3 hours. Supervised applied work experience in an area of study. May be repeated up to nine credit hours. Prerequisite: Senior standing.

FCS 690. Parent/Professional Relationships. 3 hours. Lecture. Exploring roles and opportunities for early childhood educators and others interacting with parents and parent audiences. Use of media, workshops, communication, parent/teacher conferences.

FCS 691. Superseded. 3 hours. Lecture. Prevalence, causes, and impact of violence and abuse on individual and family; criteria for recognizing child victims; legal aspects of professional responsibilities and interventions. Prerequisite: Junior standing.

FCS 740. Special Topics: (___). 1-4 hours. Intensive study in special areas of family and consumer sciences. May be repeated if subject matter is different. Offered as graded or pass-fail.

FCS 771. Directed Readings in Family and Consumer Sciences. 1-3 hours. Selected readings with emphasis on contemporary problems suited to student interest. Prerequisites: Research and investigative skills. Students anticipating graduate study encouraged to enroll. May be repeated for a maximum of three hours. Prerequisite: Junior standing.

FCS 780. Family Violence and Child Abuse. 3 hours. Lecture. Prevalence, causes, and impact of violence and abuse on individual and family; criteria for recognizing child victims; legal aspects of professional responsibilities and interventions. Prerequisite: Junior standing.

FCS 782. Advanced Exploration of Issues in Youth and Adolescence. 3 hours. Lecture. An examination of contemporary theories and research addressing the period of childhood and adolescence. Emphasis on individual, family, and community influences on reasoning and behavior. Students will be involved in a research project. Prerequisite: FCS 285 Lifespan Human Development or PSYCH 263 Developmental Psychology.

FCS 783. Research and Thesis. 3 hours. May be repeated for a maximum of six hours. Prerequisites: Must have successfully completed TTED 891 Methods of Research and TTED 887 Data Analysis and Interpretation in Technology or related coursework.

Finance

FIN 208. Introduction to Risk Management and Insurance. 3 hours. An introduction to the fields of risk management and insurance. The course will explore the nature of risk and how insurance contracts can be used in order to manage risk. Specific areas of insurance including life, property, casualty, and health will be introduced with the goal of addressing the special characteristics and issues of each area. Prerequisites: MATH 143 Elementary Statistics, or one-year of professional work experience in the insurance industry, or permission of instructor.

FIN 210. Financial Planning. 3 hours. An overview of issues facing individuals at various stages of preparing for a financially stable future. This includes, but is not limited to, personal financial statements and plans, personal taxes, major purchases, managing consumer credit, essentials of individual insurance coverage, investment choices, and retirement/estate planning. Prerequisites: Sophomore standing or one-year professional work experience or permission of instructor.
FIN 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FIN 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FIN 326. Business Finance. 3 hours. Provides an overview of the tools and techniques that are used to make financial decisions. The emphasis is on the firm level, but application at the personal level is also addressed. Specific topics include, but are not limited to, financial statement analysis, time value of money, risk-and-return analysis, principles of valuation, financial securities and markets, and corporate financial decision-making. Prerequisites: ECON 200 Principles of Microeconomics, ACCTG 202 Managerial Accounting and 55 hours completed.

FIN 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FIN 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

FIN 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

FIN 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

FIN 621. Investments I. 3 hours. Provides an overview of the investment decision-making process. Topics include, but are not limited to: investment objectives, investment securities, principles of valuation, trading of securities, market regulations, and portfolio theory. Prerequisite: FIN 326 Business Finance and 55 hours completed.

FIN 623. Financial Institutions and Markets. 3 hours. Provides an overview of the functions and operations of financial institutions and markets. Specific topics include, but are not limited to: determinants of interest rates, Federal Reserve System, security valuation, and financial market operations. Prerequisite: FIN 326 Business Finance and 55 hours completed.

FIN 624. Investments II. 3 hours. Extends the analysis of investment securities and portfolio decisions that was initiated in FIN 621 Investments I. Topics include, but are not limited to: analysis of options, futures, and convertible securities; applying the top-down investment analysis approach to equity valuation; the role of duration and convexity in bond analysis; asset pricing models; risk-adjusted performance evaluation; and behavioral finance. Prerequisites: FIN 621 Investments I, MGT 310 Business Statistics and 55 hours completed, or permission of instructor.

FIN 625. International Finance. 3 hours. An overview of international investments, capital flows, financial markets, as well as policies and techniques used in financial decision-making in a multinational environment. Pre-requisites: ECON 201 Principles of Macroeconomics, FIN 326 Business Finance, and 55 hours completed.

FIN 627. Advanced Business Finance. 3 hours. An in-depth study of tools and techniques that are used in financial planning, decision-making, and analysis of financial policies. Prerequisites: FIN 326 Business Finance, MGT 310 Business Statistics and 55 hours completed.

FIN 631. Seminar in Financial Management. 3 hours. Extends the study of tools and techniques used in corporate decision-making process initiated in FIN 627 Advanced Business Finance. Specific topics include, but are not limited to: capital structure, corporate financing decisions, working capital management, and mergers and acquisitions. Prerequisites: FIN 621 Investments I, FIN 623 Financial Institutions and Markets FIN 627 Advanced Business Finance, and 55 hours completed.

FIN 693. Topics in Finance (___). 1-3 hours. Study of a specific topic in finance. Specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: FIN 326 Business Finance, 55 hours completed and permission of instructor.

FIN 694. Internship in Finance. 1-6 hours. Relevant work experience in private or public institutions. The work experience must be approved by the instructor. May be repeated for a maximum of six hours. Prerequisite: 55 hours completed and permission of the instructor required.

FIN 827. Seminar in Finance (___). 3 hours. Comprehensive reading and research in various fields of finance. May be repeated if subject matter is different. Prerequisites: FIN 326 Business Finance and admission to the MBA program.

FIN 836. Financial Strategy. 3 hours. Financial management of the firm, emphasizing financial planning, capital budgeting and cost of capital. Case method. Prerequisite: FIN 326 Business Finance, or waiver.

Geography

GEOG 106. World Regional Geography. 3 hours. Geographic distribution of urban, cultural, economic and demographic phenomena in several contrasting regions of the world. The importance of historical context and the impacts of globalization.

GEOG 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GEOG 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GEOG 300. Elements of Geography. 3 hours. Physical, environmental and cultural elements of the Earth. Introduction to the spatial nature of geography in a variety of different contexts. Recommended geography course selection for elementary education majors.

GEOG 301. Introduction to Urban Geography. 3 hours. The social, political and economic functions of cities and the spatial dynamics that create urban patterns. Residential, commercial, industrial and office sector land uses, location analysis, pragmatic land development issues and the consequences of land use policies that affect development.

GEOG 302. Introduction to Environmental Geography. 3 hours. The physical geography of the Earth and the interface between human activity and the environment. Topics include ecosystems and the bioclimatic environment, resources and energy generation, atmospheric structure and air pollution, the hydrologic environment, land use and pollution.

GEOG 303. Geographic Information Systems I. 4 hours. An introduction to the collection, structure, input, manipulation and display of spatially referenced data. Basic concepts and practical applications involving computerized geographic data. Includes an integrated lab component.

GEOG 304. Human Geography. 3 hours. Study of the Earth's human landscapes and the cultural, economic, political and environmental processes that shaped them with an emphasis on understanding how culture and cultural patterns have developed, particularly under the influence of changing economic and political conditions.
GEOG 305. Cartography. 3 hours. An overview of maps, their formats, structures and functions. Students are taught concepts through the use of a computer-based mapping application for optimum representation of geographic phenomena.

GEOG 307. East Asia: China, Japan, and Korea. 3 hours. A systematic and regional analysis of the cultures, economies, environments, and political conditions of China, Japan, North/South Korea, and Taiwan.

GEOG 395. Topics in Geography (___). 1-3 hours. Intensive study of specific topics in geography or regional geography topics. May be repeated when topic is different.

GEOG 401. Urban and Regional Planning. 3 hours. The nature and components of public planning at the sub-state level in North America. Planning for cities, counties, towns and other units of local government. Prerequisite: GEOG 301 Introduction to Urban Geography or permission of instructor.

GEOG 403. Geographic Information Systems II. 4 hours. Applications in geographic information systems with an emphasis on geographic information system analysis techniques, global position system applications, and database design. Includes an integrated lab component. Prerequisite: GEOG 303 Geographic Information Systems I.

GEOG 501. Urban and Rural Sustainability. 3 hours. Examination of issues and best practices at local, regional and global scales. Prerequisite: ENGL 299 Introduction to Research Writing, or equivalent, or consent of instructor.

GEOG 502. Global Environmental Change. 3 hours. The physical dimensions and the human causes and consequences of global environmental change, including air pollution and the enhanced Greenhouse Effect, ozone depletion, deforestation and land degradation.

GEOG 507. Geography of the Global Economy. 3 hours. Introduction to the location and differentiation of economic activities in today's global society. Globalization and its effects on both developed and developing countries.

GEOG 508. Geography of Hazards and Disasters. 3 hours. Geographic aspects of a variety of hazards and disasters throughout the world. Physical processes, social and economic implications of these events, perceptions, impacts, responses and mitigation strategies.

GEOG 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GEOG 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GEOG 594. Directed Readings in Geography. 1-3 hours. Intensive individual readings in select topics in geography. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

GEOG 596. Individual Study in Geography. 1-3 hours. Individual study in a selected area of geography culminating in a written research report. May be repeated for a maximum of 6 hours. Prerequisite: Three courses in geography or permission of instructor.

GEOG 600. Service Learning in Community Development Laboratory. 3 hours. Supervised work experience related to community development. A minimum of 20 contact hours are required for each credit hour. May be repeated up to a maximum of six hours. Prerequisite: Permission of instructor.

GEOG 601. Senior Seminar in Geography. 3 hours. A "capstone" course to assess student's knowledge of basic geographic concepts and to develop further their knowledge and analytical skills in the context of a variety of subfields within geography. Required for all geography majors. Prerequisite: Permission of instructor.

GEOG 602. Service Learning in Sustainability Laboratory. 3 hours. Supervised work experience related to sustainability. A minimum of 20 contact hours are required for each credit hour. May be repeated up to a maximum of six hours. Prerequisite: Permission of instructor.

GEOG 603. Service Learning in GIS Laboratory. 3 hours. Supervised work experience related to GIS applications. A minimum of 20 contact hours are required for each credit hour. May be repeated up to a maximum of six hours. Prerequisite: Permission of instructor.

GEOG 604. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

GEOG 605. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

GEOG 759. Seminar: Special Topics in Geography (___). 1-3 hours. Intensive study of specific topics in geography. The specific topics will be designated each time the course is offered. May be repeated when the topic is different. Prerequisite: One course in geography or permission of instructor.

Gerontology

GERO 155. Interdisciplinary Introduction to Gerontology. 3 hours. Interdisciplinary framework and the study and practice of gerontology. Major issues in theory, research, and experience with older adults. Critical reading of gerontological research from multiple disciplines and translating research into practical problem solving.

Graphics and Imaging Technologies

GIT 100. Introduction to Graphics Technologies. 3 hours. Overview of the graphics industry, including digital imaging, print media, and web/interactive graphics. Current issues, developments, trends, and projections.

GIT 141. Vector Based Graphics. 3 hours. Image composition techniques and procedures utilizing vector graphics software. (Adobe Illustrator)

GIT 142. Raster Graphics Software. 3 hours. Image composition techniques and procedures utilizing raster graphics software. (Adobe PhotoShop)

GIT 221. Web Graphics Software. 3 hours. Introduction to web design principles, techniques, and procedures utilizing web design software for the development of web pages.

GIT 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GIT 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GIT 230. Graphic Design. 3 hours. Design principles, typography studies and procedures used in the planning of graphic elements and page layout for print and web applications.

GIT 231. Audio/Video Software. 3 hours. Audio and visual composition techniques and procedures utilizing audio and video software.

GIT 240. Page Layout Software. 3 hours. Composition techniques and procedures utilizing page layout software. (Adobe InDesign).
GIT 270. Introduction to Packaging Technologies. 3 hours. Introduction to the packaging industry including current trends in packaging design and applications, brand identity, color theory, legal issues, and environmental and sustainability issues.

GIT 301. Graphics Career Development. 2 hours. Preparation of students for employment in graphics internships and full-time positions. Emphasis is placed on academic planning, certification opportunities and procedures, resume content, job search skills, job interview, business etiquette, time management and goal setting. Prerequisite: GIT 100 Introduction to Graphics Technologies.

GIT 310. Photography. 3 hours. Techniques and procedures for creating photos for reproduction purposes. Includes densitometry, sensitometry, composition, lighting, displaying of prints. Introduction to digital photography.

GIT 311. Product Photography. 3 hours. Technical and conceptual aspects of capturing still images of products, buildings and structures both indoor and outdoor. Emphasis will be placed on the application of appropriate capturing techniques, equipment use and lighting for field/on-location conditions and studio settings. Prerequisites: GIT 142 Raster Graphics Software and GIT 310 Photography.

GIT 322. Web Site Design. 3 hours. Web site development techniques, design and standards for creating responsive, user friendly websites with HTML & CSS. Prerequisites: GIT 221 Web Graphics Software.

GIT 323. Web and Motion Graphics. 3 hours. Techniques and procedures for applying the principles of animation to produce 2D animated projects using motion graphics software for web and digital media outputs.

GIT 334. 3D Graphics. 3 hours. Introduction to 3D modeling and scanning.

GIT 342. Print File Preparation and Preflighting. 3 hours. Determining proper workflow techniques from file generation to print production. Emphasis is placed on troubleshooting and managing files as well as determining proper file structure based on the required output. Prerequisites: GIT 100 Introduction to Graphics Technologies, GIT 141 Vector Based Graphics, GIT 142 Raster Graphics Software, and GIT 240 Page Layout Software.

GIT 350. Printing Technologies. 3 hours. Fundamental characteristics, uses and operational procedures of traditional and digital printing technologies and equipment including image conversion and press layout techniques. Print quality control and troubleshooting.

GIT 355. Specialty Graphics. 3 hours. Screen printing, wide-format printing, pad printing and other specialty printing principles and applications. Digital file preparation and printing of projects. Prerequisites: GIT 100 Introduction to Graphics Technologies and GIT 141 Vector Based Graphics.

GIT 400. Investigations. 1-4 hours. Individual studies in printing and graphic design to meet special interests. Prerequisite: Permission of instructor. May be repeated to a maximum of four credit hours provided subject matter is different.

GIT 401. Graphics Work Experience. 1-3 hours. Current on-the-job work experience/career exploration in a graphics setting. May include job shadowing. Credit hours variable depending on number of hours worked. Prerequisites: 18 hours in GIT and approval of the department chairperson.

GIT 411. Portrait Photography. 3 hours. Theory and techniques used to capture images of people in the studio and on location. Concentration is placed upon lighting techniques, equipment usage, digital image manipulation and the study of psychology related to portraiture. Prerequisites: GIT 142 Raster Graphics Software and GIT 310 Photography.

GIT 421. Interactive Media Design. 3 hours. Fundamentals of scripting with JavaScript & JQuery to design and create dynamic, interactive websites and online applications. Prerequisite: GIT 322 Web Site Design.

GIT 432. Digital Media Design. 3 hours. Planning, storyboarding, workflow and techniques of capturing audio and video. Prerequisite: GIT 251 Audio/Video Software.

GIT 511. Commercial Photography. 3 hours. Technical and conceptual aspects of capturing still images of products, buildings and structures both indoor and outdoor. Emphasis will be placed on the application of appropriate capturing techniques, equipment use and lighting for field/on-location conditions and studio settings. Prerequisites: GIT 311 Product Photography and GIT 411 Portrait Photography.

GIT 521. Mobile Media Development. 3 hours. Content creation for mobile devices (Tablets, SmartPhones) Creation, testing and delivery of digital content. Prerequisites: GIT 100 Introduction to Graphics Technologies and GIT 240 Page Layout Software.


GIT 530. 3D Animation and Rendering. 3 hours. Animating and rendering 3D graphics. Prerequisite: GIT 334 3D graphics.

GIT 531. Publication Graphics. 3 hours. Document design and production for print and electronic delivery. Prerequisites: GIT 342 Print File Preparation and Preflighting.

GIT 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.


GIT 570. Flexible Packaging. 3 hours. Characteristics, applications, design and production of flexible packaging. Prerequisites: GIT 141 Vector Based Graphics and GIT 270 Introduction to Packaging Technologies.

GIT 571. Rigid Packaging. 3 hours. Characteristics, applications, design and production of rigid packaging. Prerequisites: GIT 141 Vector Based Graphics and GIT 270 Introduction to Packaging Technologies.

GIT 572. Paperboard Packaging. 3 hours. Characteristics, applications, design and production of paperboard and corrugated packaging. Prerequisites: GIT 141 Vector Based Graphics and GIT 270 Introduction to Packaging Technologies.

GIT 580. Sales and Customer Service. 3 hours. Introduction to skills and practices of sales and customer service representatives.

GIT 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GIT 590. Special Topics (___). 1-3 hours. Selected topics in graphic arts and graphic design. Each class limited to single topic. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

GIT 600. Graphics Internship. 3 hours. Graphic experiences at a work site in a commercial setting. Prerequisite: 85 total hours, 20 hours of GIT courses, and approval of the department chairperson. Offered on a Pass-Fail basis only.

GIT 601. Laboratory Practicum. 1-4 hours. Practical experience in a departmental laboratory setting. Prerequisite: Senior standing and approval of the department chairperson.

GIT 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.
COURSE DESCRIPTIONS

GIT 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to extend their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

GIT 630. Portfolio Management. 3 hours. Developing, critiquing and refining of student work for presentation in a professional design portfolio. Professional issues related to the graphic communications industry. Prerequisites: GIT 301 Graphics Career Development and either GIT 323 Web and Motion Graphics or GIT 432 Digital Media Design.

GIT 640. Color Reproduction. 3 hours. Preparation of digital files for use in the RGB, CMYK and LAB workflows. Emphasis is placed on color correction; color managed output and human color perception. Prerequisite: GIT 342 Print File Preparation and Preflighting or GIT 432 Digital Media Design.

GIT 650. Production Graphics. 3 hours. This capstone course will simulate a live, production environment. Students will take orders, write job specifications, create estimates, prepare artwork and digital files, produce the finished product and perform job billing. Prerequisites: Senior standing, permission of instructor, 30 hours of GIT coursework completed.

GIT 670. Packaging Materials and Processes. 3 hours. Distribution, product testing, materials handling and process automation within the packaging industry. Prerequisites: GIT 141 Vector Based Graphics and GIT 270 Introduction to Packaging Technologies.

GIT 680. Graphics Administration. 3 hours. Graphics management and production problems. Interpersonal relationships, communication skills, and change theory. Addresses the function of upper level management. Prerequisites: 15 hours of management and marketing and 20 hours of graphics and imaging. Spring only class.

GIT 690. Senior Project. 3 hours. Planning and executing a project to enhance the students overall understanding of the graphic arts, graphic design and digital industries. Projects will follow an individual approach and will include all aspects of the project from conception, design and production, as well as presentation skills. Prerequisites: Senior standing, permission of instructor and 20 hours of graphics and imaging.

GIT 800. Graphics Internship. 3 hours. Graphic experience in a work site in a commercial, governmental or industrial setting. Prerequisite: Approval of the Department Chairperson.

GIT 810. Special Topics (___). 1-3 hours. Selected topics in graphics and imaging. Each class limited to single topic. May be repeated if subject matter is different. Prerequisite: Permission of the instructor.

GIT 840. Color Reproduction. 3 hours. Techniques in using scanner and digital camera images for reproduction in the RGB and CMYK workflow. Emphasis is placed on color correction and color managed output. Prerequisite: GIT 342 Print File Preparation and Preflighting.

GIT 880. Graphics Administration. 3 hours. Graphics management and production problems. Interpersonal relationships, communication skills, and change theory. Addresses the function of upper level management. Spring only class.

GIT 890. Graphic Arts Seminar (___). 1-6 hours. Graphic arts industry, materials, production and processes. Individual reports and group discussions. May be repeated if subject matter is different for a maximum of six hours.

Graduate Technology

GRT 750. Technology and Society. 3 hours. The influence of technology on society is examined. Social-cultural impacts in regard to communication, medicine, transportation, construction, manufacture of goods and services are presented. Discussion centers on ethical, environmental, and societal issues resulting from technological development and decisions regarding it.

GRT 790. Innovation in Technology Project. 3 hours. A project-based course that combines student work with real product and service ideas to create working prototypes, as well as finding the flaws of a design quickly and inexpensively. Topics include as the use of tools to generate meaningfully unique ideas quickly, as well as the application of the scientific method to the prototyping process.

GRT 801. Interdisciplinary Perspectives in Technology. 3 hours. An overview of technology from an interdisciplinary perspective; to increase the awareness of other programs, the culture of American Business and other academic disciplines.

GRT 805. Current Issues in Technology. 3 hours. Study of activities, topics, and trends impacting on technology. Case studies and current innovations and future emphasized.

GRT 887. Statistical Applications in Technology Research. 3 hours. An applied statistics course providing introduction to data gathering and analysis with an emphasis on problem solving for decision making and process improvement in industrial and business settings. Statistical software is used to supplement data analysis and aid in problem solving. Topics covered may include graphic and verbal representation of data, measures of central tendency, confidence intervals, correlation, and linear regression. Prerequisite: MGMKT 320 Business Statistics or equivalent or permission of instructor.

GRT 888. Product Design and Management. 3 hours. Product design from concept to completed product. Initial design and key characteristics, material selection, manufacturing and quality considerations, cost restraints, testing and evaluation of a product, packaging and maintainability of this product. Topics such as concurrent engineering versus serial engineering will also be covered.

GRT 890. Research and Thesis. 3-6 hours. May be repeated for a maximum of 6 hours. Prerequisite: GRT 891 Research Methods in Technology.

GRT 891. Research Methods in Technology. 3 hours. Fundamental principles and techniques of research, in business industry and technology, which includes the development of proposals and documentation for various types of research and research problems. Prerequisites: MATH 143 Elementary Statistics or equivalent or permission of instructor.

GRT 894. Research Application in Technology. 3 hours. Theoretical and applied research in existing or emerging technologies. Development of a problem, fabrication of apparatus for the research, conducting the research and writing the research report. Prerequisite: GRT 891 Research Methods in Technology.

GRT 895. MST Graduate Review and Assessment. 1 hours. Course provides comprehensive review of candidate's core courses and emphasis area for the Master of Science in a major in Technology (MST) degree in preparation for MST Comprehensive Exam. Comprehensive exam is administered late in the semester as part of the course.

GRT 896. Graduate Project. 3 hours. Planning and executing project to enhance student's overall understanding of industry and business. Project may be production or research related. Team approach. Prerequisite: Last semester of graduate work.

GRT 897. MST Graduate Assessment Project. 3 hours. Course provides review of candidate's core courses and emphasis area for the Master of Science with a major in Technology (MST) degree; and development and completion of a relevant project to demonstrate competence in core and emphasis area courses. Prerequisite: Permission of instructor and two previous semester-long enrollments in GRT 895 MST Graduate Review and Assessment.

General Technology

GT 100. Encounters in Technology (___). 1-3 hours. Competency-based learning experiences in technology and engineering technology education. May be repeated if subject matter is different for a maximum of six hours. Permission of instructor.
GT 130. Applications in STEM. 3 hours. Course designed to integrate practical mathematics in science, technology and engineering applications showing the relationship of math to specific science, technology and engineering applications to include mechanical, fluid, electrical, light/optical and thermal systems; to include resistance, energy, work, power, and momentum. Additional relationships will include wave/vibration and radiation. Includes performance based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: MATH 113 College Algebra or MATH 110 College Algebra with Review.

GT 190. Introduction to Technological Systems. 2 hours. Introductory examination of technological systems, including production, communication, transportation, and bio-related technologies, and their social-cultural impacts. Demonstrations, cooperative learning activities and discussions of assigned resource materials are primary means of learning.


GT 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GT 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GT 300. Engineering Design and Problem Solving. 3 hours. Course designed to develop cognitive information emphasizing the generation and communication of engineering and technological information. Topics include strategies to encourage invention and innovation; methods for documentation (e.g. portfolios, logs); sketching tools and techniques; engineering modeling/prototyping and graphic presentation; and related math, science, and technical analyses. Includes a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 309. Contextual Topics in Technology and Engineering. 3 hours. An overview of relevant or current technological topics delivered through a series of classroom and on-line experiences. Students are exposed to the cognitive knowledge of systems such as bio-related, medical, agricultural, alternative energy, military and governmental technologies. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 320. Communication Systems in Technology. 3 hours. An overview of communication technology delivered through a series of classroom and on-line experiences. Students are exposed to the cognitive knowledge of computers, graphic production, telecommunications, technical design, fiber optics, and audio/video systems. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 330. Engineering Materials and Processes. 3 hours. An overview of engineering materials and material processing technologies in mediated format. Through a series of on-line experiences, students are exposed to the cognitive knowledge of engineering materials and processes related to the categories of wood, metal, plastic, earth and composite engineering materials. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 340. Power/Energy/Transportation Systems. 3 hours. An overview of industrial power, energy and transportation technologies delivered through a series of classroom and on-line experiences. Students are exposed to the cognitive knowledge of power, energy and transportation systems and the development, use and impacts of energy resources. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 350. Technology and Civilization. 3 hours. The development of technology and the pervasive nature of technological innovations. An awareness of the promises and uncertainties associated with technology and institutions of society.

GT 360. Computer Aided Drafting. 3 hours. An overview of computer aided drafting delivered through a series of classroom and on-line experiences. Students are exposed to the cognitive knowledge of CAD technologies and its relationship to electrical, mechanical, construction and other technological areas. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 361. Technical Graphics with AutoCAD. 2 hours. Covers the fundamental principles of technical drawing. Topics introduced include, lettering for notations, visualization, sketching orthographic projection, dimensioning, sections, and pictorial drawing. AutoCAD is used to teach 2-D technical graphics fundamentals. Co-requisite or Prerequisite: GT 361 Technical Graphics with CAD or permission of instructor.

GT 362. AutoCAD Applications (___). 1 hours. Specific technical applications associated with students technical areas are taught. Topics include: mechanical, architectural, electrical, detail drawing for assembly and installation, etc. May be repeated for a maximum of three credit hours if subject matter is different. Co-requisite or Prerequisite: GT 361 Technical Graphics with AutoCAD or permission of instructor.

GT 365. Technical Graphics with SolidWorks. 2 hours. Covers the fundamental principles of technical drawing. Topics introduced include, lettering for notations, visualization, sketching, orthographic projection, dimensioning, sections, and pictorial drawing. SolidWorks is used to teach 2-D and 3-D technical graphics fundamentals. Co-requisite or Prerequisite: GT 361 Technical Graphics with SolidWorks or permission of instructor.

GT 366. SolidWorks Applications (___). 1 hours. Specific technical applications associated with students technical areas are taught. Topics include: mechanical, architectural, electrical, detail drawing for assembly and installation, etc. May be repeated for a maximum of three credit hours if subject matter is different. Co-requisite or Prerequisite: GT 361 Technical Graphics with SolidWorks or permission of instructor.

GT 370. Construction Systems Technology. 3 hours. An overview of the construction industry delivered through a series of classroom and on-line experiences. Students are exposed to the cognitive knowledge of construction technologies to include residential, commercial, and civil. Also discussed will be the impacts of the construction industry. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 380. Manufacturing Enterprise. 3 hours. An overview of the manufacturing industry delivered through a series of classroom and on-line experiences. Students take active roles in a simulated production process, including formation of a company, product design, production planning, finance, and marketing and sales. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

GT 390. Automated Systems. 3 hours. An overview of the automated systems delivered through a series of classroom and on-line experiences. Students are exposed to the cognitive knowledge of automated systems to include rapid prototyping, robotics, CNC and programmable logic control. Includes laboratory based experiences designed to reinforce cognitive information through a series of integrated hands-on laboratory activities and projects. Prerequisites: GT 191 Foundations of Technology and Engineering, GT 330 Engineering Materials and Processes and GT 360 Computer Aided Draftering and/or permission of instructor.

GT 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

GT 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

Health and Human Performance

HHP 101. Weight Training. 1 hours. May not be repeated. Students wishing additional credit should enroll in HHP 200 Lifetime Sports (Weight Training).
HHP 105. Golf. 1 hours. May not be repeated. Students wishing additional credit should enroll in HHP 200 Lifetime Sports: (Golf).

HHP 107. Racquetball. 1 hours. May not be repeated. Students wishing additional credit should enroll in HHP 200 Lifetime Sports: (Racquetball).

HHP 109. Physical Fitness Training. 1 hours. This course consists of physical fitness training for students pursuing or considering a minor in Military Science. May be repeated up to eight hours. Footnote: See ROTC Department before enrolling.

HHP 120. Swimming I. 1 hours. An elementary course in the fundamentals of swimming and diving. May not be repeated. Students wishing additional credit should enroll in HHP 200 Lifetime Sports: (Swimming I).

HHP 150. Lifetime Fitness Concepts. 1 hours. Basic concepts for the development and maintenance of physical fitness. Concepts are cardiovascular fitness, weight control, nutrition, strength, flexibility, etc. Fitness assessment and exercise prescription included.

HHP 151. Dance Appreciation. 3 hours. Students will develop an aesthetic awareness and appreciation of dance in its artistic, social, and cultural contexts. A variety of dance experiences will be used to explore dance aesthetics, history, and the creative process.

HHP 195. Introduction to Physical Education. 2 hours. A basic orientation to the field of physical education including discipline objectives, historical and philosophic considerations, professional memberships, career opportunities, and a thorough examination of the departmental professional preparation program.

HHP 200. Lifetime Sports: ____. 1-3 hours. May include: bicycling, scuba diving, karate, aerobics, weight training, racquetball, etc. Specific topics may be repeated. Offered on Pass-Fail basis only.

HHP 220. Lifeguarding. 2 hours. Includes certification in American Red Cross Lifeguarding and CPR for the professional Rescuer. Must pass swimming proficiency test at the first class session.

HHP 227. Workshop ____. 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHP 228. Workshop ____. 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHP 260. First Aid and CPR. 2 hours. American Red Cross Standard First Aid and Cardiopulmonary Resuscitation. Provides fundamental principles and skills in First Aid and CPR. Taught by lecture-discussion, workbooks, and practice aid sessions.

HHP 262. Care and Prevention of Athletic Injuries. 2 hours. Modern principles and practice in conditioning and care of athletes.

HHP 320. Rules and Officiating. 2 hours. The rules of football, basketball, and volleyball will be studied, as well as the mechanics of officiating them. Students will select two of the three areas to meet course requirements.

HHP 321. Coaching Softball and Baseball. 2 hours. Strategies, techniques and various coaching theories are covered through lecture, demonstration and observation. Recognized methods of coaching and training are emphasized.

HHP 322. Coaching Track and Field. 2 hours. The technical study of the various events and the place in life this sport has occupied from the time of the ancient Olympic games to the present day. The recognized methods of coaching and training are emphasized.

HHP 323. Coaching Football. 2 hours. A study of the history of football and the influence on school and college students. Its place in a school curriculum and its use as an extracurricular activity are emphasized. Reports, lectures, and discussions.

HHP 324. Coaching Basketball. 2 hours. The history and development of the game of basketball and systems used in various sections are stressed through lectures, reports, and discussions. The principles of conditioning and strategy are emphasized.

HHP 325. Coaching Volleyball. 2 hours. Strategies, techniques, and various coaching theories are covered through lecture, demonstration and observation. Recognized methods of coaching and training are emphasized.

HHP 326. Coaching Swimming. 2 hours. The techniques associated with coaching of the four competitive swimming strokes for youth to adult levels. Philosophy and methods of coaching are emphasized through lecture, demonstration, practice and analysis of physical skills and designed for use in both competitive and physical education settings. Prerequisite: Swimming proficiency test to be determined by instructor.

HHP 340. Scientific Foundations of Coaching. 2 hours. This course is designed for undergraduate majors in Physical Education and other undergraduate students interested in coaching. The basis of the course is to present a fundamental understanding of specific scientific areas in which coaches should demonstrate competencies. These areas include exercise physiology, sport psychology, and biomechanics of movement. The overriding goal is that students leave the course with the practical skills and knowledge base needed to coach athletic teams of all ages.

HHP 341. Elementary School Physical Education and Health. 3 hours. Study and participation in creative and mimetic activities, lead-up games, rhythms, stunts, tumbling, self-testing activities and games of low organization. Current issues and trends in elementary principles, health, fitness, program planning, class organization, and evaluations will also be covered.


HHP 347. Elementary Games and Rhythms for K-6. 2 hours. Study and practice in conducting games, and rhythmic activities along with supervised laboratory experiences for students of dance, physical education, and/or elementary education.

HHP 349. Group Fitness Instruction. 2 hours. This course is designed to teach students the principles of group fitness instruction, provide guidelines for group exercise segments and practical teaching skills exposing the student to a variety of exercise modes. Prerequisites: HHP 151 Dance Appreciation and HHP 200 Lifetime Sports: (dance electives).

HHP 360. Theory and Fundamentals of Activities I. 2 hours. Theories and techniques of individual and dual sports with practical application of knowledge, principles, and analysis of skill as they relate to the teaching process. Sport activities to be covered will be selected from the following: tennis, bowling, badminton, golf, archery, and racquetball.

HHP 361. Theory and Fundamentals of Activities II. 2 hours. Theories and techniques of team sports with practical application of knowledge, principles, and analysis of skill as they relate to the teaching process. Sport activities to be covered will be selected from the following: soccer, volleyball, field hockey, touch football, basketball, softball, and track and field.

HHP 362. Theory and Fundamentals of Activities III. 2 hours. Theories and techniques of selected non-traditional sports or activities with practical application to knowledge, principles, and analysis of skill as they relate to the teaching process. Activities to be covered will include aerobic dance, gymnastics, and tumbling.

HHP 385. Practicum in Health and Human Performance. 2 hours. Students will learn through both practical experience and program design effective methods of planning and implementing activities in the areas of either coaching; group fitness, dance and rhythms; or strength and conditioning. Prerequisites: All courses in selected emphasis must be taken prior to practicum experience.

HHP 440. Topics in Health, Human Performance and Recreation (____). 1-3 hours. Directed class or seminar study at the undergraduate level in various areas of health, human performance and recreation. The specific topic or topics will be designated each time the course is offered. May be repeated if subject matter differs. May be offered for pass-fail or graded credit.

HHP 460. Kinesiology. 3 hours. A study of the action of the articulations and muscle groups during gymnastic exercises, games and athletics, selection and prescription of exercises. Prerequisite: BIOL 257/BIOL 258 Anatomy and Physiology/Laboratory.

HHP 462. Adapted Physical Education. 2 hours. Study of the ways in which the needs of the atypical student can be met. Particular emphasis on body alignment and other medical aspects of the handicapped. Special emphasis given to various exercise modalities and prescriptions relating to treatment.
HHPR 464. Physiology of Exercise. 3 hours. Responses of the human body to exercise with special emphasis on muscular contraction, body composition, training regimens, generation of energy, and oxygen transport system. Prerequisites: BIOL 257/BIOL 258 Anatomy and Physiology/Laboratory.

HHPR 466. Motor Development. 3 hours. The study of the perceptual and motor development of typical and atypical children as it relates to their ability to learn motor skills; with an emphasis on how to identify and aid children with body management problems.

HHPR 468. Principles of Administration in Health and Physical Education. 3 hours. The organization, equipment, and supervision of a health and physical education department. The duties of a director in arranging schedules, tournaments, and meets.

HHPR 479. Techniques for Teaching Physical Education. 3 hours. Techniques, methods, and course content used in teaching health and physical education in the secondary school. Offered by the HHPR department. To be taken before the professional semester. Prerequisites: Admission to teacher education and PSYC 357 Educational Psychology.

HHPR 499. Report (____). 1-2 hours. Additional study in some phase of Health, Physical Education or Recreation requiring a professional or community service activity and prescribed by instructor. May be repeated if report is different.

HHP 500. Advanced Peer Health. 1 hour. Additional study in peer and community health activities. Service activities are required and the course may be repeated by instructor permission and assignment. Prerequisite: Permission of instructor.

HHP 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHP 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

HHP 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHP 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

HHP 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

Health, Human Performance and Recreation

HHPR 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHPR 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHPR 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHPR 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HHPR 704. Workshop in Health, Human Performance and Recreation (____). 1-3 hours. Attendance at a professional workshop pertaining to issues in health, human performance and recreation fields. May include such areas as teaching, health and wellness, performance exercise, dance, recreation and leisure. May be repeated if subject matter is different. May be taken on a pass/fail basis.

HHPR 710. Assessment of Motor Dysfunction in Special Populations. 3 hours. Applying instruments in determining physical and motor needs of individuals with disabilities. Includes discussion of instrument selection, administration, and interpretation with an emphasis on practical application. Prerequisite: HHP 462 Adapted Physical Education or permission of instructor.

HHPR 712. Methods and Materials for Teaching Adapted Physical Education. 3 hours. This course deals with the organization and administration of adapted physical education. Basic structure of adapted programs, desirable goals, various methods, materials and techniques of teaching students with disabilities are discussed. Prerequisite: HHP 462 Adapted Physical Education or permission of instructor.

HHPR 714. Practicum in Adapted Physical Education. 3 hours. Supervised practical experience enabling students to gain insight into the various methods, materials and techniques of providing physical activity for students with disabilities. Prerequisite: HHP 462 Adapted Physical Education or permission of instructor.

HHPR 720. Health Education Methods and Materials. 3 hours. This course is designed to prepare teachers, pre-school through middle school, with methods and materials necessary to implement a health education program. Emphasis will be on personal health and wellness, effective cooperation with parents, physicians, public health agencies and consumer awareness.

HHPR 722. School Health Problems. 3 hours. Problems in promoting the health of school children, programs of prevention and protection against infectious diseases; physical inspection and examinations: health and safety instruction.

HHPR 724. Principles of Health Education. 3 hours. History, philosophy, current trends, basic issues, and fundamental principles of health education are covered. Using these principles as basic criteria, students make critical appraisals of health curricula, health units, health teaching methods, audio-visual health materials and health tests.

HHPR 760. Technology and Instrumentation in Human Performance. 3 hours. This course is designed to give students laboratory experience in the use of instrumentation and procedures commonly employed to assess human performance, physical fitness, and cardiopulmonary health status in modern laboratories of applied exercise physiology, sports physiology, and contemporary health screening facilities. It is also designed to prepare the student to generate both written and graphical representations and descriptions of data and to get the student accustomed to writing in a scientific style/format that is worthy of publication. Prerequisite: Senior or graduate status. Course will be assessed an additional class fee.

HHPR 763. Scientific Principles of Strength and Conditioning. 3 hours. The purpose of this course is to familiarize the student with the scientific principles and proper techniques behind intermediate and advanced strength training for fitness and sport. In addition to advanced practical skills of weight training, the student will also be introduced to the underlying physiological and biomechanical principles behind program design. This course is predicated on the philosophy that good strength coaches are proficient in both verbal explanation and demonstration of proper exercise techniques. Prerequisites: BIOL 257/258 Anatomy & Physiology, HHP 460 Kinesiology, and HHP 464 Physiology of Exercise.
HHPR 801. Methods of Assessment in Health Human Performance and Recreation. 3 hours. Methods used in the administration and application of various instruments in the health, physical education and recreation professions. Statistical procedures to be used in evaluating tests and their results will be explored and applied. Prerequisites: Completion of undergraduate statistics course or permission of instructor.

HHPR 806. Special Investigations (____). 1-3 hours. Independent study in physical education particularly relevant to the educational program of the individual student under the direct supervision of an appropriate staff member. May be repeated if subject matter differs. Prerequisite: Permission of instructor.

HHPR 810. Foundations of Human Performance and Wellness. 3 hours. The purpose of this course is to familiarize the student with the basic historical, philosophical, ethical, and cultural foundations regarding human performance and wellness. Students will review the research and current literature in the sub-disciplines of physical education, sport, dance, exercise science, and wellness. Students will develop an understanding and appreciation for human movement and its important relationship to global health related physical fitness and wellness.

HHPR 820. Foundations of Recreation and Leisure. 3 hours. A study of the basic historical, philosophical, ethical, and cultural foundations of recreation and leisure in society. A critical review of the major writings and research in the field will be utilized to assess the role of recreation and leisure in modern society and the future. Prerequisites: Acceptance in HHPR graduate degree program or permission of instructor.

HHPR 823. Finance and Marketing in Sport and Leisure Services. 3 hours. Finance and Marketing in Sport and Leisure Services will address the concepts of financing, grant writing, and endowments used in commercial, non-profit and educational settings. In addition, marketing, promotion and public relations used to promote and identify the business or organization and the programs and services offered will be explored.

HHPR 825. Leadership and Legal Issues in Sport and Leisure Services. 3 hours. This course is designed to introduce graduate students to the administrative process in sport and leisure service management. Current leadership practices will be covered with a focus on the concepts of tort law, constitutional law and risk management as they relate to the sport and recreation professions.

HHPR 826. Sport and Leisure Facility Development and Operation. 3 hours. A course on design principles for people in the sport and leisure field. Emphasis will be on the design, construction, and maintenance of sport and leisure facilities including park areas, playgrounds, gymnasiums, golf courses, and athletic fields.

HHPR 840. Seminar (____). 3 hours. A specific area in physical education will be studied intensively through readings, reports and discussions. A specific subtitle or problem such as physical education program K-12 will be listed in the schedule of classes. May be repeated under different topics. Prerequisite: Permission of instructor.

HHPR 863. Biomechanics. 3 hours. The focus of the course is on the fundamental biomechanical principles to the human musculoskeletal system. We explore the physiology of the body's interaction with its environment, and integrate biology and physics to describe, define, and understand movement. Topics will include kinematics, kinetics, energetics, and musculotendon mechanics.

HHPR 866. Advanced Exercise Physiology. 3 hours. The lecture and laboratory sessions are designed to investigate concepts of energy metabolism, lactate production and accumulation, energy expenditure, excess post exercise oxygen consumption, cardiovascular temperature regulation, neuromuscular control, aerobic and anaerobic adaptations and ergonomics. The laboratory sessions expand upon the lectures by providing an opportunity to conduct a detailed review of scientific literature, collect data on human performance, and interpret the responses in conjunction with the literature.

HHPR 870. Supervision and Management of Therapeutic Recreation Services. 3 hours. The purpose of this course is to explore and understand the theoretical and practical knowledge of supervision and management of therapeutic recreation services in health and human service organizations. Students will explore and acquire the core competencies essential for supervision and management of therapeutic recreation services and how such services fit in the milieu of services provided through various health and human service organizations and agencies.

HHPR 875. Advanced Therapeutic Recreation Processes. 3 hours. Techniques, approaches, procedures, protocols and practices in the provision of therapeutic recreation services. Prerequisites: Permission of instructor required.

HHPR 878. Social-Psychology of Sport and Recreation. 3 hours. This course is designed for students to study the social/cultural, and psychological aspects of sport and recreation. Students are provided the opportunity to research, discuss, and gain an awareness of the impact of sport in American society and its social controversies. Students will also be exposed to the factors affecting athletic performance such as motivation, personality and group facilitation. This course will also expose the students to current social controversies related to organized sport in America.

HHPR 884. Leadership and Programming in Hospital Recreation. 3 hours. The principles and practices involved in the leadership of hospital recreation and in the establishment of programs for various types of hospital patients. Prerequisite: HHPR 875 Advanced Therapeutic Recreation Processes.

HHPR 890. Research and Thesis. 3-5 hours. (3-5 hours depending upon the topic and the recommendation of the advisor). May be repeated for a maximum of 5 hours. Prerequisite: HHPR 891 Methods of Research.

HHPR 891. Methods of Research. 3 hours. Methods, techniques and applications of research in health, physical education and recreation. Should be scheduled in first enrollment. Prerequisite: Departmental consent.

HHPR 895. Internship (____). 3 hours. An opportunity to serve an internship in a Health, Human Performance or Recreation setting under the supervision of a school, agency, or organization upon approval of the department. May be taken in such areas as education, public recreation department, a hospital, or in an industrial setting. To be taken as the course in an emphasis area. Prerequisite: Permission of the Department.

History

HIST 101. World History to 1500. 3 hours. The origin and historical development of various cultures throughout the world and the interplay of physical, economic, political and social forces in the shaping of world civilization to 1500.

HIST 102. World History from 1500. 3 hours. The origin and historical development of various cultures throughout the world said the interplay of physical, economic, political and social forces in the shaping of world civilization from 1500 to the present.

HIST 201. American History to 1865. 3 hours. The origins of the American nation to the conclusion of the Civil War.

HIST 202. American History from 1865. 3 hours. The emergence of modern America, 1865 to the present.

HIST 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HIST 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HIST 305. Readings in American History (____). 1-2 hours. Intensive individual readings in selected topics and particular movements in American history. Prerequisite: Permission of instructor. May be repeated for a maximum of 2 hours.

HIST 306. Readings in World History (____). 1-2 hours. Intensive individual readings in selected topics and particular movements in World history. Prerequisite: Permission of instructor. May be repeated for a maximum of 2 hours.

HIST 430. History: Theory and Practice. 3 hours. Introduction to basic historical research methods and writing, library usage, and bibliographical aids. Prerequisite: 12 hours of history. Required for all history majors.

HIST 435. Archives and Manuscripts. 3 hours. Managing archival records and manuscripts. Will provide a basic understanding of archival work, including electronic records. Participation in hands-on activities required.

HIST 440. Intro to Public History. 3 hours. This course introduces the student to the history, theory, and practice of public history, including government agency, museum, archival, and "popular history" settings. Participation in public history service-learning required. Prerequisite: Completion of 60 credit hours.
HIST 479. Techniques for Teaching Middle and Secondary Social Studies. 3 hours. Techniques, methods, and course content used in teaching social studies in the middle and secondary schools. Must be taken before the professional semester and should be taken in the semester immediately prior to it. Prerequisites: Admission to teacher education, HIST 430 Theory and Practice, EDUC 520 Methods and Materials for Academic Literacy and PSYCH 357 Educational Psychology.

HIST 501. Special Topics in World History (____). 1-3 hours. Intensive study of various subjects, periods, and movements in World history to be chosen each semester in consultation with the student body. May be repeated if subject matter changes. Will be counted as World history.

HIST 502. Special Topics in American History (____). 1-3 hours. Intensive study of various subjects, periods, and movements in American history to be chosen each semester in consultation with the student body. May be repeated if subject matter changes. Will be counted as American history.

HIST 505. African Civilizations. 3 hours. Social, economic, political, and religious forces shaping African history from its beginnings. Emphasis on the classical civilizations of Northeast Africa, including Egypt, and the Medieval civilizations of West Africa. Prerequisite: HIST 101 World History to 1500, its equivalent or permission of instructor.

HIST 507. Modern Africa. 3 hours. Social, economic, political, and religious forces shaping modern Africa from 1860 to the present. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 510. Modern Middle East. 3 hours. Social, economic, and political forces shaping Middle Eastern history from 1800 to the present, with discussion of early Islamic history. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 515. World War I. 3 hours. The origins, course, and results of World War I. Prerequisite: A course in history or permission of instructor. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 518. Nazi Germany and the Holocaust. 3 hours. The life and times of Adolf Hitler, the rise of the Nazis, the participation of Germany in World War II, and the Holocaust. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 520. World War II. 3 hours. The background, course, and results of the Second World War. Prerequisite: A course in history or permission of instructor. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 522. Korean and Vietnam Wars. 3 hours. The origins, course, and results of the Korean and Vietnam wars. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 523. Early China. 3 hours. History of China from antiquity to 1700, including political, intellectual, economic, cultural and social development. Prerequisite: HIST 101 World History to 1500 or permission of instructor.

HIST 524. Early Japan. 3 hours. History of Japan from pre-history to 1700, including political, intellectual, economic, cultural and social development. Prerequisite: HIST 101 World History to 1500 or permission of instructor.

HIST 526. Japan Since 1700. 3 hours. Political, economic, social, and cultural history of Japan from the eighteenth century to the present, including the relationship between Japan and the world. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 527. China Since 1700. 3 hours. Political, economic, social, and cultural history of China from the eighteenth century to the present, including the relationship between China and the world. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 529. History of South Asia. 3 hours. Political, economic, social, and cultural history of India, Pakistan and surrounding South Asian regions, from the pre-history to present, including the relationship between South Asia and the world. Prerequisite: HIST 101 World History to 1500 or HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 531. Samurai: History, Literature, Myth. 3 hours. Emergence of samurai as distinct warrior class in Japan, rise to dominance, and their elimination as a class in the modern era. Cultural and social legacies as well as political and economic position. Prerequisite: HIST 101 World History to 1500 or HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 532. History of Japanese Women. 3 hours. Examination of legal, social and cultural position of women in Japanese society from antiquity to present. Prerequisite: HIST 101 World History to 1500 or HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 533. US-East Asia Relations. 3 hours. Political, military, economic, social and cultural interaction between East Asia and the U.S. with emphasis on the modern era. Prerequisite: HIST 202 American History from 1865 or HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 534. Korea Since 1700. 3 hours. Political, economic, social, and cultural history of Korea from the eighteenth century to the present, including the relationship between Korea and the world. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 535. Medieval Civilization. 3 hours. Changes and developments in Europe from the fall of the Western Roman Empire, 476 to 1500. Prerequisite: HIST 101 World History to 1500, its equivalent or permission of instructor.

HIST 536. Modern South America. 3 hours. A survey of modern South American history covering the nineteenth and twentieth centuries but with a substantial review of the pre-Columbian, conquest, and colonial periods. Focus will be on the social and political forces that have shaped the region in the past two hundred years. Prerequisite: HIST 102 World History from 1500.

HIST 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HIST 540. English History to 1660. 3 hours. Development of England from medieval times to 1660, with emphasis on origin and development of common law, the courts, and other significant institutions.

HIST 545. English History since 1660. 3 hours. Continuation of 540 English History to 1660, 1660 to present.

HIST 546. The Age of Empire. 3 hours. Examines expansionism and colonialism of the 19th and 20th centuries, including underlying intellectual, political, and economic causes, the consequent competition among the major powers, and the effects of that competition on non-Europeans. Prerequisites: HIST 102 World History from 1500, an equivalent, or permission of instructor.

HIST 547. Radical Islam. 3 hours. This course covers the history, description, and current influence of the radical strains of Islam, both Sunni and Shi'a, that have had such an impact on world affairs in recent decades, especially since the tragic events of 9/11. Prerequisite: HIST 102 World History from 1500.

HIST 548. The French Revolution and Napoleon. 3 hours. The Old Regime in France, the decade of Revolution, the rise of Napoleon Bonaparte and the First Empire; the effects of the Revolution and the Napoleonic era on the political and social institutions of France and Europe. Prerequisite: HIST 102 World History from 1500, its equivalent or permission of instructor.

HIST 550. Your Family in History. 3 hours. Exploration of family history with emphasis on life in twentieth-century America using the tools of genealogy and oral history.

HIST 556. History of U.S. Presidents. 3 hours. Examines the successes and failures of those who have held the nation's highest elective office, from George Washington to the present. Considers the factors necessary to predict and evaluate the president's tenure as chief executive. Prerequisite: HIST 201 American History to 1865.

HIST 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Pre-requisite: Concurrent enrollment in the professional semester is required.

HIST 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
HIST 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project. Prerequisite: HIST 602. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

HIST 608. Women in American History. 3 hours. The social, cultural, economic, and political history of American women, focusing on the ways race, class, gender, and region interacted to shape women's lives.

HIST 610. Modern Europe, 1500 to 1815. 3 hours. A survey of Western European History and culture from the end of the Middle Ages to the end of the Napoleonic period.

HIST 619. Kansas and the West. 3 hours. Kansas from aboriginal days to the present. Prerequisite: HIST 201 American History to 1865 and HIST 202 American History from 1865, their equivalents or permission of instructor.

HIST 620. History of the South. 3 hours. Survey of the social, cultural, and political development of the American South from the colonial period to the present, with an emphasis on the 19th century. Prerequisite: HIST 201 American History to 1865, its equivalent or permission of instructor.

HIST 625. Mexico and the US Southwest. 3 hours. Cultural and political interaction between Mexico and the U.S. with emphasis on the modern era. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 626. U.S. Iraq and Afghanistan. 3 hours. A history of the U.S.-led wars in Iraq and Afghanistan. Divided into two main components, one on Iraq and one on Afghanistan, the course will focus on U.S. involvement, military, political, and cultural, in these countries as part of the broader "War on Terror". Substantial background on both countries will be included. Prerequisite: HIST 102 World History from 1500.

HIST 636. Native Americans. 3 hours. Survey of social, cultural, and political Native American history from prehistoric to the present with an emphasis on the 19th century. Prerequisite: HIST 201 American History to 1865, its equivalent or permission of instructor.

HIST 642. Medieval Britain 1066-1485. 3 hours. A study of Britain's transformation from an Anglo-Saxon society to late-medieval feudalism. This course surveys the effects of the Norman Conquest and the struggle of authority between the crown and parliament, as well as the relationship and interaction between the four kingdoms of Britain and Ireland. Particular focus will be placed on the Norman Conquest, Barons rebellion, Welsh conquest, Scottish War of Independence, the Hundred Years' War, and the War of the Roses. Prerequisite: HIST 101 World History to 1500, its equivalent, or permission of instructor.

HIST 644. The Tudor Age. 3 hours. England's transition to a modern nation, with emphasis on social, political, and religious changes under the Tudor monarchs, 1485 to 1603. Prerequisite: HIST 540 English History to 1660 or HIST 545 English History since 1660, either of their equivalents or permission of instructor.

HIST 646. Modern Scotland. 3 hours. A study of Scotland since the 1880's with a focus on political, economic, and social aspects of Scottish society. This course surveys the effects of Scotland's distinct experiences as a nation within the UK and brings clarity to the nation's campaigns of devolution and independence. Prerequisite: HIST 102 World History from 1500, its equivalent, or permission of instructor.

HIST 648. Modern Britain 1846-Present. 3 hours. A study of Britain's transformation from a global Superpower to its current position. This course surveys the effects of increased enfranchisement and the idea of democracy on the British government and society from the Victorian era to the present. Particular focus will be placed on the politics and society of Victorian Britain, Britain's relationship with Ireland, British international influence, the social impact of two world wars, the Welfare State, and the loss of Empire. Prerequisite: HIST 102 World History from 1500, its equivalent, or permission of instructor.

HIST 650. Colonial America. 3 hours. Significant developments in Colonial North America, 1492-1789. Prerequisite: HIST 201 American History to 1865, its equivalent or permission of instructor.

HIST 652. American Revolution. 3 hours. The development of the Revolution, evaluation of the Confederation period, and the writing and ratification of the Constitution. Prerequisite: HIST 201 American History to 1865, its equivalent or permission of instructor.

HIST 655. Early American Republic, 1789-1848. 3 hours. Political, economic, social, scientific, and cultural developments in the United States from the ratification of the US Constitution to the end of the Mexican American War. Prerequisite: HIST 201 American History to 1865, its equivalent or permission of instructor.

HIST 656. Secessional Crisis and Civil War. 3 hours. Polarization and war between the North and South, 1846-1865. Prerequisite: HIST 201 American History to 1865 or permission of instructor.

HIST 657. Reconstruction and New South. 3 hours. The Civil War's political, social, and economic consequences, 1865-1915. Prerequisite: HIST 202 American History from 1865 or permission of instructor.

HIST 660. Industrial America, 1865-1914. 3 hours. Political, economic, social, and intellectual developments during the period of industrialization. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 662. Modern America, 1912-1941. 3 hours. Examination and analysis of major developments and controversies (in both domestic and foreign affairs) in American history from 1912 to 1941. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 664. Modern America, 1941-1968. 3 hours. Examination and analysis of major developments and controversies (in both domestic and foreign affairs) in American history from 1941 to 1968. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 665. Modern America Since 1968. 3 hours. Examination and analysis of major developments and controversies (in both domestic and foreign affairs) in American history since 1968. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 668. U.S. as a Superpower. 3 hours. Emergence of the U.S. as an international power in 1988 and as a superpower after World War II. Prerequisite: One course in history. May be counted as World History with permission of the instructor. Prerequisite: HIST 202 American History from 1865, its equivalent or permission of instructor.

HIST 673. American Military Experience, 1607-1898. 3 hours. Institutional development of the American/U.S. military, 1607 to 1898. Includes conduct of wars, development of doctrine, and adoption of new technologies. Prerequisite: HIST 201 American History to 1865 or permission of instructor.

HIST 674. American Military Experience, 1898 to Present. 3 hours. Institutional development of the American/U.S. military, 1898 to present. Includes conduct of wars, development of doctrine, and adoption of new technologies. Prerequisite: HIST 202 American History from 1865 or permission of instructor.

HIST 695. History as Profession. 3 hours. Capstone course for undergraduate History major. Examine academic, pedagogic, and public approaches to history. Prerequisite: Senior standing; required of all graduating seniors, except BSED majors.

HIST 699. Senior Assessment. 1 hours. A consideration of major historical and historiographical issues for an assessment of understanding and knowledge of American and World History. Prerequisite: senior standing. Required of all graduating seniors, except BSED majors.

HIST 700. History: Selected Subjects (above). 1-3 hours. Intensive study of various periods, movements, and topics in history. May be repeated since subject matter changes. May be offered on-line.
HIST 701. American History Selected Subjects (___). 1-3 hours. Intensive study of various periods, movements, and topics in American history. May be repeated since subject matter changes. May be offered on-line.

HIST 703. World History Selected Subjects (___). 1-3 hours. Intensive study of various periods, movements, and topics in World history. May be repeated since subject matter changes. May be offered on-line.

HIST 745. History Internship (___). 3 hours. Practical training in archival work, museology, or archeology, in cooperation with state or national museums or archival depositories. In addition to on-campus preparation and conclusion, involves sixty hours on-the-job experience in state or national museums or archival depositories under professional supervision. May be repeated for a maximum of 9 hours to include all three areas. Prerequisite: Permission of instructor.

HIST 805. Readings in American History (___). 1-3 hours. Intensive individual readings in limited periods and particular movements in American history. May be repeated. By appointment. May be offered on-line.

HIST 806. Readings in World History (___). 1-3 hours. Intensive individual readings in limited periods and particular movements in World history. May be repeated. By appointment. May be offered on-line.

HIST 807. Historical Research and Historiography. 3 hours. Techniques of historical research and overview of the philosophy and interpretation of history. Required on all graduate programs in history, preferably during first enrollment. May be offered on-line.

HIST 813. Seminar in American History (___). 3 hours. Intensive study of special periods or movements in American history. Prerequisite: Consent of instructor. May be repeated. May be offered on-line.

HIST 820. Seminar in World History (___). 3 hours. Intensive study of selected ideas, periods, problems, or movements in World history. Prerequisite: Consent of instructor. May be repeated. May be offered on-line.

HIST 881. Orientation to College Teaching. 3 hours. Laboratory work in the classroom situation, work with instructional aids; involvement in curriculum planning, test construction, and classroom instruction. By appointment. Prerequisite: Consent of instructor.

HIST 890. Research and Thesis. 4-6 hours. Intensive individual research and writing on selected topic. By appointment. Required of all candidates for the Master of Arts degree (Option I).

HIST 892. Final Assessment for Option III. 2 hours. Focused research in preparation for the non-thesis option comprehensive examination. Prerequisite: Completion of all other course work for Option III or permission of advisor, graduate studies director and chair.

HIST 902. Readings in History (___). 1-3 hours. Intensive individual readings in limited periods and/or particular movements in either American, European, or World history. May be repeated for a maximum of 6 hours.

HIST 910. Special Investigations (___). 1-3 hours. Independent study in selected historical subjects relevant to student interests and needs. May be repeated for a maximum of 6 hours.

Honor

HONOR 101. Topics in Honors. 1-3 hours. Includes a variety of topics depending on the particular semester it is offered. During the fall semester it will focus on the development of the Peer Mentor program organized through the Honors College Association. In years where there is an Honors College Study Abroad trip, the course will focus on the presentation of material associated with that given learning experience. Other topics may be created based on the needs of the Honors College.

HONOR 200. Special Topics (___). 1-3 hours. The Honors College special topics courses will include a variety of interdisciplinary course offerings whereby the student will be able to make connections between two disciplines in a single course offering, thus giving more breadth to their understanding of the curricular material presented. The specific course topics will vary from semester to semester, and all courses will fit into the PSU General Education requirements in a variety of categories. The course may be repeated since the topics will vary.

Human Resource Development

HRD 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HRD 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HRD 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.


HRD 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

HRD 596. Introduction to Human Resource Development. 3 hours. Roles, functions, principles, and theories of employee training, learning, education, development, and performance and their relationships with other disciplines.

HRD 597. Organizational Staffing. 3 hours. Study of the concepts and processes in determining job requirements, identifying sources for and methods of recruiting employees, and the legal and effective methods for selecting the individual with the best fit for the job and organization.

HRD 598. Talent Management. 3 hours. Study of the concepts and processes in the performance management of the employees in an organization. Includes a study of the laws and regulations related to compensating and rewarding employees.

HRD 630. Employee and Labor Relations. 3 hours. Study of the concepts and processes for the fair, ethical and legal treatment of employees in an organization and in their jobs. Includes the study of employee and employer relations in grievances, union activities and collective bargaining.

HRD 706. Personnel Development in Business and Industry. 3 hours. Techniques for improving employee learning and performance from analysis and selection through relationships and rewards.

HRD 710. Seminar in Human Resource Development. 1-3 hours. Study of a particular topic, problem, or issue in human resource development. Includes class work, readings, and research with emphasis on current issues. May be repeated if subject matter is different for a maximum of six hours.

HRD 716. Behavior Analysis for HRD Professionals. 3 hours. In-depth study of the four distinct human behavior styles as they relate to team processes, management/subordinate relationships, communication, coaching/mentoring in the workplace. The examination of human resource development strategies as influenced by behavioral management to enhance employee performance in the workplace. Pre-requisite: HRD 596 Introduction to Human Resource Development or HRD 796 Foundations and Applications or permission of instructor.

HRD 741. HRD Strategies for Quality Improvement. 3 hours. The role of human resource development in the implementation of quality improvement programs in business and industry with an emphasis on team building.

HRD 753. Workforce Development. 3 hours. Innovative methods for developing and preparing employees for change with emphasis on problem solving that improves quality and performance of both the organization and employees.


HRD 780. Globalization of Human Resource Development. 3 hours. A global perspective of human resource development programs and practices in other countries and cultures.
HRD 785. Video Lesson Development. 3 hours. Lesson planning and use of a storyboard. Creation of an effective lesson using contemporary video technology, computer editing, and sound tracks, and transfer of video presentations to electronic storage devices such as CD-ROM, DVD, or video cassette.

HRD 790. Occupational Analysis. 3 hours. Evolution and meaning of the analysis technique and its application to human resource development. The use of analysis in relating components of an occupation to course and program development.


HRD 796. HRD Foundations and Applications. 3 hours. Foundation principles, theories, principles, functions and roles associated with employee development, education, and performance in business and industry. Student successfully completing HRD 596 Introduction to Human Resource Development is not eligible to enroll in HRD 796.

HRD 799. International Workplace and Workforce Issues. 3 hours. A comparative analysis of the workplace and workforce of other countries with the United States. Emphasizes strategies that maximize the efficiency and effectiveness of organizations. Prerequisite: Permission of instructor.

HRD 804. Fundamentals of Front Line Supervision. 3 hours. Supervisory and leadership procedures used by experienced supervisors in business and industry, including current practices and innovative techniques.

HRD 805. Special Problems (____). 1-3 hours. Investigation of a specific topic or problem in human resource development. Prerequisite: Permission of advisor. May be repeated if subject matter is different with a maximum of six hours to be applied towards a degree program. May be taken as graded or pass-fail.

HRD 815. Current Issues in HRD. 3 hours. Readings, research, case studies, discussion, and study of current topics and issues in human resource development.

HRD 845. Designing HRD Interventions. 3 hours. In-depth study of the functional processes used for planning, designing, developing, and implementing effective HRD interventions; and the examination of common OD, T&D, and CD interventions used to solve problems in organizations. Prerequisite: HRD 596 Introduction to Human Resource Development or HRD 796 Foundations and Applications or permission of instructor.

HRD 850. Graduate Study in Human Resource Development. 1 hour. Development of career plans and goals that insure consistency in the courses, projects, reports, and research topics within the HRD master degree. Introduces the style and format for written and oral reports and research studies. Prerequisite: Admission to the HRD Master Degree.

HRD 851. Career Planning in Human Resource Development. 1 hour. Development of a career plan and a print and digital portfolio which include major written, oral, and mediated reports and projects with an emphasis on competencies mastered.

HRD 852. Organizational Development and Change. 3 hours. Planned strategic HRD interventions intended to improve the resources and effectiveness of the entire organization. Current theories of organizational development, change, and systems and strategies.

HRD 854. Consulting for Human Resource Development Professionals. 3 hours. The HRD consulting role in the organization utilizing problem solving and change management processes that improve performance and quality to keep pace with changing world of work.

HRD 856. Diversity in the Workplace. 3 hours. Methods to increase the ability of organizations to work successfully with workplace diversity, and procedures for maximizing the potential of a diverse workforce for the benefits of both the individual and organization.

HRD 857. Ethics, Values and Legal Issues in HRD. 3 hours. Examination of personal, social, and organizational values and culture related to their effects on human resource development ethical principles, standards, and legal issues, with an emphasis on actual workplace situations.

HRD 879. Professional Presentations. 3 hours. Formal and informal presentations for audiences in various industrial and organizational settings. Needs assessment, effective presentation techniques, and audience interaction and engagement.

HRD 883. Internship in Human Resource Development. 3 hours. A supervised internship that incorporates what a student learned in the classroom with practices in developing individual and/or organizational learning and performance improvement interventions. Prerequisite: Permission of instructor. Graded on a pass-fail basis.

HRD 890. Research and Thesis. 3-6 hours. Development of a thesis under Option I. Prerequisite: Methods of Research and permission of instructor. May be repeated for a maximum of six hours. May be taken as graded or pass-fail.

HRD 891. Methods of Research. 3 hours. Methods and techniques of research, interpretation, evaluation, and use of research. Emphasizes analysis of problems, development of a research plan and completing a literature review.

HRD 892. Research and Writing for HRD Professionals. 3 hours. Emphasizes analysis of problems encountered in the field of HRD, development of a research plan, completing a literature review and writing a proposal. Pre-requisite: HRD 596 Introduction to Human Resource Development or HRD 796 Foundations and Applications or HRD 891 Methods of Research or permission of instructor.

HRD 899. Planning and Implementing a Human Resource Development Program. 3 hours. Policies and procedures, knowledge and skills to establish, expand, or update a human resource development program. Emphasizes strategic planning, and administrative staffing, program and facilities planning, budgeting, project management, and evaluation. Prerequisite: Permission of instructor.

HRD 900. Seminar in HRD. 3 hours. Planning for a research project including the development of a prospectus for a research study with an emphasis on the study design and methodology. May be taken as graded or pass-fail. Prerequisite: Methods of Research and permission of advisor.

HRD 983. Practicum in Human Resource Development. 3 hours. Supervised experience in a job based setting related to the student's area of specialization such as instructional design or technology, teaching and facilitation, or HRD consulting or management. Prerequisite: Permission of instructor. Graded on a pass-fail basis.

HRD 990. Special Research Problem. 3-6 hours. A research, experimental or field study presented as a formal research project under Option I. Permission of advisor. May be repeated for a maximum of six hours. May be taken as graded or pass-fail.

HRD 991. Special Investigations (____). 1-6 hours. Investigation of a specific topic or problem in human resource development. Prerequisite: Permission of advisor. May be repeated if subject matter is different with a maximum of six hours to be applied towards an Ed.S. degree program. May be taken as graded or pass-fail.

HRD 992. Special Investigations (____). 3 hours. Independent study of a specific topic or problem in technology management or human resource development. Emphasis is on practical application. May be repeated if subject matter is different with a maximum of six hours to be applied towards an Ed.S. degree program. May be taken as graded or pass-fail. Prerequisite: Permission of advisor.


International Business

IB 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IB 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
IB 330. International Business. 3 hours. Environmental complexities that arise when business activities and institutions transcend international borders, including forms of doing business abroad and cross-cultural aspects of the management of foreign operations. Prerequisites: MKTG 330 Principles of Marketing and MGT 330 Management and Organizational Behavior.

IB 340. International Marketing. 3 hours. Study of multi-national marketing concepts; exporting fundamentals; environmental analysis for international marketing; product, price, distribution and promotion in an international context. Prerequisites: MGT 330 Management and Organizational Behavior and MKTG 330 Principles of Marketing.

IB 410. Topics in International Business. 1-3 hours. Study of specific topics in international business. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: 45 credit hours completed or permission of instructor.

IB 520. Emerging Markets. 3 hours. Importance of emerging markets in global business. Entry strategies and operational modes of multinational enterprises in emerging markets. The growth of emerging market multinationals as well as the challenges of negotiating with stakeholders in these markets. Prerequisite: IB 330 International Business or permission of instructor.

IB 530. Cross Cultural Analysis. 3 hours. A study of the cultural aspect of international business. The focus is on understanding how different cultures affect the operation of business practices in different countries and regions of the world.

IB 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IB 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IB 610. Topics in International Business. 1-3 hours. Study of specific advanced topics in international business. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: Junior standing.

IB 620. Internship in International Business. 1-3 hours. Internship work experience in public, private, governmental, or not-for-profit business setting. The work experience must be approved by a departmental internship representative/faculty member. Students must enroll in the course during the same semester and time in which the internship occurs. Prerequisite: Permission of instructor required.

IB 630. Special Topics (International Experience - International Business). 1-3 hours. An academically based international experience. May combine academic course work, business experience focused on international business, travel and cultural immersion. May be repeated if the country or region visited is different. Specific experiences must be approved in advance by the International Business Major advisor. Prerequisite: Junior Standing.

IB 640. Senior Honors Project 1 in International Business. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

IB 641. Senior Honors Project 2 in International Business. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

Innovation Engineering

IE 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IE 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IE 550. Introduction to Innovation Engineering. 3 hours. Introduces students to the core elements of the Innovation Engineering process: 1) using creativity tools to generate meaningfully unique solutions to customer problems, 2) communicating creation ideas in clear, concise language in a way the customer understands, 3) identifying the feasibility of taking project ideas to market, 4) and using the cycles of discovery to make go-no-go decisions on patent development.

IE 580. Create: Innovation Engineering I. 3 hours. The first course in Innovation Engineering will provide a systematic approach to creativity, the foundation for students to understand how to generate innovative ideas in any field. The course gives students the theories behind and practice using tools to generate meaningfully unique ideas. These tools engage creative stimulus, diversity, and mining for technology and economic, social and cultural trends. The course will examine case histories that demonstrate how social and cultural contexts and human institutions have been influenced by innovative individuals who have realized original ideas in practice.

IE 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IE 590. Communicate: Innovation Engineering II. 3 hours. Combines elements of several disciplines: clear, precise and creative expression. Attuning to the narrative power of visual imagery as well as text; an emphasis on writing as a method of prototyping and technology translation. Students learn to communicate the benefit, the uniqueness, and the credibility of a concept to others. Students work with innovators to explore and translate the benefits of technical and specialized ideas to a target audience. Students will learn how to evaluate the meaningful uniqueness of ideas through the process of articulation and to translate big ideas into words that persuade others to take action. Prerequisite: IE 580 Create: Innovation Engineering I.

IE 670. Commercialize: Innovation Engineering III. 3 hours. Students work with real product and service ideas and create working prototypes to find the flaws of a design quickly and inexpensively. Topics include application of the scientific method to the prototyping process, sales forecasting, open source technology, patent searching, provisional patent writing and some elements of market research and funding. Prerequisites: IE 580 Create: Innovation Engineering I and IE 590 Communicate: Innovation Engineering II.

IE 680. Experience: Innovation Engineering Case Study. 3 hours. Through weekly case studies and in rapidly changing peer teams, students generate ideas, articulate innovations through writing and research potential technologies and markets in context of real world businesses or nonprofit organizations. Through this process, students will learn to identify the best opportunities and to set up systems for generating and implementing new ideas in a wide range of organizations. Prerequisites: IE 580 Create: Innovation Engineering I, IE 590 Communicate: Innovation Engineering II and IE 670 Commercialize: Innovation Engineering III.
IE 685. Innovation Engineering Internship. 3 hours. Through on the job experience, students will gain insight through real world application of the processes and work involved in creating, connecting, and commercializing a new idea into a marketable product or service. Prerequisites: IE 580 Create: Innovation Engineering I, IE 590 Communicate: Innovation Engineering II, IE 670 Commercialize: Innovation Engineering III and IE 680 Experience: Innovation Engineering Case Study.

IE 695. Innovation Engineering Independent Study. 3 hours. Independent study related to creating, connecting and commercializing a meaningful unique idea within the student’s given major under direct supervision of the IE Minor faculty. Allows students to explore potential ideas and test various markets. Prerequisites: IE 580 Create: Innovation Engineering I, IE 590 Communicate: Innovation Engineering II, IE 670 Commercialize: Innovation Engineering III and IE 680 Experience: Innovation Engineering Case Study.

IE 780. Innovation Engineering: Creating Ideas. 3 hours. Students will learn a system for generating creative ideas for new products or services. Students will apply concepts through lab experiences and applications focusing on idea mining strategies that stimulate multiple and diverse ideas for new products and services.

IE 790. Innovation Engineering: Communicating Ideas. 3 hours. Students will learn how to communicate the meaningful uniqueness of products and services in a way the customer understands. Students will apply concepts through lab experiences and applications that focus on developing synergy between the creative idea, the problem it solves and the promise to the customer. Prerequisite: IE 780 Innovation Engineering: Creative Ideas.

IE 880. Innovation Engineering: Commercializing the Idea. 3 hours. Students will work with real product and service ideas and create working prototypes to find flaws of a design quickly and inexpensively. Topics will include, scientific method of the prototyping process, sales forecasting, open source technology, patent-searching, provisional patent writing, as well as some elements of marketing research and funding. Prerequisites: IE 780 Innovation Engineering: Creating Ideas and IE 790 Innovation Engineering: Communicating Ideas.

IE 890. Innovation Engineering: Using the System to Make a Decision. 3 hours. Students will apply the innovation skills they have learned to carry out multiple cycles of discovery to make necessary go-no-go decisions on their creations, as demonstrated through a research based project. Prerequisites: IE 780 Innovation Engineering: Creating Ideas, IE 790 Innovation Engineering: Communicating Ideas and IE 880 Innovation Engineering: Commercializing the Idea.

Intensive English Program

IEP 025. Elementary Structure and Composition. 0 hours. An introduction to the English language with an emphasis on developing skills in basic grammatical structures, writing sentences, paragraphs and questions, and spelling and punctuation. Offered on Pass-No Credit basis only.

IEP 026. Elementary Reading and Listening/Speaking. 0 hours. An introduction to the English language with an emphasis on developing skills in reading, vocabulary, listening and speaking which has an emphasis on asking and answering questions. Offered on Pass-No Credit basis only.

IEP 027. Elementary Level. 1 hours. Intensive study of basic English skills in structure, writing, reading and listening/speaking. Offered on a Pass-No Credit basis only. May be taken up to 3 times.

IEP 031. Intermediate I Structure. 0 hours. Intensive study of new grammatical structures with emphasis on recognition, comprehension and usage of structures in meaningful contexts. Prerequisites: IEP 025 Elementary Structure and Composition and IEP 026 Elementary Reading and Listening/Speaking. Offered on Pass-No Credit basis only.

IEP 032. Intermediate I Composition. 0 hours. Intensive study of writing at the sentence and paragraph level. Prerequisites: IEP 025 Elementary Structure and Composition and IEP 026 Elementary Reading and Listening/Speaking. Offered on Pass-No Credit basis only.

IEP 033. Intermediate I Reading. 0 hours. Intensive study and practice of reading skills with emphasis on comprehension and increasing vocabulary and reading speed. Prerequisites: IEP 025 Elementary Structure and Composition and IEP 026 Elementary Reading and Listening/Speaking. Offered on Pass-No Credit basis only.

IEP 034. Intermediate I Listening/Speaking. 0 hours. Intensive study and practice of listening to formal English and giving short oral presentations. Prerequisites: IEP 025 Elementary Structure and Composition and IEP 026 Elementary Reading and Listening/Speaking. Offered on Pass-No Credit basis only.

IEP 037. Intermediate I Level 3. 1 hours. A continuation of IEP 027 Elementary Level with intensive study of English structure, writing, reading and listening/speaking at a low intermediate level. Prerequisites: IEP 027 Elementary Level or direct placement through IEP Placement Test. Offered on a Pass-No Credit basis only. May be taken up to 3 times.


IEP 042. Intermediate II Composition. 0 hours. A continuation of IEP 032 Intermediate I Composition with emphasis on transitioning from writing paragraphs to essays. Prerequisites: IEP 031 Intermediate I Structure, IEP 032 Intermediate I Composition, IEP 033 Intermediate I Reading, and IEP 034 Intermediate I Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 043. Intermediate II Reading. 0 hours. A continuation of IEP 033 Intermediate I Reading with increased level of difficulty in readings and vocabulary. Prerequisites: IEP 031 Intermediate I Structure, IEP 032 Intermediate I Composition, IEP 033 Intermediate I Reading, and IEP 034 Intermediate I Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 044. Intermediate II Listening/Speaking. 0 hours. A continuation of IEP 034 Intermediate I Listening/Speaking with listening to short lectures, taking notes and giving oral presentations. Prerequisites: IEP 031 Intermediate I Structure, IEP 032 Intermediate I Composition, IEP 033 Intermediate I Reading, and IEP 034 Intermediate I Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 047. Intermediate II Level 4. 1 hours. A continuation of IEP 037 Intermediate I Level 3 with emphasis on developing higher level English skills in structure, writing, reading and listening/speaking. Prerequisites: IEP 027 Elementary Level and IEP 037 Intermediate I Level 3 or direct placement through IEP Placement Test. Offered on a Pass-No Credit basis only. May be taken up to 3 times.

IEP 051. Advanced I Structure. 0 hours. A continuation of IEP 041 Intermediate II Structure with systematic review and introduction of complex grammatical structures. Prerequisites: IEP 041 Intermediate II Structure, IEP 042 Intermediate II Composition, IEP 043 Intermediate II Reading, and IEP 044 Intermediate II Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 052. Advanced I Composition. 0 hours. A continuation of IEP 042 Intermediate II Composition with emphasis on writing essays and introduction of documentation. Prerequisites: IEP 041 Intermediate II Structure, IEP 042 Intermediate II Composition, IEP 043 Intermediate II Reading, and IEP 044 Intermediate II Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 053. Advanced I Reading. 0 hours. A continuation of IEP 043 Intermediate II Reading with increased level of difficulty in readings and vocabulary, and more complex study skills. Prerequisites: IEP 041 Intermediate II Structure, IEP 042 Intermediate II Composition, IEP 043 Intermediate II Reading, and IEP 044 Intermediate II Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 054. Advanced I Listening/Speaking. 0 hours. Students listen to lectures appropriate to the level and take notes. Students learn new vocabulary and present information about academic topics. Prerequisites: IEP 041 Intermediate II Structure, IEP 042 Intermediate II Composition, IEP 043 Intermediate II Reading, and IEP 044 Intermediate II Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 057. Advanced I Level 5. 1 hours. A continuation of IEP 047 Intermediate II Level 4 with emphasis on developing higher level English skills in structure, writing, reading and listening/speaking. Prerequisites: IEP 027 Elementary Level, IEP 037 Intermediate I Level 3, IEP 047 Intermediate II Level 4 or direct placement through IEP Placement Test. Offered on a Pass-No Credit basis only. May be taken up to 3 times.
IEP 061. Academic Preparation Text/Lecture. 0 hours. A bridge course designed to prepare students for academic classes through the use of authentic materials and practice emphasizing Reading, Listening/Speaking and study skills. Prerequisites: IEP 051 Advanced I Structure, IEP 052 Advanced I Composition, IEP 053 Advanced I Reading, and IEP 054 Advanced I Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 062. Academic Preparation Writing. 0 hours. A bridge course designed to prepare students for academic classes through the use of authentic materials in the writing of documented visualizations. Prerequisites: IEP 051 Advanced I Structure, IEP 052 Advanced I Composition, IEP 053 Advanced I Reading, and IEP 054 Advanced I Listening/Speaking. Offered on a Pass-No Credit basis only.

IEP 067. Academic Preparation Course Level 6. 1 hours. A bridge course to transition students to academic classes by using authentic materials and tasks. Prerequisites: IEP 027 Elementary Level, IEP 037 Intermediate I Level 3, IEP 047 Intermediate II Level 4, IEP 057 Advanced I Level 5 or direct placement through IEP Placement Test. Offered on a Pass-No Credit basis only. May be repeated. See the IEP Student Handbook for information about the number of times the course can be taken.

Interior Design

IND 110. Interior Design Fundamentals. 3 hours. An introduction to the interior design profession and a basic overview of the facets of interior design, including: design elements and principles, lighting and technology, space planning, material finishes and furniture selection, special considerations in design, and historic influences.

IND 120. Interior Design Studio Fundamentals. 3 hours. Studio. Application of interior design fundamentals in a studio setting. Students will be introduced to hand drafting and introductory level computer aided drafting through a series of exercises and design projects while demonstrating basic space planning and interpretation of architectural plans and symbols. Purchase of supplies required. Prerequisite: IND 110 Interior Design Fundamentals.

IND 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IND 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IND 312. History of Design I. 3 hours. Lecture. Study of historic architecture, interiors and furniture from antiquity to the 1900's. Emphasis is given to the identification of the interiors and furniture of these eras.

IND 313. History of Design II. 3 hours. Lecture. Study of historic architecture, interiors and furniture from the 1900's through the present. Emphasis is given to the identification of styles, interiors and furniture of these eras.


IND 316. Space Planning and Programming. 3 hours. Lecture. Spatial analysis of residential and commercial projects. Application of the preliminary design process including research, analysis, and interpretation of information. Prerequisite: IND 315 Interior Design: Studio I or permission of instructor.

IND 323. Interior Design Materials and Resources. 3 hours. Lecture. A study of materials and resources used in designing residential and contract interiors. CSI (Construction Specifications Institute) format utilized.

IND 324. Applied Color and Lighting Design. 3 hours. The application of color theory, psychology of color, and lighting design for interior environments. Emphasis is placed on the appropriate use of color, lighting fixtures, luminaires, and architectural lighting in order to create a specific user experience in an interior space. Prerequisite: IND 120 Interior Design Studio Fundamentals or permission of instructor.

IND 325. Interior Design: Studio II. 3 hours. Lecture and studio. Intermediate commercial studio problems with emphasis on conceptualization, design theory, ideation, programming, rapid visualization and space planning. Prerequisite: IND 315 Interior Design: Studio I. Purchase of supplies required.

IND 326. Computer Application for Interior Design. 3 hours. Application of a variety of computer programs to enhance previous studio projects. Junior standing.

IND 411. Professional Practice for Interior Design. 3 hours. Lecture. General procedures for operating and maintaining an interior design business, both residential and contract, including costs, pricing, specification writing, management, professional responsibilities, presentations, and client communications. Emphasis on the interior design profession and allied fields. Prerequisite: IND 325 Interior Design Studio II.


IND 422. Interior Design: Studio IV. 3 hours. Studio. Contract studio involving public use interior spaces such as those for special populations, retail, historic preservation, corporate facilities, assisted-living, nursing homes, and medical facilities. Programmatic requirements and complex design solutions. Prerequisite: IND 420 Interior Design: Studio III. Purchase of supplies required.

IND 425. LEED in Interior Design. 3 hours. Lecture. Research, discussion, and study for the LEED Green Associate Certification requirements. Registration for exam and fees will be applicable. Prerequisite: Senior standing or permission of instructor.

IND 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IND 570. Professional Internship Preparation. 1 hours. Explorations of potential internship placements that reflect future career options. Students will draft and revise resumes, cover letters, and preliminary portfolios. Selection and initial contact with potential firms. Prerequisite: GIT 240 Page Layout Software. Open to interior design majors only.

IND 571. Professional Internship. 2 hours. Off-campus, pre-professional internship experience negotiated between the firm, student, and instructor. Provides an opportunity to explore a particular area of interior design or related field through actual work experience. Prerequisite: GIT 240 Page Layout Software and IND 570 Professional Internship Preparation. Open to interior design majors only.

IND 572. Interior Design Portfolio Prep and Senior Exhibit. 1 hours. The development of a self-generated, comprehensive portfolio. Public exhibition of students' cumulative work.

IND 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

IND 600. Study Tour. 1-3 hours. An academically based study tour experience. May combine academic course work, industry experience, travel and cultural immersion. May be repeated if the tour, region or country visited is different. Special permission of instructor required.

International Studies

INT 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

INT 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

INT 505. Topics in International Studies (___). 3 hours. A special topic class that explores a selected international issue or topic in depth. The class may be repeated if the topic is different. Permission of instructor.

INT 510. Readings in International Studies. 1-3 hours. Directed readings in a selected topic in International Studies. May be repeated for a total of six hours if the topics are different. Permission of instructor.
INT 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

INT 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

INT 690. Study Abroad (____). 3-6 hours. An academically based foreign travel experience. Combines academic course work, travel and cultural immersion. May be repeated if country/region visited is different. Permission of instructor.

INT 695. Internship/Practicum. 3 hours. Supervised work experience or independent project whose major emphasis is on international matters. Students may work directly with a business, governmental agency, non-governmental organization, foundation or labor union, or they may be assigned work such an organization has requested. Permission of instructor.

INT 699. Senior Seminar in International Studies. 3 hours. A capstone course for International Studies majors and minors. Focuses on the application of principles, skills and information in the analysis of contemporary international issues. Permission of International Studies Director.

JUST 104. Introduction to the Justice System. 3 hours. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.

JUST 109. Principles of Justice Studies. 3 hours. The nature of justice, how justice is linked to power, ideology, social control, social change. Generative themes in various dimensions of justice such as social and economic justice, gender, race and criminal justice.

JUST 223. Basic Interviewing and Counseling Skills. 3 hours. The role and purpose of accepted interviewing techniques and their application to counseling, interrogation, and other social situations.

JUST 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

JUST 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

JUST 322. Ethics and Justice Policy. 3 hours. Ethical theories and their application to principles of justice, law, and social policies.

JUST 328. Police and Justice. 3 hours. Objectives, strategies, programs, institutional arrangements, roles, perspectives, and interagency relationships of police.

JUST 475. Community Policing. 3 hours. The development of community and problem-solving policing. Emphasis is placed on the critical issues in community policing, especially the patterns of interaction between police and the public. Prerequisite: Junior or senior standing.

JUST 480. Women, Crime, and Justice. 3 hours. A historical examination of social, economic, and legal factors that have defined violence against women, violence by women, and the role of women in the justice professions.

JUST 485. Crime and Public Policy. 3 hours. This upper-level course provides an introduction to crime and the efforts to control crime through law and public policy. Public policy surrounding crime will be examined in a variety of crime and justice areas such as crime control, law enforcement, and court processes.

JUST 500. Criminal Law and Society. 3 hours. Criminal process and constitutional and legal problems associated with arrest, search and seizure, and due process of law. Criminal liability and crimes against persons, property, and society; governmental sanctions of individual conduct as formulated by legislatures and the courts. Prerequisite: Junior or senior status.

JUST 501. Criminal Procedure. 3 hours. Laws and constitutional protections that govern the criminal justice process from detection and investigation through arrest, adjudication, and punishment.

JUST 502. Criminal Profiling. 3 hours. The dynamics of human behavior as related to criminal activity. Utilizing sociological, psychological, and criminological theories, the course focuses on the analysis of the crime scene and the various characteristics of the offenders revealed by that analysis. Discusses in detail strategies employed by the FBI and state and local profilers.

JUST 518. Serial Killers. 3 hours. An examination of the phenomenon of serial killers with an emphasis on the social construction of serial murder. An investigation of theories, typologies, and case study analysis of serial killers and their victims.

JUST 521. Special Topics in Justice Studies (____). 1-3 hours. Intensive examination and analysis of selected justice topics and issues relevant to justice studies. Prerequisite: Permission of instructor. May be repeated for a maximum of 6 hours if subject varies.


JUST 528. White Collar Crime. 3 hours. Major issues in business, professional, and official rule violations. Consumer fraud, securities violations, unethical professionalism, and political corruption.

JUST 538. Philosophy of Law. 3 hours. Philosophical issues in law using actual cases as well as philosophical writings. Nature of law, judicial reasoning, rights, liberty, responsibility, and punishment.

JUST 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

JUST 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

JUST 591. Native American Sovereignty and the Law. 3 hours. Use of Native American case law to explore the dynamics of Indian sovereignty from the Doctrine of Discovery in the 16th century to contemporary politics of tribal self-determination, including federal Indian law cases and the Wounded Knee trials.

JUST 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

JUST 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

JUST 671. Internship. 3 hours. Assignments in a justice-related placement designed to further the student's integration of theory and practice. Internships are arranged with advisor. Graded on pass-fail basis.
JUST 695. Senior Seminar in Justice Issues. 3 hours. Comprehensive analysis of selected justice concepts and issues with an emphasis on a capstone research project and portfolio.

JUST 698. Directed Readings in Justice Studies. 3 hours. Individual study and research in selected areas of Justice Studies. May be repeated for a maximum of six hours. Prerequisite: Permission of instructor.

Leadership

LDSP 201. Seminar (____). 1-3 hours. Individual study (research, project, or field-based orientation). May be repeated using different topics. Requires acceptance into Emerging Leaders Program or permission of instructor.

LDSP 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

LDSP 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

LDSP 501. PELP Phase IV Community Internship. 1-3 hours. Perform internship in field of study; work with mentor in identifying how to mesh professional, personal, and civic responsibility. Maintain journal to relate experience to leadership lessons learned in LDSP 201 Seminar (____). Prerequisite: Must be a senior.

LDSP 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

LDSP 599. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

LDSP 600. Foundations of Leadership. 3 hours. Emphasizes leadership theory, leadership styles, problem-solving, resolving conflict, nurturing change within organizations, decision-making styles, small group facilitation, and systems thinking. Students will engage in field work which will include observations of leaders and experience in taking leadership roles. During the course, students will begin compiling a leadership portfolio that they will add to throughout their leadership minor experience. Prerequisite: declared as leadership minor or permission of instructor.

LDSP 601. Service Learning Seminar. 1 hours. Students will either plan and implement a project that provides service to the community or students will take a leadership role in an existing service learning project. Students will keep a reflective journal of their leadership activities, noting the connections between their practice of leadership and the content of their leadership minor courses. Prerequisite: completion of LDSP 600 Foundations of Leadership or concurrent enrollment.

LDSP 602. Leadership Seminar. 2 hours. Emphasizes the application of leadership skills within the student's chosen career setting. Students will engage in at least 10 hours field work which will include observations of leaders in a chosen career setting and experience in taking leadership roles within that same career setting. Students will also complete their leadership portfolios begun in the Foundations of Leadership course. Prerequisite: completion of LDSP 600 Foundations of Leadership and completion of at least 15 hours of leadership minor courses or permission of the instructor.

LDSP 800. Educational Leadership I. 3 hours. First course for both those who wish to obtain licensure as a building leader and those who do not wish to obtain licensure but wish to earn a Masters in Educational Leadership. Course covers program orientation, leadership, oral and written communication, problem-solving, decision-making, meeting management, and conflict management. Includes a minimum of 16 hours of field work. Often concurrent enrollment with TCHL 891 Methods of Research.

LDSP 801. Educational Leadership II. 3 hours. Middle phase course for both those who wish to obtain licensure as an administrator and those who do not wish to obtain licensure. Course covers nurturing change, school climate, securing and working effectively with school staff, home/school/community relationship, and the financial aspects of public education. Includes a minimum of 16 hours of field work. Prerequisite: LDSP 800 Educational Leadership I or permission of instructor. Often concurrent enrollment with LDSP 863 Supervision of Instruction.

LDSP 809. Legal Foundations of Public Education. 3 hours. Basic legal provisions affecting education that are of interest and significance to educators and lay citizens. Often concurrent enrollment with LDSP 855 Administration and Supervision of Special Education.

LDSP 835. Elementary and Middle School Curriculum. 3 hours. Focuses upon past and present curriculum design for elementary and middle school students. Emphasis is given to the establishment of goals and objectives, the assessment of needs, and the selection and organization of content, activities and evaluation practices. Prerequisite: TCHL 834 Curriculum Development. Often concurrent enrollment with LDSP 847 The Principalship.

LDSP 836. Secondary School Curriculum. 3 hours. This course focuses on past and present curriculum design for adolescents. Emphasis is given to the establishment of goals and objectives, the assessment of needs and the selection and organization of content, activities and evaluation practices. Articulation between the middle level and high school will also be considered. Prerequisite: TCHL 834 Curriculum Development. Often concurrent enrollment with LDSP 847 The Principalship.

LDSP 845. School Leadership Internship I. 1.2 hours. A supervised post-degree internship for licensure for school building leaders in their first semester (if full-time) or first year (if part-time) of employment as a school building administrator. The intern will implement a school improvement plan and an individual leadership plan, providing both quantitative and qualitative data to demonstrate the progress of the school in improving student learning. Prerequisites: verification of current conditional school leadership license and verification of current employment as a school leader/administrator (full-time or part-time) in a state accredited school. Successful completion of SSLS 845 School Leadership Internship I.

LDSP 846. School Leadership Internship II. 2 hours. A supervised post-degree internship required for licensure for school building leaders in their second semester (if full-time) or second year (if part-time) of employment as a school building administrator. The intern will continue to implement a school improvement plan and an individual leadership plan begun in SSLS 845 School Leadership Internship I and will continue providing both quantitative and qualitative data to demonstrate the progress of the school in improving student learning. Prerequisites: verification of current conditional school leadership license and verification of current employment as a school leader/administrator (full-time or part-time) in a state accredited school. Successful completion of SSLS 845 School Leadership Internship I.

LDSP 847. The Principalship. 3 hours. Focuses on the role of management skills necessary for effective leadership at the building level. Management skills to be taught will include instructional leadership styles, responsibilities of staff development, uses of organizational theory, decision-making processes, allocation of resources at the building level and administration of curricular activities. Includes differentiated content for persons seeking licensure at either elementary or secondary level. Often concurrent enrollment with LDSP 835 Elementary and Middle School Curriculum and LDSP 836 Secondary School Curriculum.

LDSP 854. Organizational Theory and Planning. 3 hours. The purpose of this class is to explore leadership from a variety of perspectives. A synthesis of current theoretical and empirical developments in formal organizations will be addressed. Readings come from a variety of disciplinary perspectives, such as sociology, organizational behavior, and psychology. The course will consider various aspects of leadership and analyze the leader from a symbolic perspective, as a manager of meaning and critical change. In addition, the leadership role in planning from the latest research and practice will be addressed. Various planning models will be studied and analyzed. Prerequisite: Admission to Ed.S. program.

LDSP 855. Administration and Supervision of Special Education. 3 hours. Information and skills required by the building leader and director or supervisor of special education programs. Often concurrent enrollment with LDSP 809 Legal Foundations of Public Education.

LDSP 859. Change Processes and Professional Development. 3 hours. An intensive study of the theoretical and practical aspects of professional development and the elements involved in the change process. Emphasis will be on understanding the relationships among staff, the change process, and the improvement of programs. Emphasis is also on the familiarity with the major characteristics of adulthood, which affect the adult as a learner. Prerequisite: Admission to Ed.S. program.
LDSP 863. Supervision of Instruction. 3 hours. A study of the principles and techniques necessary for coordinating, monitoring, and improving the educational programs of elementary and secondary schools. Emphasis is on techniques of effective supervision and evaluation which promotes the professional growth of teachers. Often concurrent enrollment with LDSP 801 Educational Leadership I.

LDSP 874. Educational Policy Making and Reform. 3 hours. An analysis of patterns of influence, organizations, and governmental agencies which impact education at the community, state and national levels. Particular emphasis is placed on analysis of policy development process and the relationship of policy to administration. Prerequisite: Admission to Ed.S. program or permission of the instructor.

LDSP 888. Foundations of Education. 3 hours. A study of how philosophy, history, sociology, and psychology undergirds the beliefs and choices that influence the aims, purposes, curriculum, teaching, and administrative styles in education.

LDSP 893. Practicum in Educational Leadership I - Building Level Administration. 3 hours. One of two capstone courses in the Masters in Educational Leadership program. Individual field work in various organizational settings suitable for the development of leadership skills through mentoring relationships. While enrollment is within a semester framework, the work required for the practicum will require two semesters of activity. Admission by application only. Pass-No Credit.

LDSP 894. Practicum in Educational Leadership II - Building Level Administration. 3 hours. One of two capstone courses in Masters in Educational Leadership Program. The focus of this practicum is data based decision making. Within this context the student will collect data, analyze data and interpret the results of the data analyses. While enrollment is within a semester framework, the work required for the practicum generally requires two semesters of activity. Admission by application only. Pass-No Credit.

LDSP 901. Educational Systems Leadership I. 3 hours. This course focuses on the following domains of leadership including the skills, responsibilities, opportunities and problems in each domain; Policy and Governance, Curriculum Planning and Development, Instructional Leadership, Pupil Service Leadership, Educational Facilities and Legal Aspects in each of the previously mentioned areas.

LDSP 902. Educational Systems Leadership II. 3 hours. This course focuses on the following domains of leadership including the skills, responsibilities, opportunities and problems in each domain; Organizational Leadership, Human Resources Leadership, Values and Ethics of Leadership, Communications and Community Relations, Business Leadership, and Legal Aspects in each of the previously mentioned areas.

LDSP 903. Educational Systems Leadership III. 3 hours. This course focuses on the following domain of leadership including the skills, responsibilities, opportunities and problems in the domain of district leadership and cultures.

LDSP 941. District Leadership Internship I. 2 hours. A supervised post-degree internship for licensure for District level leaders in their first semester (if full-time) or first year (if part-time) of employment as a school district level administrator. The intern will implement a district-wide improvement plan and an individual leadership plan, providing both quantitative and qualitative data to demonstrate the progress of the plan in improving student learning.

LDSP 942. District Leadership Internship II. 2 hours. A supervised post-degree internship for licensure for District level leaders on their second semester or second year (if part-time) of employment as a school district level administrator. The intern will continue to implement a district wide improvement plan and an individual leadership plan began in LDSP 941 District Leadership Internship I and will continue providing both quantitative and qualitative data to demonstrate the progress of the plan in improving student learning.

LDSP 996. Internship: (____). 1-6 hours. Supervised field experience in administration and supervision. May be repeated for a maximum of 6 hours. Admission by application only. Pass-No Credit.

LDSP 997. Practicum Educational Systems Leadership I. 3 hours. Supervised field experiences and seminars in administration and supervision particular to the late spring-early summer school semesters. Admission by permission only. Pass-No Credit. (Fall only).

LDSP 998. Practicum: Educational Systems Leadership II. 3 hours. Supervised field experiences and seminars in administration and supervision particular to the late spring-early summer school semester. Admission by permission only. Pass-No Credit. (Spring only).

Mathematics

MATH 017. Elementary Algebra. 3 hours. A beginning course in algebra designed to prepare the student for MATH 019 Intermediate Algebra. Offered on a Pass-No Credit basis only. Not counted toward the total hours required for a degree.

MATH 018. Intermediate Algebra. 4 hours. Designed to prepare the student for Math 110 College Algebra with Review. Not counted toward the total hours required for a degree.

MATH 019. Intermediate Algebra. 4 hours. Designed to prepare the student for Math 110 College Algebra with Review. Not counted toward the total hours required for a degree.

MATH 110. College Algebra with Review. 5 hours. (Only 3 hours count toward a degree). Operations with algebraic expressions; linear and quadratic functions; graphs of polynomial and rational functions; systems of equations; logarithmic and exponential functions; arithmetic and geometric progressions; permutations and combinations. Slower paced than MATH 113 College Algebra, but covers the same material. Not recommended for those having four years of high school mathematics, including two units of algebra, one unit of geometry, and one-half unit of advanced or senior mathematics. Closed to students with a grade of "C" or better in a course with number higher than 110. Prerequisite: Grade of "C" or better in MATH 019 Intermediate Algebra or two units of high school algebra.

MATH 113. College Algebra. 3 hours. Operations with algebraic expressions; linear and quadratic functions; graphs of polynomial and rational functions; systems of equations; logarithmic and exponential functions; arithmetic and geometric progressions; permutations and combinations. Not recommended for those having four years of high school mathematics, including two units of algebra, one unit of geometry, and one-half unit of advanced or senior mathematics. Closed to students with credit in MATH 110 College Algebra with Review or MATH 126 Pre-Calculus or MATH 153 Introduction to Analytic Processes, or students with a letter grade of "C" or better in MATH 150 Calculus I. Prerequisite: Grade of "B" or better in MATH 019 Intermediate Algebra or two units of high school algebra.

MATH 114. Elements of Technical Analysis. 3 hours. Basic mathematics for technology students. Special emphasis on units of measurement, accuracy, use of calculators, beginning algebra, solutions of equations, use of graphs. Open only to candidates for the Associate of Applied Science degree. Closed to students with credit in MATH 113 College Algebra.

MATH 122. Plane Trigonometry. 3 hours. The trigonometric functions; solutions of right and oblique triangles; identities; properties of circular functions; and complex numbers; applications. Prerequisite: MATH 110 College Algebra with Review or MATH 113 College Algebra. Closed to students with credit in MATH 126 Pre-Calculus.

MATH 126. Pre-Calculus. 4 hours. Pre-Calculus properties of the real number system, limits, functions, continuity, trigonometry, and graphs. Not open to students with credit in MATH 113 College Algebra, MATH 114 Elements of Technical Analysis, MATH 122 Plane Trigonometry, MATH 150 Calculus I, or MATH 153 Introduction to Analytic Processes. Prerequisite: Two units of high school algebra and trigonometry or permission of instructor.

MATH 133. Quantitative Reasoning. 3 hours. Designed for the students NOT planning to major in a field that requires advanced mathematical skills. Prepares students for the mathematics encountered in other college courses that use quantitative reasoning. Emphasis on developing critical thinking and quantitative reasoning skills needed to understand major issues in society. Prerequisite: MATH 019 Intermediate Algebra or one unit of high school algebra.

MATH 143. Elementary Statistics. 3 hours. Basic concepts of statistics and probability applicable to all disciplines. Topics include data analysis, probability, discrete and continuous distributions, sampling, and statistical inference. Not open to students with credit in MATH 543 Probability and Statistics. Prerequisite: MATH 019 Intermediate Algebra or one unit of high school algebra.

MATH 150. Calculus I. 5 hours. Students with credit in MATH 153 Introduction to Analytic Processes receive only 3 hours credit. Functions, limits, derivatives and integrals. Applications to science, business, and technology. Prerequisite: MATH 126 Pre-Calculus, or MATH 122 Plane Trigonometry and MATH 110 College Algebra with Review, or MATH 122 Plane Trigonometry and MATH 113 College Algebra, or permission of instructor. You must have a grade of C or higher in all courses used to meet this requirement.
MATH 153. Introduction to Analytic Processes. 3 hours. Topics in differential and integral calculus and linear algebra for business applications. Closed to students with credit in MATH 150 Calculus I. Prerequisite: Grade of C or higher in MATH 110 College Algebra with Review or MATH 113 College Algebra or MATH 126 Pre-Calculus.

MATH 154. Engineering Calculus II. 4 hours. Advanced topics in calculus with an emphasis on computer-based application to engineering technology. Topics covered include integration techniques, complex numbers and polar coordinates, multivariable differentiation and integration, matrix algebra and systems of equations, and differential equations. Prerequisite: Grade of C or higher in MATH 150 Calculus I, or permission of instructor.

MATH 155. Calculus II. 5 hours. Continuation of MATH 150 Calculus I. Differentiation and integration techniques, transformations, polar coordinates, conics, transcendental functions, series and vectors. Prerequisite: Grade of C or higher in MATH 150 Calculus I or permission of instructor.

MATH 170. Mathematical Explorations. 1-3 hours. Directed class or seminar at the beginning college level. May be repeated.

MATH 204. Mathematics for Education I. 3 hours. Prepares prospective elementary and middle school teachers to know, understand, and use the basic principles and concepts of mathematics. These will include problem solving strategies, functions, sequences, set theory, probability theory, and statistics concepts. Closed to students with credit in MATH 150 Calculus I except students who are seeking a Bachelor of Science in Education degree.

MATH 212. Matrix Algebra. 2 hours. Algebra of matrices, determinants, the inverse and rank of a matrix, linear vector space concepts, and eigenvalues. Linear programming. Prerequisite: MATH 110 College Algebra with Review or MATH 113 College Algebra or MATH 126 Pre-Calculus.

MATH 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MATH 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MATH 253. Calculus III. 3 hours. Continuation of MATH 155 Calculus II. Vectors, solid analytic geometry, multivariable and vector calculus, and multiple integration. Prerequisite: MATH 155 Calculus II.

MATH 304. Mathematics for Education II. 3 hours. Prepares prospective elementary and middle school teachers to know, understand, and use the basic principles and concepts of mathematics involving the properties of whole numbers, integers, rational numbers, and real numbers and the fundamental models for their operations. Additionally, topics in measurement, and geometric concepts, such as properties of two and three-dimensional shapes, congruency, similarity, and transformations will be explored. Grade of "C" or higher in MATH 204 Mathematics for Education I.

MATH 307. Geometry for Education. 3 hours. An introduction to geometry concepts from an informal, intuitive approach. Exploration of geometry from a historical, Euclidean point of view, incorporating concepts in both two and three dimensions. The development of the measurement system, to include both customary and metric systems. Transformations of two-dimensional objects through reflections, rotations, and translations. Integrated throughout the course will be a focus on the diverse cultures that have contributed to Mathematics and Geometry in particular. Includes hands-on activities and technologies such as dynamic software, graphing calculators, and the Internet. Prerequisite: C or better in MATH 204 Mathematics for Education I or C or better in both MATH 143 Elementary Statistics and MATH 126 Pre-Calculus.

MATH 343. Introductory Applied Statistics. 3 hours. Basic concepts of statistics and probability. Topics include sampling techniques, summary statistics, probability, discrete and continuous distributions, sampling distributions, introduction to design of experiments, exploring bivariate data, and parametric and nonparametric statistical inference. Prerequisite: MATH 110 College Algebra with Review or MATH 113 College Algebra.

MATH 407. Cultural Mathematics. 1 hour. A look at the development and role of mathematics in a variety of cultures, including key moments in the history of mathematics, contributions of selected individuals, and contributions of different cultures in the historical development of mathematics. Prerequisite/Corequisite: MATH 204 Mathematics for Education I.

MATH 413. Introduction to Mathematical Thought. 3 hours. A course designed to introduce students to the branches of mathematics, as well as formal mathematical notation. The topics include Logic, Proof, Number Theory, Sets, Functions, Relations, and Cardinality.

MATH 471. Manipulatives for Teaching Mathematics. 1 hour. The use of mathematical manipulatives in teaching. Manipulatives to include geoboards, algebra tiles, and Miras. Prerequisite: Admission to teacher education.

MATH 472. Technology for Teaching Secondary Mathematics. 2 hours. Appropriate uses of technology in teaching middle school and high school mathematics. Introduction to interactive whiteboard, tablets and apps, software, and graphing technologies will be included. Prerequisite: Admission to teacher education.

MATH 479. Techniques for Teaching Mathematics. 3 hours. Techniques, methods, and course content used in teaching mathematics in secondary school. Offered by the Department of Mathematics. Concurrent, one hour weekly departmental tutorial service required. To be taken before the professional semester. Demonstrable skill at the College Algebra level is required for passing the class. Prerequisite: Admission to education and PSYCH 357 Educational Psychology. Corequisite: MATH 480 Internship in Secondary Mathematics Teaching.


MATH 503. Introduction to Advanced Mathematical Concepts for Education. 3 hours. This course is an introduction into advanced topics in mathematics including concepts of: matrices, discrete and continuous functions, calculus, and graph theory. The topics will be introduced using appropriate technology. Prerequisite: MATH 126 Pre-Calculus and MATH 472 Technology for Teaching Secondary Mathematics.

MATH 513. Discrete Structures. 3 hours. Elements of propositional logic, sets, algorithms, number theory, proofs, counting, mappings, relations, trees, graphs, digraphs, and Boolean algebra. Prerequisite: MATH 413 Introduction to Mathematical Thought.

MATH 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MATH 543. Probability and Statistics. 3 hours. Probability theory, random variables, discrete and continuous distributions and density functions, mathematical expectation, moment generating functions. Prerequisite: MATH 155 Calculus II and MATH 413 Introduction to Mathematical Thought.

MATH 553. Differential Equations. 3 hours. Standard types of ordinary equations of the first and second order, linear equations with constant coefficient solution by series, and applications to geometry and physical science. Prerequisite: MATH 253 Calculus III and MATH 212 Matrix Algebra. Offered spring semester.

MATH 557. Introduction to Analysis. 3 hours. A proof-oriented treatment of topics in analysis including the real number system, sequences, the topology of real numbers, continuous functions, differentiation, and integration. Prerequisites: MATH 253 Calculus III and MATH 413 Introduction to Mathematical Thought. Offered fall semester.


MATH 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required.

MATH 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
MATH 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

MATH 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.


MATH 613. Abstract Algebra. 3 hours. Elements of group theory and ring theory; subgroups, cyclic and permutation groups, homomorphisms, quotient groups, isomorphism theorems, subrings, and ideals. Applications to modular arithmetic, partitions and equivalence relations, polynomial rings, complex numbers, integral domains, and fields. Prerequisite: MATH 413 Introduction to Mathematical Thought. Offered fall semester.

MATH 617. Linear Algebra. 3 hours. Vector spaces including basic properties, subspaces, bases and dimension; linear transformations including kernels, images, and change of basis; determinants; eigenvalues and eigenvectors; diagonalization of matrices; and a selection of applications. Students will be required to provide numerous proofs as part of the course. Offered concurrently with MATH 717 Linear Algebra. Prerequisite: MATH 212 Matrix Algebra and MATH 513 Discrete Structures. Offered spring semester.

MATH 636. Basic Concepts of Geometry. 3 hours. Elementary geometry from an advanced standpoint with emphasis on structure and proof. Metric and synthetic approaches to two- and three-dimensional Euclidean geometries; constructions; and non-Euclidean geometries. Prerequisite: MATH 413 Introduction to Mathematical Thought. Offered spring semester.

MATH 656. Mathematical Modeling. 3 hours. Problems arising from areas and disciplines other than mathematics. Description of the problem at its source, analysis of the key factors and simplifying assumptions, presentation of the problem in a tractable form, solution and testing of the selected model. Prerequisite: MATH 155 Calculus II and MATH 212 Matrix Algebra. Offered fall semester.

MATH 658. Financial Mathematics. 3 hours. Mathematics of simple and compound interest, time value of money, annuities, cash flow analysis, loans, bonds, options, forwards, futures, swaps, hedging strategies, and risk management. Prerequisite: MATH 155 Calculus II. Spring.

MATH 670. Topics in Mathematics: (____). 1-3 hours. Directed class or seminar study at the undergraduate level. May be repeated. May not be taken for graduate credit. Prerequisite. Permission of instructor. A pass/fail grading system may be used.

MATH 673. Seminar: Actuarial Exam Number 1. 1 hours. Directed reading, problem solving, and student presentations with the purpose of preparing students for the first actuarial examination. Must score at least a "4" on Exam 1/P administered by the Society of Actuaries and the Casualty Actuarial Society. Offered on a Pass-Fail basis only.

MATH 674. Seminar: Actuarial Exam Number 2. 1 hours. Directed reading, problem solving, and student presentations with the purpose of preparing students for the second actuarial examination. Must score at least a "4" on Exam 2/FM administered by the Society of Actuaries and the Casualty Actuarial Society. Offered on a Pass-Fail basis only. Pre-requisite or Co-requisite: MATH 658 Financial Mathematics.

MATH 679. Mathematics Education Seminar. 1 hours. Issues related to the professional preparation of secondary mathematics teachers and an in-depth examination of critical issues in public education. The KSDE mathematics content knowledge licensure examination must be taken before or during this semester in order to receive credit for this course. Prerequisite or Corequisite: MATH 479 Techniques for Teaching Mathematics.

MATH 687. Reading in Mathematics. 1-3 hours. Directed reading for superior undergraduate students. May be repeated for a maximum of 3 hours. Prerequisite: Permission of instructor.

MATH 699. Senior Seminar. 1 hours. Activities include: student presentations, review of major courses, and assessment. Required of all senior mathematics majors, both teaching and non-teaching. Should be taken the senior year.

MATH 705. Topics in Elementary Mathematics (____). 1-3 hours. Topics relevant to the elementary classroom will be developed in laboratory or seminar setting. May be repeated if topic is different. A maximum of 3 hours credit can be applied toward a degree. Prerequisite: Elementary teaching experience.


MATH 717. Linear Algebra. 3 hours. Vector spaces including basic properties, subspaces, bases and dimension; linear transformations including kernels, images, and change of basis; determinants; eigenvalues and eigenvectors; diagonalization of matrices; and a selection of applications. Students will be required to provide numerous proofs as part of the course. Prerequisite: MATH 212 Matrix Algebra and MATH 513 Discrete Structures. Offered concurrently with MATH 617 Linear Algebra. Spring.


MATH 727. Linear Optimization Models. 3 hours. Simplex algorithm. Topics such as duality, revised and dual simplex algorithms, sensitivity analysis, transportation and assignment problems, network and flows. Prerequisite: MATH 212 Matrix Algebra.

MATH 728. Mathematics of Financial Derivatives. 3 hours. Introduction to financial derivatives, binomial options, stochastic calculus, the Black-Scholes model, Delta-hedging, exotic options, and other related topics. Pre-requisite: MATH 543 Probability and Statistics. Spring.

MATH 733. Topology. 3 hours. Topological structures: Open sets, neighborhoods, closed sets, subspaces, product spaces, quotient spaces, separation axioms; limits and continuity, filters and sequences; compactness and connectedness; countability axioms and separability; metric spaces.


MATH 749. Time Series Analysis. 3 hours. Autocorrelation, moving averages, smoothing methods, multiple regression, regression of time series data, and ARIMA methodology. Prerequisite: MATH 543 Probability and Statistics.


MATH 763. Numerical Linear Algebra. 3 hours. Numerical linear algebra: Gaussian elimination, orthogonal transformations, least squares, algebraic eigenvalue problem, iterative methods, numerical solution of partial differential equations. Prerequisites: MATH 212 Matrix Algebra or MATH 817 Linear Algebra. Offered spring semester.

MATH 770. Topics in Mathematics: (____). 1-3 hours. Directed class or seminar study. May be repeated if topics are different. A maximum of six hours can be applied toward a degree. Prerequisite: Permission of instructor.

MATH 773. Expository Mathematics: (____). 0.5-6 hours. Analysis and synthesis of expository mathematics. Role of key mathematical concepts, teaching techniques, and/or learning devices in modern mathematics. May be repeated for a maximum of 6 hours.

MATH 813. Algebra I. 3 hours. Theory of rings and modules; polynomial rings, homomorphisms, quotient rings, ideals, rings of fractions, integral domains, and modules. Prerequisite: MATH 613 Abstract Algebra.

MATH 836. Advanced Geometry. 3 hours. Development of non-euclidean geometries and advanced Euclidean topics.

MATH 840. Topics in Statistics (____). 1-3 hours. Directed class or seminar study. Prerequisite: Permission of instructor. May be repeated for a maximum of 6 hours.

MATH 853. Functions of a Complex Variable. 3 hours. General theory of analytic functions, conformal representation and mapping, trigonometric and hyperbolic functions, expansions in power series, definite integrals, and calculus of residues. Prerequisites: MATH 557 Analysis I or permission of instructor.

MATH 856. Analysis I. 3 hours. The real-number system, topology, sequences and series, continuity and differentiability of functions of one real variable, the Riemann integral. Prerequisite: MATH 557 Introduction to Analysis or permission of instructor. Offered fall semester.

MATH 859. Analysis II. 3 hours. Riemann-Stieltjes integration, series and sequences of functions, differentiation and Riemann integration in Euclidean space, and other topics in analysis. Prerequisite: MATH 856 Analysis I.

MATH 863. Seminar in Mathematics (____). 1-6 hours. Intensive study in a selected area of mathematics. May be repeated for a maximum of 6 hours.

MATH 870. Topics in Mathematics: (____). 1-3 hours. Directed class or seminar study. May be repeated if topics are different. A maximum of 6 hours can be applied toward a degree. Prerequisite: Permission of instructor.

MECET 121. Engineering Graphics I. 3 hours. Introduction to fundamental principles of graphic communication. Use of computer aided design software to produce 2-D sketches, 3-D geometry, and dimensioned 2-D orthographic views, and use of manual methods for sketching.

MECET 220. Statics. 3 hours. (3 hours lecture). Study of forces acting on rigid bodies at rest. Vectors, couples, equilibrium, distributed forces, geometric properties, beam analysis, and friction. Prerequisites: Grade of C or higher in PHYS 100 College Physics I or PHYS 104 Engineering Physics I and PHYS 130 Elementary Physics Laboratory I. Prerequisite or Corequisite: MATH 150 Calculus I or equivalent.

MECET 226. Computer Aided Design. 3 hours. Use of computer aided design software to generate complex 3-D geometry and communicate detail design information, dimensioning and tolerancing, surface finish, etc. Prerequisite: MECET 121 Engineering Graphics I or equivalent.


MECET 420. Kinematics. 2 hours. (2 hours lecture). Motion, forces, and mechanisms that produce motion in a mechanical system. Calculation of displacement, velocity, and acceleration of machine elements using graphics, mathematical and computer assisted methods. Prerequisites: MECET 121 Engineering Graphics I or MGFET 160 Manufacturing Graphics and MECET 220 Statics or PHYS 220 Engineering Mechanics I-Statics.

MECET 423. Mechanics of Materials. 3 hours. (3 hours lecture). Principles of mechanics as applied to the strength and stiffness of engineering materials. Topics include stress, strain, properties of areas, torsion, bending, compound stresses, and columns. Prerequisite: MECET 220 Statics or equivalent. Corequisite: MECET 424 Mechanics of Materials Laboratory.

MECET 424. Mechanics of Materials Laboratory. 1 hour. (2 hours laboratory). Laboratory activities designed to verify the properties of engineering materials using standard testing equipment and procedures. Testing of materials in tension, compression, shear, torsion, and bending in accordance with ASTM standards. Individual laboratory reports requiring the use of manual and computer assisted data collection and analysis techniques. Prerequisite or corequisite: MECET 423 Mechanics of Materials or equivalent.

MECET 428. Thermodynamics. 3 hours. Heat, temperature, laws of thermodynamics and their applications. Includes software simulations and project work to apply thermodynamic theories. Prerequisite: PHYS 100 College Physics I or PHYS 104 Engineering Physics I.

MECET 522. Dynamics. 3 hours. Study of forces acting on rigid bodies in motion. Kinematics and kinetics of particles, systems of particles, dynamics of machines and vibrations. Forces and acceleration analysis using Newton’s second law and energy and momentum methods. Includes software simulations of impact, vibration, etc. Prerequisite: MECET 220 Statics.

MECET 523. Mechanical Design I. 3 hours. (3 hours lecture). Principles for selecting and interfacing standard mechanical system components. Topics include tolerance analysis, fasteners, shafts, couplings, brakes, clutches, gears, belt and chain drives, bearings, seals, cams, motors, and other power transmission components. Extensive use of engineering handbooks, vendor catalogs, and computer software. Prerequisite: MECET 423 Mechanics of Materials or equivalent.

MECET 524. Fluid Mechanics. 3 hours. (3 hours lecture). Elementary fluid mechanics. Manual and computer assisted calculation of viscosity, flow, pressure and pressure-velocity relationships of fluid to design fluid power systems or control manufacturing processes. Emphasis on the selection of valves, accumulators, actuators, seals, pumps, and motors. Prerequisite: PHYS 100 College Physics I or PHYS 104 Engineering Physics I and PHYS 130 Elementary Physics Laboratory I. Corequisite: MECET 525 Fluid Mechanics Laboratory.

MECET 525. Fluid Mechanics Laboratory. 1 hour. (2 hours laboratory). Laboratory activities designed to verify the principles of fluid mechanics. Topics include pressure and flow measurements, friction losses, pump performance, and the use of computer assisted and computer aided equipment to gather data and write formal laboratory reports. Prerequisite or corequisite: MECET 524 Fluid Mechanics or equivalent.

MECET 528. Computer Aided Modeling. 3 hours. Study of modeling methods to support secondary operations in design, manufacturing and product communication. Prerequisite: MECET 226 Computer Aided Design.

MECET 623. Mechanical Design II. 3 hours. (3 hours lecture). Design of shafting, springs, fasteners, belts, clutches, brakes, chains, bearings, and gears. Emphasis is placed on the manual and computer aided design of individual machine elements in accordance with ASME codes and other industrial standards. Prerequisite: MECET 523 Mechanical Design I or equivalent.
<table>
<thead>
<tr>
<th>COURSE DESCRIPTIONS</th>
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<tbody>
<tr>
<td>MECET 627. Introduction to Biomedical Engineering Technology. 3 hours. Foundation concepts of cellular structure, organ systems and human physiology. Introduction to design of biomolecular systems, testing of biomechanical, biofluid and biomaterial systems. Prerequisites: BIOL 113 Environmental Life Science or CHEM 215 General Chemistry. MECET 424 Mechanics of Materials Laboratory, MECET 524 Fluid Mechanics, or instructor permission.</td>
</tr>
<tr>
<td>MECET 682. Heat Transfer. 3 hours. (3 hours lecture). Principles of heat transfer including conduction, convection, and radiation involved with materials and processing techniques. Manual and computer assisted calculations with applications in design. Prerequisite: MATH 150 Calculus I. Prerequisite or corequisite: MECET 524 Fluid Mechanics.</td>
</tr>
<tr>
<td>MECET 861. Mechanics of Composites and Structures. 3 hours. Calculation of effective properties of composites, nanocomposites and structures made from these materials. Analysis and prediction of structural behavior in different conditions. Specific features of composites design, application of composites, elements of the theories of elasticity, viscoelasticity and fracture mechanics of anisotropic media.</td>
</tr>
<tr>
<td>Manufacturing Engineering Technology</td>
</tr>
<tr>
<td>MFGET 160. Manufacturing Graphics. 3 hours. (3 hours lecture). Introduction of design process 3D CAD, utilizing CATIA Software. Emphasis on creation of basic surface and solid models. Includes Boolean Union, difference and intersection techniques to enable the creation of more complex components from the basis surface and solid models.</td>
</tr>
<tr>
<td>MFGET 162. Welding Processes and Procedures. 3 hours. (3 hours lecture with open laboratory). This is an introductory course providing technical information on gas metal, flux core, plasma, and gas tungsten arc welding techniques employed by the welding industry. Techniques in weld inspection, NDE processes, semi-automatic and manual welding as well as plasma arc and oxy-fuel cutting.</td>
</tr>
<tr>
<td>MFGET 261. Computer Aided Part Design. 3 hours. (3 hours lecture with open laboratory). Advanced CAD course with emphasis on creation of models to support rapid prototyping, CNC manufacturing processes and mold making. Includes complex surfaces (NURBS, polygon meshes) the trimming and joining to create complex parts. Utilizing the parts created to design and draw mold cavities from which parts can be molded. CATIA CAD software is utilized in this class. Prerequisite: MFGET 160 Manufacturing Graphics or other applicable 3D modeling class.</td>
</tr>
<tr>
<td>MFGET 268. Manufacturing Methods I Laboratory. 1 hours. (2 hours laboratory). Laboratory experiences in manufacturing methods. Disassembly and fabrication problems and discussion on the manufacturing process. Small team projects. Corequisite: MFGET 263 Manufacturing Methods I.</td>
</tr>
<tr>
<td>MFGET 363. Principles of Tool Design. 3 hours. (3 hours lecture, with open laboratory). General methods of tool design with emphasis on jigs and fixtures. Enables the student to develop ideas into practical specifications for modern manufacturing methods. Prerequisites: MFGET 263 Computer Aided Design or MFGET 261 Computer Aided Part Design or equivalent. MFGET 263 Manufacturing Methods I and MFGET 268 Manufacturing Methods I Laboratory or equivalent. Note: While this is not a CAD class the student is expected to be able to design and complete tool designs utilizing one of the modern 3D CAD systems (CATIA, ProE, SolidWorks, AutoCad, etc.)</td>
</tr>
<tr>
<td>MFGET 367. Manufacturing Methods II. 4 hours. (2 hours lecture, 4 hours laboratory). Emphasis on applied manufacturing methods found in industry. Measuring tools, hand tools, and machine tools will be used to construct projects from student drawings. Metrology tools and inspection techniques will be covered. Prerequisites: MFGET 263 Manufacturing Methods I, MFGET 268 Manufacturing Methods I Laboratory and a CAD course.</td>
</tr>
<tr>
<td>MFGET 405. Quality Control. 3 hours. (3 hours lecture). Dr. Deming's concepts using statistical process control charts for variables and attributes. Computer applications, quality cost, gauge repeatability and reproducibility, acceptance sampling techniques and topics on TQM, ISO 9000, DOE, Lean Manufacturing, Six Sigma and ISO 14000. Prerequisite: A course in statistics.</td>
</tr>
<tr>
<td>MFGET 564. Heat Treatment and Metallurgy I. 3 hours. (2 hours lecture, 2 hours laboratory). Applied ferrous and Non-ferrous metallurgy dealing with processing and manufacturing of metallic alloys. Metal structures will be evaluated using materiallographic techniques. Mechanical properties of heat treated and non-heat treated alloys will be evaluated. Prerequisites: CHEM 105 Introductory Chemistry and CHEM 106 Introductory Chemistry Laboratory. MFGET 263 Manufacturing Methods I and MFGET 268 Manufacturing Methods I Laboratory or equivalent.</td>
</tr>
<tr>
<td>MFGET 567. Principles of Metalcasting. 3 hours. (3 hours lecture). Basic principles, techniques and materials used in pattern construction. Theory and practice in techniques and principles of metalcasting operations, equipment, testing, and inspection methods related to quality and production control. Prerequisites: MFGET 263 Manufacturing Methods I and MFGET 268 Manufacturing Methods I Laboratory or equivalent. Concurrent enrollment in MFGET 568 Principles of Metalcasting Laboratory (required for Manufacturing majors, recommended for others).</td>
</tr>
<tr>
<td>MFGET 568. Metalcasting Processing Laboratory. 2 hours. (4 hours laboratory). Laboratory experiences with various metalcasting processes: molding processes, coremaking techniques, ferrous and non-ferrous metallurgy, sand control and gating and riser making techniques. Prerequisite: Concurrent enrollment required in MFGET 567 Principles of Metalcasting.</td>
</tr>
<tr>
<td>MFGET 569. Casting Design and Simulation. 3 hours. (3 hours lecture with open laboratory). Design of components suitable for metalcasting processes. Emphasis placed on molding, fluid flow, heat transfer, gating, feeding, and subsequent machining as well as metallurgical properties, structural design and cost-effectiveness. Computer assisted process simulation will be covered. Prerequisites: MFGET 567 Principles of Metalcasting and MFGET 568 Metalcasting Processing Laboratory.</td>
</tr>
<tr>
<td>MFGET 661. Computer Aided Manufacturing. 3 hours. (3 hours lecture with open laboratory). Interfacing computers and CAM software to develop Computer Numerical Control (CNC) programs for turning, milling, and other machines. (EDM and waterjet). Emphasis on manual programming, tooling considerations, post-processing, speeds and feeds, and transferring data among CAD, CAM and CNC. Prerequisite: MFGET 263 Manufacturing Methods I, MFGET 367 Manufacturing Methods II and MFGET 268 Manufacturing Methods I Laboratory or equivalent. Requires open laboratory assignments.</td>
</tr>
<tr>
<td>MFGET 662. Computer Aided Manufacturing II. 2 hours. Advanced CNC (Computer Numerical Control) programming techniques using CAM software. Projects will emphasize machining of complex surfaces including mold/die work, tooling components, student designed parts, and machining quality. Focus on successful manufacturing and part inspection. Prerequisites: MFGET 367 Manufacturing Methods II, MFGET 661 Computer Aided Manufacturing. Requires open laboratory.</td>
</tr>
<tr>
<td>MFGET 666. Manufacturing and Design Project I. 2 hours. (2 hours lecture with open laboratory). A &quot;capstone&quot; experience incorporating design, design analysis and material selection based on design cost and quality. Projects will be assigned to teams or individuals to assure a professional experience in the major field. Prerequisite: MFGET 423 Mechanics of Materials. Enrollment restricted to manufacturing or mechanical seniors.</td>
</tr>
<tr>
<td>MFGET 668. Principles of Investment Casting. 3 hours. (3 hours lecture with open laboratory). Basic principles, techniques and materials used in the production of investment casting. Theory and practice in techniques and principles of operations, equipment, testing, and inspection methods related to quality and production control. Prerequisites: MFGET 567 Principles of Metalcasting and MFGET 568 Metalcasting Processing Laboratory.</td>
</tr>
<tr>
<td>MFGET 669. Manufacturing and Design Project II. 3 hours. (3 hours lecture with open laboratory). Part II of the &quot;capstone&quot; experience dealing with actual manufacturing, testing and evaluation of the project designed in MFGET 666 Manufacturing and Design Project I. Students are required to take either the SME Certification Exam or the Fundamentals Exam at their cost. Prerequisite: MFGET 668 Manufacturing and Design Project I or written permission of instructor. Enrollment limited to manufacturing and mechanical engineering technology majors only.</td>
</tr>
<tr>
<td>MFGET 690. Manufacturing Production Control and Management. 3 hours. (3 hours lecture with open laboratory). Control of the production processing system with regard to plant layout material selection/utilization, human factors/management, and product marketing will be studied. The course utilizes a manufacturing enterprise approach to disseminate course content. Prerequisites: MFGET 263 Manufacturing Methods I and MFGET 268 Manufacturing Methods I Laboratory and MFGET 367 Manufacturing Methods II.</td>
</tr>
</tbody>
</table>
Management and Marketing

MGMKT 444. Legal and Social Environment of Business. 3 hours. The legal and social environment within which businesses operate. A study of relevant underlying legal, social, political and ethical forces which impact organizations. A substantial portion of the course will be devoted to contracts. Prerequisite: Junior standing.

MGMKT 532. Marketing Channel Management. 3 hours. Institutions, historical development, and behavioral aspects of marketing channels; channel design, selection, and management; electronic channels; supply chains. Prerequisite: MKTG 330 Principles of Marketing.

MGMKT 801. MBA Experience. 1 hours. Introduction to the MBA Program, faculty, university resources, and other students. Topics include group management skills, case analysis skills, research skills, computer skills, integration skills, written skills, oral presentation skills, and career planning. Prerequisite: Admission to the MBA program.

MGMKT 821. Topics in Business (___). 1-3 hours. Study of specific topics in business. A specific subject area will be defined each time the course is offered. May be repeated if topic is different.

MGMKT 826. Quantitative Business Analysis. 3 hours. Tools of managerial economics, decision making under uncertainty, forecasting, regression analysis, and linear programming. Prerequisite: MGMKT 310 Business Statistics, ECON 805 Economic Analysis or waivers.

MGMKT 828. Leadership and Behavioral Management. 3 hours. An in-depth study of leadership, organizational design and the interactions between individuals, groups and organizations. Emphasis will be given to an experiential exercise in leadership and team-building. Other topics include organizational behavior, motivation, HRM, and other management processes.

MGMKT 830. Business, Government and Society. 3 hours. Concepts and methods for incorporating social responsiveness and public policy analysis into the strategic decision making of the firm. Prerequisite: MGMKT 444 Legal and Social Environment of Business, or waivers.

MGMKT 831. International Business. 3 hours. Concepts and methods for incorporating worldwide variables and conditions into the strategic decision making of the firm. Prerequisites: FIN 326 Business Finance, MKTG 330 Principles of Marketing or waivers.

MGMKT 839. Marketing Strategy. 3 hours. Management-oriented approach to marketing analysis and planning emphasizing the behavioral sciences, and economics and marketing theory. Prerequisite: MKTG 330 Principles of Marketing, or waiver.

MGMKT 895. Strategic Management. 3 hours. The student assumes the role of a decision-maker exercising all management functions to implement policy based on effective management strategy. Case method or simulation. Pre-requisites: MGMKT 330 Management and Organizational Behavior, FIN 836 Financial Strategy, MGMKT 839 Marketing Strategy, and to have completed a total of 12 hours of graduate level courses.

Management

MGT 101. Introduction to Business. 3 hours. A descriptive introduction to the modern business world and an interpretation of the functional areas of business. The development of the business firm and its environment. Required for all business majors.

MGT 105. Introduction to Entrepreneurship. 3 hours. An introduction to the process of business start-up with special attention paid to planning, financing, starting, and managing a new business. May be taken in lieu of MGT 101 Introduction to Business.

MGT 210. Business Professionalism. 3 hours. An introduction to the standards of business professionalism which focuses on the development of skills such as the development of interpersonal relationships, collaboration, time management, and professional communication (written and oral). Additionally, career planning and management will be addressed. Prerequisites: ENGL 101 English Composition and COMM 207 Speech Communication. Required for all business majors.

MGT 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MGT 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MGT 310. Business Statistics. 3 hours. Bayesian theory, probability distributions, decision trees, hypothesis testing, power curves, sampling theory, index numbers, and regression analysis. Prerequisite: "C" in MATH 143 Elementary Statistics or equivalent, and junior standing.

MGT 320. Basic Quantitative Methods. 3 hours. An overview of quantitative methods for managers, using data to solve managerial problems, representing data through graphing, understanding index numbers to signify rates of change, basic financial principles (including time value of money, annuities, etc.), linear algebra for business applications, rates of change and basic differentiation. Prerequisite: A grade of "C" or better in MATH 110 College Algebra with Review or MATH 113 College Algebra or MATH 126 Pre-Calculus and 55 hours completed.

MGT 330. Management and Organizational Behavior. 3 hours. Theories of organization design, structure and dynamics of behavior that foster effective communication and interaction between individuals, groups and organizations. Pedagogies include lecture, experiential learning, cases. Prerequisite: 45 credit hours completed and MGT 101 Introduction to Business.

MGT 410. Topics in Management (___). 1-3 hours. Study of specific topics in management. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: 45 credit hours completed or permission of instructor.

MGT 420. Quantitative Decision Making. 3 hours. Applications of quantitative and analytical approaches to decision making problems in business. Topics include linear programming, distribution and network models problems, integer linear programming, and decision analysis. Prerequisite: "C" in MATH 143 Elementary Statistics, MGMKT 320 Basic Quantitative Methods and junior standing.


MGT 520. Quality Management. 3 hours. This course integrates the major Total Quality Management (TQM) and Continuous Quality Improvement (CQI) philosophies. The course includes lectures and case studies. Students will learn how to use the major TQM tools and will gain an understanding of global TQM applications. Prerequisites: MGMKT 310 Business Statistics or permission of the instructor.

MGT 530. Advanced Organizational Behavior. 3 hours. Contributions to organizational management by behavioral scientists and an examination of how their research studies can be applied to the management of today's dynamic organization. Case studies, experiential exercises, group activities and lecture-discussions. Prerequisites: MGMKT 330 Management and Organizational Behavior and junior standing.

MGT 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MGT 540. Human Resources Management. 3 hours. A strategy based study of HRM topics such as attracting, developing and retaining people in organizations. Important HRM issues included in the course are laws and regulations, labor management-relations, diversity management, etc. Prerequisite: MGMKT 330 Management and Organizational Behavior.

MGT 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MGT 610. Topics in Management (___). 1-3 hours. Study of specific advanced topics in management. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: Junior standing.

MGT 620. Internship in Management. 1-3 hours. Internship work experience in public, private, governmental, or not-for-profit business setting. The work experience must be approved by a departmental internship representative/faculty member. Students must enroll in the course during the same semester and time in which the internship occurs. Prerequisite: Permission of instructor required.
MGT 630. International Experience in Management. 1-3 hours. An academically based international experience with a focus on some aspect of management. May combine international coursework, business experience, travel and cultural immersion. May be repeated if the country or region visited is different. Specific experiences must be approved in advance by the International Business Advisor or representative. Prerequisite: Permission of International Business Advisor or Representative.

MGT 640. Senior Honors Project 1 in Management. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

MIL 302. Advanced Military Science III. 3 hours. Small unit tactics, communications, command and staff, branches of the army, map reading. Included is a laboratory activity that will offer weapon systems, water survival test and pre-camp orientation. Includes two weekend practical exercises. Prerequisite: MIL 100/102 Military Science I, MIL 103 Military Science I Laboratory, MIL 200/202 Military Science II and MIL 300 Advanced Military Science III. Spring semester.

MIL 303. Leadership Assessment and Development Course. 4 hours. A five-week internship conducted at Fort Lewis, Washington. Students are formed into small groups with college students from across the nation. The instruction is highly structured and demanding, stressing leadership at small unit levels under varying, challenging conditions. Prerequisites: MIL 100/102 Military Science I, MIL 103 Military Science I Laboratory, MIL 200/202 Military Science II and MIL 300/302 Advanced Military Science III.

MIL 400. Advanced Military Science IV. 3 hours. Administration and logistics, mechanized team tactics, interpersonal skills and counseling. Included is a laboratory activity that will offer leadership development and organizational theory, assumption of duties of cadet chain of command. Includes two weekend practical exercises. Prerequisite: MIL 100/102 Military Science I, MIL 103 Military Science I Laboratory, MIL 200/202 Military Science II and MIL 300/302 Advanced Military Science III. Fall semester.

MIL 402. Advanced Military Science IV. 3 hours. Military law, leadership problems, ethics and professionalism, general military subjects. Included in the class is a laboratory activity that will offer practical staff exercises. Includes two weekend practical exercises. Prerequisite: MIL 100/102 Military Science I, MIL 103 Military Science I Laboratory, MIL 200/202 Military Science II, MIL 300/302 Advanced Military Science III and MIL 400 Advanced Military Science IV. Spring semester.

MIL 455. Seminar in Military Science. 3 hours. Intensive study of a specific topic, problem or theory in the military. May be repeated. Requires completion of the Basic Course and consent of the department chairman.

Marketing

MKTG 227. Workshop (____), 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MKTG 228. Workshop (____), 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MKTG 330. Principles of Marketing, 3 hours. Provides an overview of marketing, focusing on the functions, institutions, channels, and processes used to distribute goods and services from producer to consumer. Prerequisites: MKTG 101 Introduction to Business, PSYCH 155 General Psychology, ECON 200 Principles of Microeconomics or ECON 201 Principles of Macroeconomics and 45 credit hours completed.

MKTG 410. Topics in Marketing (____), 1-3 hours. Study of specific topics in marketing. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: 45 credit hours completed or permission of instructor.

MKTG 420. Services Marketing, 3 hours. Addresses the development and execution of services marketing strategies for goods- and services-producing organizations. Topics include the challenges and opportunities of the marketing of services, the services marketing mix, service quality, customer satisfaction, and employee and customer roles in producing and delivering services. Prerequisite: MKTG 330 Principles of Marketing.

MKTG 430. Retail and Channels Management, 3 hours. Overview of marketing strategies related to marketing channels and retail management. Topics include the nature of retailing, retail marketing strategies, retail buying and selling, marketing channels, and the relationship between retailing and channels. Prerequisite: MKTG 330 Principles of Marketing.

MKTG 440. Advertising Management, 3 hours. Advertising management in relation to overall marketing program; analysis of advertising strategy, organization, and media selection; measurement of effectiveness; social and economic aspects. Prerequisite: MKTG 330 Principles of Marketing.
MKTG 450. Personal Selling and Sales Management. 3 hours. Study of professional selling practices and philosophies. Provides an introduction to the basic activities of sales management and personal selling skills. Topics covered include training, recruiting, motivation, evaluation and compensation of sales force; time and territory management; personal selling process; sales ethics. Prerequisite: MKTG 330 Principles of Marketing.

MKTG 460. Social Media Marketing. 3 hours. Focus on the use of social media to achieve marketing objectives. Emphasis on measurement and evaluation of social media tactics and strategies. Prerequisite: MKTG 330 Principles of Marketing.

MKTG 510. Consumer Behavior. 3 hours. Consumer behavior theories and models; internal influencing forces of needs, motivation, perception, learning, attitudes, and personality; external influencing forces of demographics, culture, social class, family, reference groups, and marketing communication. Prerequisite: MKTG 330 Principles of Marketing and PSYCH 155 General Psychology.

MKTG 520. Marketing Research. 3 hours. Nature and scope of marketing research, scientific method and research techniques, procedures, questionnaire design, sampling, data analysis, and research report writing. Prerequisites: MKTG 330 Principles of Marketing, MGT 310 Business Statistics and MKTG 510 Consumer Behavior.

MKTG 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MKTG 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MKTG 610. Topics in Marketing (___). 1-3 hours. Study of specific advanced topics in marketing. A specific subject area will be identified each time the course is offered. May be repeated if topic is different. Prerequisite: Junior standing.

MKTG 620. Internship in Marketing. 1-3 hours. Internship work experience in public, private, governmental, or not-for-profit business setting. The work experience must be approved by a departmental internship representative/faculty member. Students must enroll in the course during the same semester and time in which the internship occurs. Prerequisite: Permission of instructor required.

MKTG 630. International Experience in Marketing. 1-3 hours. An academically based international experience with a focus on some aspect of marketing. May combine international coursework, business experience, travel and cultural immersion. May be repeated if the country or region visited is different. Specific experiences must be approved in advance by the International Business Advisor or representative. Prerequisite: Permission of International Business Advisor or Representative.

MKTG 640. Senior Honors Project 1 in Marketing. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

MKTG 641. Senior Honors Project 2 in Marketing. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

MKTG 680. Applied Marketing Management. 3 hours. Capstone course in marketing that focuses on application of marketing principles. Prerequisite: MKTG 330 Principles of Marketing, MKTG 510 Consumer Behavior and MKTG 520 Marketing Research.

Modern Languages and Literatures

MLL 114. Chinese Language and Culture I. 3 hours. An introduction to the Chinese language emphasizing the development of listening, speaking, reading, writing, and an appreciation of Chinese culture.

MLL 118. Chinese Language and Culture II. 3 hours. A continuation of MLL 114 Chinese Language and Culture I. A student may earn retro-credit upon successful completion of this course. Prerequisite: MLL 114 Chinese Language and Culture I.


MLL 128. French Language and Culture II. 3 hours. A continuation of MLL 124 French Language and Culture I. Prerequisite: MLL 124 French Language and Culture I. A student may earn retro-credit upon successful completion of this course.

MLL 151. Beginning Spanish Conversation. 3 hours. Conversational practice on a wide range of topics. May be taken as graded or pass-fail.

MLL 152. Spanish for the Professions. 3 hours. A beginning course with an emphasis on oral communication in real life situations. Basic vocabulary and structures to communicate with Spanish speakers in the community.

MLL 154. Spanish Language and Culture I. 3 hours. An introduction to the Spanish language emphasizing the development of listening, speaking, reading and writing, and an appreciation of Hispanic culture.

MLL 158. Spanish Language and Culture II. 3 hours. A continuation of MLL 154 Spanish Language and Culture I. A student may earn retro-credit upon successful completion of this course.

MLL 160. Introduction to Foreign Languages (___). 1-3 hours. Introductory course in one of various languages. May be repeated when course content is different. May be taken on a Pass/Fail basis.

MLL 184. Russian Language and Culture I. 3 hours. An introduction to the Russian language emphasizing the development of listening, speaking, reading, writing, and an appreciation of Russian culture.

MLL 188. Russian Language and Culture II. 3 hours. A continuation of MLL 184 Russian Language and Culture I. Prerequisite: MLL 184 Russian Language and Culture I. A student may earn retro-credit upon successful completion of this course.

MLL 194. Korean Language and Culture I. 3 hours. An introduction to the Korean language with emphasis on comprehension of the spoken language and appreciation of Korean culture, leading to the ability to function effectively at a basis level.

MLL 198. Korean Language and Culture II. 3 hours. A continuation of MLL 194 Korean Language and Culture I. Prerequisite: MLL 194 Korean Language and Culture I. A student may earn retro-credit upon the successful completion of this course.

MLL 221. French Language and Culture III. 3 hours. A continuation of MLL 128 French Language and Culture II. Prerequisite: MLL 128 French Language and Culture II. A student may earn retro-credit upon successful completion of this course.

MLL 225. French Grammar and Conversation I. 3 hours. The study of new grammatical structures and conversational activities for the development of oral proficiency as defined by the American council on the Teaching of Foreign Language. Prerequisite: MLL 221 French Language and Culture III. A student may earn retro-credit upon successful completion of this course.

MLL 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
MLL 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MLL 250. Directed Studies in Spanish (____). 1-3 hours. Directed studies in an area of the Spanish language or Hispanic culture. Permission of the instructor required. May be repeated if the subject matter is different. May be taken as graded or pass-fail.

MLL 251. Spanish Language and Culture III. 3 hours. A continuation of MLL 158 Spanish Language and Culture II. Prerequisite: MLL 158 Spanish Language and Culture II. A student may earn retro-credit upon successful completion of this course.

MLL 253. Spanish Conversation. 3 hours. Conversational activities for the development of oral proficiency as defined by the American Council on the Teaching of Foreign Languages. Prerequisite: MLL 251 Spanish Language and Culture III.

MLL 254. Spanish Grammar and Composition I. 3 hours. The study of new grammatical structures and cultural information and a review of concepts with special emphasis on developing writing skills. A student may earn retro-credit upon successful completion of this course. Prerequisite: MLL 251 Spanish Language and Culture III.

MLL 325. French Grammar and Conversation II. 3 hours. A continuation of MLL 325 French Grammar and Conversation I. Prerequisite: MLL 225 French Grammar and Conversation I or permission of instructor.

MLL 328. Readings in French Literature and Civilization I. 3 hours. The reading of a wide variety of authentic materials, such as literature, journal, and internet articles, and advertisements. A student may earn retro-credit upon successful completion of this course. Prerequisites: MLL 225 French Grammar and Conversation I.

MLL 329. French Grammar and Composition. 3 hours. Intensive study of previous and new grammatical structures with emphasis on written expression. Prerequisites: MLL 325 French Grammar and Conversation II or MLL 328 Readings in French Literature and Civilization I or permission of instructor.

MLL 351. Spanish Grammar and Composition II. 3 hours. Intensive study of previous and new grammatical structures with emphasis on written expression. Prerequisites: MLL 254 Spanish Grammar and Composition I or permission of instructor.

MLL 358. Readings in Hispanic Literature and Civilization I. 3 hours. The reading of a wide variety of authentic materials, such as literature, journal and internet articles, and advertisements. A student may earn retro-credit upon successful completion of this course. Prerequisites: MLL 251 Spanish Language and Culture III.

MLL 420. Readings in French Literature and Civilization II. 3 hours. Texts chosen for their cultural and literary value, with equal emphasis on reading and discussion of the selections. Prerequisites: MLL 328 Readings in French Literature and Civilization I or permission of instructor.

MLL 425. Directed Studies in French (____). 1-3 hours. Directed study of a specific field in French. May be repeated if subject matter is different. Prerequisite: MLL 225 French Grammar and Conversation I or MLL 328 Readings in French Literature and Civilization I and permission of instructor.

MLL 427. French Culture and Civilization. 3 hours. A study of the development of French or French-American culture with particular emphasis on history, politics, economics, customs, traditions, and literary and artistic trends. Prerequisite: MLL 328 Readings in Hispanic Literature and Civilization I.

MLL 427. Directed Studies in Spanish (____). 1-3 hours. Directed study of a specific field in Spanish. May be repeated if subject matter is different. Prerequisite: Permission of instructor. May be taken as graded or pass-fail.

MLL 429. French Grammar and Conversation. 3 hours. A study of the development of oral proficiency as defined by the American Council on the Teaching of Foreign Languages. Prerequisite: MLL 251 Spanish Language and Culture III.

MLL 456. Topics in Spanish. 1-3 hours. Intensified study of a specific field in Spanish. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

MLL 457. Hispanic Culture and Civilization. 3 hours. A study of the development of Spanish or Spanish-American culture with particular emphasis on history, politics, economics, customs, traditions, and literary and artistic trends. Prerequisite: MLL 358 Readings in Hispanic Literature and Civilization I.

MLL 475. Directed Studies in Spanish (____). 1-3 hours. Directed study of a specific field in Spanish. May be repeated if subject matter is different. Prerequisite: Permission of instructor. May be taken as graded or pass-fail.

MLL 477. The Teaching of Languages. 3 hours. Discussion, demonstrations and training in the major approaches, methodologies and techniques to teach languages. Students are also required to observe local classroom(s) an average of 2 hours a week during which they will teach a minimum of 3 lessons over the course of the semester. To be taken before the professional semester. Prerequisites: Admission to Teacher Education and PSYCH 357 Educational Psychology.

MLL 525. French Phonetics and Oral Practice. 3 hours. Theoretical study and practice on the French sound system, articulation of sounds, oral and aural practice. Prerequisites: MLL 225 French Grammar and Conversation I or MLL 328 Readings in French Literature and Civilization I and permission of instructor.

MLL 526. Business French. 3 hours. A study of business environments and practices in France and Quebec with development of language skills specific to business and the professions. Prerequisites: MLL 225 French Grammar and Conversation I or MLL 328 Readings in French Literature and Civilization I and permission of instructor.

MLL 527. Translation of French. 3 hours. Translation of texts from French into English, and from English into French, using authentic materials covering a broad range of written texts, topics, linguistic levels, and registers. Prerequisites: MLL 225 French Grammar and Conversation I or MLL 328 Readings in French Literature and Civilization I and permission of instructor.

MLL 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MLL 550. Hispanic Film. 3 hours. The study of the movies of an individual director or of those of a given performer or movement, or an overview of the genre. Prerequisites: MLL 254 Spanish Grammar and Composition I and MLL 358 Readings in Hispanic Literature and Civilization I.

MLL 551. Hispanic Visual Culture. 3 hours. The study of the great works of Hispanic art as a means of understanding the culture that produced them. Prerequisites: MLL 254 Spanish Grammar and Composition I and MLL 358 Readings in Hispanic Literature and Civilization I.

MLL 555. Spanish Phonetics and Oral Practice. 3 hours. Theoretical study and practical work on the Spanish sound system, articulation of sounds, oral and aural practice. Prerequisites: MLL 254 Spanish Grammar and Composition I and MLL 358 Readings in Hispanic Literature and Civilization I and permission of instructor.

MLL 556. Spanish for International Business. 3 hours. A study of business environments and practices in Spain and Latin America with development of language skills specific to business and the professions. Prerequisites: MLL 254 Spanish Grammar and Composition I and MLL 358 Readings in Hispanic Literature and Civilization I.

MLL 557. Translation of Spanish. 3 hours. Translation of texts from Spanish into English, and from English into Spanish, using authentic materials covering a broad range of written texts, topics, linguistic levels, and registers. Prerequisites: MLL 254 Spanish Grammar and Composition I and MLL 358 Readings in Hispanic Literature and Civilization I.

MLL 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.
MLL 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MLL 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

MLL 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

MLL 625. Topics in French (___). 1-3 hours. Intensive study of a specific field in French. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

MLL 655. Topics in Spanish (____). 1-3 hours. Intensified study of a specific field in Spanish. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

MLL 720. Topics in French (___). 1-3 hours. An intensified study of a specific field in French. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

MLL 750. Topics in Spanish (___). 1-3 hours. Intensified study of a specific field in Spanish. May be repeated if subject is different. Prerequisite: Permission of instructor.

Music

MUSIC 102. Class Voice. 1 hours. Beginning level group instruction in voice performance, focusing on the fundamentals of voice production in speaking and singing, including vocal hygiene. Designed for any or all students with limited singing experience, wishing to improve their singing skills. May be repeated.

MUSIC 109. Aural Skills and Theory Fundamentals. 4 hours. Aural recognition of some simple intervals, scales and triads; melodic dictation and rhythmic dictation. Use of solfege syllables for singing intervals, scales, and diatonic melodies; keyboard performance of scales and play/sing exercises; performance of rhythms with basic conducting patterns. Basic skills in music reading. Key signatures, scales, intervals, treble and bass clefs, rhythmic notation.

MUSIC 111. Aural Skills and Theory I. 4 hours. Aural recognition and singing of all simple intervals, scales, triads; one-phrase melodic dictation; diatonic harmonic dictation; rhythmic dictation; use of solfege syllables for sightsinging; keyboard performance of keyboard play/sing exercises; performance of rhythms with basic conducting patterns. Introduction to first-species counterpoint; instrumental transposition and the overtone series; introduction to melodic structures, cadences, and periods; composition exercises for instruments. Prerequisite: Entrance exam grade. A grade of C or better is required. Spring only.

MUSIC 113. Aural Skills and Theory II. 4 hours. Aural recognition and singing of compound intervals, triads and seventh chords; two-phrase melodic dictation; 4-part diatonic harmonic dictation with introduction to chromatism; rhythmic dictation involving syncopation and hemiola; singing of melodies with chromatic inflections; performance of rhythms with conducting patterns; performance of keyboard play/sing exercises. Study of 2nd, 3rd, and 4th species counterpoint; use of jazz/pop chord and Roman/Arabic symbols; analysis of musical examples; introduction to chromatism; composition exercises for piano and other instruments. Prerequisite: MUSIC 111 Aural Skills and Theory I. A grade of C or better is required. Fall only.

MUSIC 120. Music Appreciation (____). 3 hours. Using the techniques of listening to recognize the various elements, forms, styles, and textures of music, this class helps develop an appreciation of the fine arts and aesthetics of human performance in the arts. Subject matter will vary with each section but will emphasize types of music such as: classical, jazz, rock or world music. The specific content of each section will be identified in the class schedule. May be repeated if course content is different. No previous music experience is necessary. Classical sections not open to students who have completed MUSIC 121 Introduction to Music Literature or its equivalent. Not open to music majors.

MUSIC 121. Introduction to Music Literature. 2 hours. Significant musical works from the Middle Ages through the present with stylistic analysis. A secondary emphasis is placed on world music. Designed for music majors and minors. Fall only. This course satisfies the Fine Arts (2-3 hours) section of the general education requirements for all music degrees.

MUSIC 131. Piano Class. 1 hours. Beginning study of the piano, including the keyboard, treble and bass clefs, scales, basic chords, elementary technique. Methods of practicing, sight reading, study and performance of simple piano music. Primarily for music majors with little or no previous piano study. May be repeated. Must have a C or better to pass. Fall only.

MUSIC 132. Piano Class. 1 hours. Continuation of MUSIC 131 Piano Class. May be repeated. Primarily for music majors and minors. Must have a C or better to pass. Spring only.

MUSIC 140. Children's Music. 3 hours. Basic fundamentals, activities, and materials of music in the elementary classroom.

MUSIC 156. Band (____). 1 hours. The band organizations have a dual objective of service to the school and the study and performance of significant repertoire specifically composed for this medium. Included in the organizations are the Symphonic Band, Marching Band, and Wind Ensemble. Open to all university students by audition. MUSIC 156 Band (___) may be repeated for a maximum of 8 hours. MUSIC 356 Band (___) and MUSIC 756 Band (___) may be repeated.

MUSIC 157. Jazz Ensemble. 1 hours. Patterned after both contemporary big band and the large popular groups of the 1930's, this group devotes itself to the performance of the best jazz literature of the past and present. Open to all university students by audition. MUSIC 157 Jazz Ensemble may be repeated for a maximum of 4 hours. MUSIC 357 Jazz Ensemble and MUSIC 757 Jazz Ensemble may be repeated.

MUSIC 167. Jazz Choir. 1 hours. A mixed ensemble of singers selected to study and perform vocal jazz and other popular idioms. Appearance include university, community, and regional functions, often in conjunction with the Jazz Ensemble or Combo. Open to students by audition. MUSIC 167 Jazz Choir may be repeated for a maximum of 4 hours. MUSIC 367 Jazz Choir and MUSIC 767 Jazz Choir may be repeated.

MUSIC 176. Orchestra. 1 hours. Orchestral training including preparation and performance of standard literature for orchestra. Opera, and oratorio. Open to all university students by audition. MUSIC 176 Orchestra may be repeated for a maximum of 4 hours. MUSIC 376 Orchestra and MUSIC 776 Orchestra may be repeated.

MUSIC 178. Chamber Music (____) (subject such as Brass, Strings, etc). 1 hours. Prerequisite: Adequate performance skill and assignment to the specific ensemble group. May be repeated.

MUSIC 188. Chorale. 1 hours. Mixed ensemble of selected singers involved in the preparation and performance of choral music from the 16th century to the present. Activities include campus concerts, participation in oratorio production, spring tour and other performances. Open to students by audition. MUSIC 188 Chorale may be repeated for a maximum of 4 hours. MUSIC 388 Chorale and MUSIC 788 Chorale may be repeated.

MUSIC 191. Recital Hour. 0 hours. Performance venue for all music majors. Opportunity to become familiar with repertoire of a variety of genres and to gain performance experience. Required for seven semesters. Grades assigned on the basis of attendance. May be repeated.
MUSIC 211. Aural Skills and Theory III. 4 hours. 4-part dictation of chromatic harmony; dictation or modulating melodies; dictation and sight-singing with chromatic solfege syllables; keyboard performance with play/sing exercises. Study of modulation and late-19th century harmonic practice; composition exercises with emphasis on varieties of texture. Prerequisite: MUSIC 113 Aural Skills and Theory II. A grade of C or better is required. Spring only.

MUSIC 213. Aural Skills and Theory IV. 4 hours. Dictation of alternative scales and melodies based on those scales; aural recognition of extended tertian sonorities and altered dominants; singing of jazz melodies and 12-note rows; keyboard play/sing exercises of jazz harmonic progressions. Study of 20th-century harmonic practice, including atonal, 12-tone and jazz; introduction to indeterminacy. Prerequisite: MUSIC 211 Aural Skills and Theory III. A grade of C or better is required. Fall only.

MUSIC 225. Topics in Music (____). 1-3 hours. Lecture or seminar in specialized areas of music. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

MUSIC 226. Jazz Improvisation. 2 hours. A systematic approach to the art of improvisation including terms, patterns, solo development, and analysis of solos. Prerequisite: Past or concurrent enrollment in MUSIC 109 Aural Skills and Theory Fundamentals or by permission of instructor. May be repeated.

MUSIC 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MUSIC 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MUSIC 231. Intermediate Piano Class. 1 hours. Continuation of MUSIC 131 and MUSIC 132 Piano Class. Designed to enable music majors to meet secondary piano requirements. Study and performance in class of appropriate piano music such as Bach dances, sonatinas, and similar works. May be repeated. Prerequisite: MUSIC 131 and MUSIC 132 Piano Class or MUSIC 250 Applied Music (Piano) or equivalent. Must have a C or better to pass. Fall only.

MUSIC 232. Intermediate Piano Class. 1 hours. Continuation of MUSIC 231 Intermediate Piano Class. May be repeated. Must have a C or better to pass. Spring only.

MUSIC 238. Basic Conducting. 2 hours. Baton techniques involving beat patterns. Solfeggio practice and its application in transposition. Score structure, terminology and score reading. Fall only.

MUSIC 241. Introduction to Music Education. 1 hours. Designed for prospective public school music teachers. Includes field experience and directed observation in area schools. Introduction to curriculum and standards for K-12 school music programs. Fall only.

MUSIC 250. Applied Music (____). 1/2-3 hours. 3 hours for students in the B.M. program**, 2 hours for students in the B.M.E. and B.A. programs**, all others 1 hour*. May be repeated. Prerequisite: Permission of instructor. (*This may be a beginning subject or may be a continuation of an instrument previously studied. Frequently this instrument has a functional purpose for music teaching such as piano, organ, or voice. Consistent progress is expected but the level of performance is not specified and no recital is required. The student is expected to practice one hour per day.) (**For the degree of Bachelor of Music Education, the student declares an applied emphasis upon entering and is expected to continue this subject with a one-hour lesson each week for seven semesters. Daily practice of two hours is expected.) (**For the degree of Bachelor of Music, intensive study is expected in the performance major throughout the program, with a one hour private lesson per week and minimum daily practice of three hours.) (Summer session credit, 1/2 of that listed in each instance.)

MUSIC 279. Opera Workshop. 1-3 hours. Preparation of the singing actor with stage technique for the lyric theater. Techniques of preparing works. Scenes from standard and contemporary operas and operettas. May be repeated. Open to students by audition.


MUSIC 289. Applied Diction for Singers II. 1 hours. Drill on the phonetics of French and German and application to solo and choral repertoire.

MUSIC 311. Composition. 3 hours. Original composition in the smaller forms for piano, voice, solo instruments, small ensembles. Prerequisite: MUSIC 113 Aural Skills and Theory II. May be repeated.

MUSIC 321. History of Music. 3 hours. Medieval, Renaissance, and Baroque periods. Music characteristics and the lives and contributions of the principal composers. General historic background, the political and cultural milieu, the growth of notation, and of instrumental and vocal music, both sacred and secular. Fall only.

MUSIC 322. History of Music. 3 hours. Classical period to the present. Continuation of MUSIC 321 History of Music. Spring only.

MUSIC 326. Pedagogy/Literature (____). 1-3 hours. Pedagogical principles related to teaching the specific area to include a survey of method books and/or technique books as appropriate to the medium and knowledge/creation of appropriate warm-up techniques as appropriate to the medium. Also included are lesson observations and the creation of a course of study/knowledge of repertoire. Prerequisite: Junior standing. May be repeated if subject matter differs.

MUSIC 330. Woodwind Techniques. 2 hours. Playing experience on clarinet, saxophone, flute, and double reed instruments. Embouchure, fingerings, reed selection and adjustment, instrument selection and maintenance, mouthpiece selection, literature, and teaching techniques.

MUSIC 331. Brass Techniques. 1 hours. Playing experience on upper and lower brass instruments. Embouchure, fingerings, slide positions, instrument selection and maintenance, mouthpiece selection, transpositions, literature, and teaching techniques. Must enroll concurrently with MUSIC 336 Vocal Techniques.

MUSIC 333. Percussion Techniques. 1 hours. Applied techniques on instruments of the percussion section. Repair and care of drums and heads, study and practice on different roll techniques, literature, teaching techniques, and the application of the techniques to orchestra, band, and drum corps. Must enroll concurrently with MUSIC 342 String Techniques.

MUSIC 336. Vocal Techniques. 1 hours. Experience in using the voice for teaching purposes, teaching techniques for students at all levels, literature. Must enroll concurrently with MUSIC 331 Brass Techniques.

MUSIC 337. Choral Conducting. 2 hours. Development of techniques necessary to interpret and perform diverse styles of choral literature. Emphasis placed on music appropriate for use in schools. Prerequisite: MUSIC 238 Basic Conducting.

MUSIC 338. Instrumental Conducting. 2 hours. Baton techniques as applied to different types of instruments. Rehearsal procedures and techniques, with practical application in conducting instrumental laboratory organization. Survey of suitable instrumental literature. Prerequisite: MUSIC 238 Basic Conducting. Spring only.

MUSIC 340. Organization of the Instrumental Music Program. 3 hours. Curriculum, philosophy, and administration of the program, including materials and techniques for implementation. Prerequisite: MUSIC 238 Basic Conducting. Concurrent enrollment in a techniques class unless all requirements have already been met. Spring only.

MUSIC 341. Band Literature and Methods. 3 hours. Literature and materials for school bands. Selected works will be analyzed with regard to rehearsal techniques which may be employed to increase the perception and judgment of band students.

MUSIC 342. String Techniques. 1 hours. Playing experience on upper and lower string instruments. Left and right hand technique, instrument selection and maintenance, literature, and teaching techniques. Must enroll concurrently with MUSIC 333 Percussion Techniques.

MUSIC 344. Marching Band Techniques. 1 hours. Organization and administration of the modern marching band program. Charting and show building with performance and drumming procedures. Materials and methods are emphasized. Fall only.

MUSIC 345. Jazz Ensemble Techniques. 1 hours. Organization and administration of the modern jazz ensemble. Jazz phrasing, styles, improvisation, materials, and methods are emphasized. Prerequisite: MUSIC 238 Basic Conducting and MUSIC 113 Aural Skills and Theory II. Spring only.
MUSIC 356. Band (____). 1 hours. The band organizations have a dual objective of service to the school and the study and performance of significant repertoire specifically composed for this medium. Included in the organizations are the Symphonic Band, Marching Band, and Wind Ensemble. Open to all university students. MUSIC 156 Band (____) may be repeated for a maximum of 8 hours. MUSIC 356 Band (____) and MUSIC 756 Band (____) may be repeated.

MUSIC 357. Jazz Ensemble. 1 hours. Patterned after both contemporary big band and the large popular groups of the 1930's, this group devotes itself to the performance of the best jazz literature of the past and present. Open to all university students by audition. MUSIC 157 Jazz Ensemble may be repeated for a maximum of 4 hours. MUSIC 357 Jazz Ensemble and MUSIC 757 Jazz Ensemble may be repeated.

MUSIC 367. Jazz Choir. 1 hours. A mixed ensemble of singers selected to study and perform vocal jazz and other popular idioms.Appearances include university, community, and regional functions, often in conjunction with the Jazz Ensemble or Combo. Open to students by audition. MUSIC 167 Jazz Choir may be repeated for a maximum of 4 hours. MUSIC 367 Jazz Choir and MUSIC 767 Jazz Choir may be repeated.

MUSIC 376. Orchestra. 1 hours. Orchestral training including preparation and performance of standard literature for orchestra, opera, and oratorio. Open to all university students by audition. MUSIC 176 Orchestra may be repeated for a maximum of 4 hours. MUSIC 376 Orchestra and MUSIC 776 Orchestra may be repeated.


MUSIC 378. Chamber Music (____) (subject such as Brass, Strings, etc). 1 hours. Prerequisite: Adequate performance skill and assignment to the specific ensemble group. May be repeated.


MUSIC 387. University Choir. 1 hours. A large mixed ensemble that performs a wide variety of choral literature in at least one major concert each semester. Additional performances, both on and off campus, are often included as well. No audition required. MUSIC 187 University Choir may be repeated for a maximum of 4 hours. MUSIC 387 University Choir and MUSIC 787 University Choir may be repeated.

MUSIC 388. Chorale. 1 hours. Mixed ensemble of selected singers involved in the preparation and performance of choral music from the 16th century to the present. Activities include campus concerts, participation in oratorio production, spring tour and other performances. Open to students by audition. MUSIC 188 Chorale may be repeated for a maximum of 4 hours. MUSIC 388 Chorale and MUSIC 788 Chorale may be repeated.

MUSIC 391. Recital Hour. 0 hours. Performance venue for all music majors. Opportunity to become familiar with repertoire of a variety of genres and to gain performance experience. Required for seven semesters. Grades assigned on the basis of attendance. May be repeated.

MUSIC 392. Junior Recital (____). 1 hours. For the Bachelor of Music program, a recital of at least 30 minutes is required in the junior year. May be repeated if the medium is different. Prerequisite: Junior level in same applied subject, with concurrent enrollment in that subject, plus permission of instructor.

MUSIC 413. Orchestration. 3 hours. Range, color, and treatment of orchestral and band instruments. Practical arranging for ensembles, orchestra and band; brief history of orchestration. Prerequisite: MUSIC 213 Aural Skills and Theory IV.

MUSIC 414. Forms and Analysis. 2 hours. Form, harmonic and melodic structure, large and small forms, music of various periods.

MUSIC 425. Topics in Music (____). 1-3 hours. Lecture or seminar in special areas of music. May be repeated if subject matter is different. Prerequisite: Permission of instructor.

MUSIC 431. Teaching Music in the Schools, Pre-K-8. 3 hours. Approaches to teaching singing, playing instruments, listening, moving to, and creating music. Emphasis is on Orff, Kodaly, and Dalcroze methodologies. Spring only.

MUSIC 432. Secondary Choral Methods. 3 hours. Philosophy, objectives, and organization of the program with materials and techniques for implementation. Prerequisite: MUSIC 238 Basic Conducting, MUSIC 213 Aural Skills and Theory IV. Fall only.

MUSIC 450. Applied Music (____). 1/2-3 hours. For secondary students, 1 hour*; for students on the B.M.E. program, 2 hours**; for students on the B.M. program, 3 hours***. May be repeated. May be taken for departmental honors in a semester when a recital is not required. Prerequisite: Successful audition before a qualifying jury of the Department of Music faculty, completion of the junior barrier portfolio, and permission of instructor. (*This may be a beginning subject or may be a continuation of an instrument previously studied. Frequently this instrument has a functional purpose for music teaching such as piano, organ, or voice. Consistent progress is expected but the level of performance is not specified and no recital is required. The student is expected to practice one hour per day.) (**For the degree of Bachelor of Music Education, the student declares an applied emphasis upon entering and is expected to continue this subject with a one-hour lesson each week for seven semesters. Daily practice of two hours is expected.) (***For the degree of Bachelor of Music, intensive study is expected in the performance major throughout the program, with a one hour private lesson per week and minimum daily practice of three hours.) (Summer session credit, 1/2 of that listed in each instance.)

MUSIC 479. Opera Workshop. 1-3 hours. Preparation of the singing actor with stage technique for the lyric theater. Techniques of preparing works. Scenes from standard and contemporary operas and operettas. May be repeated. Open to students by audition.

MUSIC 492. Senior Recital (____). 1 hours. For the Bachelor of Music Education program, a recital of 30 minutes is required; for the Bachelor of Music program, a solo recital of at least one hour is required. Prerequisite: Senior level in the same applied subject, with concurrent enrollment in that subject, plus permission of instructor. May be repeated if applied medium is different. BM majors must pass Piano Proficiency Examination before they will be allowed to perform their Senior Recital.

MUSIC 493. Senior Project. 1 hours. For the Bachelor of Arts degree only. Students seeking the BA in Music degree have the option of doing a Senior Recital or a Senior Project as the capstone course for their degree. The scope and depth of the project will be determined in consultation with the BA degree advisor in the Department of Music. Prerequisite: Approval of BA Advisor.

MUSIC 511. Counterpoint. 3 hours. Analysis of vocal and instrumental polyphony of the Late Renaissance to the 20th Century. Composition based on the styles of representative composers. Prerequisite: MUSIC 213 Aural Skills and Theory IV. Spring only.

MUSIC 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MUSIC 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. BME majors must pass Piano Proficiency Examination before they student teach. Offered on a Pass-Fail basis only.

MUSIC 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

MUSIC 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.
MUSIC 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

MUSIC 710. Organ Seminar (____). 2 hours. Examination of representative literature and instruments from the major historical traditions, with special emphasis on matters related to performance practice. Score and prose readings, lectures, live and recorded performances. May be repeated if subject material is different.

MUSIC 711. Advanced Composition. 3 hours. Contemporary compositional devices with an emphasis on counterpoint and the larger forms. May be repeated for a maximum of nine hours.

MUSIC 713. Graduate Review-Music Theory. 2 hours. Review course for students who show deficiencies in Music Theory based on the results of graduate entrance exam. Course will not count for degree credit and must be completed prior to being allowed to enroll in graduate music theory courses. Prerequisite: Graduate Entrance Examination. Fall only.

MUSIC 716. Graduate Review-Music History. 2 hours. Review course for students who show deficiencies in Music History based on the results of graduate entrance exam. Course will not count for degree credit and must be completed prior to being allowed to enroll in graduate music history courses. Prerequisite: Graduate Entrance Examination. Fall only.

MUSIC 722. History of Solo Vocal Repertoire. 3 hours. A selective survey of standard solo art song repertoire. Hands-on teaching experiences include multimedia presentation enriched by individual research and solo performance. Prerequisite: 12 hours of applied music credit.

MUSIC 723. Piano Literature (____). 3 hours. Solo literature and concerti for piano chosen from selected historical periods with detailed study of representative works of the major composers. May be repeated if subject matter is different. Prerequisite: 12 hours of applied piano music credit or equivalent study.

MUSIC 725. Topics in Music (____). 1-3 hours. Lecture or seminar in specialized areas of music. Prerequisite: MUSIC 213 Aural Skills and Theory IV and MUSIC 321 History of Music or equivalent. May be repeated if topic is different.

MUSIC 728. Pedagogy/Literature (____). 3 hours. Methods and materials, studio curriculum development, studio management, and career development for teaching at institutions of higher learning. Content related to specified applied area.

MUSIC 731. Choral Techniques. 3 hours. Problems confronting the choral conductor in rehearsal techniques, including such elements as tonal production, diction, balance and intonation.

MUSIC 736. Advanced Choral Conducting. 3 hours. Choral conducting techniques, open-score reading, score study, sight-singing, technical application of the study of styles. Preparation and performance of specific works. May be repeated for a maximum of 6 hours.

MUSIC 738. Advanced Instrumental Conducting I. 3 hours. A critical analysis and interpretation of standard and contemporary literature. The preparation and reading of the full score. Physical aspects of advanced conducting problems. May be repeated for a maximum of 6 hours.

MUSIC 741. Instrumental Methods and Literature. 3 hours. Literature and materials for instrumental ensembles of all levels. Selected works will be analyzed with regard to rehearsal techniques which may be employed to increase the perception and judgment of instrumental students. Not open to students with credit in MUSIC 341 Band Literature and Methods.

MUSIC 747. Piano Pedagogy I. 2 hours. Methods and materials (beginning through 4th year). Studio curriculum development, studio management, and career development observations and discussions with experienced teachers. Prerequisite: MUSIC 450 Applied Music (Piano).

MUSIC 750. Applied Music (____). 1/2-3 hours. For graduate students. A 1/2 hour lesson receives 1 hour credit, a full hour lesson receives 2 hours credit. May be repeated. Prerequisite: Permission of instructor. (Summer session credit, 1/2 of that listed in each instance.)

MUSIC 756. Band (____). 1 hours. The band organizations have a dual objective of service to the school and the study and performance of significant repertoire specifically composed for this medium. Included in the organizations are the Symphonic Band, Marching Band, and Wind Ensemble. Open to all university students. MUSIC 156 Band (____) may be repeated for a maximum of 6 hours.

MUSIC 758 Band (____) and MUSIC 758 Band (____) may be repeated.

MUSIC 757. Jazz Ensemble. 1 hours. Patterned after both contemporary big band and the large popular groups of the 1930's, this group devotes itself to the performance of the best jazz literature of the past and present. Open to all university students by audition. MUSIC 157 Jazz Ensemble may be repeated for a maximum of 4 hours. MUSIC 357 Jazz Ensemble and MUSIC 757 Jazz Ensemble may be repeated.

MUSIC 767. Jazz Choir. 1 hours. A mixed ensemble of singers selected to study and perform vocal jazz and other popular idioms. Open to all university students at audition. MUSIC 167 Jazz Choir may be repeated for a maximum of 4 hours. MUSIC 367 Jazz Choir and MUSIC 767 Jazz Choir may be repeated.

MUSIC 776. Orchestra. 1 hours. Orchestral training including preparation and performance of standard literature for orchestra, opera, and oratorio. Open to all university students by audition. MUSIC 176 Orchestra may be repeated for a maximum of 4 hours. MUSIC 376 Orchestra and MUSIC 776 Orchestra may be repeated.

MUSIC 777. Art of Accompanying. 2 hours. Solving practical and artistic issues in accompanying. Discussion and application of various approaches to accompanying a diverse selection of instrumental and vocal works. Open to all those who have taken MUSIC 377 Accompanying Techniques. Prerequisite: Piano proficiency equal to MUSIC 450 Applied Music (Piano).

MUSIC 778. Advanced Chamber Music (____) (subject, such as Brass, Strings, etc.). 1 hours. Prerequisite: Performance skill of senior recital level and assignment to the specific ensemble group. May be repeated.

MUSIC 779. Opera Workshop. 1-3 hours. Preparation of the singing actor with stage techniques for the lyric theater. Techniques of preparing works. Scenes from standard and contemporary operas and operettas. May be repeated. Open to students by audition.

MUSIC 787. University Choir. 1 hours. A large mixed ensemble that performs a wide variety of choral literature in at least one major concert each semester. Additional performances, both on and off campus, are often included as well. No audition required. MUSIC 187 University Choir may be repeated for a maximum of 4 hours. MUSIC 387 University Choir and MUSIC 787 University Choir may be repeated.

MUSIC 788. Chorale. 1 hours. Mixed ensemble of selected singers involved in the preparation and performance of choral music from the 16th century to the present. Activities include campus concerts, participation in oratorio production, spring tour and other performances. Open to students by audition. MUSIC 188 Chorale may be repeated for a maximum of 4 hours. MUSIC 388 Chorale and MUSIC 788 Chorale may be repeated.

MUSIC 810. Analytical Techniques. 3 hours. Analysis of music compositions from the various musical periods with an emphasis on structure and style, with their relationship to performance. Prerequisite: Satisfactory performance on the Graduate Music Theory Placement Examination and MUSIC 414 Forms and Analysis. Spring only.

MUSIC 819. History of Opera. 3 hours. The history of the opera as a lyric-dramatic medium. Emphasis on its sociological, theatrical and musical origins and the rise of national styles. Prerequisite: 6 hours of undergraduate music history, or consent of instructor.

MUSIC 822. Introduction to Graduate Study in Music. 2 hours. Techniques and materials of musical composition. Bibliography in music and music education. Fall only.
MUSIC 823. Music in the Renaissance. 3 hours. The development of music from 1450 to 1600 with emphasis on the major schools and composers. Prerequisites: Seven hours of music history and literature.

MUSIC 824. Music in the Baroque Era. 3 hours. The development of the styles of the principal composers and schools of composition of the Baroque Era.

MUSIC 825. Music in the Classical Period. 3 hours. Styles and techniques of the Stili Galant and the Rococo as antecedents to the classical period. Development of the tonal forms, emergence of the string quartet and art song. Comparison of the Baroque and Classical styles of opera and oratorio.

MUSIC 826. 19th-Century Romanticism in Music. 3 hours. 19th-Century romanticism in the works of representative composers of solo and orchestral literature, art song, opera and ballet.

MUSIC 827. Directed Study in Music History (____). 3 hours. Individual reading and research in music history from the Middle Ages to the present. Prerequisite for acceptance as graduate credit: Satisfactory performance on the Music History Preliminary Examination. May be repeated for a maximum of 6 hours if topic is different.

MUSIC 828. Advanced Vocal Pedagogy. 3 hours. Basic anatomy and physiology of the vocal mechanism; survey of current research/literature on the topic; examination of standard reference materials. Practical application of principles through supervised studio teaching. Prerequisite: Undergraduate vocal pedagogy or the equivalent.

MUSIC 829. The History of the Wind Band. 3 hours. The complete history of the wind band from Renaissance to present day. Instrument developments and uses. Significant works and composers. Current trends and a look to the future of the wind band medium.

MUSIC 831. Choral Literature (____). 3 hours. Styles, forms and national influence in choral music of selected historical periods; score study and listening. May be repeated if subject matter is different.

MUSIC 832. Directed Study in Music Education (____). 3 hours. Individual reading and research in music education. May be repeated for a maximum of 6 hours if topic is different. Prerequisite: Major in music education.

MUSIC 833. 20th Century Music. 3 hours. Analysis of the styles, techniques and philosophical concepts of the principal composers and schools of composition. Contemporary principles of music and art aesthetics and the influences of the major social and political events.

MUSIC 834. Foundations of Music Education. 3 hours. Historical and philosophical foundations of music education. Principles of music education as applied to curriculum, methods and evaluation.


MUSIC 836. Advanced Instrumental Conducting II. 3 hours. Continuation of materials and techniques from MUSIC 738 Advanced Instrumental Conducting I. Preparation of material for Graduate Conducting Recital #2. Rehearsal techniques and preparation. Literature selection, rehearsal outlining, program notes and performance evaluation is included. Prerequisite: MUSIC 738 Advanced Instrumental Conducting I. May be repeated for a maximum of six hours.

MUSIC 839. Introduction to Symphonic Literature. 3 hours. Survey of symphonic literature from the 18th-century through contemporary works. The class focuses especially on the symphony (with reference to related genres such as the concerto and the symphonic poem), tracing its course in major works from the classical period to the present.

MUSIC 850. Applied Music (____). 1-4 hours. Private study and public performance of advanced musical literature. Designed for students auditioning for permission to enroll in MUSIC 890 Thesis, on the same instrument. Prerequisite: Permission of instructor. May be repeated to a maximum of four hours. (Summer session credit, 1/2 of that listed in each instance.)

MUSIC 890. Thesis. 1-6 hours. May be repeated.

Nursing

NURS 205. Special Topics in Nursing (____). 1-3 hours. Study of nursing or a health related issue. Specific topic will be designated each time the course is offered. May be repeated if different course content. Will not apply to the nursing major. Prerequisites: None.

NURS 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

NURS 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

NURS 265. Health Promotion and Disease Prevention. 2 hours. Concepts essential for health promotion and disease prevention across the lifespan. Emphasis is placed on levels of prevention, wellness, and teaching methods and planning. Open to all majors.

NURS 303. Introduction to Public Health. 3 hours. An introduction to public health to introduce students from a variety of disciplines to the basic tenets of public health providing a history of public health, and introduction to the public health core functions and disciplines, (epidemiology, environmental health, biostatistics, health management and policy and social and behavior health), current events and issues in the field, and career opportunities.

NURS 304. Advancing Careers: Transitioning to Baccalaureate Nursing. 3 hours. Engages the learner intellectually in an ongoing professional dialogue and journey with peers, colleagues and instructors to broaden professional development and build on preexisting knowledge and experience. Content centers on involvement within the profession, utilization of evidence-based practice, expanding technologies and broadening the vision of professional nursing practice. Prerequisite: Admission to the PSU Irene Ransom Bradley School of Nursing RN-BSN Program and completion of an associate degree in nursing and licensed as a registered nurse.

NURS 312. Neonatal Resuscitation. 2 hours. A self-study course focusing on the principles and procedures of hospital-based resuscitation of newborns. Physiology of the initiation of newborn respirations; the procedures of airway management, ventilation, chest compressions, and intubation; and the use of medications. Permission of instructor required.

NURS 314. Health Care Terminology and Drug Calculations. 3 hours. Health care terminology and math skills applied to solving problems of drug dosage calculations, interpretation of physician/health care provider’s orders, and instructions on how to read drug labels. This course is for pre-nursing, nursing, and allied health professionals pursuing a possible career in the healthcare field. Course is self-paced design. Open to all majors.

NURS 318. Nursing Fundamentals. 5 hours. Focus on delivery of safe, high quality nursing care. Psychomotor skills necessary to safely perform therapeutic interventions are discussed, demonstrated, practiced in a laboratory setting and applied in structured acute care settings. Prerequisite: Admission to the Irene Ransom Bradley School of Nursing Pre-Licensure BSN program. Concurrent enrollment or successful completion of NURS 265 Health Promotion and Disease Prevention, NURS 320 Health Assessment, NURS 322 Professional Nursing and NURS 390 Pathophysiological Bases of Nursing.

NURS 320. Health Assessment. 3 hours. Two hours theory and one credit hour is clinical which is equivalent to three clock hours of clinical per week for a total of 48 hours. Examine nurse’s role in conducting evidence-based health and physical assessments across the life span. Emphasis is on development of physical assessment skills, differentiating normal and abnormal findings, and completing proper documentation of findings. Prerequisite: Admission to the Irene Ransom Bradley School of Nursing Pre-Licensure BSN program. Concurrent enrollment or successful completion of NURS 265 Health Promotion and Disease Prevention, NURS 318 Nursing Fundamentals, NURS 322 Professional Nursing and NURS 390 Pathophysiological Bases of Nursing.
### COURSE DESCRIPTIONS

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<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
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<tr>
<td>NURS 321. Health Assessment for the Registered Nurse.</td>
<td>4 hours. Examine nurse's role in conducting evidence-based health and physical assessments across the life span. Emphasis is on advancing the foundation of physical assessment skills, differentiating normal and abnormal findings, and completing proper documentation. Prerequisite: Admission to the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse. Concurrent enrollment or satisfactory completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing.</td>
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<tr>
<td>NURS 322. Professional Nursing.</td>
<td>3 hours. Lecture. Concepts, knowledge and skills essential for implementation of the practice of nursing. Assists with transition into a professional nursing program and provides specific techniques for success in the nursing major. Prerequisite: Admission to the Irene Ransom Bradley School of Nursing Pre-Licensure BSN program. Concurrent enrollment or satisfactory completion of NURS 265 Health Promotion and Disease Prevention, NURS 318 Nursing Fundamentals, NURS 320 Health Assessment and NURS 390 Pathophysiologic Bases of Nursing.</td>
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<tr>
<td>NURS 340. Nurse's Role in Health Promotion.</td>
<td>2 hours. Concepts essential for health promotion and disease prevention for nurses. The course provides coverage of theory and research with an emphasis for clinical application of preventative and health promotion actions. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse.</td>
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<tr>
<td>NURS 370. Women's Health Issues.</td>
<td>2 hours. Overview of health care needs and common health concerns of women throughout the life cycle. Emphasis will be placed on preventative measures and use of available community resources.</td>
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<tr>
<td>NURS 390. Pathophysiologic Bases of Nursing.</td>
<td>3 hours. Study of disruptions of physiology in the human organism. Previously acquired knowledge of behavioral and physiologic sciences will be related to selected pathological conditions. Prerequisites: Admission to the Irene Ransom Bradley School of Nursing RN to BSN Program, BIOL 257/258 Anatomy and Physiology/Laboratory, BIOL 371/372 General Microbiology/Laboratory and CHEM 105/106 Introductory Chemistry/Laboratory or permission of instructor.</td>
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<tr>
<td>NURS 405. Gerontological Nursing.</td>
<td>3 hours. Three credit hours total. Two hours theory and one credit hour is clinical which is equivalent to three clock hours of clinical per week for a total of 48 hours. Promotes successful healthy aging while addressing the physical, psychosocial, and spiritual needs of older adults utilizing a holistic framework.</td>
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<tr>
<td>NURS 407. Gerontology for the Registered Nurse.</td>
<td>2 hours. Promotes successful healthy aging while addressing the physical, psychosocial, and spiritual needs of older adults utilizing a holistic framework. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse. Concurrent enrollment or satisfactory completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing.</td>
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<tr>
<td>NURS 410. Nursing the Adult Medical-Surgical Client.</td>
<td>7 hours. Integrate theories and content from the sciences, arts, humanities, nursing and other disciplines to facilitate adaptive responses of clients to chronic and acute physiological problems. Emphasis is placed on adults in hospital and community settings.</td>
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<tr>
<td>NURS 442. Pharmacology in Nursing.</td>
<td>3 hours. This course will focus on the nurse's role in pharmacological therapy of individuals across the lifespan.</td>
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<tr>
<td>NURS 452. Nursing the Childbearing Family.</td>
<td>4 hours. This course includes concepts, theories, and psychomotor skills essential for implementation of nursing care of the childbearing family. Assessment and care during the preconceptual, prenatal, intrapartal, postpartal, and neonatal phases of the childbearing cycle are included.</td>
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<tr>
<td>NURS 462. Nursing the Child and Family.</td>
<td>4 hours. This course will focus on the nurse's role in caring for the child and family. Focus is on infancy through adolescence as related to normal growth and development and disease processes as they relate to the pediatric patient.</td>
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<tr>
<td>NURS 470. Nursing the Psychiatric/Mental Health Client.</td>
<td>4 hours. Three credit hours of theory and one credit hour of clinical. Clinical contact is figured on a 3:1 ratio. Therefore, an equivalent of 3 hours of clinical per week in a 16 week semester with a total of 40 hours is required. The study of promoting mental health throughout the lifespan. Synthesizes social and psychological evidence-based research in hospital and community settings.</td>
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<tr>
<td>NURS 482. Evidence-Based Practice and Research.</td>
<td>2 hours. Introduction to research methods and evidence-based practice as a basis for providing high quality nursing care. Basic skills of the research process and factors in critical evaluation of research studies will be included.</td>
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<td>NURS 484. Evidence-based Research for the Registered Nurse.</td>
<td>2 hours. Focus is knowledge of the research process, quantitative versus qualitative research design, ethical issues, basic knowledge of some of the most common empirical analyses, appraisal of evidence and integration of the evidence into nursing practice. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse. Concurrent enrollment or satisfactory completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing.</td>
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<td>NURS 499. Concepts of Leadership in an Evolving Healthcare System.</td>
<td>4 hours. Exploration of concepts of leadership and their application to current and future practice in the healthcare environment; informatics and healthcare policy. Developing decision making, time management, and delegation and prioritization skills for application in management of nursing care.</td>
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<tr>
<td>NURS 502. Community Health Nursing.</td>
<td>5 hours. Concepts of nursing and public health applied to promoting health of families and other population aggregates, and assessing health states and resources available to specific populations. Clinical experiences takes place in selected community settings. Prerequisite: Successful completion of NURS 442 Pharmacology in Nursing, NURS 410 Nursing the Adult Medical-Surgical Client, NURS 470 Nursing the Psychiatric/Mental Health Client, NURS 462 Nursing the Child and Family, NURS 405 Gerontological Nursing, NURS 452 Nursing the Childbearing Family, NURS 482 Evidence-Based Practice and Research, NURS 499 Concepts of Leadership in an Evolving Healthcare System. Concurrent enrollment of NURS 525 Advanced Care of the Medical-Surgical Client, NURS 600 Transitions in Nursing Practice.</td>
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<tr>
<td>NURS 503. Population-based Health Care.</td>
<td>4 hours. Concepts of community/public health nursing with synthesis of nursing and public health practice with goals to promote and preserve the health of populations. Focus includes working with aggregates and communities in activities to create options for healthier environments and essential components of health through organized assessment, education and utilization of resources available for populations in the communities. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse. Concurrent enrollment or satisfactory completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing.</td>
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<td>NURS 505. Leadership and Management for the Registered Nurse.</td>
<td>4 hours. Exploration of leadership roles and nursing management functions and their application to current practice in today's healthcare environment. Includes leadership and management concepts, ethical factors, care delivery models, and intra- and inter-professional collaboration in providing quality nursing care. Includes experiential assignments with nurse leaders at least one level above current practice level. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse. Concurrent enrollment or satisfactory completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing.</td>
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<td>NURS 525. Advanced Care of the Medical-Surgical Client.</td>
<td>6 hours. Focuses on client-centered care to optimize human responses of adults with complex/multiple health problems in a variety of environments. Prerequisite: Successful completion of NURS 442 Pharmacology in Nursing, NURS 410 Nursing the Adult Medical-Surgical Client, NURS 470 Nursing the Psychiatric/Mental Health Client, NURS 462 Nursing the Child and Family, NURS 405 Gerontological Nursing, NURS 452 Nursing the Childbearing Family, NURS 482 Evidence-Based Practice and Research, NURS 499 Concepts of Leadership in an Evolving Healthcare System. Concurrent enrollment of NURS 502 Community Health Nursing, NURS 600 Transitions in Nursing Practice.</td>
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<td>NURS 539. Workshop (___).</td>
<td>1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.</td>
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</table>
NURS 570. Special Topics in Nursing (____). 1-6 hours. Nursing elective. Intensive study of nursing or health problem, trend, or issue. Specific topic to be designated each time course is offered. May be repeated if different course content. Prerequisite: Nursing major or approval of instructor.

NURS 580. Readings in Nursing. 1-6 hours. A nursing elective. Directed individual reading in selected topics in nursing. Offered by appointment to registered nurses desiring to update and increase knowledge in specified areas and for generic students wishing additional elective credit in nursing. May be repeated if subject matter differs.

NURS 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

NURS 600. Transitions in Nursing Practice. 2 hours. A capstone experience establishing readiness for professional nursing practice and competency for licensure. Graded on a Pass-Fail basis. Prerequisites: Successful completion of NURS 442 Pharmacology in Nursing, NURS 410 Nursing the Adult Medical-Surgical Client, NURS 470 Nursing the Psychiatric/Mental Health Client, NURS 462 Nursing the Child and Family, NURS 405 Gerontological Nursing, NURS 452 Nursing the Childbearing Family, NURS 482 Evidence-Based Practice and Research, NURS 499 Concepts of Leadership in an Evolving Healthcare System. Concurrent enrollment of NURS 502 Community Health Nursing, NURS 525 Advanced Care of the Medical-Surgical Client.

NURS 601. Internship in Nursing Practice. 1 hours. A clinical experiences capstone course in primarily acute care settings, with emphasis on assuming the role of the professional nurse, managing care for a group of clients, and synthesizing nursing knowledge. Students practice clinical skills while working with clinical mentors under the direction of faculty. Pass-fail only.

NURS 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence in which the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the project and the student must then complete their Departmental Academic Honors in the traditional way.

NURS 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

NURS 605. Independent Study (____). 1-6 hours. Development of a project under direct supervision of appropriate faculty member. Prerequisite: Completion of Level I nursing courses or permission of instructor. May be repeated if subject matter differs.

NURS 606. Musculoskeletal Assessment of the Athlete. 2 hours. This course will explore the introductory interprofessional care of athletes - injury prevention, orthopedic assessment, treatment, surgery, and rehabilitation. Students will review current literature on sports medicine topics and learn orthopedic assessment skills. Prerequisites: NURS 410 Nursing the Adult Medical Surgical Client and completed the Peri-Operative lecture/lab content. Students in the Exercise Science Major or other HHPR programs will need permission of their academic advisor and the course instructor.

NURS 665. Pathophysiology and Pharmacology for the Registered Nurse. 3 hours. Builds on basic knowledge of pathophysiology and pharmacology to enhance nursing management of illness and disease. Pathology, manifestations, diagnostics, treatments, genomics, and nursing interventions for selected disorders are addressed. Major classifications of drugs, their use in selected disorders, and nursing implications are discussed. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse. Concurrent enrollment or satisfactory completion of NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing.

NURS 668. Health Care Policy Today and in the Future for the Registered Nurse. 2 hours. Examination of the role that nurses individually and collectively play in influence of health care, healthcare systems, and healthcare policy. Prerequisites: Admission to PSU and the Irene Ransom Bradley School of Nursing RN to BSN program and completion of an associate degree in nursing and licensed as a registered nurse.

NURS 670. Family Health Care Nursing. 4 hours. Exploration of family nursing with emphasis on assessment, health education and promotion, application of relevant family theories and family nursing in a rural environment. Population focused assessment of health needs and education are included. The practicum with clients and families across the lifespan allows for application of concepts of family nursing. Prerequisites: Satisfactory completion of all general education course requirements and the following courses: NURS 304 Advancing Careers: Transitioning to Baccalaureate Nursing, NURS 321 Health Assessment for the Registered Nurse, NURS 404 Nurse's Role in Health Promotion, NURS 407 Gerontological Nursing for the Registered Nurse, NURS 444 Evidence-based Research for the Registered Nurse, NURS 503 Population-based Health Care, NURS 505 Principles of Leadership and Management, NURS 665 Pathophysiology and Pharmacology for the Registered Nurse and NURS 668 Health Care Policy Today and in the Future for the Registered Nurse.

NURS 712. Issues and Roles in Advanced Practice Nursing. 2 hours. Exploration of role development in advanced practice nursing. Advanced practice nursing as influenced by rural, social, cultural, political, ethical, and economic forces interacting with complex client/family systems is examined. Past, present, and future roles of advanced practice nurses are explored. Prerequisite: Admission to graduate school and DNP program.

NURS 713. Leadership in Advanced Practice Nursing. 3 hours. Explores organizational and leadership theories related to advanced nursing practice and the Doctor of Nursing Practice role. Current and Futuristic issues and trends and a systematic approach relevant to organizational leadership to foster quality improvement will be included. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 730. Advanced Health Promotion: Individual, Family and Community. 3 hours. Exploration of advanced family nursing through theories of human and family development, family assessment, and health promotion across the lifespan. Evaluation of health gaps, development and implementation of health promotion for risk reduction/illness prevention for various populations including the rural health care environment will be emphasized. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 745. Transcultural Health Care. 1-3 hours. Focuses on concepts and theories of transcultural care and issues related to health care practices for culturally diverse populations. General concepts and aspects of a specific cultural group will be studied. Open to all majors.

NURS 746. Practicum in Transcultural Health Care. 1 hours. Clinical experience providing health care in a specific cultural setting. Corequisite: NURS 745 Transcultural Health Care, Permission of instructor required.

NURS 760. Nursing and Health Care System Management. 2 hours. Leadership and administrative theory and management strategies for nursing advanced practice role and healthcare. Emphasis on management of organizational resources and legal/regulatory issues and processes within the rural health care delivery system. Prerequisites: Admission to the MSN program or special permission. Corequisite: NURS 761 Nursing and Health Care System Management: Practicum.

NURS 761. Nursing and Health Care System Management: Practicum. 1 hours. (3 hours practicum per week). Application of leadership and administrative theory and management strategies in nursing's advanced practice and for healthcare. Emphasizing practicum managing organizational resources and legal/regulatory issues and processes within rural healthcare delivery systems. Prerequisite: Admission to the MSN program or special permission. Corequisite: NURS 760 Nursing and Health Care System Management.
NURS 800. Theories Related to Nursing. 2 hours. Explores the philosophical underpinnings of nursing and development of theory. Students will synthesize different nursing theories to provide the context for health care delivery, outcomes and advanced practice. An emphasis will be placed on the inter-relationships of theories, research and use of concepts to guide evidence-based practice. Prerequisites: Admission to PSU Graduate College and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 801. DNP Intensive Seminar. 1 hour. Strategies for promoting professional development while preparing for a degree designed specifically to prepare individuals for specialized nursing practice are examined. Students are introduced to a model of nursing education that prepares individuals for practice with interdisciplinary information systems, quality improvement, and patient safety expertise. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 803. Advanced Health Assessment. 2 hours. Course is designed to assist students to refine history taking, psychosocial assessment, and physical assessment skills. Content focuses on assessment of individuals throughout the life span. Emphasis is placed on detailed history taking, differentiation, interpretation, and documentation of normal and abnormal findings. The course includes lecture, discussion, and demonstration of history taking and an integrated physical assessment. Prerequisite: Admission to MSN nursing program or special permission. Co-requisite: NURS 804 Advanced Health Assessment Practicum.

NURS 804. Advanced Health Assessment Practicum. 2 hours. Reviews and builds upon the students previous skills in physical assessment. It offers more comprehensive and systematic advanced physical assessment content as the foundation for the advanced practice nursing role. Directed laboratory and simulated experiences afford the opportunity to apply the clinical decision making process to accurately and efficiently gather and analyze subjective and objective data for diverse patient populations. In addition, students will be provided the opportunity to develop health assessment knowledge and skills in clinical experiences to facilitate building partnerships with patients and other health care professionals. Students will relate assessment findings to the pathology or physiological change to establish differential diagnoses to determine the plan of care, use of diagnostic testing and provide patient education. Prerequisite: Admission to the PSU Graduate School and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor. NURS 730 Advanced Health Promotion: Individual, Family and Community, NURS 803 Advanced Health Assessment and NURS 809 Advanced Pathophysiology.

NURS 805. Special Investigations. 1-6 hours. Independent study in selected nursing topics relevant to student interests and needs. May be repeated for a maximum of six hours.

NURS 806. Primary Care I: Family Health. 3 hours. The first of two core specialty courses using a systems approach that emphasizes a multi-dimensional and interprofessional approach to assessment, differential diagnosis and treatment formulation for the primary care needs of individuals and families across the lifespan. Common health conditions are explored in relation to health promotion, health maintenance, assessment, diagnosis, and management of common episodic, chronic, and complex conditions affecting health. Students will develop skills in critical thinking and the use of evidence-based practice guidelines in developing the rationale for diagnosing and managing primary care needs. In addition to cultural and spiritual diversity, students learn patient preferences in health care decision making with a focus on person centered care. Prerequisites: NURS 801 DNP Intensive Seminar, NURS 712 Issues and Roles in Advanced Practice Nursing, NURS 713 Leadership in Advanced Practice Nursing, NURS 730 Advanced Health Promotion: Individual, Family and Community, NURS 800 Theories Related to Nursing, NURS 809 Advanced Pathophysiology, NURS 817 Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing, NURS 803 Advanced Health Assessment, NURS 804 Advanced Health Assessment Practicum, NURS 818 Applied Drug Therapy, NURS 892 Health Care Research, NURS 895 Informatics for Healthcare, NURS 894 Principles of Epidemiology and NURS 895 Interpreting Research for Evidence-Based Nursing Practice. Corequisites: NURS 807 Primary Care I Practicum: Family Nurse Practitioner.

NURS 807. Primary Care I Practicum: Family Nurse Practitioner. 3 hours. This practicum prepares the student for entry into practice as a primary care provider. This course is designed to prepare the family nurse practitioner student as a provider of direct health care services. The patient population of the family provider includes individuals and families across the lifespan. Within this role, the family nurse practitioner student will synthesize theoretical, scientific, and contemporary clinical knowledge for the assessment and management of both health and illness states. Advanced practice competencies incorporate the health promotion, health protection, disease prevention, and management focus of the family nurse practitioner role. Prerequisites: NURS 801 DNP Intensive Seminar, NURS 712 Issues and Roles in Advanced Practice Nursing, NURS 730 Advanced Health Promotion: Individual, Family and Community, NURS 800 Theories Related to Nursing, NURS 809 Advanced Pathophysiology, NURS 817 Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing, NURS 803 Advanced Health Assessment, NURS 804 Advanced Health Assessment Practicum, NURS 818 Applied Drug Therapy, NURS 892 Health Care Research, NURS 895 Informatics for Healthcare, NURS 894 Principles of Epidemiology, NURS 895 Interpreting Research for Evidence-Based Nursing Practice, NURS 806 Primary Care I: Family Health and NURS 807 Primary Care I Practicum: Family Nurse Practitioner. Corequisite: NURS 812 Primary Care II Practicum: Family Nurse Practitioner.

NURS 812. Primary Care II: Family Health. 3 hours. The second of two core specialty courses using a systems approach that emphasizes a multi-dimensional and interprofessional approach to assessment, differential diagnosis and treatment formulation for the primary care needs of individuals and families across the lifespan. Common health conditions are explored in relation to health promotion, health maintenance, assessment, diagnosis, and management of common episodic, chronic, and complex conditions affecting health. Students will develop skills in critical thinking and the use of evidence-based practice guidelines in developing the rationale for diagnosing and managing primary care needs. In addition to cultural and spiritual diversity, students learn patient preferences in health care decision making with a focus on person centered care. Prerequisites: NURS 801 DNP Intensive Seminar, NURS 712 Issues and Roles in Advanced Practice Nursing, NURS 713 Leadership in Advanced Practice Nursing, NURS 730 Advanced Health Promotion: Individual, Family and Community, NURS 800 Theories Related to Nursing, NURS 809 Advanced Pathophysiology, NURS 817 Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing, NURS 803 Advanced Health Assessment, NURS 804 Advanced Health Assessment Practicum, NURS 818 Applied Drug Therapy, NURS 892 Health Care Research, NURS 895 Interpreting Research for Evidence-Based Nursing Practice, NURS 806 Primary Care I: Family Health and NURS 807 Primary Care I Practicum: Family Nurse Practitioner. Corequisite: NURS 813 Primary Care II Practicum: Family Nurse Practitioner.
NURS 817. Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing. 1 hours. Basic principles of pharmacokinetics and pharmacodynamics are discussed in preparation for the advanced practice nurse to prescribe. The foundation of decision-making about proper drug selection, prescription, and monitoring are examined. Prerequisites: Admission to the PSU Graduate School and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 818. Applied Drug Therapy. 3 hours. Clinical application of specific categories of drugs, common to a variety of medical conditions faced by advanced practice nurses. Use of protocols, prescription writing, ethical/legal, and economic issues surrounding the use of drugs are addressed. Nurse's role and responsibilities are explored. Application through case studies, quizzes and exams. Prerequisites: Admission to the PSU Graduate School and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor. NURS 817 Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing.

NURS 828. Primary Care III Practicum: Family Nurse Practitioner. 3 hours. This practicum prepares the student for entry into practice as a primary care provider. This course is designed to prepare the family nurse practitioner student as a provider of direct health care services. The patient population of the family nurse practitioner includes individuals and families across the lifespan. Within this role, the family nurse practitioner student will synthesize theoretical, scientific, and contemporary clinical knowledge for the assessment and management of both health and illness states. Advanced practice competencies incorporate the health promotion, health protection, disease prevention, and management focus of the family nurse practitioner practice. Prerequisites: NURS 801 DNP intensive seminar, NURS 712 Issues and Roles in Advanced Practice Nursing NURS 713 Leadership in Advanced Practice Nursing NURS 730 Advanced Health Promotion; Individual, Family and Community, NURS 800 Theories Related to Nursing NURS 809 Advanced Pathophysiology NURS 817 Pharmacokinetics and Pharmacodynamics for Advanced Practice Nursing, NURS 803 Advanced Health Assessment, NURS 804 Advanced Health Assessment Practicum, NURS 818 Applied Drug Therapy, NURS 892 Health Care Research, NURS 885 Informatics for Healthcare, NURS 894 Principles of Epidemiology, NURS 895 Interpreting Research for Evidence-Based Nursing Practice, NURS 896 Primary Care I: Family Health, NURS 807 Primary Care I Practicum: Family Nurse Practitioner, NURS 812 Primary Care II: Family Health and NURS 813 Primary Care II Practicum: Family Nurse Practitioner.

NURS 829. Nurse Practitioner Preceptorship II. 3 hours. Capstone clinical experiences averaging 9 hours per week; total 144 hours. The FNP student will continue to develop in the role of the nurse practitioner. The course is designed for the FNP student to synthesize theory into practice, to include pharmacological therapies, protocols and strategies for legal/ethical/economic issues in the advance practice role, delivering primary care in family practice or equivalent settings to individuals/families. Prerequisites: NURS 828 Primary Care III Practicum: Family Nurse Practitioner.

NURS 830. Family Process/Management of Acute Emergent Illness (___). 1 hours. Theory and research supporting the practice of advanced family nursing with families experiencing acute health problems common to the rural Midwest. Prerequisites: NURS 712 Issues and Roles in Advanced Nursing Practice, NURS 800 Theories Related to Nursing Practice, NURS 803 Advanced Health Assessment/NURS 804 Advanced Health Assessment Practicum, NURS 818 Advanced Pharmacology and NURS 892 Research Methods in Nursing/NURS 893 Nursing Research Seminar or permission of instructor. Corequisites: NURS 831 Family Process/Management of Acute Emergent Illness: Practicum and NURS 809 Advanced Pathophysiology.

NURS 831. Family Process/Management of Acute Emergent Illness: Practicum (___). 3 hours. (9 practicum hours per week). Practicum course includes application of theory, research, advanced practice role in rural family nursing for families experiencing acute health problems. Opportunity for selection of families to enhance clinical focus. Corequisite: NURS 830 Family Process/Management of Acute Emergent Illness (___).

NURS 835. Family Process/Management of Chronic Illness (___). 1 hours. Theory and research supporting the practice of advanced family nursing with families when a member has a significant chronic illness. The experiences of families with health problems common to the rural midwest. Prerequisite: NURS 712 Issues and Roles in Advanced Nursing Practice, NURS 800 Theories Related to Nursing Practice, NURS 803 Advanced Health Assessment/NURS 804 Advanced Health Assessment Practicum, NURS 818 Advanced Pharmacology, NURS 892 Research Methods in Nursing/NURS 893 Nursing Research Seminar or permission of instructor. Corequisites: NURS 836 Family Process/Management of Chronic Illness: Practicum.

NURS 836. Family Process/Management of Chronic Illness: Practicum (___). 3 hours. (9 practicum hours per week). Practicum course includes application of theory, research, advanced practice role in rural family nursing for families dealing with chronic health problems. Opportunity for selection of families to enhance clinical focus. Corequisite: NURS 835 Family Process/Management of Chronic Illness (___).

NURS 840. Management of Clients/Families Within the Health Care System Practicum (___). 2 hours. (6 practicum hours per week). Capstone experience for the FNP student to synthesize theory and application of theory, research, and clinical skills appropriate to advanced practice management of problems of groups of families, including advocacy. Opportunity for selection of families to enhance clinical focus. Prerequisites: NURS 830 Family Process/Management of Acute Emergent Illness (___), NURS 831 Family Process/Management of Acute Emergent Illness: Practicum (___). May be taken as a prerequisite or corequisite: NURS 835 Family Process/Management of Chronic Illness (___). NURS 836 Family Process/Management of Chronic Illness: Practicum (___).

NURS 850. Curriculum Development. 3 hours. The nature of higher education faculty roles, curriculum design, instructional process, evaluation, and issues in nursing education. Prerequisite: Admission to the PSU Graduate School or permission of instructor.

NURS 853. Evaluation for Nurse Educators. 1 hours. Offers a broad perspective of evaluation for improvement. Models of evaluation and research evidence provide base for demonstration of accountability. Standards for accreditation and approval are examined. Links to allocation of resources and opportunity for innovation are explored. Effect of relationship between evaluation and improvement of nursing and health care delivery is analyzed. Prerequisites: Admission to PSU Graduate College and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 854. Teaching Strategies: Practicum. 1 hours. (3 practicum per week). Practicum for implementation of teaching plan, use of technology in the classroom. Prerequisite: Admission to the PSU Graduate School or permission of instructor. Corequisite: NURS 855 Teaching Strategies.

NURS 855. Teaching Strategies. 2 hours. The development of teaching methods based on teaching/learning theory in nursing education. Emphasis is on teaching and learning pedagogy and development of innovative teaching strategies. Prerequisite: Admission to the PSU Graduate School or permission of instructor. Corequisite: NURS 854 Teaching Strategies: Practicum.

NURS 856. Education Practicum (___). 2 hours. (6 practicum hours per week). Preparation for an education role in nursing. Prerequisites: Admission to PSU Graduate School and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 865. Strategic Development. 3 hours. Analyzes the overall plan for applying methods and techniques of strategic development in pursuit of an organizational goal.

NURS 866. Administration Practicum (___). 2 hours. Clinical practice 6 hours per week. Prepares the student for an administrative role in nursing and health care. Prerequisites: Completion of both common and advanced practice core courses (with exception of NURS 890 Research Thesis/NURS 891 Research Project); clinical specialty courses, and either NURS 760 Nursing Management/NURS 761 Nurse Management: Practicum or NURS 865 Strategic Development or special permission. Corequisites: NURS 760 Nursing and Health Care System Management/NURS 761 Nurse and Health Care System Management: Practicum or NURS 865 Strategic Development.

NURS 885. Informatics for Healthcare. 2 hours. The evolution of informatics in healthcare will be discussed as well as the risks, benefits, legal and ethical considerations of common types of technologies in healthcare that monitor delivery of patient care. Evaluate the use of advanced communication and technology in quality improvement and patient safety initiatives. National initiatives, current use of information systems, and projected future directions on the use of information systems in healthcare will also be emphasized. Consider the selection and implementation of healthcare systems and technologies for patient care. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 888. Health Policy. 2 hours. Critical analysis of interdependence of health policy and health care practice across disciplines. Evaluation of social, cultural, financial and globalization issues on development of policy. Examination of relationship among power, politics and policy. Contributes to development of policy through advocacy for policies promoting access, equity, quality and patient. Focus is nursing and health care policy; providers by current major with an interest in health care policy. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.
NURS 889. Impact of Health Determinants. 3 hours. Examination of healthcare system, individual, genetic, and physical environment determinants of chronic health in the primarily rural population. Evidence based research and interventions will be evaluated to develop knowledge and skills necessary to cultivate an integrative approach to chronic disease prevention and management. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 890. Research and Thesis. 1-6 hours. 1-6 hours depending on the proposal and recommendation of the advisor. To be taken by students in Option I for Master of Science in Nursing. May be repeated for a total of 6 hours. Prerequisite: NURS 892 Research Methods in Nursing and NURS 893 Nursing Research Seminar.

NURS 891. Research Problem. 1-6 hours. To be taken by students in Option II for Master of Science in Nursing. May be repeated for a total of 6 hours. Prerequisites: NURS 892 Research Methods in Nursing and NURS 893 Nursing Research Seminar.

NURS 892. Health Care Research. 4 hours. Overview of the components and steps of the research process. Focus will be on interpreting, critiquing and synthesizing research findings from qualitative, quantitative and other methods of research. Knowledge will be applied by critical appraisal of research studies and evidence-based practice reviews at a graduate level. Prerequisites: Admission to the PSU Graduate School and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor, NURS 800 Theories Related to Nursing.

NURS 893. Nursing Research Seminar. 1 hour. The purpose of this course is to identify researchable problems and prepare a research proposal. Trends in society and nursing that influence the direction of nursing research are identified. Specific clinical practice problems are developed and are posed as hypotheses, research questions or objectives. Methods to address problems are developed. Prerequisite: Graduate Level Statistics course; admission to MSN program or permission of instructor. NURS 892 Research Methods in Nursing.

NURS 894. Principles of Epidemiology. 2 hours. Introduction to epidemiology and to the epidemiologic approach to problems of health and disease. Emphasis is placed on the concepts and methods of epidemiologic investigation and the many applications of epidemiology to public health, global health, disease surveillance and clinical practice. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 895. Interpreting Research for Evidence-Based Nursing Practice. 2 hours. Analytical and systematic approach to evaluate evidence-based research used in clinical practice. The course will build on methods of evidence-based practice, theoretical foundations, ethical principles, cultural considerations, and statistical analysis. The course enables the student to develop an evidence-based approach to solving clinical questions. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor.

NURS 900. Quality, Safety and Practice Outcomes. 3 hours. Prepares students with the concepts of quality and safety improvements in an effort to evaluate health and practice outcomes. Students will be exposed to theoretical perspectives of quality and patient safety factors while exploring the strengths and weaknesses of selected methodology approaches. Evidence-based practice and change management will be integrated with the concepts of quality and safety improvements. NP review course required. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor. BSN to DNP prerequisite: NURS 892 Health Care Research.

NURS 910. DNP Clinical Residency. 1-10 hours. The advanced practice clinical residency is designed to provide experiences in a practice environment that allows the DNP student to expand clinical knowledge and skills in an area of practice. End-of-program practice experiences are designed to assist the student to build and assimilate knowledge for advanced specialty practice at a high level of complexity. Students will demonstrate competency in an area of specialized practice ranging from a specialized field to the full spectrum of primary care services. Using practice guidelines, students will utilize evidence-based decision making in making assessments, formulating differential diagnoses, prescribing therapeutic interventions and evaluating outcomes in the care of individuals/families/populations. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor, NURS 828 Primary Care III Practicum. Family Nurse Practitioner or APRN licensure, or special permission of instructor.

NURS 911. Tools for Practice Scholarship. 2-3 hours. Development of proficiency in the use of the tools used in practice scholarship. Tools will include those used in planning and designing a practice focused research project, development of a research proposal, analytic techniques for practice focused research, and publishing and presenting research findings. Prerequisites: Admission to PSU Graduate School and admission to Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor, NURS 895 Interpreting Research for Evidence-Based Nursing Practice.

NURS 920. DNP Scholarly Project. 1-6 hours. The capstone project is an amalgamation of the individual student's field of inquiry, requiring the identification of a practice-focused problem to be examined in depth with the aim of improvement of practice and/or patient outcomes (Essentials 1, 3 and 8: Program Outcomes 1 and 8). Throughout enrollment in the capstone hours the student will define a practice problem; conduct a comprehensive integrated review of the literature regarding the identified practice problem; design an appropriate project to further describe the problem or examine a suitable intervention; gather and analyze the data using the appropriate metrics(s); interpret and evaluate the results of the inquiry; and disseminate project findings to a targeted audience. Project details must be agreed upon and approved by the DNP Capstone Project Instructor and the student's primary capstone project faculty advisor. The capstone project must contain a series of NURS 920 courses. The student may complete one or more steps in a semester consistent with the number of credit hours enrolled in for that semester. Prerequisites: Admission to the PSU Graduate School and Irene Ransom Bradley School of Nursing Graduate Program or permission of instructor, graduate level statistics course. Completion of or concurrent enrollment in NURS 892 Health Care Research or an approved equivalent or permission of the instructor. May be repeated for a maximum of six hours.

Plastics Engineering Technology

PET 180. General Plastics Laboratory. 1 hours. (2 hours laboratory). Laboratory experiments involving plastic materials and processes used in plastics industry. Concurrent enrollment in PET 185 General Plastics required.

PET 185. General Plastics. 3 hours. Introductory plastics course including topics in polymers and applications, processing and fabrication methods, tooling and molds, and testing. Concurrent enrollment in PET 180 General Plastics Laboratory is required.

PET 272. Plastics Processing I Laboratory. 1 hours. (2 hours laboratory). Experiential course which supports PET 273 Plastics Processing I. Safety, economics, set-up, and production with extrusion, injection molding, blow molding, thermforming, rotational molding, transfer molding, casting, and fabrication. Co-requisite: PET 273 Plastics Processing I. Prerequisites: PET 185 General Plastics and PET 180 General Plastics Laboratory.

PET 273. Plastics Processing I. 3 hours. Processing techniques for polymers including: extrusion, injection molding, blow molding, thermoforming, rotational molding, compression molding, transfer molding, casting, and fabrication. Co-requisite: PET 272 Plastics Processing I Laboratory. Prerequisite: PET 185 General Plastics and PET 180 General Plastics Laboratory.

PET 281. Plastics Testing Technology. 3 hours. (3 hours lecture). Theories and practical aspects of industrial and scientific testing and characterization procedures of plastics. Understanding of properties, testing, identification, characterization, specification, and standardization of polymers. Prerequisites: PET 185 General Plastics, PET 180 General Plastics Laboratory, MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus, CHEM 215 General Chemistry I and CHEM 216 General Chemistry I Laboratory.

PET 370. Thermoplastic Resins Laboratory. 1 hours. (2 hours laboratory). Techniques and procedures used for the testing, evaluation and selection of thermoplastic resins. Corequisite: PET 371 Thermoplastic Resins. Prerequisites: CHEM 320 Introductory Organic Chemistry and CHEM 326 Organic Chemistry Laboratory or CHEM 360 Introduction to Polymer Science and Technology.

PET 371. Thermoplastic Resins. 3 hours. Study of thermoplastic materials that are commercially available for the plastics industry. Review of the manufacture, properties and applications of widely utilized resins. The chemical structure - property relationships (crystallinity, morphology, copolymerization, molecular weight, and physical properties), Corequisite: PET 370 Thermoplastic Resins Laboratory. Prerequisites: CHEM 320 Introductory Organic Chemistry and CHEM 326 Organic Chemistry Laboratory or CHEM 360 Introduction to Polymer Science and Technology.
PET 372. Plastic Processing I Laboratory. 1 hour. (2 hours laboratory) Set-up, troubleshooting, and production with injection molding, extrusion, and blow molding machinery. Production economics, safety, material handling, auxiliary equipment, and maintenance. Corequisite: PET 373 Plastics Processing I. Prerequisites: PET 281 Plastics Testing Technology, CHEM 320 Introductory Organic Chemistry and CHEM 326 Organic Chemistry Laboratory.


PET 374. Thermostat Resins Laboratory. 1 hour. (2 hours laboratory) Practical experience in the techniques and procedures used for testing, evaluation and selection of thermoset resins. Corequisite: PET 375 Thermostat Resins. Prerequisites: CHEM 320 Introductory Organic Chemistry and CHEM 326 Organic Chemistry Laboratory or CHEM 380 Introduction to Polymer Science and Technology.

PET 375. Thermostat Resins. 3 hours. Study of thermoset materials commercially available for the plastics industry. Review of the manufacture, properties and applications of widely utilized resins. Chemical structure-property relationships (crosslinking and formulation techniques of thermoset resins are examined). Emphasis is made of the role of thermosets as matrix/binder in polymeric composites. Corequisite: PET 374 Thermostat Resins Laboratory. Prerequisites: PET 370 Thermoplastic Resins Laboratory and PET 371 Thermoplastic Resins. May be taken concurrently with PET 376 Plastics Processing II Laboratory and PET 377 Plastics Processing II.

PET 376. Plastic Processing II Laboratory. 1 hour. (2 hours laboratory). Experiential course which supports PET 377 Plastics Processing II. Focused on safety, set-up, optimization, and automation with extrusion, injection molding, blow molding, thermoforming and other processing methods. Co-requisite: PET 377 Plastics Processing II. Prerequisite: PET 273 Plastics Processing I, PET 272 Plastics Processing I Laboratory, PET 371 Thermoplastic Resins, PET 370 Thermoplastic Resins Laboratory.

PET 377. Plastic Processing II. 3 hours. Study of the more prevalent industry processing methods (extrusion, injection molding, blow molding, thermoforming, and others) focusing on optimization, quality, automation, maintenance, and safety. Overall manufacturing enterprise and costing strategies will be included. Co-requisite: PET 376 Plastics Processing II Laboratory. Prerequisites: PET 273 Plastics Processing I, PET 272 Plastics Processing I Laboratory, PET 371 Thermoplastic Resins, PET 370 Thermoplastic Resins Laboratory.

PET 385. Part and Mold Design I. 3 hours. Methods and systems used in the development of plastic products, from concept development, material selection, CAD design, CAE analysis, cost analysis, and prototyping, through molds/tooling used for production. Focus is placed on the design process using standard industry practices. Prerequisite: MECET 121 Engineering Graphics I, PET 273 Plastics Processing I, PET 371 Thermoplastic Resins.

PET 586. Senior Project I. 1 hour. (1 hour lecture-open lab). The (Part I) first semester “capstone” plastic course incorporating functional part/process selection and design, technical and processing analysis, and suitable polymeric material selection. Prerequisite: First semester “Senior status” and permission of instructor.

PET 673. Advanced Injection Molding. 3 hours. (1 hour lecture, 4 hours laboratory). An advanced course focused on Injection Molding. Emphasizing process control, troubleshooting, quality and automation. Prerequisite: PET 273 Plastics Processing I and PET 272 Plastics Processing Laboratory.

PET 684. Part and Mold Design II. 3 hours. Methods and systems used in the development of plastic products utilizing advanced CAD design processes and CAE analysis/simulation techniques including design of complex molds/tooling for production. Projects based on industry type design scenarios will be completed. Prerequisite: MECET 226 Computer Aided Design, PET 281 Plastics Testing Technology, PET 375 Thermostat Resins, PET 377 Plastics Processing II, PET 585 Part and Mold Design I.

PET 685. Composites. 3 hours. (3 hours lecture). Raw materials, processing, fabrication, testing, properties of composites, and application. Prerequisite: PET 180 General Plastics Laboratory and PET 185 General Plastics, CHEM 320 Introductory Organic Chemistry and CHEM 326 Organic Chemistry Laboratory, or CHEM 325 Organic Chemistry I and CHEM 326 Organic Chemistry Laboratory or equivalent. For graduate students or senior plastics majors who have taken all undergraduate plastics courses.

PET 687. Senior Project II. 2 hours. (2 hour lecture and open lab). The "Part II" of this capstone course will continue with the initial efforts of Senior Project I (Part I - PET 586) and is based on sound design, costing and quality, testing and evaluation with the culminating efforts in producing a prototype and/or enhancement of a process. Prerequisite: PET 586 Senior Project I with Senior status (second semester) and instructors permission.

PET 883. Polymeric Materials Rheology and Processing. 3 hours. The study of flow behavior of fluids. Polymer rheology will explore the deformation and flow behavior of polymeric fluids in simple geometries. Polymer fluid mechanics (relevant to processing) will be presented in order to investigate deformation and flow behavior of viscoelastic polymeric liquids in complex geometries. Prerequisites: PET 273 Plastic Processing I or MECET 524 Fluid Mechanics and MECET 525 Fluid Mechanics Laboratory. CHEM 380 Introduction to Polymer Science and Technology or permission of instructor. Corequisite: CHEM 785 Physical Chemistry of Polymers or permission of instructor.

PET 885. Composite Materials and Testing. 3 hours. New and advanced techniques of processing composites including resin structures and non-destructive testing techniques associated with composites. Laboratory work required.

Philosophy

PHIL 103. Introduction to Philosophy. 3 hours. Introduction to concepts and methods of philosophy through study of representative thinkers and issues.

PHIL 105. Ethics. 3 hours. Introduction to reflective study of moral choice, standards of right and wrong, the nature of the good life. Ethical theories applied to personal and social decision-making.

PHIL 112. Biomedical Ethics. 3 hours. Major theories of moral obligation and justice and their application to biological sciences and medical practices. This course philosophically investigates ethical issues of biological health, reproduction, technology and research. Issues studied may include: just health care, euthanasia, eugenics, the human genome project, genetic engineering, cloning, and stem cell research.

PHIL 113. Business Ethics. 3 hours. Major theories of moral obligation and justice and their application to business practices. This course philosophically investigates ethical issues of business. Issues studied may include: corporate responsibility, government regulation, investment and production, advertisement, the environment, and preferential hiring.

PHIL 114. Environmental Ethics. 3 hours. Major theories of moral obligation and justice and their application to the environment and environmental issues. This course philosophically investigates ethical issues that arise from the use and exploitation of the environment, such as the value of biodiversity, obligations to future generations, obligations to non-humans, and the ethics of environmental risk management.

PHIL 207. Critical Thinking. 3 hours. Study of the basic skills of good and bad reasoning. Focus is on informal reasoning. Topics include: argument structure and identification, validity and strength of arguments, common fallacies of reasoning, use and abuse of language in reasoning, principles of fair play in argumentation.

PHIL 208. Logic. 3 hours. Systematic study of deductive reasoning (and possibly inductive reasoning) using the techniques of modern logic. Examines different types of valid inference, the logical structure of English sentences, and the validity of arguments generally. Involves the development and use of a symbolic system which models logical relations among sentences.

PHIL 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHIL 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHIL 231. World Religions. 3 hours. A nonsectarian introduction to the great religious traditions of the world, including Hinduism, Buddhism, Judaism, Christianity, and Islam.

PHIL 310. History of Ancient Philosophy. 3 hours. Examination of most significant philosophies of ancient and medieval periods. Includes Presocratics, Socrates, Plato, Aristotle, and Stoics, Augustine and Aquinas.
PHIL 311. History of Modern Philosophy. 3 hours. Philosophical significance of the Scientific Revolution. The "problem of knowledge." Examination of Continental rationalism, British empiricism and German idealism. Includes study of Descartes, Locke, Berkeley, Hume, Kant and others.

PHIL 312. Problems of Philosophy. 3 hours. Intensive study of a selected topic in philosophy. May be repeated for a maximum of six hours when subject matter is different.

PHIL 313. Topics in Philosophy. 3 hours. Intensive study of a selected topic in philosophy. May be repeated for a maximum of six hours when subject matter is different.

PHIL 314. Medieval Philosophy. 3 hours. This course is a survey of Western philosophical thought during the Middle Ages, roughly from late antiquity to the Renaissance. Topics may include the relation of faith, reason, and revelation; the nature and existence of God; whether humans are free; the nature of time and eternity; and the problem of universals. Significant figures discussed may include Augustine, Avicenna, Maimonides, Aquinas, Scotus, and Ockham.

PHIL 315. Nineteenth Century Philosophy. 3 hours. This course will be an examination of philosophical movements and figures in 19th century philosophy. Figures studied may include Fichte, Hegel, Kierkegaard, Nietzsche, Marx, Schelling, Bentham, Mill, Wollstonecraft, and others.

PHIL 316. American Philosophy. 3 hours. This course is a study of philosophy as it has been developed in North America from the early 18th century until at least the close of the 20th century. Major figures may include, but are not limited to, Edwards, Jefferson, Emerson, Peirce, James, Du Bois, Dewey, Quine, Deloria, Nussbaum, Rorty, West, among others.

PHIL 317. Analytic Philosophy. 3 hours. This course will examine the attempts of 20th-century philosophers to resolve or dissolve philosophical problems by an analysis of language. Figures and movements covered include Frege, Russell, Moore, Wittgenstein, logical positivism, ordinary language philosophy, among others.

PHIL 318. Continental Philosophy. 3 hours. This course will examine those figures and movements which fall under "Continental Philosophy" including movements such as phenomenology, existentialism, hermeneutics traditions, structuralism, post-structuralism, deconstruction, continental feminism, postmodernism, post-colonialism, among others.

PHIL 320. Philosophy of Religion. 3 hours. This course examines the central issues surrounding the meaning and justification of religious discourse, belief, and practice. Topics covered include: religious experience, faith and reason, the epistemic status of revelation, the nature of ultimate reality, arguments concerning the nature and existence of God, miracles, the meaning of "self" or personality, the afterlife, religious language, religious diversity, and the relations of religion to morality and science.

PHIL 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHIL 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHIL 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the culminating project of the student in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

PHIL 645. Directed Readings in Philosophy. 1-3 hours. Individual study and research in selected areas of philosophy. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

PHYS 100. College Physics I. 4 hours. Mechanics; heat; sound. Prerequisite: MATH 113 College Algebra or MATH 110 College Algebra with Review, or MATH 126 Pre-Calculus or MATH 150 Calculus I. Concurrent enrollment required in PHYS 130 Elementary Physics Laboratory I. Closed to students with credit in PHYS 104 Engineering Physics I.

PHYS 101. College Physics II. 4 hours. Algebra-based basic electrical circuits; optics; relativity; atomic structure. Prerequisite: PHYS 100 College Physics I. Concurrent enrollment required in PHYS 131 Elementary Physics Laboratory II. Closed to students with credit in PHYS 105 Engineering Physics II.

PHYS 102. Undergraduate Seminar. 1 hour. Survey of current research areas in physics and related technologies with emphasis on local research activities. For science, engineering, and engineering technology majors. Recommended to be completed prior to completing PHYS 104/105 Engineering Physics I and II. May be repeated.

PHYS 104. Engineering Physics I. 4 hours. Mechanics; heat; sound. For science, engineering, and engineering technology students. Prerequisite: MATH 150 Calculus I. Concurrent enrollment required in PHYS 130 Elementary Physics Laboratory I. Closed to students with credit in PHYS 100 College Physics I.

PHYS 105. Engineering Physics II. 4 hours. Calculus-based electrostatics; magnetism; Maxwell's equations; light; optics. For science, engineering, and engineering technology majors. Prerequisite: PHYS 104 Engineering Physics I or PHYS 100 College Physics I and MATH 150 Calculus I. Concurrent enrollment required in PHYS 131 Elementary Physics Laboratory II. Closed to students with credit in PHYS 101 College Physics II.

PHYS 114. Physical Science Laboratory for Teachers. 2 hours. Current techniques in science education are emphasized to expand and enhance the science content proficiency of future educators. Prerequisites: PHYS 171 Physical Science and PHYS 172 Physical Science Laboratory.

PHYS 130. Elementary Physics Laboratory I. 1 hour. Experiments in mechanics; heat; sound. Concurrent enrollment required in PHYS 100 College Physics I or PHYS 104 Engineering Physics I.

PHYS 131. Elementary Physics Laboratory II. 1 hour. Experiments in electricity, magnetism, electrical circuits and optics using digital oscilloscopes, multimeters, and lasers. Concurrent enrollment required in either PHYS 101 College Physics II or PHYS 105 Engineering Physics II.

PHYS 160. Physical Geology. 3 hours. Introduction to minerals and rocks on the earth's surface and interior; dynamic geological processes, including plate tectonics, volcanism, orogeny, glaciation, weathering, and erosion. Co-requisite: PHYS 165 Physical Geology Laboratory.

PHYS 165. Physical Geology Laboratory. 1 hour. Laboratory exercises to accompany PHYS 160 Physical Geology, including mineral properties and rock identification, landforms and structural geology, seismic data manipulation, and interpretation of geologic maps. Co-requisite: PHYS 160 Physical Geology.

PHYS 166. Meteorology. 3 hours. A descriptive survey of atmospheric science integrating the concepts of weather patterns, climate, atmospheric composition and structure, pressure, wind, and impact of pollution. Co-requisite: PHYS 167 Meteorology Laboratory.
PHYS 167. Meteorology Laboratory. 1 hours. Exercises, activities and experiments to accompany PHYS 166 Meteorology. Co-requisite: PHYS 166 Meteorology.

PHYS 171. Physical Science. 3 hours. The principles of mechanics, electricity and magnetism, atomic science, earth and space science. Three hours of lecture will be accompanied by two hours of hands-on laboratory experiences weekly. Concurrent enrollment required in PHYS 172 Physical Science Laboratory. Closed to students majoring or minoring in the physical sciences or having had PHYS 371 The Physical World.

PHYS 172. Physical Science Laboratory. 1 hours. Concurrent enrollment in PHYS 171 Physical Science required. Closed to students majoring or minoring in Physics or Chemistry.

PHYS 175. Descriptive Astronomy. 3 hours. The solar system, stellar astronomy, the galaxy, cosmology. Corequisite: PHYS 176 Astronomy Laboratory.

PHYS 176. Astronomy Laboratory. 1 hours. Practical experiments related to astronomy. Light and optics, spectra, mechanics, magnetism, radioactivity; sky observations of constellations, planets, stars and galaxies. Corequisite of either PHYS 175 Descriptive Astronomy or PHYS 375 Solar System Astronomy.

PHYS 220. Engineering Mechanics I--Statics. 3 hours. Study of forces, couples, vector mathematics, rigid body equilibrium, structures, distributed forces, geometric properties, beam analysis, friction, virtual work and stability of equilibrium. Prerequisites: MATH 150 Calculus I. (or concurrent) and PHYS 104 Engineering Physics I or PHYS 100 College Physics I.

PHYS 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHYS 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHYS 240. Introductory Physics Topics. 1-3 hours. Lecture or seminar in selected introductory topics of physics.


PHYS 479. Techniques for Teaching Physics. 3 hours. Techniques, methods, and course content used in teaching physics in the secondary school. Offered by the Department of Physics. To be taken before the professional semester. Prerequisites: Admission to teacher education and PSYCH 357 Educational Psychology.

PHYS 500. Mathematical Physics. 3 hours. Mathematical methods in classical and modern physics. Prerequisites: MATH 150 Calculus I and PHYS 101 College Physics II or PHYS 105 Engineering Physics II.

PHYS 502. Computational Physics. 3 hours. Use of computational techniques in solving problems in mechanics, electricity and magnetism, electronic circuits, optics and modern physics. Prerequisites: PHYS 500 Mathematical Physics.

PHYS 504. Solid State Electronic Devices. 3 hours. Conduction in metals and semiconductors, the p-n junction, ohmic and rectifying contacts, zener and tunnel diodes, bipolar transistors, multi-junction devices, field effect transistors, introduction to integrated circuits. Prerequisites: MATH 150 Calculus I and PHYS 101 College Physics II or PHYS 105 Engineering Physics II.


PHYS 512. Electricity and Magnetism I. 3 hours. Vector calculus, coordinate systems and transformations, electrostatic fields, boundary value problems, magnetostatics, magnetic forces, materials and devices, Maxwell's Equations. Prerequisite: PHYS 500 Mathematical Physics.

PHYS 514. Applied Thermodynamics. 3 hours. Heat, temperature, laws of thermodynamics and their applications. Prerequisite: PHYS 104 Engineering Physics I.

PHYS 516. Modern Physics I. 3 hours. Relativity, atomic, nuclear, high energy and solid state physics. Prerequisites: MATH 150 Calculus I and PHYS 101 College Physics II or PHYS 105 Engineering Physics II.

PHYS 518. Physical Optics. 3 hours. Huygen's principle; interference; diffraction; polarization and crystal optics; electromagnetic theory of light. Prerequisites: MATH 253 Calculus III and PHYS 105 Engineering Physics II.


PHYS 530. Intermediate Physics Laboratory (___). 3 hours. Experiments in electricity and magnetism; thermodynamics; atomic and nuclear physics; optics. Prerequisite: PHYS 105 Engineering Physics II. May be repeated if subject matter is different each time.

PHYS 532. Electronic Circuits I. 3 hours. A.C., D.C. circuitry, diode and transistor theory, transistor amplifiers, amplifier and feedback circuits, oscillators, digital electronics, microprocessors. Prerequisite: PHYS 105 Engineering Physics II.

PHYS 533. Electronic Circuits II. 3 hours. Digital to analog and analog to digital converters, transducers and applications to computer interfacing, feedback and control by computers. Prerequisite: PHYS 532 Electronic Circuits I.

PHYS 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHYS 540. Topics in Physics (____). 1-3 hours. Lecture or seminar in specialized area of physics. Prerequisites: PHYS 500 Mathematical Physics. May be repeated if subject matter is different.

PHYS 541. Topics in Astronomy (____). 1-3 hours. Lecture, seminar, or laboratory studies in specialized areas of Astronomy. May be repeated if subject matter is different.

PHYS 542. Topics in Earth Science (____). 1-3 hours. Lecture, seminar, laboratory, and/or field studies in a specialized area of Earth Science. May be repeated if subject matter is different. Prerequisites: PHYS 160/165 Physical Geology/Laboratory.

PHYS 559. Laboratory Assistant Practicum. 2 hours. For students intending to teach physics or general science in secondary schools. Assisting in preparation and instruction in one of several physics or physical science laboratories. A minimum of four hours assisting per week is required. Prerequisite: Students must be enrolled in the teacher education curriculum; permission of instructor.

PHYS 575. Introductory Astrophyics. 3 hours. Celestial mechanics, photometry, stellar and planetary astronomy, radio and space probe astronomy. Prerequisite: PHYS 101 College Physics II or PHYS 105 Engineering Physics II.

PHYS 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

PHYS 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PHYS 591. Physics Project. 1-3 hours. Project in classical or modern physics. Prerequisite: Permission of instructor. May be repeated.
PHYS 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

PHYS 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

PHYS 610. Analytical Mechanics II. 3 hours. Lagrangian and Hamiltonian mechanics, rigid body motion, mechanics of continuous media. Prerequisite: PHYS 510 Analytical Mechanics I.

PHYS 612. Electricity and Magnetism II. 3 hours. Maxwell's equations, time-varying electric and magnetic fields, electromagnetic wave propagation, transmission lines, wave guides and antennae. Prerequisite: PHYS 512 Electricity and Magnetism I.

PHYS 616. Modern Physics II. 3 hours. Continuation of PHYS 516 Modern Physics I. Applications of relativity and quantum mechanics to atomic, nuclear, high energy, solid state, and astrophysics. Prerequisite: PHYS 516 Modern Physics I.

PHYS 691. Senior Research Project. 2 hours. Individual research project. Oral and written presentations by student. Prerequisite: Senior standing.

PHYS 699. Senior Review and Assessment. 1 hour. Capstone course for undergraduate physics majors along with exiting assessment. Prerequisite: Senior standing.

PHYS 702. Advanced Computational Physics. 3 hours. Numerical solution methods of partial differential equations and application of boundary conditions to problems in electricity, magnetism, fluid dynamics, and quantum mechanics. Prerequisites: PHYS 553 Differential Equations, PHYS 500 Mathematical Physics, or permission of instructor.

PHYS 712. Electromagnetics. 3 hours. Magnetostatics, Magnetic fields, Electromagnetic Induction, The Maxwell equations, Electromagnetic waves, application of electromagnetics, laboratory experiments and demonstrations designed to teach electromagnetics concepts and applications. Prerequisite: PHYS 516 Modern Physics I or permission of instructor.

PHYS 714. Statistical Thermodynamics. 3 hours. Distribution functions, statistical methods applied to radiation and matter. Prerequisite: PHYS 516 Modern Physics I or CHEM 593 Physical Chemistry I or permission of instructor.

PHYS 716. Introductory Quantum Mechanics. 3 hours. Atomic spectra, special theory of relativity and the origins of quantum theory. Wave mechanics, the square well, barrier potentials, harmonic oscillator, and hydrogen atom. Prerequisite: PHYS 516 Modern Physics I or CHEM 593 Physical Chemistry I or permission of instructor.

PHYS 730. Advanced Physics Laboratory (____). 3 hours. Experiments in: Atomic and nuclear physics; x-rays; solid state physics; electromagnetic phenomena. Prerequisite: PHYS 530 Intermediate Physics Laboratory or other junior-senior level laboratory work. May be repeated if subject matter is different each time.

PHYS 735. Laboratory Safety and Compliance. 1 hour. Survey of recommended best practices for safe laboratory operation, handling and disposal of hazardous materials, electricity, radiation, pressurized or cryogenic gases, and first aid, including the latest federal, state, city, and campus regulations to prevent accidents or exposures that may cause injury, property damage, or interference with other work. Recommended for Lab Assistants. Prerequisite: PHYS 131 Elementary Physics Laboratory II or PHYS 172 Physical Science Laboratory.

PHYS 740. Advanced Topics in Physics (____). 1-3 hours. Lecture or seminar in specialized areas of physics. May be repeated if subject matter is different each time.

PHYS 741. Special Topics (____). 1-3 hours. Selected topics in the physical sciences. Primarily for education majors. May be repeated if subject matter is different.

PHYS 742. Solid State Physics. 3 hours. Theoretical and experimental aspects of solid state physics. Prerequisite: Permission of instructor.

PHYS 743. Solid State Electronics. 3 hours. Digital Electronic Signals and Switches, Logic Gates, Boolean Algebra, Flip-Flops and Registers; Semiconductor, Magnetic and Optical Memory, feed-back and control by computers via LabView. Prerequisites: MATH 150 Calculus I and PHYS 105 Engineering Physics II or permission of instructor.

PHYS 745. Nanophysics. 3 hours. Fundamental physics of nanoscale systems and their device applications. The course focuses on novel nanomaterials such as carbon nanotubes, graphene and other two-dimensional atomic crystals (such as h-BN, MoS2, MoSe2, WS2 and WSe2) and their heterostructures, nanostructures based on III-V semiconductor systems and their alloys such as quantum wells, and some nanobiological systems. Prerequisite: PHYS 516 Modern Physics I or permission of instructor.

PHYS 754. Nanophysics. 3 hours. Fundamental physics of nanoscale systems and their device applications. The course focuses on novel nanomaterials such as carbon nanotubes, graphene and other two-dimensional atomic crystals (such as h-BN, MoS2, MoSe2, WS2 and WSe2) and their heterostructures, nanostructures based on III-V semiconductor systems and their alloys such as quantum wells, and some nanobiological systems. Prerequisite: PHYS 516 Modern Physics I or permission of instructor.

PHYS 750. Thin Films. 3 hours. Setup and operation of high vacuum deposition systems, thin film fabrication techniques, experimental analysis of thin films and modeling using current theory, film patterning techniques, properties of thin films. Prerequisite: PHYS 516 Modern Physics I or permission of instructor.

PHYS 760. History and Philosophy of Science. 3 hours. Introduction to modern views about the nature of science with a survey of major changes and contributors to development of epistemology and empirical techniques in the physical and life sciences. Prerequisites: PHYS 101 College Physics I/PHYS 101 College Physics II or PHYS 104 Engineering Physics I/PHYS 104 Engineering Physics II, and PHYS 516 Modern Physics I.

PHYS 775. Advanced Astrophysics. 3 hours. Study of the astrophysics of stars (energy production processes and evolution), galaxies (dynamics and evolution), and cosmology. Prerequisite: PHYS 275 Introductory Astrophysics or permission of instructor.


PHYS 816. Quantum Mechanics. 3 hours. Non-relativistic quantum theory; operator formalism; perturbation and variational methods.

PHYS 830. Graduate Physics Laboratory. 3 hours. Selected experiments in modern physics.

PHYS 832. Experimental Design in the Physical Sciences. 3 hours. Incorporation of parametric, systematic, and statistical error analysis, instrumental uncertainties, and logic into the design and planning of experiments in physics, chemistry, and engineering. Prerequisites: PHYS 516 Modern Physics I and PHYS 530 Intermediate Physics Laboratory.

PHYS 840. Graduate Topics in Physics (____). 3 hours. Lecture or seminar in specialized areas of physics. May be repeated if subject matter is different each time.

PHYS 881. Orientation to College Teaching. 3 hours. Laboratory work in the classroom situation; work with instrumental aids; involvement in curriculum development, test construction, and classroom instruction.
PHYS 882. Guided Inquiry for Science Fairs and Demonstrations. 3 hours. How to guide and encourage secondary school students in research projects in the physical sciences. Emphasizes important distinctions between simply building a technical demonstration and actually following the scientific method. Recommended for secondary school teachers. Prerequisites: PHYS 100 College Physics I/PHYS 101 College Physics II or PHYS 104 Engineering Physics I/PHYS 105 Engineering Physics II, and PHYS 516 Modern Physics I.

PHYS 890. Research and Thesis. 1-6 hours. May be repeated. No more than six hours applies toward the master's degree, except when additional hours are determined by the Department to be required to complete the thesis and its defense.

PHYS 891. Research Problem. 1-6 hours. May be repeated. No more than six hours applies toward the master's degree, except when additional hours are determined by the Department to be required to complete the problem and report.

PHYS 893. Research Grant Proposal Writing. 3 hours. Introduction to fundamental techniques for obtaining research funding, including both government and private sources, types of solicitations, rules, strategies, nd proposal formats. Prerequisite: PHYS 516 Modern Physics I.

Political Science

POLS 101. U.S. Politics. 3 hours. Fundamental study of how the U.S. government is organized and functions, with emphasis on the political processes and citizen participation.

POLS 103. Comparative Political Institutions. 3 hours. Introduction to the study of political institutions for a comparative perspective. Focus on presidencies, parliaments, course, party systems, electoral systems, civil societies, and bureaucracies.

POLS 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

POLS 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

POLS 242. United Nations. 1 hours. The class provides an overview of the history and structure of the United Nations and addresses the wide range of issues the UN works on around the world. The course discusses current issues confronting the United Nations and assesses the importance of these issues to the international community. Students will explore the roles and responsibilities both within the United Nations system and around the world by researching issues related to peace and security, development, the environment, and human rights. A substantial portion of the class is designed to prepare students to compete in the annual Midwest Model United Nations conference. Course may be repeated.

POLS 301. State and Local Government and Politics. 3 hours. A study of the structure and functions of state, county, and municipal government in the United States. Prerequisite: POLS 101 U.S. Politics or permission of instructor. Students who have taken POLS 102 are not eligible to take this class.

POLS 320. Introduction to Political Science. 3 hours. An introduction to the world and science of politics. Examines political topics related to the functioning of political systems and stressing the interrelatedness of those systems. Required of all political science and social science pre-law majors.

POLS 324. Introduction to Comparative Politics. 3 hours. Survey of basic principles and practices of liberal democratic, authoritarian and totalitarian governments, with a review of politics in selected countries of various regions.

POLS 412. Law in Film and Literature. 3 hours. Philosophical inquiry into the nature of law and legal phenomena as elucidated by film and literature. Focus on constitutive legal theories, including natural law, legal realism, Marxist legal theory, and poststructuralism.

POLS 450. Political Philosophy. 3 hours. An examination of key concepts of political philosophy, such as justice, right, and nature, from classical, medieval, and modern perspectives.

POLS 492. Directed Readings in Political Science. 1-3 hours. Individual study and research in selected areas of political science. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

POLS 512. Environmental Politics. 3 hours. Analysis of historical and contemporary concerns and values relating to environmental protection and natural resource management and their manifestation into political movements and policy. Prerequisites: POLS 101 U.S. Politics or POLS 324 Introduction to Comparative Politics.

POLS 516. Political Parties and Elections. 3 hours. Examination of political parties as organizations, their role within government, and the effectiveness of parties and elections as democratic links between citizens and those who govern. Prerequisite: POLS 101 U.S. Politics.

POLS 517. U.S. Congress. 3 hours. Comprehensive study of the U.S. Congress, including legislator selection, legislative organization and procedure, and other participants in the legislative process. Prerequisite: POLS 101 U.S. Politics or POLS 102 State and Local Government and Politics.

POLS 523. Asian Politics. 3 hours. Overview of historical and contemporary politics in Asia through the lens of comparative politics. Focus on politics of China, Japan, India, North and South Korea, and Central and Southeast Asia. Prerequisite: POLS 103 Comparative Political Institutions or permission of instructor.

POLS 524. European Politics. 3 hours. Investigation of the institutions, politics, and policies of contemporary Europe. Includes analysis of the European Union (EU) and country studies of Western, Central and Eastern Europe. Prerequisite: POLS 103 Comparative Political Institutions or POLS 324 Introduction to Comparative Politics or permission of instructor.

POLS 525. Middle Eastern Politics. 3 hours. Comparative politics of the Middle East and nearby Muslim countries. Focus on war, insurgency, coups, and their regional and global implications. Prerequisites: POLS 103 Comparative Political Institutions or POLS 324 Introduction to Comparative Politics or permission of instructor.

POLS 526. Latin American Politics. 3 hours. Survey of institutions, problems, parties and politics of Latin America, with emphasis on selected countries. Prerequisite: POLS 103 Comparative Political Institutions or POLS 324 Introduction to Comparative Politics or permission of instructor.

POLS 527. African Politics. 3 hours. Modern political systems of Sub-Saharan Africa. Particular attention to issues of ethnicity, the role of government in development, problems associated with government failure in the region, the role of the international community in Africa. Prerequisite: POLS 103 Comparative Political Institutions or POLS 324 Introduction to Comparative Politics or permission of instructor.

POLS 530. International Relations. 3 hours. Close attention to current affairs, international law, the principles and practices of diplomacy, international organizations, the efforts to prevent war and maintain peace.

POLS 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

POLS 562. Law and Politics. 3 hours. Analysis of the judicative roles performed by federal and state judiciaries in the American political system. Prerequisite: POLS 101 U.S. Politics or POLS 320 Introduction to Political Science.

POLS 571. Political Studies-Selected Topics (___). 1-3 hours. Intensive examination and analysis of selected topics in political science. May be repeated when subject is different.

POLS 576. Global Human Rights. 3 hours. This course provides a comprehensive overview of the major theoretical roots and empirical phenomena that compose the field of human rights. Students are exposed to the contemporary debates surrounding human rights, especially regarding their universalism, relativism, and political nature. Students also learn the politics and historical context of human right violations including but not limited to torture, genocide, and political repression. Attention will be given to the evolution of thought concerning the promotion of civil and political rights as they relate to women, children, and culture. Finally, the major international institutions, political processes, and procedures by which human rights norms are established and enforced are explored. The positive and negative effects of globalization on the human rights regime is also discussed. Prerequisites: POLS 101 U.S. Politics or POLS 103 Comparative Political Institutions.
POLS 578. Democratic Theory and Public Opinion. 3 hours. Interpretations of democracy, the degree to which the United States is democratic, and the formation of public opinion and its role in United States politics.

POLS 587. U.S. Foreign Policy. 3 hours. Study of the foreign policy of the United States with emphasis on current trends and the foreign policy decision-making process. Prerequisite: POLS 101 U.S. Politics or permission of instructor.

POLS 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

POLS 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

POLS 604. The American Presidency. 3 hours. An analysis of the office of the President of the United States and its relationship with other governmental institutions in the constitutional and political system. Prerequisite: POLS 101 U.S. Politics or equivalent.

POLS 605. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

POLS 609. Administrative Law. 3 hours. A comprehensive study of public law standards that shape decision-making in U.S. regulatory agencies. Focus on rule-making, enforcement, and adjudication. Prerequisites: POLS 101 U.S. Politics or POLS 324 Introduction to Comparative Politics or permission of instructor.

POLS 616. Interest Groups and Social Movements. 3 hours. Examination of various groups attempting to influence governmental policy, their form, function, and method. Prerequisite: POLS 101 U.S. Politics or POLS 320 Introduction to Political Science.

POLS 630. International Political Economy. 3 hours. Examination of the interdependent relationships between government, politics, and economics, and among the countries and economies of the world. Prerequisite: ECON 201 Principles of Macroeconomics or permission of instructor.

POLS 652. International Law. 3 hours. The course provides an in-depth study to the norms, laws, regimes, and state practices that make up the field of international law. "Is International law in fact law?" This is the underlying question informing the course. The strengths and weaknesses of the various treaties, norms, and conventions associated with topics such as peacekeeping, humanitarian intervention, human rights, trade, and security will be discussed. In addition, students will be able to identify and assess the mechanisms of global governance by studying case studies of international law at work. Prerequisite: POLS 105 Comparative Political Institutions or permission from the instructor.

POLS 660. Political Science Internship (___). 1-3 hours. Supervised work experience in the local courts, state and national legislatures, approved campaign experiences and political party activities, and public administrative service agencies. May be repeated once. Permission of instructor. Offered only on a pass-fail basis.

POLS 661. Constitutional Law I. 3 hours. The role of the Supreme Court in the development of constitutional principles of the separation of powers and federalism. Prerequisite: POLS 101 U.S. Politics or equivalent.

POLS 662. Constitutional Law II. 3 hours. The role of the Supreme Court in the development of civil liberties and related matters. Prerequisite: POLS 101 U.S. Politics or equivalent.

POLS 663. War: The Politics of Violence. 3 hours. The phenomena of war; the etiology of war, its history, and utility in the modern age. Prerequisite: POLS 101 U.S. Politics or permission of instructor.

POLS 686. Senior Seminar in Political Science. 3 hours. A "capstone" course to enhance the ability of graduating seniors to apply the basic concepts of political sciences and its major subfields. The seminar involves the analysis of a variety of contemporary issues and stresses the clear communication of such to both students and nonstudents of the discipline. Required of all majors in political science. Prerequisite: 24 hours of political science, including required courses in major, or permission of instructor.

Psychology

PSYCH 155. General Psychology. 3 hours. Introduction to the science of psychology with an emphasis on the principles which lead to a greater understanding of behavior. Selected laboratory experiences included.

PSYCH 165. Psychology as a Profession I. 2 hours. An orientation to the field of human services, focusing on professional psychology and counseling, including career options and directions, training and credentialing, and including a general orientation to ethics in the field.

PSYCH 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PSYCH 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PSYCH 230. Career Exploration. 1 hours. Designed to aid students in exploring sources of career information and the world or work. Decision-making skills and methodologies, sources of occupational-educational information, and the various sources for gaining career information and self-understanding will be explored. Includes experience in using career information systems.

PSYCH 263. Developmental Psychology. 3 hours. Principles of growth and development in the physical, cognitive, social, emotional and personality spheres. Application of current scientific data in the real world of infants, children, adolescents, and adults will be emphasized. Prerequisite: PSYCH 155 General Psychology or permission of instructor.

PSYCH 275. Psychology of Adjustment. 3 hours. A study of factors designed to promote personality characteristics that reflect mental health. Emphasis will be centered on the development of positive, affective personality rather than on the correction of negative, undesirable characteristics.

PSYCH 357. Educational Psychology. 3 hours. A broad based course designed to relate psychological theory to educational practice. Coverage includes course planning and objectives, learning and information processing, teaching strategies, motivation, behavior management, multicultural education, and measurement and evaluation. Prerequisite: For Teacher Education majors only: Junior standing, grade of "C" or better in PSYCH 155 General Psychology, PSYCH 263 Developmental Psychology and EDUC 261 Explorations in Education, minimum 2.5000 cumulative GPA. Elementary only: Have taken a Basic Skills Test, or score of 22 on the ACT or 1040 SAT. Secondary only: Admission to Teacher Education or permission of the Teacher Education office and instructor.

PSYCH 360. Psychology of Aging. 3 hours. The course examines the psychological aspects of human development and behavior from adulthood to older adulthood, which includes age-related changes in socialization, personality, intelligence, sensation, perception, learning, memory, interpersonal relationships, living arrangements, and the implication of these changes in the life of older adults.

PSYCH 362. Death and Dying. 3 hours. This course will explore scientific, theoretical, and applied issues of death and dying from a psychological perspective. Relevant psychological concepts will also be integrated with other approaches to contemplating death and dying, including personal experience, family and loved ones, health care providers, medical systems, and the broader culture.
PSYCH 389. Research Methods in Psychology I. 3 hours. Study of elementary descriptive and inferential statistics employed in behavioral sciences research, including an introduction to research methodology. Computer-based laboratory experiences provided. Prerequisite: PSYCH 155 General Psychology and MATH 113 College Algebra or MATH 110 College Algebra with Review or MATH 126 Pre-Calculus or permission of instructor.

PSYCH 392. Research Methods in Psychology II. 3 hours. Study of research designs and their applications, specific to broad methodological issues, research ethics, and the interpretation of research findings. Prerequisite: PSYCH 389 Research Methods in Psychology I.

PSYCH 394. Principles of Learning. 3 hours. Overview of the basic principles of human and animal learning, focusing on the biological and cognitive bases of behavior acquisition and the processes of learning. Prerequisite: PSYCH 155 General Psychology.

PSYCH 406. Independent Study: (___). 1-3 hours. Individual study, either research or readings oriented, under the direct supervision of an appropriate member of the faculty. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

PSYCH 430. Positive Psychology. 3 hours. This course provides an introduction to the study of topics related to science of positive psychology. It is designed to provide you with a basic understanding of the principles and concepts that are most relevant to you as an individual and as an individual in society. You will be strongly encouraged to apply these concepts to your life and to develop a fuller understanding of yourself, and your personal and social relationships. Prerequisite: Psychology major or minor or permission of instructor.

PSYCH 440. Topics in Psychology: (___). 1/2-3 hours. Specific area in psychology will be studied intensively through readings, reports, and discussions. A specific subtitle such as psycholinguistics, biofeedback, or leadership will be listed in the schedule of classes. May be taken on a Pass/Fail basis. May be repeated if subject matter is different. A maximum of 4 hours can be taken under the subtitle Organizational Leadership. No more than 6 hours may be applied to a psychology major and no more than 3 hours may be applied to a psychology minor without special permission from the chairperson of the Department of Psychology and Counseling.

PSYCH 445. Introduction to Clinical Psychology. 3 hours. This course will provide students with an introduction to the science and profession of clinical psychology. Students will gain an understanding of the roles of clinical psychologists, the education and training required to become a clinical psychologist, and current issues in the field. Students will develop an appreciation of clinical diagnosis, methods of assessment, and approaches to the practice of psychotherapy. Emphasis will be placed on an empirical approach to the science and practice of clinical psychology. Prerequisite: PSYCH 155 General Psychology.

PSYCH 456. Introduction to Social Psychology. 3 hours. An introduction to the psychology of social behavior. Systematic consideration of such concepts as social influence, conformity and deviation, social attitudes, prejudice, socialization and personality, and leadership.

PSYCH 463. Cognitive Processes. 3 hours. Theory and research in human cognitive processes and cognitive bases of behavior such as information processing, memory, concept information, problem solving, perception, and language. Prerequisite: PSYCH 155 General Psychology.

PSYCH 505. Power-Based Violence. 3 hours. This course is designed to provide an understanding of the dynamics underlying power-based violence (including bullying, harassment, sexual harassment, sexual assault, rape, domestic violence, and stalking).

PSYCH 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PSYCH 571. Abnormal Psychology. 3 hours. Introduction to the study of abnormal behavior. Careful consideration will be given to the history of the concept of abnormality. Symptomatology of abnormal behavior will be studied as well as functional disorders including personality disorders and schizophrenia. Prerequisite: PSYCH 155 General Psychology or permission of instructor.

PSYCH 575. Industrial and Organizational Psychology. 3 hours. Application of principles, methods and findings from psychological research to pertinent industrial and organizational problems. Emphasis is given to theories of organizational development, organizational structures, contingencies of supervision and leadership, personnel psychology, theories of motivation, training and development, human engineering, and consumer psychology. Prerequisite: Junior standing or permission of instructor.

PSYCH 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

PSYCH 592. Applied Research Methods. 1-9 hours. Applications of research design and analysis through active participation in a programmatic research project in the department. Includes data collection, data analysis, and written summaries of research results. Prerequisite: Permission of instructor. May be repeated for a maximum of 9 hours. No more than 6 hours may be applied to a psychology major, and no more than 3 hours may be applied to the psychology minor.

PSYCH 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

PSYCH 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

PSYCH 605. Psychology and the Military. 3 hours. This course will provide the learner an overview of Psychology-based careers in the Federal Government with a particular focus on those in the military. The importance of Psychologists, Counseling-Psychologists, Professional Counselors, Marriage and Family Therapists, Case Managers, and other Psychology-based positions with the Federal Government. The course will explore opportunities to work with the Government and how as a public servant will take care of government employees and their families, as well as the general public in some cases.

PSYCH 616. Introduction to Group Processes. 3 hours. Principles of group process such as leadership, membership, group development, and facilitative/therapeutic factors will be included. Issues in group creation, maintenance, termination, and ethical issues, types of group work and appropriate application, are covered. Experiential activities included to emphasize self-awareness and interpersonal and team-building skills. Prerequisite: Six hours of psychology or permission of instructor.

PSYCH 665. Psychology as a Profession II. 1 hours. A course encompassing six hours of knowledge application and methods to pursue jobs or graduate school admission. Application, letter of intent, and resume preparation will be included. Prerequisites: PSYCH 165 Psychology as a Profession I, 75 hours of coursework or permission of instructor.

PSYCH 675. Human Factors Psychology. 3 hours. Focuses on humans and their interaction with products, equipment, facilities, procedures, and environments used in work and everyday living. Includes the systematic application of relevant information about human capabilities, limitations, characteristics, behavior, and motivation to the study of design and ergonomics. Prerequisites: 45 credit hours or permission of instructor.

PSYCH 685. Psychology of Personality. 3 hours. A study of the personality theories and the use of personality variables as an affective basis of behavior. Determination of and techniques of measuring personality variables. Prerequisite: PSYCH 155 General Psychology, PSYCH 389 Research Methods in Psychology I, junior-level status, or permission of instructor.
PSYCH 690. Assistantship in Psychology. 1-3 hours. Assistants will be exposed to a wide variety of educational and experimental settings within the Department of Psychology and Counseling and will work directly with the professional teaching staff to gain a mastery of the educational and experimental side of the department in a practical way. Prerequisite: Junior level standing and permission of instructor. May be repeated.

PSYCH 691. Evolutionary Psychology. 3 hours. A survey of how the basic principles of natural selection and sexual selection govern behavior and mental processes. A major focus will be research findings that describe how evolutionary processes apply to behavior, including human behavior and mental processes. Prerequisite: PSYCH 155 General Psychology and senior standing.

PSYCH 698. Sensation and Perception. 3 hours. This course surveys contemporary research and theory on sensation and perception. Topics surveyed include sensory physiology, psychophysics, visual attention and search, visual and auditory cognition, and central nervous system pathways involved in the processing of color, form, motion, depth, touch, temperature, taste, smell, and balance. Special attention will be given to research on vision as it highlights approaches scientists have taken in their efforts to understand the functioning of the brain. Prerequisites: PSYCH 155 General Psychology and at least junior standing, or permission of instructor.

PSYCH 699. Senior Thesis. 1-3 hours. senior level honors research project or paper. May be repeated for a maximum of 3 hours. Prerequisite: 30 hours of undergraduate psychology and permission of instructor.

PSYCH 701. Ethics in Human Services. 3 hours. Emphasizes knowledge of client rights, confidentiality and release of information regulations, professional standards, code of ethics, and common violations in the human services.

PSYCH 703. Mental Health Case Management. 3 hours. This is a pre-fieldwork course emphasizing practical techniques to facilitate client engagement and relationship with case managers and other support staff. Simulated experience will be provided through the use of role-play. This course also provides specific skills and knowledge in: crisis management; case management with alcohol and drug-abusing consumers vs. with clients with mental disorders; dealing with clients who are dually diagnosed; and case management issues for differential diagnoses and treatment/intervention plans.

PSYCH 705. Human Service Skills. 3 hours. This face to face course will focus on effective communication and interviewing techniques with emphasis on listening and responding. Students will also learn principles of ethical practice and the role of the provider in a variety of settings. Prerequisite: Admission to the B.S. in Psychology with an emphasis in Psychology and the Military or permission of instructor.

PSYCH 711. Addictions I. 3 hours. This course provides knowledge of behavior patterns, progressive stages, historic and generational bases of alcohol/drug dependency, and other types of addictions. The course will also cover issues including addiction substitution, continuum of care, progress in recovery, and relapse dynamics.

PSYCH 720. Multicultural Issues in Psychology and Counseling. 3 hours. Designed to assist human service workers in understanding their own ethnicity, increasing their sensitivity to life experiences of minority group members, and promoting establishment of successful professional relationships.

PSYCH 722. Fundamentals of Tests and Measurement. 3 hours. An overview of contemporary basic psychometric theory. Focused application of these principles in psychology and counseling and other related domains of society. Prerequisite: 9 hours of psychology or permission of instructor. (PSYCH 389 Research Methods in Psychology I or its equivalent is recommended.)

PSYCH 724. Physiological Psychology. 3 hours. Relationships between various body systems and behavior with special emphasis on latest relevant empirical data. Laboratory experiences will be included. Prerequisites: PSYCH 155 General Psychology and at least junior standing, or permission of instructor.

PSYCH 727. Pharmacology and Substance Abuse. 3 hours. Course provides knowledge of states of intoxication and withdrawal, long term effects of substance abuse, effects of psychoactive drugs, mixing drugs, and cross-addictions.

PSYCH 735. Psychology of Mental Health. 3 hours. Study of the dynamics of human adjustment in terms of psychological and social variables. Prerequisite: 6 hours of psychology or permission of instructor.

PSYCH 736. Psychology of Family Development. 3 hours. A study of the dynamics of family development with emphasis on its relationship to family therapy.

PSYCH 738. Human Sexuality. 3 hours. This course is a study of human sexuality and assisting individuals and couples with sexual concerns. It is designed to provide scientific information in the following areas: research about sexuality, sexual development, aging and sexual functioning, sexual orientation, gender issues, sexual anatomy and physiology, sexual response cycles, psychological and social sexual dynamics, treatment of sexual disorders and sexual trauma/abuse, sexual behavior patterns, sexual communication, contraception, infertility, and sexually transmitted infections. Prerequisites: PSYCH 155 General Psychology and PSYCH 263 Developmental Psychology or equivalent.

PSYCH 740. Topics in Psychology. (____). 1/2-3 hours. Study of specific area in psychology or counseling through readings, reports and discussions under such listed subtitles as psycholinguistics, philosophical psychology, or therapies. May be taken on a Pass/Fail basis. May be repeated if subject matter is different. No more than 6 hours may be applied to a psychology major and no more than 3 hours may be applied to a psychology minor without special permission from the chairperson of the Department of Psychology and Counseling.

PSYCH 741. Behavior Modification. 3 hours. A systematic review of the major theories of behavior modification with emphasis on the applications of basic principles of behavior modification and learning to home, school, and other learning situations. Prerequisite: PSYCH 394 Principles of Learning or equivalent course.

PSYCH 745. Introduction to Counseling and Psychotherapy. 3 hours. Development of concepts underlying school and agency counseling programs. Overview of counseling techniques and guidance services. Prerequisite: 9 hours of education and/or psychology or permission of instructor.

PSYCH 749. Crisis Management and Treatment. 1 hours. This course will provide an introduction to the effects of crises, disasters, and other trauma-causing events and their influence on individuals and communities. Basic principles of crisis intervention and strategies for promoting resilience are also included.

PSYCH 755. Introduction to School Psychology. 3 hours. This course is designed to assist new and prospective students to differentiate the field of school psychology from related professions by exploring the roles and functions of school psychologists, the nature and scope of the graduate training involved, and future projections of opportunities in the field. Students' understanding of the profession is further expanded through instruction in consultation and observation, two activities in which school psychologists commonly participate.

PSYCH 756. Social Psychology. 3 hours. Designed to provide a thorough background in social psychology and to motivate a continuing exploration of theoretical problems and issues in the field. Combines examination of historical development of theory and method in social psychology with analyses of theoretical, methodological approaches to a variety of contemporary topics. Prerequisite: Successful completion of PSYCH 389 Research Methods in Psychology I and PSYCH 392 Research Methods in Psychology II or permission of instructor.

PSYCH 761. History and Systems of Psychology. 3 hours. Brief summary of the historical and psychological backgrounds of modern psychology. The contributions of structuralism, functionalism, behaviorism, Gestalt psychology, dynamic psychology and humanism to the development of scientific psychology. Prerequisite: 9 hours of psychology.

PSYCH 771. Psychology and the Law. 3 hours. Applications of psychological processes and concepts to the American legal system. Among the topics covered are the socialization of legal attitudes, opinions about the purposes of the criminal justice system and persons, the concept of "dangerousness", the nature of jury decision-making, and the rights of prisoners, patients, and children.

PSYCH 773. Criminal Psychopathology. 3 hours. This course is intended to provide a survey of some of the main psychological theories of criminal behavior. It will include an introduction to general theoretical approaches, examine mental disorders in relationship to criminal behavior, as well as explore some of the psychological characteristics associated with specific types of criminal behavior.

PSYCH 774. Family and Addictions. 3 hours. An overview of the impact of substance abuse on the family, along with knowledge of assessment tools and intervention strategies appropriate for use with families affected by substance abuse. Prerequisite: PSYCH 711 Addictions I.

PSYCH 775. Individual Counseling in Addictions, 3 hours. Provide knowledge and skills in basic communication and ability to establish a counseling relationship, overview and evaluation of current theories of individual counseling in substance abuse; examination of the role of the counselor; crisis intervention theory and practice. Prerequisite: PSYCH 711 Addictions I and acceptance into Substance Abuse Services program or permission of instructor.
PSYCH 776. Addiction Services Coordination. 3 hours. Provides knowledge in screening and assessment in substance abuse; crisis management; case management with substance abusing clients vs. clients with mental disorders; treatment planning and services in substance abuse; and client record management. Prerequisites: PSYCH 711 Addictions I, PSYCH 775 Individual Counseling in Addictions, and acceptance into Substance Abuse Services program, or permission of instructor.

PSYCH 777. Fieldwork in Psychology for Substance Abuse Services. 3 hours. Supervised field placement for psychology majors in the substance abuse services emphasis. Prerequisites or concurrent enrollment: PSYCH 616 Introduction to Group Processes, PSYCH 701 Ethics in Human Services, PSYCH 711 Addictions I, PSYCH 775 Individual Counseling in Addictions, PSYCH 776 Addictions Services Coordination, acceptance into Substance Abuse Services program, and permission of instructor. Formal application must be made the semester before enrollment in PSYCH 777. May be repeated. Formal application must be made the semester before enrollment in PSYCH 778.

PSYCH 779. Fieldwork in Psychology: Human Resource Development Practicum. 1-3 hours. This course provides supervised field placement for psychology majors in the Human Resource Development concentration. Prerequisites: 21 hours of coursework in the undergraduate psychology major plus 15 hours of coursework in the HRD emphasis, a 3.00 GPA, PSYCH 575 Industrial and Organizational Psychology, acceptance into Human Resource Development, and permission of instructor. Formal application must be made the semester before enrollment in PSYCH 779.

PSYCH 781. Psychology of Exceptional Children. 3 hours. Psychology of exceptional children with special emphasis on development, emotional, and social characteristics.

PSYCH 783. Ethical and Legal Issues in School Psychology and Related Fields. 3 hours. The course features two areas of primary focus: 1) Content and guidelines for practicing as a school psychologist within the parameters of the National Association of School Psychologists’ Code of Ethics and 2) Current legal trends and litigation findings which have both direct and indirect impact on decision-making in the practice of school psychology and its related fields, e.g., special education and others. Student/parent procedural safeguards including due process procedures as outlined in federal and state regulations will be reviewed. The course includes numerous case study opportunities for hands on practice. Prerequisite: Nine hours of psychology or permission of instructor.

PSYCH 801. Ethical Issues in Clinical Psychology. 3 hours. A review of ethical guidelines, issues and dilemmas in the provision of psychological services. This course is required of all graduate psychology majors with an emphasis in clinical psychology. Prerequisite: Admission to a graduate program in psychology or counseling.

PSYCH 803. Intellectual Assessment. 3 hours. Extensive supervised practice in administration, scoring, and interpretation of major intelligence tests. Analysis of test data and psychological report writing are also stressed. Prerequisite: PSYCH 722 Fundamentals of Tests and Measurement, admission to a graduate practitioner degree program in psychology or counseling, and permission of instructor. Permission of department chairperson. This course must be followed by enrollment in an appropriately supervised field experience (practicum/internship). Lab fee required. Course will be assessed an additional class fee.

PSYCH 805. Psychoeducational Assessment. 3 hours. Examination of various individual mental tests with closely supervised practice in administration, interpretation and use of test results. Particular emphasis will be given to those instruments which are designed to measure the ability of individuals with speech, hearing and visual defects. Prerequisite: PSYCH 803 Intellectual Assessment or permission of instructor.

PSYCH 806. Special Investigation (___). 1-3 hours. Independent study in psychology or counseling particularly relevant to the educational program of the individual student under the direct supervision of an appropriate staff member. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

PSYCH 808. Child Personality Assessment. 3 hours. Foundations of child psychopathology as well as administration, scoring, and interpretation of personality tests for children. Assessment measures will include projective, self-report and rating scale instruments for children. Prerequisite: PSYCH 722 Fundamentals of Tests and Measurement, PSYCH 803 Intellectual Assessment, admission to a graduate practitioner program in psychology or counseling, and permission of instructor.

PSYCH 809. Personality Assessment. 3 hours. Training in the administration and interpretation of psychological tests designed to assess personality functioning including both projective and non-projective assessment measures. (As part of the training experience, students will be expected to take a number of personality tests, and the results of these tests will be individually reviewed with the student by the instructor or other licensed psychologist.) Prerequisites: PSYCH 801 Ethical Issues in Clinical Psychology, PSYCH 803 Intellectual Assessment, and PSYCH 811 Psychopathology and Diagnosis of Mental Disorders, admission to a graduate practitioner degree program in psychology or counseling and permission of instructor. Lab fee required. Course will be assessed an additional class fee.

PSYCH 810. Advanced Educational Psychology. 3 hours. An applied study of behavioristic and humanistic learning theories, classroom motivation, discipline, measurement, evaluation and testing.

PSYCH 811. Psychopathology and Diagnosis of Mental Disorders. 3 hours. Study of the Diagnostic and Statistical Manual of the American Psychiatric Association, emphasizing the differentiation and classification of mental disorders. Prerequisite: Admission to a graduate program in psychology or counseling, or permission of instructor.

PSYCH 814. Program Planning and Management in School Counseling. 2 hours. Instruction in planning and managing a comprehensive K-12 developmental school counseling program (including advisory committees, needs assessment, goals/objects/outcomes, and program evaluation methods). Techniques, procedures, and materials used to meet the needs of individuals, classroom groups, small groups, and the school community will be addressed. Prerequisite: PSYCH 745 Introduction to Counseling and Psychotherapy or permission of instructor.

PSYCH 816. Group Dynamics. 3 hours. A study of principles underlying the process of group action and interaction in social situations with application to situations of leadership and supervisory relationships. Emphasizes application of group dynamics principles in counseling, personal growth, and other psychological groups. Experiential activities are included. Not open for credit students who have taken PSYCH 616 Introduction to Group Processes. Prerequisite: 6 hours of psychology or permission of instructor.

PSYCH 817. Theories and Techniques of Family Counseling and Therapy. 3 hours. Study of the theories and of techniques of counseling and psychotherapy with family relationships. Prerequisite: Admission to a graduate practitioner counseling or psychology degree program or permission of instructor.

PSYCH 818. Theories of Counseling and Psychotherapy. 3 hours. Theories, principles and procedures of counseling in schools and agencies. Prerequisite: PSYCH 745 Introduction to Counseling and Psychotherapy required of all counseling majors or permission of instructor.

PSYCH 819. Techniques of Counseling and Psychotherapy. 3 hours. An experientially-based pre-practicum course emphasizing counseling and psychotherapeutic techniques and behavior. Emphasis will be placed upon the identification and acquisition of broad communication and relationship-building skills, specific counseling techniques, a counseling response repertoire, and an understanding of the interaction between theory and technique as it applies to actual practice. Simulated supervised counseling experience will be provided through the use of micro-counseling and role playing; the course will provide the opportunity to practice actual counseling techniques and interview behavior prior to the practicum. Prerequisites: PSYCH 745 Introduction to Counseling and Psychotherapy and PSYCH 818 Theories of Counseling and Psychotherapy, admission to a graduate practitioner degree program in psychology or counseling and permission of instructor.

PSYCH 822. Practicum in School Counseling. 3 hours. Supervised practice of school counseling in elementary and secondary schools. Prerequisite: Permission of instructor. Formal application must be made the semester before enrollment in PSYCH 822 Practicum in School Counseling.

PSYCH 823. Psychopharmacology. 3 hours. Three basic segments are included in this course: an overall description of methods of learning, an in-depth analysis of the pharmacological and psychopharmacological events that occur after drug intake; and a specific description of some combination of the fields of learning and psychopharmacology. Not open to students with old PSYCH 787 Psychopharmacology.

PSYCH 826. Contemporary and Ethical Issues in School Counseling. 1 hours. This course will focus on the contemporary issues school counselors are faced with when working with children and youth in schools. An emphasis will also be on the challenges school counselors address in terms of ethical and legal issues. The American School Counselors Association's Codes of Ethics will be utilized. Prerequisite: PSYCH 745 Introduction to Counseling and Psychotherapy, PSYCH 814 Program Planning and Management in School Counseling, or permission of instructor.
COURSE DESCRIPTIONS

PSYCH 827. Clinical Mental Health Counseling Practice. 2 hours. The study of the foundations, contextual dimensions, and knowledge and skill requirements of community counseling as well as consultation models for application to assist others with their delivery of counseling services to clients. Prerequisite or corequisite: Permission of instructor and PSYCH 822 Practicum in School Counseling.

PSYCH 830. Psychology of Learning. 3 hours. Theoretical foundations of learning including conditioning, cognitive, and social approaches. Application of these theories to the basic problems encountered in education and psychology. Prerequisite: 9 hours of psychology or its equivalent.

PSYCH 831. Techniques of Supervision of Counseling and Psychotherapy. 3 hours. Study and supervised practice of supervision of counseling and psychotherapy. Prerequisite or corequisite: Permission of instructor and PSYCH 822 Practicum in Counseling (Community or School). PSYCH 872 Practicum in Clinical Psychology, or PSYCH 970 Advanced Practicum in School Psychology, or their equivalent. May be repeated. Maximum of 12 credit hours of PSYCH 831 and PSYCH 831 Advanced Techniques of Supervision of Counseling and Psychotherapy combined hours may count toward a graduate degree.

PSYCH 832. Evidence-Based Interventions: Adults. 3 hours. An overview of evidence-based interventions for some of the major psychological disorders in an adult population. Prerequisites: PSYCH 811 Psychopathology and Diagnosis of Mental Disorders, PSYCH 818 Theories of Counseling and Psychotherapy, PSYCH 819 Techniques of Counseling and Psychotherapy, admission to a graduate practitioner program in psychology or counseling, and permission of instructor.

PSYCH 833. Evidence-Based Interventions: Children. 3 hours. An overview of evidence-based interventions for some of the major psychological disorders encountered in children. Prerequisites: PSYCH 818 Theories of Counseling and Psychotherapy, PSYCH 819 Techniques of Counseling and Psychotherapy, admission to a graduate practitioner program in psychology or counseling, and permission of instructor.

PSYCH 834. Introduction to Human Neuropsychology. 3 hours. Provides an overview of evolution, anatomy, physiology, and pharmacology as related to the field neuroscience. Use empirical findings from neuroscience to understand the neurological basis for psychological constructs of memory, language, emotion, spatial reasoning, executive functioning, and attention. Review common symptoms of neurological disorders and appropriate neuropsychological screening methods. Prerequisites: Permission of instructor.

PSYCH 837. Assessment and Intervention with Early Childhood Disabilities. 3 hours. Addresses assessment and intervention in early childhood handicapped children. Intended for those familiar with tests and measurements, and presumes a grasp of developmental theory applied to children. Common early childhood handicapping conditions along with research on intervention for these conditions is provided. Specifically designed to train graduate level students to competently perform both norm-referenced and criterion referenced assessments. Students are required to develop evidence-based interventions for children they have assessed. Prerequisite: PSYCH 722 Fundamentals of Tests and Measurement and permission of instructor.

PSYCH 839. Group Interventions. 3 hours. An overview of group therapy, with focus on practical aspects of managing a group, along with intervention protocols for commonly encountered problems in a mental health setting. Prerequisites: PSYCH 818 Theories of Counseling and Psychotherapy and admission to applied skills graduate degree program (Clinical Psychology, School Counseling, School Psychology) required. Prerequisite: PSYCH 818 Theories of Counseling and Psychotherapy and admission to applied skills graduate degree program.

PSYCH 840. Seminar: (____). 1/2-3 hours. A specific area in psychology or counseling will be studied intensively through readings, reports, and discussions. A specific subtitle such as perception, motivation, emotions, psychological statistics will be listed in the schedule of classes. May be taken on Pass/Fail basis. May be repeated if subject matter is different. No more than 6 hours may be applied to a master's degree.

PSYCH 844. Diversity Issues in Counseling. 3 hours. Theories and practice of counseling with diverse populations including cultural, sub-cultural, gender, ethnic, and special needs groups. Special emphasis is given to competencies in multicultural awareness and establishing counseling relationships, communicating, and goal setting with diverse populations.

PSYCH 845. Practice in Family Counseling. 1-3 hours. This course is for the advanced student who wishes to study family therapy in greater depth. Prerequisites: PSYCH 819 Techniques of Counseling and Psychotherapy and permission of instructor. PSYCH 817 Theories of Family Counseling and Therapy strongly recommended. May be repeated.

PSYCH 848. Career Development. 3 hours. Study of the concept of career development and of sources of information related to the world of work.

PSYCH 855. Group Counseling Practicum. 1 hours. A supervised group leadership experience. Formal application must be made the semester before enrollment in practicum. Prerequisites: Admission to Practicum in Psychology or Counseling, PSYCH 816 Group Dynamics, PSYCH 819 Techniques of Counseling and Psychotherapy and permission of instructor. May be repeated for a total of eight hours.

PSYCH 856. Group Counseling Internship. 1 hours. A supervised group leadership experience. Formal application must be made the semester before enrollment in practicum or internship. Prerequisites: Admission to Practicum in Psychology or Counseling, PSYCH 816 Group Dynamics, PSYCH 819 Techniques of Counseling and Psychotherapy, PSYCH 855 Group Counseling Practicum, and permission of instructor. May be repeated for a total of eight hours.

PSYCH 859. Advanced Developmental Psychology. 3 hours. A study of various determinants of behavior as they apply to the behavior of people in various life phases from infancy to senescence.

PSYCH 860. Clinical Psychology. 1 hours. Integration of assessment, diagnosis, and treatment issues as they apply to the clinical practice of psychology. Prerequisite: Completion of all other non-fieldwork-based coursework (including PSYCH 809 Personality Assessment and PSYCH 811 Psychopathology and Diagnosis of Mental Disorders) in the clinical psychology option and permission of instructor.

PSYCH 865. Pre-Practicum in Clinical Psychology. 3 hours. A combination of class and fieldwork designed to give students an introduction to the practicum experience. Supervised observation in assessment, diagnosis, and therapy in a multi-disciplinary mental health setting. Prerequisite: Permission of instructor. Formal application must be made the semester before enrollment in PSYCH 865 Pre-Practicum in Clinical Psychology.

PSYCH 870. Practicum in School Psychology. 1-4 hours. Supervised experience in the educational planning, follow-up, and research with children or youth, individually and in groups in the setting of schools K-12. Admission by application only. Prerequisite: Acceptance in Ed.S. School Psychology Program and permission of instructor. Formal application must be made the semester before enrollment in 870. May be repeated for a total of eight hours.

PSYCH 872. Practicum in Clinical Psychology. 1-6 hours. Supervised experience in assessment, diagnosis, and therapy in a multi-disciplinary mental health setting. Prerequisites: Permission of instructor, PSYCH 801 Ethical Issues in Clinical Psychology, PSYCH 809 Personality Assessment and PSYCH 832 Evidence-Based Interventions: Adults. Formal application must be made the semester before enrollment in PSYCH 872 Practicum in Clinical Psychology. May be repeated.

PSYCH 881. Orientation to College Teaching. 3 hours. Laboratory work in the classroom situation; work with instructional aids, involvement in curriculum development, test construction, and classroom instruction. Prerequisite: Permission of instructor. May be repeated.

PSYCH 890. Research and Thesis. 3-6 hours. Prerequisite: PSYCH 891 Methods of Research in Psychology and Counseling or its equivalent and permission of instructor. May be repeated for a maximum of 6 hours.

PSYCH 891. Methods of Research in Psychology and Counseling. 3 hours. The major goals of the course are to stimulate interest in and to develop and demonstrate such skills as the planning, proposing, conducting and writing of research in an area of professional interest. Content will include such topics as the exploration and evaluation of research, research design, statistical decision-making, computer applications, the ethical conduct of research and issues in conducting research dealing with psychological variables. Prerequisite: PSYCH 392 Research Methods in Psychology or permission of instructor.

PSYCH 894. Internship in School Counseling. 3 hours. Supervised field experience in school counseling in elementary and secondary schools. Prerequisite: PSYCH 822 Practicum in School Counseling and permission of instructor. Formal application must be made the semester before enrollment in PSYCH 894 Internship in School Counseling.

PSYCH 895. Internship in Clinical Psychology. 1-9 hours. Advanced supervised experience in assessment, diagnosis, and therapy in a multi-disciplinary mental health setting. Prerequisites: Permission of instructor and PSYCH 872 Practicum in Clinical Psychology. Formal application must be made the semester before enrollment in PSYCH 895 Internship in Clinical Psychology. May be repeated.
PSYCH 901. Contemporary Problems in School Psychology. 3 hours. An examination of the practical and theoretical problems in school psychology.

PSYCH 906. Special Investigation: (____). 1-3 hours. Independent study in counseling or school psychology under the direct supervision of an appropriate staff member. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

PSYCH 910. Advanced Counseling Theories. 3 hours. Emphasis on the study of primary sources of contemporary theories and dynamics within the counseling relationship. Prerequisite: Completion of a course in counseling theory or permission of instructor.

PSYCH 912. Advanced Counseling Practicum. 1-3 hours. Advanced level of supervised experiences in counseling with specific attention to complex case situations and theoretical orientation. May be repeated for a total of 6 hours. Prerequisite: Permission of instructor. Formal application must be made the semester before enrollment in PSYCH 912.

PSYCH 931. Advanced Techniques of Supervision of Counseling and Psychotherapy. 3 hours. Advanced study and supervised practice of supervision of counseling and psychotherapy. Prerequisite or corequisite: Permission of instructor, PSYCH 831 Techniques of Supervision of Counseling and Psychotherapy; PSYCH 985 Internship in Clinical Psychology, or PSYCH 995 Internship in School Psychology, or their equivalent. May be repeated. Maximum of 12 credit hours of PSYCH 831 Techniques of Supervision of Counseling and Psychotherapy and PSYCH 931 combined hours may count toward a graduate degree.

PSYCH 970. Advanced Practicum in School Psychology. 1-12 hours. Supervised experience in the assessment, diagnosis, counseling, educational planning, follow-up, and research with children or youth, individually and in groups in the setting of schools K-12 and/or special institutions. Prerequisites: Admission to the Ed.S. program in school psychology and permission of instructor. Formal application must be made the semester before enrollment in PSYCH 970 Advanced Practicum in School Psychology. May be repeated for a total of 12 hours.

PSYCH 990. Special Research Project. 3-6 hours. Independent supervised research, required of all Option I candidates and available to Option II candidates for the Specialist in Education Degree, as well as other advanced students. May be repeated. No more than six hours may be applied to a Specialist in Education Degree. Prerequisite: Permission of the instructor.

PSYCH 994. Advanced Internship in School Counseling. 1-3 hours. Advanced supervised field experience in school counseling in elementary and secondary schools. Prerequisites: PSYCH 822 Practicum in School Counseling, PSYCH 894 Internship in School Counseling, and permission of instructor. Formal application must be made the semester before enrollment in PSYCH 994 Advanced Internship in School Counseling. May be repeated.

PSYCH 995. Internship in School Psychology. 3 hours. (Post degree, required for certification) Supervised field experience in school psychology. Prerequisites: PSYCH 970 Advanced Practicum in School Psychology, a Specialist in Education Degree in School Psychology, and permission of instructor. Formal application must be made the semester before enrollment in PSYCH 995 Internship in School Psychology. May be repeated.

Master of Science in Reading

READ 720. Content Literacy for Middle and Secondary Teachers. 3 hours. This course is designed to enhance the methodology skills of teachers in the middle and secondary level by incorporating literacy into their subject areas. The course will focus on strategies for increasing student comprehension of content areas texts and other literacy sources. Teachers will develop classroom-ready strategies for teaching comprehension and vocabulary.

READ 834. Advanced Children's and Young Adult Literature. 3 hours. An intensive study of literature and its utilization with children and young adults in classroom settings. A variety of genres, both traditional and current, will be read and explored with an emphasis placed on instructional uses. (Pre K-12)

READ 845. Approaches to Teaching Writing. 3 hours. Foundations of teaching writing in Pre-K-12 classrooms using both direct instruction and process writing models. Students are expected to practice instructional strategies in classrooms and report on their findings.

READ 848. Advanced Language Arts. 3 hours. An in-depth study of language acquisition, production, and utilization. The focus of the course will deal specifically with how to integrate the language arts into the total school curriculum. Classroom application of current methodology, materials, and research findings will be emphasized.

READ 869. Literacy Topics and Trends. 3 hours. The purpose of the course is to study topics and trends that directly affect literacy teaching, including foundational topics to the challenges of an educational atmosphere ruled by high-stakes testing. Students will have the opportunity to read, discuss and research literacy topics and effective literacy strategies, based on research and best practices.

READ 870. Developmental Reading Instruction. 3 hours. This course is designed to provide the pre-K-12 reading specialist with an advanced examination of reading development and developmentally responsive teaching associated with the essential elements of literacy. Content will focus on literacy development from emergent to fluent readers, appropriate instructional strategies linked with each developmental stage, comprehensive assessment approach that guides instruction and intervention, and intervention instructional practices for children experiencing difficulties with literacy. Current research and multiple theoretical views will be analyzed in relation to all course focus areas. Participants will create, implement, and evaluate developmentally appropriate reading lessons.

READ 871. Diagnosis of Reading Difficulties. 3 hours. This course provides an in-depth study of the elements necessary for the diagnosis of reading difficulties in a remedial setting and in the classroom. Reading specialist candidates use a variety of formal and informal assessment tools to assess students' reading difficulties. Candidates will demonstrate the development of a diagnosis and case study for two students, one each from a primary/intermediate/middle/or secondary grade level. Prospective reading specialists analyze their data and convey their interpretations through case studies. Prerequisite or Corequisite: READ 870 Developmental Reading Instruction.

READ 872. Methods and Materials in Remedial Reading. 3 hours. This course is designed to present methods and materials used in remedial reading instruction. Emphasis will be placed on the proper selection and correct use of special methods and materials to meet the skill needs of students. Reading specialist candidates develop and implement appropriate lesson plans designed to meet students' assessed needs. The course is appropriate for both elementary and secondary teachers. Prerequisite or corequisite: READ 871 Diagnosis of Reading Difficulties or instructor permission.

READ 873. Practicum in the Diagnosis and Remediation of Reading Difficulties. 3 hours. This course provides reading specialist candidates experience in diagnosing the skill needs of struggling readers. Reading specialist candidates complete multiple formal and informal assessments and develop and implement lessons and strategies to meet those needs. They evaluate the implementation of their lessons in written reflections discussing what was effective or ineffective and discuss any potential revisions needed. Prerequisites or corequisites: READ 871 Diagnosis of Reading Difficulties; READ 872 Methods and Materials in Remedial Reading.

READ 874. Apprenticeship in Reading. 3 hours. The apprenticeship course is the capstone course where knowledge and performance previously learned and acquired, as well as new knowledge in this course will be put to use. Reading specialist candidates explore in depth contextual factors affecting their students, the referral process for additional reading assistance, participation in developing IEPs, participation in literacy organizations, and exploration of potential sources for grants and manuscript submissions. Reading specialist candidates create a program completion portfolio which documents ways they have met the International Literacy (Reading) Standards and summarizes and reflects on their teaching and learning experiences throughout the entire graduate reading program, as well as the new knowledge acquired in the Apprenticeship course. Prerequisites: READ 870 Developmental Reading Instruction, READ 871 Diagnosis of Reading Difficulties, READ 872 Methods and Materials in Remedial Reading and READ 873 Practicum in the Diagnosis and Remediation of Reading Difficulties. This will be the final course.

Recreation

REC 160. Introduction to Recreation and Leisure. 3 hours. A lecture/experiential course designed to introduce students to the history, philosophy, concepts, trends in recreation leisure and fitness. Students identify and explore their personal leisure ethic. Multicultural, international and influence of social institutions are also discussed.

REC 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
REC 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

REC 240. Introduction to Therapeutic Recreation. 3 hours. Theoretical, philosophical and historical foundation of therapeutic recreation and a survey of the major services and settings for the ill and handicapped.

REC 270. Field Study in Recreation Leisure and Fitness. 2 hours. A field course. Students visit a broad range of excellent recreation, leisure, therapeutic recreation and fitness facilities. Discussion with the upper and mid-level managers and administrators. Concerning employment and issues. Prerequisite: REC 160 Introduction to Recreation and Leisure.

REC 275. Recreation Practicum. 2 hours. Practical experiences leading to understanding and appreciation for the work and function of various agencies offering recreation services in the community. Experience working with and/or observing various recreation agencies.

REC 276. International Field Study in Recreation. 1-3 hours. An international experience where students provide recreation programs, teach skills or train others to provide services related to recreation, wellness, physical education or therapeutic recreation. Experiential learning using journaling, discussion and other reflective methods of learning.

REC 280. Recreation Methods and Leadership. 3 hours. An exploration and application of the development and use of play, games, and activities used in the provision of recreation/leisure services. A laboratory fee may be required. Two hours lecture and two hours laboratory. Prerequisites: REC 160 Introduction to Recreation and Leisure and REC 240 Introduction to Therapeutic Recreation or permission of instructor.

REC 311. Recreation Program Design and Leadership. 3 hours. An application of leadership principles to the unique problems encountered by physical education and recreation personnel.

REC 317. Camping and Outdoor Education. 3 hours. An introduction to the history and philosophy of camping. Training for camp leadership with emphasis on program planning, camping skills, and development of outdoor living skills.

REC 320. Management Strategies and Financing in Recreation. 3 hours. Introduction to park and recreation facilities, management, personnel, program financing, design and budget standards within city or therapeutic recreation setting. Prerequisites: REC 160 Introduction to Recreation and Leisure and REC 240 Introduction to Therapeutic Recreation.

REC 419. Survey Research Techniques in Recreation. 3 hours. Methods and techniques in designing and conducting surveys in recreation. Sampling techniques and statistical procedures used to interpret and evaluate the data will be studied. Various ways to present data will also be included. Prerequisites: REC 160 Introduction to Recreation and Leisure and REC 270 Field Study in Recreation Leisure and Fitness, or REC 275 Recreation Practicum.

REC 425. Personal Training and Fitness Management. 3 hours. Techniques and methods used in client assessment, program design, and program implementation of personal training. Professional responsibility of the fitness manager will also be examined including ethics, laws, regulations, and procedures. Prerequisites: BIOL 257/258 Anatomy and Physiology/Laboratory and HHP 464 Physiology of Exercise.

REC 430. Commercial Recreation. 3 hours. Introduction to the aspects of starting a business in recreation. Students will prepare an in-depth business plan for a commercial recreation business of their own choosing.

REC 435. Design and Maintenance of Recreation/Leisure Facilities. 3 hours. Design principles for large park areas, playgrounds, gymnasiums, athletic fields, and other recreation venues. Prerequisites: REC 160 Introduction to Recreation and Leisure, REC 240 Introduction to Therapeutic Recreation and REC 320 Management Strategies and Financing in Recreation.

REC 438. Issues in Recreation. 3 hours. Current trends and issues in the administration and management of recreation and leisure services in public, private and commercial settings. Prerequisite: REC 320 Management Strategies and Financing in Recreation.

REC 440. Topics in Health, Physical Education and Recreation (____). 1-3 hours. Directed class or seminar study at the undergraduate level in various areas of health, human performance and recreation. The specific topic or topics will be designated each time the course is offered. May be repeated if subject matter differs. May be offered for pass-fail or graded credit.

REC 441. Therapeutic Interventions for Older Adults. 3 hours. This course is designed to provide the student with current information about aging as related to health, physical activity, and social interaction. It pairs each student with an individual aged 50 years or older for the purpose of applying gerontological health and well-being through social, physical, and health education activities and learning opportunities.

REC 461. Professional Conference. 1 hours. Students attend a minimum of two days of an approved professional conference related to their emphasis area or the recreation field generally. Prerequisites: REC 160 Introduction to Recreation and Leisure and REC 270 Field Study in Recreation Leisure and Fitness, or REC 275 Recreation Practicum.

REC 462. Pre-Internship Seminar. 1 hours. Focus on internship preparation, resume analysis, interview skills, locating quality internships, setting professional goals, professional involvement, employment strategies specific to recreation field. Prerequisites: REC 160 Introduction to Recreation and Leisure, REC 240 Introduction to Therapeutic Recreation and REC 270 Field Study in Recreation Leisure and Fitness or REC 275 Recreation Practicum.

REC 465. Assessment and Documentation in Therapeutic Recreation. 3 hours. This course will provide the student with the skills necessary to assess the patient/client who has physical, cognitive, psychological, social and/or leisure disabilities and to assess the impact of those limitations as they relate to leisure functioning. It will also provide knowledge of medical terminology and methods in documenting initial progress, transition and discharge notes. Prerequisites: REC 240 Introduction to Therapeutic Recreation, REC 469 Intervention in Therapeutic Recreation (may be taken concurrently), REC 275 Recreation Practicum, and REC 311 Recreation Program Design and Leadership (may be taken concurrently).

REC 469. Intervention in Therapeutic Recreation. 3 hours. The process of intervention using various strategies for identifying targets of change within disabled populations, direction in which change is desired, and methods of obtaining change through the use of recreational and other related activities will be presented. Prerequisite: REC 240 Introduction to Therapeutic Recreation or concurrent enrollment.

REC 470. Administration of Recreation. 3 hours. Recent trends in organization of recreation at federal, state and local levels. Attention is given to legislative provisions, governmental control, financing, budget, personnel, and administrative practices. Prerequisites: REC 280 Recreation Methods and Leadership and REC 320 Management Strategies and Financing in Recreation.

REC 471. Theory of Therapeutic Recreation Program Service and Development. 3 hours. Course focuses on comprehensive therapeutic recreation program development,budgeting, marketing, promotion and evaluation methods. Also included are leisure education theories, and basic pharmacology concepts. Prerequisites: REC 320 Management Strategies and Financing in Recreation, REC 465 Assessment and Documentation in Therapeutic Recreation and REC 469 Intervention in Therapeutic Recreation.

REC 480. Professional Trends and Issues in Therapeutic Recreation Services. 3 hours. The purpose of this course is to explore and examine current trends, issues and professional concerns in therapeutic recreation. Prerequisite: REC 465 Assessment and Documentation in Therapeutic Recreation and REC 469 Intervention in Therapeutic Recreation.

REC 498. Internship in Recreation. 12 hours. Internship in recreation under the supervision of an agency staff member with at least a Bachelor's Degree (Certified Therapeutic Recreation Specialist for T.R. students) and approval of the university instructor. May be taken in such areas as public recreation departments, hospital, advocacy agencies, and industry. Prerequisites: Minimum GPA of 2.5 in all core and option courses must be completed prior to enrollment. Admission by application and instructor permission.

REC 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

REC 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

REC 770. Administration of Recreation. 3 hours. Recent trends in organization of recreation at federal, state and local levels. Attention is given to legislative provision, governmental control, financing, budget, personnel, and administrative practices. Prerequisites: REC 280 Recreation Methods and Leadership and REC 320 Management Strategies and Financing in Recreation. If taken at graduate level, additional study is required.
Sociology

SOC 100. Introduction to Sociology. 3 hours. An introduction to the study of human society by using basic sociological concepts.

SOC 200. Introduction to Anthropology. 3 hours. Study of the concepts of human culture, from fossil and prehistoric man to his present position in the animal kingdom. The course emphasizes a study of prehistoric humans and contemporary primitive cultures.

SOC 220. Social Problems. 3 hours. An intensive study of selected major current social problems.

SOC 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

SOC 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

SOC 360. Community Sociology. 3 hours. A study of the forces and agencies which determine the nature of the organization of the community. Investigations into local community problems may be used to implement the understanding of the community. Prerequisite: SOC 100 Introduction to Sociology.

SOC 410. Sociology of Sport. 3 hours. Critical investigation of the origins of sport and the role sport plays in society; links between sport, the economy and media; pros and cons of collegiate and youth sports; Title IX; and screening for performance-enhancing substance use. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 440. Personality and Social Structure. 3 hours. Examination of the links between culture, social structure, and personality. Major concerns include the influence upon perception, motivation, cognition, socialization, personality, development, attitudes, role behavior, language, communications and collective behavior. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 443. Race and Ethnic Relations. 3 hours. Comparative examination of racial and ethnic groups, with special attention given to the concept of race, the nature and causes of racial-ethnic inequalities; prejudice and discrimination, and racially motivated violence. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 495. Individual Study in Sociology (___). 1-3 hours. Intensive investigation of selected topics in sociology. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

SOC 504. Special Studies in Sociology (___). 3 hours. Intensive examination and analyses of selected topics in sociology. May be repeated when subject matter is different. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 512. Social Stratification. 3 hours. A study of the factors which account for differences in influence, power, and social prestige held by different individuals and groups in the community and the society. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 527. Correctional Systems. 3 hours. A critical examination of existing and alternative systems for the control and rehabilitation of persons processed by the juvenile and criminal courts. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 534. Political Sociology. 3 hours. Analysis of political institutions and movements by using concepts such as legitimacy, power, authority, elites, oligarchy, and authoritarianism. Prerequisite: SOC 100 Introduction to Sociology or permission of instructor.

SOC 536. The Family and Society. 3 hours. The family as a dynamic social institution studied from the viewpoint of the way it affects and is affected by economic, social, and cultural forces in society.

SOC 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
SOC 691. Senior Seminar in Sociology. 3 hours. Research to integrate and assess knowledge gained through the study of sociology. Involves design and execution of a social research project and communicating the process and outcomes to sociologists and others. Prerequisites: Senior standing and completion of SOC 100 Introduction to Sociology.}

SOC 794. Special Topics in Sociology (___). 1-3 hours. An intensive examination and analysis of selected sociological topics. May be repeated when subject matter is different. Prerequisite: SOC 100 Introduction to Sociology.

SOC 895. Readings in Sociology (___). 1-3 hours. Intensive individual readings in selected topics in sociology. May be repeated for a maximum of 6 hours.

Social Sciences

SOSCI 387. Social Research Design. 4 hours. Designing and implementing social sciences research, including translation of theory into hypotheses, operationalization of definitions, questionnaire construction, and testing, analysis, and presentation of findings. Prerequisite: SOC 100 Introduction to Sociology.

SOSCI 388. Social Research Analysis. 4 hours. Answering social research questions using quantitative and qualitative data. Techniques of data management and analysis using SPSS. Prerequisite: POLS 101 U.S. Politics or GEOG 106 World Regional Geography. For Sociology majors SOC 100 Introduction to Sociology and SOSCI 387 Social Research Design.

Special Education

SPED 350. Methods, Infants/Toddlers with Disabilities. 2 hours. The course provides knowledge and skills relating to the methods, materials, equipment, and techniques needed to design an individualized program for teaching infants and toddlers with disabilities. Appropriate delivery systems, assessment, curriculum, and intervention strategies in natural environments will be considered. Prerequisites: EDUC 261 Explorations in Education and completion of 45 credit hours and a 2.50 GPA.


SPED 401. Topics in Special Education (___). 1-3 hours. Individual study (research, project, or field-based oriented) under the direct supervision of a faculty member. Proposal must be submitted within 3 weeks after the beginning of the semester. May be repeated using different topics.

SPED 450. Methods, Preschoolers with Disabilities. 2 hours. The course provides knowledge and skills relating to the methods, materials, equipment, and techniques needed to design an individualized program for teaching preschool aged 3-5 with disabilities in inclusive settings. Appropriate delivery systems, curriculum, and intervention strategies will be considered. Prerequisites: EDUC 261 Explorations in Education and completion of 45 credit hours and a 2.50 GPA.


SPED 510. Overview of Special Education. 3 hours. An introduction to the field of special education, types of children served, typical local and state programs that provide intervention for young children with disabilities from birth through sixth grade. Prerequisites: Completion of 60 credit hours and a 2.50 GPA. Prerequisites for Elementary Education K-6: EDUC 261 Explorations in Education and ACT score of 22 or higher or passing score on a Basic Skills Test.

SPED 511. Overview of Special Education (Birth thru 6th Grade). 3 hours. An introduction to the field of special education, types of children served, typical local and state programs that provide intervention for young children with disabilities from birth through sixth grade. Prerequisites: Completion of 60 credit hours and a 2.50 GPA. Prerequisites for Elementary Education K-6: EDUC 261 Explorations in Education and ACT score of 22 or higher or passing score on a Basic Skills Test.

SPED 512. Characteristics of Students in Inclusive Settings. 3 hours. An introduction to inclusive educational settings, designed to provide an investigation of the characteristics of students with learning challenges in the areas of emotional disturbance, learning disabilities, intellectual disabilities, language disabilities, and giftedness. The etiologies, characteristics, causes and prevalence, methods of assessment and linking intervention to assessment results. Prerequisites: EDUC 261 Explorations in Education and ACT score of 22 or higher or passing score on a Basic Skills Test.

SPED 513. Instructional Approaches for the Inclusive Classroom. 3 hours. Required for the undergraduate education major seeking an Inclusive Education minor. Course content focuses on effective teaching heterogeneously grouped students in K-12 general education settings. The course addresses evidenced-based methods for designing, delivering, and adapting instruction for students across a broad range of abilities. Fundamental aspects of literacy teaching, including explicit instructional strategies relevant to specific content areas, are a major focus of the course. Prerequisites: Completion of SPED 510 Overview of Special Education or SPED 511 Overview of Special Education (Birth thru 6th Grade) with grade of C or better.

SPED 514. Professional Collaboration in Inclusive Settings. 3 hours. Designed to develop the knowledge, skills and abilities of pre-service teachers to collaborate with professionals, implement inclusive practices and instruct students with diverse learning needs. Course content includes theory and research related to inclusion, professional collaboration, Individuals with Disability Education Act (IDEA), implementation of instructional strategies, multi-tiered system of support, and a 30 hour clinical experience. Prerequisites: Completion of SPED 510 Overview of Special Education or SPED 511 Overview of Special Education (Birth thru 6th Grade) with grade of C or better. Concurrent enrollment in or completion of SPED 512 Characteristics of Students in Inclusive Settings, SPED 513 Instructional Approaches for the Inclusive Classroom and SPED 515 Positive Behavior Support in Inclusive Settings.

SPED 515. Positive Behavior Support in Inclusive Settings. 3 hours. Designed to prepare pre-service teachers to effectively instruct and support students who display behavioral and emotional needs. Course content includes characteristics of students with challenging behaviors, theory and research related to various behavior support programs, multi-tiered system of support for promoting social competence and inclusive strategies and interventions. Prerequisites: Completion of SPED 510 Overview of Special Education or SPED 511 Overview of Special Education (Birth thru 6th Grade) with grade of C or better. Prerequisites for Elementary Education K-6: EDUC 261 Explorations in Education and ACT score of 22 or higher or passing score on a Basic Skills Test.

SPED 520. Overview of Autism Spectrum Disorders. 3 hours. An introduction to Autism Spectrum Disorders, designed to provide an overview of the definition and characteristics, causes and prevalence, methods of assessment and diagnosis, education and related service options, evidence-based practices, legal issues, and collaboration with families and professionals. Prerequisites: Completion of 60 credit hours and a 2.50 GPA.

SPED 550. Methods, Primary Children with Disabilities. 2 hours. The course provides knowledge and skills relating to the methods, materials, equipment, and techniques needed to design an individualized program for teaching students in grades K-3 with disabilities. Appropriate delivery systems in the elementary school, curriculum, and intervention strategies will be considered. Prerequisite: Admission to Teacher Education.

SPED 560. Assessment of Young Children. 3 hours. The course provides knowledge and skills relating to the assessment of development and achievement in children birth through third grade in general education and special education programs. Topics will include formal and informal assessment, collaborative decision-making, involving the family in the assessment process, and linking intervention to assessment results. Prerequisites: EDUC 261 Explorations in Education and completion of 45 credit hours and a 2.50 GPA.
SPED 561. Elementary Special Education Practicum. 1 hour. This is an undergraduate course designed to provide the trainee with knowledge and skills relating to the methods, materials, and techniques needed to design an individualized program for teaching elementary (K-3) students with disabilities in an elementary school setting. This practicum required 33 clock hours spent in an elementary school setting. It is intended to be taken concurrently with SPED 550 Methods, Primary Students with Disabilities. Prerequisite: Admission to Teacher Education.

SPED 738. Characteristics of Students with High-Incidence Learning Needs. 3 hours. This course provides an investigation of the characteristics of students with high incidence learning needs in the areas of autism spectrum disorders, developmental delays, emotional disturbance, intellectual disabilities, learning disabilities, multiple disabilities, orthopedic impairments, sensory disabilities, speech and language disorders, traumatic brain injuries and attention disorders. The etiologies of these disabilities, related learning and behavioral characteristics, relevant learning theory, and support for students' development will be addressed.

SPED 743. Characteristics of Young Children with Disabilities. 3 hours. This course presents an overview of the characteristics of young children with disabilities including atypical development and the etiologies of various disorders. The effects of early intervention and special education rules and regulations regarding young children will also be covered.

SPED 744. Special Education Technology. 3 hours. Explorations and applications in technology for students with special needs. Course content includes topics such as evaluation of students, care and maintenance of augmentative/assistive devices, assistive instructional software, and application of skills in program development and review.

SPED 745. Behavior Analysis and Management. 3 hours. Course content includes principles and application of classroom management techniques that lead to changing inappropriate behaviors and prompting the acquisition of acceptable behaviors. Student will develop a Functional Behavior Assessment (FBA) which requires collecting and analyzing data. From this information, student will create a Behavior Intervention Plan (BIP).

SPED 747. KISN Training Series. 1-3 hours. This course focuses on a variety of evidence-based practices for individuals who present characteristics of autism spectrum disorders (ASD). The course is taught over the fall and spring semesters.

SPED 748. Autism Spectrum Disorder Workshops. 1-2/3 hours. Designed to provide instruction through a professional development/workshop format on a variety of evidence-based practices for individuals who present characteristics of autism spectrum disorders (ASD). Graded on a pass-fail basis. May be repeated.

SPED 750. Assessment in Special Education. 3 hours. In this course students learn to administer and interpret assessments. Specific evaluation tools include screening tests, formal and informal tests, norm and criterion referenced tests, in addition to diagnostic and achievement tests. Candidates are also taught individual assessment information related to developmental milestones, academic achievement, and adaptive behavior. The key project for the course is a comprehensive evaluation report project. This project is a culmination of screening tests, formal and informal tests, norm and criterion referenced tests, as well as, diagnostic and achievement tests with interpretations.

SPED 761. Practicum I: High-Incidence Learning Needs. 3 hours. Practicum is designed to evaluate the candidate's ability to be a competent and caring special education teacher. This is a supervised experience in a setting serving students with high incidence learning needs under the direction of university personnel and a licensed/certified special education teacher having no fewer than two full years of teaching experience. Candidates will take this course at the age level of their general education teacher license. Prerequisite or corequisite: SPED 779 Teaching Elementary Students with High-Incidence Learning Needs or SPED 780 Teaching Secondary Students with High-Incidence Learning Needs. Graded on a pass-fail basis.

SPED 769. Teaching Elementary Students with High-Incidence Learning Needs. 3 hours. Designed to provide the trainee with knowledge and skills in special education teaching for elementary students identified as having high incidence learning needs. Practical application through outside projects is required. Prerequisite: SPED 738 Characteristics of Students with High-Incidence Learning Needs.

SPED 780. Teaching Secondary Students with High-Incidence Learning Needs. 3 hours. Course is designed to provide the candidate the knowledge and skills to teach secondary students with high incidence learning needs. Practical application through outside projects is required. Prerequisite: SPED 738 Characteristics of Students with High-Incidence Learning Needs.

SPED 827. Teaching Students with ASD: Understanding Sensory Processing Characteristics. 3 hours. This course, students will learn about the sensory processing characteristics of students with Autism Spectrum Disorders, assessment techniques and instructional strategies. Students will develop appropriate goals and objectives in the sensory and motor areas, incorporate related services into inclusive educational settings, embed sensory and motor skills training into the general education curriculum, adapt materials and apply assistive technologies. Prerequisite: Graduate Standing. Prerequisite or Corequisite: SPED 812 Characteristics of Learners with Autism Spectrum Disorder or SPED 912 Characteristics of Students with Autism Spectrum Disorder.

SPED 829. Teaching Students with ASD: Issues in Transition. 3 hours. The course provides an in-depth study of the transitional process of students with Autism Spectrum Disorders. Students will work with various professionals to facilitate inclusion of students with Autism Spectrum Disorders (ASD) within general education settings. Specific research-based strategies in curriculum content acquisition and behavior management will be learned. By the end of the course the students will demonstrate knowledge and skills related to modifying school work, student directed learning, social relationships and peer support, collaborative teaming, and behavioral support. Prerequisite: Graduate Standing. Prerequisite or Corequisite: SPED 812 Characteristics of Learners with Autism Spectrum Disorder or SPED 912 Characteristics of Students with Autism Spectrum Disorder.
SPED 830. Teaching Students with ASD: Early Childhood. 3 hours. This course will focus on teaching educators, home-based providers, parents, and community providers who serve children (ages 0-5) with autism spectrum disorders and young children with developmental delays using evidence-based practices as recognized by the National Professional Development Center on Autism Spectrum Disorders. From implementing effective screening practices to program development (e.g., TEACCH, Pivotal Response Training, Early Start Denver Model) with an emphasis in communication and behavior, educators learn to develop comprehensive programs. Prerequisite or corequisite: SPED 812 Characteristics of Learners with Autism Spectrum Disorder or SPED 912 Characteristics of Students with Autism Spectrum Disorder.

SPED 831. Teaching Students with ASD: Family Engagement. 3 hours. This course will focus on preparing educators, home-based providers, parents, and community providers who serve children (ages 0-5) with autism spectrum disorders and young children with developmental delays to build family-school-community partnerships. Beginning with early childhood; families make key contributions to students learning. This course will challenge students to develop a vision, supportive strategies, and evaluative methods to engage families in their children's learning. Prerequisite: SPED 812 Characteristics of Learners with Autism Spectrum Disorder or SPED 912 Characteristics of Students with Autism Spectrum Disorder.

SPED 833. Leadership and Collaboration in Special Education. 3 hours. This capstone course provides special educators leadership skills necessary for implementing instructional programs that meet the learning needs of all students. Content includes best practices related to communication, negotiation, and collaboration with focus on how to develop successful partnerships with families and professionals. Candidates will be expected to problem solve challenging situations related to special education and learn ways to initiate change by implementing special education standards. The culminating activity will include presentation of the capstone project. Prerequisite: TCHL 891 Methods of Research.

SPED 849. Partnerships with Families of Exceptional Children and Youth. 3 hours. Candidate is provided the knowledge and skills to implement family guided interventions to effectively work with students who have exceptional needs. The emphasis is on relating skills to best practices that promote family and school collaboration.

SPED 852. Characteristics of Students with Low-Incidence Learning Needs. 3 hours. Designed to provide the trainee with knowledge and skills necessary to plan and administer programs for students with functional learning needs. Focuses on the characteristics of students with functional needs as well as the skills necessary for moving, positioning, and protecting students who may have significant medical involvement as part of their disability.

SPED 853. Teaching Students with Low-Incidence Learning Needs. 3 hours. Designed to provide the trainee with knowledge and skills necessary in providing education services to students with functional learning needs. The skills of developing individualized education plans and designing both self-contained and inclusive program designs will be evaluated. Skills in positive behavioral support will be focused on as well. Prerequisite: SPED 852 Characteristics of Students with Low-Incidence Learning Needs.

SPED 860. Practicum/Low-Incidence Learning Needs. 3 hours. Designed to evaluate the student's ability to be a competent and caring special education teacher. This is a supervised experience under the direction of university personnel and a licensed/certified special education teacher, having no fewer than two full years of teaching in the present position. Prerequisite or corequisite: SPED 853 Teaching Students with Low-Incidence Learning Needs. Graded on a pass-fail basis.

SPED 861. The Professional Special Educator. 3 hours. Designed to provide candidates an understanding of historical and legal foundations that are necessary to establish an effective educational program for students with exceptional needs. This course supports the development of leadership skills, independent thinking, effective communication, professional collaboration, effective participation in the educational system, discrimination of values, and professional ethics. Prerequisites for Master of Science: SPED 779 Teaching Elementary Students with High-Incidence Learning Needs and SPED 853 Teaching Students with Low-Incidence Learning Needs. Prerequisite for Master of Arts in Teaching; SPED 780 Teaching Secondary Students with High-Incidence Learning Needs and SPED 853 Teaching Students with Low-Incidence Learning Needs. Prerequisite for Master of Arts in Teaching; SPED 780 Teaching Secondary Students with High-Incidence Learning Needs.

SPED 864. Practicum II: High Incidence Learning Needs. 3 hours. Designed to evaluate the candidate's ability to be a competent and caring education teacher. This is a supervised experience in a school setting under the direction of university personnel and a licensed/certified special education teacher having no fewer than two full years of teaching in the present location. Prerequisite or corequisite: SPED 779 Teaching Elementary Students with High-Incidence Learning Needs or SPED 780 Teaching Secondary Students with High-Incidence Learning Needs and SPED 876 Teaching Young Students with High Incidence Learning Needs.

SPED 872. Practicum III: High Incidence Learning Needs. 3 hours. Designed to evaluate the candidate's ability to be a competent and caring education teacher. This is a supervised experience in a setting serving preschool children with high incidence learning needs under the direction of university personnel and a licensed/certified special education teacher having no fewer than two full years of teaching in the present location. Prerequisite or corequisite: SPED 779 Teaching Elementary Students High-Incidence Learning Needs or SPED 780 Teaching Secondary Students with High-Incidence Learning Needs and SPED 876 Teaching Young Students with High Incidence Learning Needs.

SPED 876. Teaching Young Students with High Incidence Learning Needs. 3 hours. Designed to provide the trainee with knowledge and skills in special education teaching for preschool students identified as having high incidence learning needs. Practical application through outside projects is required. Prerequisite: SPED 738 Characteristics of Students with High-Incidence Learning Needs.

SPED 912. Characteristics of Students with Autism Spectrum Disorder. 3 hours. This course includes an examination of the psychological, physiological, social, and educational characteristics of individuals who have been identified as having an autism spectrum disorder. By the end of this course, students will demonstrate knowledge and skills related to: the definition and characteristics of learners with ASD; causes and prevalence of autism; assessment and placement options for individuals who are considered in need of special education services, and best practices in serving individuals with ASD. Prerequisite: Graduate standing.

SPED 914. Teaching Students with ASD: Research Strategies for School and Community. 3 hours. This course provides an in-depth study of a model for teaching children with autism spectrum disorders (ASD). The Zigzag Model is a system for assessing students needs through functional behavior analysis, differential reinforcement, sensory approaches, using structure or visual/tactile supports, and specific skill interventions. The course focuses on developing a comprehensive intervention program for students with ASD. Prerequisite: Graduate standing.

Sustainability, Society and Resource Management

SSRM 200. Introduction to Sustainability, Society and Resource Management. 1 hour. An overview of the SSRM major as an integrated studies program.

SSRM 600. Senior Seminar in Sustainability, Society and Resource Management. 3 hours. A required capstone course that serves as the platform for the application of knowledge and theory in an interdisciplinary context. Prerequisite: Junior or senior standing or permission of instructor.

Social Work

SWK 201. Introduction to Social Work. 3 hours. History, development, and philosophy of social welfare as an institutional system in our society--its organization, function and prospective developments. Exploration of the profession's role within the system and its relationship to other helping professions. Designed to assist the student in his/her exploration of social work as career choice.


SWK 222. Basic Helping Skills Experience. 1 hour. Students will be exposed to four different service agencies in four, three week sessions. The four areas of emphasis will be: Medical, Child and Family Welfare, Aging, and one experience in either Mental Health or Developmentally Disabled social work. Co-requisite: SWK 221 Basic Helping Skills.

SWK 227. Workshop ( ). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
SWK 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

SWK 341. Social Work and the Aged. 3 hours. Social work and social welfare policies, services and interventive processes are studied with reference to the needs of older Americans.

SWK 342. Health Care and Social Work. 3 hours. Policies, services, and interventive processes related to medical and health care settings.

SWK 343. Social Work with Families Affected by Disability. 3 hours. A study of theory, research, and best practices related to family-professional partnerships with families affected by disabilities.

SWK 344. Mental Health Theory and Practice. 3 hours. This course examines mental health issues, diagnosis, and treatment strategies from a generalist social work perspective, using a case management framework. Social work values and ethics and issues of diversity as they relate to mental health are addressed.

SWK 345. Topics in Social Work (____). 1-3 hours. Study of selected social work and social welfare topics with special emphasis upon problem evaluation and intervention. Special subject or topic will be designated in the class schedule. May be repeated when topic is different. Prerequisite: Permission of instructor.

SWK 365. Social Process and Social Policy. 3 hours. An analysis of the probable origins of major social problems and the social policies (historical, current, and proposed) that have been offered to address them. The influence of societal values on definitions of social problems. Provides a context for social work practice. Prerequisite: SWK 201 Introduction to Social Work or permission of instructor.

SWK 375. Multiculturalism and Diversity in Social Work Practice. 3 hours. Exploration of personal values, biases, stereotypes, and social conscience related to multiculturalism and diversity. Consideration of applications and ethics in social work practice.

SWK 383. Fundamentals of Research in Social Work. 3 hours. Major conceptual tools of the scientific knowledge-building process, including scientific philosophy, methodology, and design. Emphasis on critical analysis, understanding, and consumption of research in the social and behavioral sciences for knowledge-guided practice. Prerequisite: ENGL 190 Honors English Composition or ENGL 299 Introduction to Research Writing. Open to social work majors only.

SWK 385. Human Behavior Social Environment: Individual and Family Functioning. 3 hours. The use of micro level social and behavioral science theories in social work practice. The life cycle and its influences on the development of individual differences is emphasized; the impact of racial, ethnic, and cultural differences is included. Prerequisite: SWK 201 Introduction to Social Work or permission of instructor.

SWK 399. Social Work and the Court Process. 3 hours. Focuses on the documentation, court preparation, and testifying in child and adult abuse cases. The course will examine evidentiary rules, court procedures and methods of presenting effective testimony related to abuse and neglect.

SWK 400. Social Work Case Management. 3 hours. This course will provide participants with specific skills and knowledge in: case management with clients in medical hospital settings, correctional settings, public welfare settings, clients with mental disorders, clients with substance abuse and dependency disorders and those who have been diagnosed with both, assessment skills leading to a differential diagnosis and intervention planning and implementation and crisis management skills.

SWK 401. Social Work in the Criminal Justice System. 3 hours. This course is to familiarize the student with the specific workings of the American Criminal Justice System and introduce them to methods of working in this very difficult area of practice.

SWK 402. Advanced Social Work Practice I. 3 hours. The integration and application of social work knowledge, values, and skills to intervention at various systemic levels, with an emphasis on assessment within a generalist framework. Social work with individuals and families and case management receive special attention. Prerequisites: SWK 201 Introduction to Social Work, SWK 221 Basic Helping Skills. Prerequisite or Corequisite: SWK 365 Social Process and Social Policy and SWK 385 Human Behavior Social Environment: Individual and Family Function or permission of instructor. Open to social work majors.

SWK 465. Social Welfare Policy Analysis. 3 hours. A continuation of SWK 365 Social Process and Social Policy. Analysis of social welfare policies and the assumptions underlying their development. Analytical models are introduced. The process of policy development and prevention/remediation issues are examined. Prerequisite: SWK 365 Social Process and Social Policy or permission of instructor.

SWK 485. Human Behavior in the Social Environment: Groups and Communities. 3 hours. An emphasis is placed on theories at the mezzo and macro levels (group to community) levels. The course includes theories pertaining to family, group, organizational and community systems. Discussion on human diversity, discrimination and oppression is integrated at various levels. Prerequisite: SWK 201 Introduction to Social Work or permission of instructor.

SWK 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

SWK 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

SWK 598. Introduction to Addiction. 3 hours. The study of the nature of addiction and other substance use related problems: models, theories, philosophies, principles, interventions for medical and mental health conditions that coexist with addiction, and evidence-based strategies of addiction prevention, treatment, relapse prevention, continuing care, and recovery; and the impact of addiction on the individual, family and society. Prerequisites: Junior, senior or graduate status or permission of instructor.

SWK 599. Social Work and the Law. 3 hours. Analysis of the dynamic relationship between social work and the US legal system. Emphasis on the role of the social worker in dealing with the legal system and the responsiveness of the legal system to the social needs of the people.

SWK 600. Advanced Social Work Practice II: Mezzo. 3 hours. Continuation of SWK 420 Advanced Social Work Practice I. This course covers social work practice at the group (mezzo) level. Students learn about the group process, participate in a student led group, and lead a group. Prerequisite: SWK 420 Advanced Social Work Practice I. Prerequisite or Corequisite: SWK 485 Human Behavior in the Social Environment: Groups and Communities. Open to social work majors only.

SWK 601. Advanced Social Work Practice III: Macro. 3 hours. Continuation of SWK 420 Advanced Social Work Practice I. This course covers social work practice at the community (macro) level. Students learn about facilitating change at the organizational or community level. Students organize and lead a project which benefits people at the community level. Prerequisite: SWK 420 Advanced Social Work Practice I. Prerequisite or Corequisite: SWK 465 Social Welfare Policy Analysis. SWK 485 Human Behavior in the Social Environment: Groups and Communities. Open to social work majors only.

SWK 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the project and the student must then complete their Departmental Academic Honors in the traditional way.

SWK 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.
SWK 621. Practicum in Social Work. 9 hours. Practice experience and field instruction in a social welfare setting with a qualified social worker as field instructor, assisting the student to integrate theory and practice and to develop beginning level professional competence. Students will spend four-eight hour days per week within the field setting and the fifth day in on-campus coursework. To be taken during the first or second semester of the senior year. Prerequisite: SWK 420 Advanced Social Work Practice I, SWK 600 Advanced Social Work Practice II: Macro, SWK 601 Advanced Social Work Practice III: Macro and permission of instructor. Corequisite: SWK 622 Integrative Seminar in Social Work. Open to social work majors only.

SWK 622. Integrative Seminar in Social Work. 3 hours. A cumulative effort during which the student synthesizes and integrates strands of the social work curriculum by (1) developing and explicating his/her personalized social work frame of reference, and (2) demonstrating consumption and utilization of professional literature for knowledge-guided practice, in the context of his/her frame of reference. Prerequisite: SWK 420 Advanced Social Work Practice I, SWK 600 Advanced Social Work Practice II, SWK 601 Advanced Social Work Practice III: Macro and permission of instructor. Corequisite: SWK 621 Practicum in Social Work. Open to social work majors only.

SWK 670. Individual Study in Social Work. 1-6 hours. Intensive individual investigation of selected topics in social work and social welfare. May be repeated for a maximum of 6 hours. Prerequisite: Permission of instructor.

Teaching and Leadership

TCHL 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TCHL 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TCHL 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TCHL 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TCHL 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

TCHL 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B or receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

TCHL 710. Readings in Education. 1-3 hours. Emphasis on contemporary problems. Research suited to the individual needs of the student. May be repeated for a maximum of 3 hours.

TCHL 741. Seminar (____). 1/2-5 hours. A specific area of education will be studied intensively through readings, reports, and discussions. A specific sub-title will be listed on the schedule of classes. May be repeated. Pass/Fail only.

TCHL 806. Special Investigations (____). 1-3 hours. Independent study in education particularly relevant to the educational program of the individual student under the direct supervision of an appropriate staff member. This course may be repeated since the topics of investigation will vary. Prerequisite: Permission of instructor.

TCHL 810. Readings in Education. 1-3 hours. Selected readings with an emphasis on contemporary problems suited to the individual needs of the student. May be repeated for a maximum of 3 hours.

TCHL 816. The Community College. 3 hours. Aims and objectives of community college education; duties and qualifications of the staff, organization, administration, and supervision of the unit; appropriate curricula; relations with other units; student personnel practices and methods of instruction.

TCHL 824. Educational Statistics I. 3 hours. A first course in applied statistics for the behavioral and social sciences. The course investigates descriptive statistics, measures of central tendency, probability, correlation, one-way analysis of variance and some elementary non-parametric statistical analysis. Manual and computer algorithms are used for effective analysis of data and the testing of hypotheses and research questions.

TCHL 825. The Professional Semester Teacher - Initial Experience. 3 hours. This course is designed to provide the teacher candidate with the opportunity to study and experience the fundamentals of teaching with the aim of developing the knowledge base, attitudes, and behaviors that will guide future teaching situations. The experience will be organized to bring theory and practice together where direct field experience is guided by theory. Prerequisite: Admission to graduate study.

TCHL 826. Computer Applications in Advanced Educational Research. 3 hours. This course seeks to equip educational leaders and other professionals with the knowledge and skills needed to conduct research using advanced and multivariate statistical methods. Students will learn the basics of digital data collection and analysis for qualitative research, along with how to use statistical packages such as SPSS and SAS for quantitative data analysis. Students will also learn how to use statistics as an aid in making decision and change with an organization. Prerequisite: Admission to Ed.S. program or consent of the instructor.

TCHL 832. Elementary School Science. 3 hours. Designed to assist K-8 teachers to analyze and synthesize contemporary issues in science education. Hands-on activities will be utilized to assist the teacher in implementing the science knowledge base.

TCHL 834. Curriculum Development. 3 hours. Fundamental concepts underlying the school curriculum and their application to planning and development; social responsibility of the school; pupil needs and purposes; criteria for the selection of the curriculum content; appraisal of new trends and policies designed to improve the effectiveness of the school.

TCHL 835. Methods of Teaching Math, Science, and Social Studies. 3 hours. The teacher candidate will acquire the knowledge, attitudes, and behaviors with regard to the content and organization of mathematics, science and social studies curricula in the elementary school. The student will study instructional strategies and best practices with respect to objectives, methods, materials, and content. Prerequisite: Admission to Graduate Study.

TCHL 836. Positive Classroom Management. 3 hours. This course focuses on classroom-proven research-based classroom management practices that support higher student achievement. The course includes: Establishing basic rules and procedures, using effective discipline and consequences, creating positive teacher-student relationships, exhibiting a sound mental set for difficult situations, making students responsible for classroom management, and dealing with school-wide management issues.

TCHL 837. Positive Classroom Instruction. 3 hours. This course will focus on five different concepts of instruction. These include the anatomy of a structured lesson, corrective feedback, lesson design, lesson presentation and incentives for diligence and excellent work from students.

TCHL 838. Expectations, Challenges in Education. 3 hours. Current state and national initiatives that impact PK-12 education, using educational history, philosophy, psychology, and sociology as a means to analyze and synthesize data for practice.

TCHL 839. Techniques for Teaching Secondary. 3 hours. The course is designed to provide an introduction to the methodology, curriculum, and current research in the field of secondary teaching.
TCHL 840. Seminar: (____). 1-3 hours. A specific area in education will be studied intensively through readings, reports, and discussions. A specific sub-title such as comparative education, the middle school, statistics, etc., will be listed in the schedule of classes. May be repeated. A Pass/Fail grading system may be used. Prerequisite: Permission of instructor.

TCHL 843. Trends and Issues. 3 hours. Exploration of the concept of school reform through an examination of the critical issues facing the American school and the promising practices found in restructuring the educational system.

TCHL 849. The Professional Semester Teacher-Culminating Experience. 3 hours. This course is designed to provide the teacher candidate with the opportunity to study and experience the fundamentals of teaching with the aim of developing the knowledge base, attitudes, and behaviors that will guide future teaching situations. The experience will be organized to bring theory and practice together where direct field experience is guided by theory. Prerequisites: Admission to Graduate Study and TCHL 825 The Professional Semester Teacher-Initial Experience.

TCHL 850. Current Teaching Practices. 3 hours. The evolution of research on effective teaching in terms of methodologies and perspectives. Examination of current day classroom practices and how to transfer research in the area of teacher effectiveness into practice.

TCHL 851. Multicultural Approaches to Diversity in the Classroom. 3 hours. The course is designed for the practitioner to build an in-depth awareness of and sensitivity to the concepts and goals of multicultural education, with a focus on the special needs learners. The course discusses the diverse, historical tapestry of cultures that make up the US and the role language play in cultural identity and emphasizes practitioner application of fundamental diversity concepts in instructional settings.

TCHL 852. Advanced Culture and Language Acquisition for English Language Learners. 3 hours. The course provides an in-depth study of the fundamentals, similarities, and differences of first-and second language acquisition; stages of second language acquisition; history and development of second language instruction; foundations of second language learning; and similarities between child and adult language acquisition. Designed to assist the practitioner in exploring cross-cultural interaction and socio-cultural factors necessary to communicate with students, parents, and community members.

TCHL 853. Advanced Assessment and the English Language Learner. 3 hours. The course provides an advanced study of assessment issues related to formal and informal-first and second-language assessment instruments and techniques. It is directed to the practitioner’s use of item and test construction methods and administration, interpretation, and explanation of test results including identification, placement, monitoring, and exiting of the ELLs, as well as literacy assessment tools and programs.

TCHL 854. Advanced Methods and Instructional Materials for English Language Learners. 3 hours. The course is designed for the practitioner to provide an in-depth understanding of the role of language in learning. It emphasizes the development of ELLs’ communication skills and techniques necessary to support verbal, non-verbal, and multimedia resources. It discusses approaches, methods, materials, and instructional advocacy. The course provides strategies for using a broad range of literacy methodologies and programs for ELLs and acknowledges the important role of family literacy in second language acquisition.

TCHL 855. Advanced Practicum with English Language Learners. 3 hours. An advanced supervised field-based capstone experience in the education of English Language Learners organized according to a platform for professional practice and grounded in a best-practices framework. It is specifically designed to facilitate and expand the practitioner’s knowledge and ability to be an effective ESOL teacher. Prerequisites or concurrent enrollment required: TCHL 851 Multicultural Approaches to Diversity in the Classroom, TCHL 852 Advanced Culture and Language Acquisition for English Language Learners, TCHL 853 Advanced Assessment and the English Language Learner, TCHL 854 Advanced Methods and Instructional Materials for English Language Learners, and ENGL 714 Applied Linguistics for English for Speakers of Other Languages or permission of instructor.

TCHL 870. Grant Writing and External Resources. 3 hours. This course is intended to bridge the gap between the theory and practice of conducting research. It will assist students in structuring their conceptual frameworks for research proposals, in testing new research protocols, and in validating innovative instruments. Students will analyze and critique external resources. Students will prepare grant proposals related to their scholarly interests. Prerequisite: Permission of instructor.

TCHL 878. Assessment for Effective Teaching. 3 hours. An examination of the current research on effective PK-12 assessment in terms of methodologies and perspectives and exploration of state and national assessment directions, classroom evaluation systems, test construction and interpretation, performance and portfolio assessments, as well as various assessment techniques that meet or accommodate diverse intelligences and learning needs.

TCHL 879. Instructional Planning and Delivery. 3 hours. Course emphasizes current research on effective instructional planning and delivery, with opportunities to implement and evaluate findings in the classroom. The course explores and integrates varied techniques to accommodate diverse learners into the lessons that are developed.

TCHL 881. Orientation to College Teaching. 3 hours. Laboratory work in the classroom situation; work with instructional aids, involvement in curriculum planning, test construction, and classroom instruction. By appointment. Permission of instructor is required.

TCHL 882. College Teaching Internship. 3 hours. Teaching in a community college or in lower division college classes. Admission by application during previous term. Pass-No Credit. Permission of instructor is required.

TCHL 884. Educational Statistics II. 3 hours. A continuation of TCHL 824 Educational Statistics I. The course investigates multivariate analysis of variance and co-variance. Statistical methods are applied to hypotheses testing and research questions. Mixed method designs and qualitative research perspectives, data presentation, analysis, and verification will be studied. Computer and manual analysis of data are integrated into the course through a lab experience using various computer application software for statistics (e.g., SPSS, Excel, web statistics, N6 or NUD*IST). Prerequisite: TCHL 824 Educational Statistics I or permission of instructor.

TCHL 890. Research and Thesis. 3-6 hours. Prerequisite: TCHL 891 Methods of Research.

TCHL 891. Methods of Research. 3 hours. Methods and techniques of research, interpretation, evaluation, and use of research. Emphasizes analysis of problems, selection of topic and development of a research plan. Should be scheduled early in graduate program.

TCHL 892. Practicum in Teaching. 3 hours. Designed to evaluate the candidate’s ability to be an effective teacher. This is a supervised experience in a setting serving students at the level of their general teaching license or area of emphasis (elementary or secondary) under the direction of university personnel. Prerequisite: Admission to the graduate school and the MST with an emphasis in Elementary or Secondary. Taken late in the program of study.

TCHL 906. Special Investigations. 1-3 hours. Independent study particularly relevant to the educational program of the individual student under the direct supervision of an appropriate staff member. May be repeated with different topics. Prerequisite: Permission of instructor.

TCHL 907. Practicum in Higher Education. 3 hours. Supervised field experience setting in a higher education setting, including the following areas of focus: instruction, student services, or leadership. Prerequisite: TCHL 816 The Community College or permission of instructor.

TCHL 910. Readings in Education. 1-5 hours. Selected readings with an emphasis on contemporary problems suited to the individual needs of the student. May be repeated for a maximum of 3 hours.

TCHL 930. Seminar in Research Skills. 3 hours. This course meets the research requirement for Option I and Option II of the Specialist in Education degree. It is intended for practitioners who will be users of educational research and educational evaluation. The course will emphasize a review of educational research and evaluation principles, the use of these skills in reading, analyzing and interpreting research and evaluation, and the presentation of reports on topics of interest to the students. Prerequisites: TCHL 891 Methods of Research and TCHL 824 Educational Statistics I, or permission of instructor.

TCHL 940. Seminar: (____). 1-3 hours. Specific problems or a specific area in education will be studied intensively through readings, reports, and discussions. The topics to be studied will be indicated in the schedule of classes. May be repeated if subject matter is different.

TCHL 990. Special Research Project. 2-6 hours. Required of all candidates in Option II. May be repeated for a maximum of six hours.

TCHL 991. Research and Specialist Thesis. 3-6 hours. Prerequisite: TCHL 930 Seminar in Research Skills.
TECHL 993. Critical Issues in Education. 1-3 hours. A study of critical issues involving the public school and higher education; effect of research on teaching and emphasis on modern innovations. Prerequisites: Advanced graduate standing and permission of instructor.

Technology Education

TE 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TE 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TE 301. STEM Experiences for Elementary Education. 1 hour. This introductory course in technological literacy education focuses on the development and introduction of technology and engineering-based activities to support science and mathematics instruction in the elementary classroom. Through hands-on, problem-based learning activities, students will develop an understanding of the importance of and how technology and engineering can be integrated into the elementary classroom to enhance the curriculum and engage students in meaningful activities.

TE 331. Overview of Technology and Engineering in STEM Education. 3 hours. Activity-based course provides an overview of technology and engineering concepts. Manipulative activities provide experiences promoting and reinforcing technological literacy content and STEM content, based on standards for technological literacy. Required for Elementary Technological Literacy Minor. Prerequisite: EDUC 261 Explorations in Education or permission of instructor.

TE 403. Current Topics in Technology Education (___). 1-3 hours. Current technical and/or pedagogical topics related to technology education are presented. Guest lecturers and presenters from industry may be utilized. May be repeated if subject matter is different for a maximum of nine credit hours. Prerequisite: Permission of instructor.

TE 420. Professional Development 1. 2 hours. An overview of professional organizations associated with Technology Education. Activities include presenting at a regional technology conference, participating in a regional Technology Student Association conference as a judge, participating in a regional Technology Education Collegiate Association conference as well as present or co-present at the International Technology Education Association Conference as a professional member. The students will participate in professional development by preparing and presenting recruitment presentations at area high schools. Prerequisites: GT 300 Engineering Design and Problem Solving, GT 310 Contextual Topics in Technology and Engineering, GT 320 Communication Systems Technology, GT 330 Engineering Materials and Processes, GT 340 Power/Energy/Transportation Systems and GT 360 Computer Aided Drafting and/or permission of instructor.

TE 421. Professional Development 2. 2 hours. A professional development course designed to encourage students to develop professional attributes by participating in a national Technology Education Collegiate Association conference as well as present or co-present at the International Technology Education Association Conference as a professional member. The students will participate in professional development by preparing and presenting recruitment presentations at area high schools. Prerequisites: GT 300 Engineering Design and Problem Solving, GT 310 Contextual Topics in Technology and Engineering, GT 320 Communication Systems Technology, GT 330 Engineering Materials and Processes, GT 340 Power/Energy/Transportation Systems and GT 360 Computer Aided Drafting and/or permission of instructor.

TE 479. Teaching Techniques for Technology and Engineering Education. 3 hours. Techniques, methods and course content used in teaching technology education in middle, secondary and post-secondary schools. Development of curriculum materials via computer and traditional methods, including a course of study and lesson plans. To be taken last spring semester prior to professional semester. For undergraduates only. Prerequisite: GT 191 Foundations of Technology and Engineering and/or permission of instructor.

TE 496. Organization and Management for Technology and Engineering Education. 3 hours. Instruction and laboratory experiences in organization and management of technology and engineering education laboratories, including: selection and sources of equipment and supplies, laboratory planning, safety organization and management concerns, scheduling, student evaluation, discipline, professionalism, student organizations, activity and lesson planning. Computer applications incorporated throughout. For technology and engineering education certification. Prerequisite: To be taken the semester or year prior to professional semester and/or permission of instructor.

TE 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TE 551. Integrated Technology for Educators. 3 hours. Reflects Standards for Technological Literacy. Content for the Study of Technology, essential core of technological knowledge and skills that K-12 students should acquire. Content addresses today's technological systems in communication, transportation, production and bio-related technologies. Provides instructional strategies for enhancing technological literacy-critical thinking, design and problem solving. Laboratory activities, integration of academics, and development of thematic units and teaching tools are primary means for learning. Prerequisite: TE 331 Overview of Technology and Engineering in STEM Education or permission of instructor.

TE 579. Supervised Student Teaching and Follow-Up of Teachers. 2 hours. Available only to students enrolled in the professional semester. A supervising professor will visit each student teacher. Additional mentoring, outreach, and support are available to first-year teachers who maintain contact with the department. Concurrent enrollment in the professional semester is required. Offered on a Pass-Fail basis only.

TE 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TE 679. Senior Assessment in Technology and Engineering Education. 1 hour. Students complete a portfolio, resume, and participate in interview simulations and complete comprehensive examinations of technical and professional knowledge in technology education. Prerequisites: Technology education major in last semester of course work prior to professional semester; permission of instructor.

TE 753. Special Topics in Technology Education (___), 1-3 hours. Selected topics in technology education. Classroom and laboratory study. May be repeated if subject matter is different. Each class limited to a single topic and for a specific number of credit hours. Prerequisite: 9 hours of technology education and/or permission of instructor.

TE 754. Power/Energy/Transportation Systems Technology. 3 hours. Development, control, transmission, conversion, and inter-relationship of power sources. Content, curriculum and techniques of laboratory operation. Prerequisite: Adequate undergraduate preparation as determined by the instructor.

TE 755. Materials and Processes (___), 3 hours. Study of organic and inorganic materials and the processes used to change these to meet the material needs of mankind. Content, curriculum and techniques of laboratory operation. Prerequisite: Adequate undergraduate preparation as determined by the instructor.

TE 756. Communication Systems Technology. 3 hours. Methods of developing and transmitting ideas and information. Content, curriculum and techniques of laboratory operation. Prerequisite: Adequate undergraduate preparation as determined by the instructor.

TE 796. Organization and Management for Technology Education Programs. 3 hours. Organization and management practices for multipurpose laboratories and classrooms are presented. Content includes: facility planning, procurement of equipment and supplies; safety practices and planning; scheduling; discipline strategies; professionalism and incorporation of student organizations. Computer applications applicable to the organization and management topics are incorporated.

TE 806. Studies in Technology Education (___), 1-3 hours. An in-depth investigation into an area of technology education. The investigation may be technical or pedagogical and will result in a research report. Approval of problem topic by instructor is required. May be repeated if subject matter is different for a maximum of 9 hours.

TE 807. Problem Solving and Creative Thinking. 3 hours. Participants learn technological problem solving strategies and creative thinking techniques for use in technology courses. Concepts are applicable to other academic disciplines, and include: orientation to problem solving and technological problem solving; creative thinking strategies; resources to promote creative thinking; development, integration, and evaluation of problem solving activities in programs; and hands-on experiences in problem solving and creative thinking.
TE 840. Production Technology: Construction (____). 3 hours. Construction systems development in designing, planning, and constructing structures on-site. May be repeated when content is different.

TE 841. Production Technology: Manufacturing (____). 3 hours. Manufacturing systems, including the organization and operation of a manufacturing enterprise. May be repeated when content is different.

TE 850. Contemporary Developments in Technology Education. 3 hours. Philosophical bases, content, and organization patterns of technology education.

TE 851. Integrated Technology for Educators. 3 hours. Reflects Standards for Technological Literacy: Content for the Study of Technology, essential core of technological knowledge and skills that K-12 students should acquire. Provides instructional strategies for enhancing technological literacy—critical thinking, design and problem solving. Laboratory activities focus on integration of academics and technology, and development of thematic units. Specialized equipment, such as video editing stations, CNC vinyl sign makers, and laser cutting systems are used to develop activities, video instruction, and presentations for area classrooms.

TE 862. Topics in Power/Energy/Transportation Systems Technology (____). 3 hours. Recent developments in power and energy and transportation. May be repeated, when content is different, for a maximum of 6 hours.

TE 864. Topics in Communication Technology (____). 3 hours. Recent developments in communication technology. May be repeated, when content is different, for a maximum of 6 hours.

TE 881. Orientation to College Teaching. 3 hours. Laboratory work in the classroom situation, work with instructional aids, involvement in curriculum development, test construction, and classroom instruction.

TE 882. Instructional Strategies for Technology Education. 3 hours. Instructional approaches, including conceptual learning, interdisciplinary, social-cultural, problem-solving, systems integration, and interpretation of technology are presented. Delivery systems for teaching, including formal presentations, group interaction techniques, discovery, inquiry and experimentation, and games/simulations.

TE 892. College Teaching Internship. 3 hours. Teaching experience in a community college or university. Prerequisite: TE 881 Orientation to College Teaching or permission of instructor. Permission of instructor is required. May be taken as graded or pass-fail basis, as determined at the time of enrollment.

TE 893. Seminar in Technology Education (____). 1-3 hours. Selected readings and discussions in technology education and related educational problems. May be repeated for a maximum of 9 hours when content is different.

Technology Management

TM 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TM 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TM 350. Societal Influence of Technology. 3 hours. A study of the impact of technology on society, both personally and professionally. A discussion of managing it in our daily lives.

TM 390. Trade and Job Analysis. 3 hours. How to analyze trades, occupational pursuits, and jobs for divisions, operations and information. Consideration of the organization for instructional purposes.

TM 399. Technology Management Professional Development. 2 hours. Preparation of students for employment in technology management internships and full-time positions. Emphasis is placed on academic planning, certification opportunities and procedures, resume content, job search skills, job interview, business etiquette, time management and goal setting.

TM 500. Industrial Organization and Technology Management. 3 hours. An overview of industrial organization and the interrelationship of functions and fundamental principles which lead to effective coordination and control. Prerequisite: Junior standing.

TM 501. Work Measurement and Efficiency Methods. 3 hours. Productivity studies including motion and time study, performance ratings, and contemporary worker organization patterns and methods improvement. Relationships of workers, cost reduction, and productivity. Prerequisite: MATH 143 Elementary Statistics.

TM 503. Facility Management and Maintenance. 3 hours. A study of industrial facility systems. Management of maintenance programs and personnel. Design, inspection, and maintenance of electrical, pneumatic, hydraulic, and environmental systems. Prerequisite: Junior standing.

TM 520. Leadership in the Workplace. 3 hours. A study of leadership styles, traits and characteristics and their effectiveness in various situations. Leadership related to employee performance.

TM 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TM 555. Diversity in Technology Management. 3 hours. An analysis of how educational, social, cultural, political, and psychological events have and will continue to impact the manufacturing and technology-based workforce and the human resource department. The relationship of workforce diversity to employee recruitment, development, and utilization will be emphasized.

TM 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TM 650. Special Problems (____). 1-3 hours. Individual study in the students' major or minor area. May be repeated if subject matter is different for a maximum of six hours to be applied towards a degree program. May be taken as graded or pass-fail.

TM 653. Workforce Preparation. 3 hours. Familiarizes students with modern innovative methods for developing and preparing employees. The course provides examples of employee empowerment and problem-solving techniques used in preparing the workforce.

TM 679. Presentation Skills. 3 hours. Theory and practice of presentation skills for formal and informal presentations for various audiences in industrial setting using current software and multi-media equipment. Includes determining the audience, connecting with the audience, developing the presentation, developing practical applications, as well as evaluating performance.

TM 683. Internship in Technology Management. 3-6 hours. Intern experience in actual workplace settings that allows the students to apply what they have learned in the classroom setting. Directed by university faculty and coordinated with workplace supervisors, the course will include detailed work experiences related to technology management in the work environment. Prerequisite: Senior standing. Offered as Pass-Fail only.

TM 699. Senior Assessment in Technology Management. 1 hours. A capstone course for Technology Management bringing together the student's personal, professional, and technical competence which will include authentic assessment and outcome of student development of a career portfolio. Prerequisite: Senior standing.

Technical Teacher Education

TTED 193. Workshop for Beginning Career and Technical Education Teachers. 3 hours. Intensive study of methods of teaching, principles of learning, and evaluating procedures. Summer only. Offered as Pass-Fail only.

TTED 201. Occupational Work Experience. 3-12 hours. Work experience in a specific Career and Technical Education (CTE) area accepted toward CTE teacher certification. May be repeated for a maximum of 12 hours. Offered as Pass-Fail only.
TTED 227. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TTED 228. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TTED 308. Laboratory and Shop Safety. 3 hours. A study of safety performance and shop safety, including inspection, planning and maintenance of a shop laboratory and a school shop safety prevention program.

TTED 391. Student Assessment Development in Career and Technical Education. 3 hours. Techniques and instruments to be utilized in evaluating the affective, cognitive, and psychomotor domains for applied technology courses.

TTED 395. Task Analysis for Technical Teachers. 1 hours. Techniques to analyze occupational position into duties, task and steps. The focus of the material is for the development and modification of vocational/technical program curriculum.

TTED 396. Curriculum Usage in Technical Education. 2 hours. Methods of using developed curriculum. Emphasis is placed upon components of the curriculum process and how curriculum is used to make instruction more effective and efficient. Corequisite: TTED 395 Task Analysis for Technical Teachers.

TTED 401. Occupational Work Experience. 3-12 hours. Work experience in a specific in a Career and Technical Education (CTE) area accepted toward CTE teacher certification. May be repeated for a maximum of 12 hours. Offered as Pass-Fail only. Prerequisite: TTED 201 Occupational Work Experience.

TTED 445. Development of a Unit Study Guide. 3 hours. Organization and design of a training program to meet a specified need in business and industry. Progresses from needs analysis through instructional materials and methods selection to evaluation procedures.

TTED 479. Techniques for Teaching Career and Technical Education. 3 hours. Techniques and methods used in teaching career & technical education in classes and laboratory environments at the secondary and post-secondary level.

TTED 483. Teaching Internship. 3-6 hours. Directed teaching internship for persons employed as career and technical education instructors. Course can be taken twice for a total of six hours. Prerequisite: Permission of instructor. Offered as Pass/Fail only.

TTED 539. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TTED 589. Workshop (____). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

TTED 605. Special Problems (____). 1-6 hours. Individual study in the students' major or minor area. May be repeated if subject matter is different for a maximum of 6 hours to be applied towards a degree program. May be taken as graded or pass-fail.

TTED 607. Student Leadership Development in Career and Technical Education. 3 hours. The organization and administration of career and technical education student organizations, especially at the local level. Incorporation of the student organization into the career and technical education program curriculum and the uses in public relations.

TTED 608. Components of Work-based Learning in Career and Technical Education. 3 hours. Techniques for developing, operating, and evaluating work-based learning opportunities for students in Career and Technical Education.

TTED 610. Seminar (____). 1-6 hours. Study of a particular topic, problem, or issue in applied technology education. May be repeated if subject matter is different with a maximum of 6 hours to be applied towards a degree program.

TTED 619. Planning Shop Layout for Career and Technical Education. 3 hours. Planning and layout of school shop facilities and the organization and management of these facilities.

TTED 694. Foundations of Career and Technical Education. 3 hours. Basic foundations of career and technical education including national and state initiatives as well as legislative influences. Covers a basic understanding of funding, course competencies, business and industry collaboration, articulation agreements, advisory boards, student organizations, etc. to prepare teachers in CTE pathways/programs at secondary and post-secondary levels.

TTED 695. Using Technology as an Instructional Tool. 2 hours. An applied course as to how technical teachers can use technology to enhance instruction in the classroom and laboratory. Includes how to use computers, presentations, softwares, scanners, HTML, projectors and other emerging technology as an instructional tool.

TTED 697. Identification and Instruction of Students with Special Needs. 3 hours. A study of legislation and teaching strategies applicable for students with special needs in career and technical education courses. Includes a focus on legislative awareness, strategies for teaching, curriculum and facility modification, and individualized approaches.

TTED 698. Leadership and Professionalism in Career and Technical Education. 3 hours. An introductory course examining different methods and theories as to the improvement of schools and the roles in which teachers play in this process. This course will include exploration of the importance of professionalism, faculty leadership, and collaboration.

TTED 708. Laboratory and Tool Safety in Occupational Education. 3 hours. Intensive study in safety performance, safety inspection, legal issues, and maintaining a safe laboratory environment in occupational education programs.

TTED 720. Project-Based Learning in CTE. 3 hours. This course will focus on teaching career and technical education instructors how to plan, implement, and assess project-based learning activities to be used in classrooms at the secondary and post-secondary levels.

TTED 731. Adult Learners. 3 hours. Facilitating adult learning. Areas of concentration are motivation, adult learners' characteristics, cultural issues, styles and patterns. Special attention will be focused on the adult learners in occupational, correctional, basic adult education, community colleges, extensions and proprietary student learner's programs. Focused toward identification of learning styles, needs and how to match delivery techniques to learners needs.

TTED 741. Seminar (____). 1 hours. A specific area of education will be studied intensively through readings, reports, discussions and workshops. A specific subtitle will be listed on the schedule of classes. May be repeated. A pass/fail grading system will be used.

TTED 779. Instructional Methods in Career and Technical Education. 3 hours. Development of instruction as basic means of communication in career and technical education; effective demonstration, lecture, conference, and discussion procedures; the question-and-answer, visual aids, aid teaching devices; relation of methodology to course organization.

TTED 780. Classroom Management in Career and Technical Education. 3 hours. Different classroom and laboratory methods are covered. For which a teacher may use to manage the classroom and/or laboratory environment and create an environment that is conducive to learning. Topics covered include the use of control theory, creating a positive learning environment, motivating students to learn, changing the behavior of students through the use of different teaching methods, teachers serving as counselors, developing effective consequential actions and discipline, and nonviolent-crisis intervention.

TTED 801. Organization and Administration of Career and Technical Education. 3 hours. Organization of career and technical education on the national, state and local levels; a study of laws, guidelines, and requirements for administration of vocational-technical programs. Recommended for school administrators and supervisors.

TTED 802. Adaptive Leadership in CTE. 3 hours. In the world of Career and Technical Education, expectations exist for educators to be able to not only facilitate the classroom and laboratory, but a number of outside entities as well. From working with administration regarding funding, recruitment, student organizations, etc. to connections with the community, CTE teachers must be able to apply professional leadership skills. This course approaches the theory of leadership with an applicable approach to empower CTE professionals. Students in this course will be able to understand their own personal leadership tendencies as well as those they work with in order to be progressive and instrumental in their role in CTE.
TWL 603. Senior Honors Project 1. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 1 is the first course in the sequence and will focus on the fundamental development of the project and preliminary scope of work to be completed. Students will receive a grade of A, B, IP (in progress) or NC (no credit) for each enrollment of the Senior Honors Project. A grade of NC voids the process and the student must then complete their Departmental Academic Honors in the traditional way.

TWL 604. Senior Honors Project 2. 3 hours. The Senior Honors Project is an optional way to earn Departmental Academic Honors for students who are members of the Honors College. The course is a two semester sequence where the student undertakes a year-long research project or creative endeavor under the guidance of a faculty member to expand their knowledge in an area integral to their academic growth and development. The Senior Honors Project 2 is the culmination of the project started in Senior Honors Project 1 and will result in a public presentation of the work. Students must earn a grade of A or B to receive credit for this course. Failure to complete the course with a grade of A or B will void this option and students will have to satisfy their Departmental Academic Honors requirement in the traditional way. There will be no IP (in progress) or IN (incomplete) grades for this course. Projects must be done by the end of the spring term to count towards Departmental Academic Honors requirements. Prerequisite: Senior Honors Project 1.

TWL 694. Technology Laboratory Internship (___). 1-3 hours. Variable credit for one to three hours. Can be repeated. Technology and Workforce Learning students can enroll for the course in their technical area as laboratory assistant during the semester a specific laboratory is offered. Prerequisite: Written permission of instructor.

TWL 795. Special Topics in Technology (___). 1-3 hours. Selected topics in technology. Regularly scheduled classroom and laboratory study pertaining to a distinct body of technical knowledge. May be repeated if subject matter is different. May be taken on a pass-fail basis.

TWL 897. Seminar in Technology (___). 1-3 hours. Seminar in which current trends, structures, philosophies and processes in technology are examined. Special interest areas will be studied intensively. May be repeated if subject matter is different for a maximum of 6 hours. Prerequisite: Permission of instructor.

Undergraduate Studies

UGS 100. The Freshman Experience. 2 hours. Development of critical thinking skills is an essential component. Topics covered include development of higher order thinking skills through exposure to a variety of problem solving methods; study skills; a study of the General Education curriculum and objectives of a liberal arts education; career choice and course selection; a discussion of social issues that impact on University life; PSU resources, health, time, and money management issues; and diversity topics.

UGS 101. Transitions. 1-2 hours. The transition to university life from another institution of higher education, a work environment, a foreign country, or other situations that would benefit from this assistance. Emphasis on academic, personal and social development necessary to be a successful and engaged member in the university community. New international students are required to take this course to assist in their transition to the American educational experience.

UGS 102. Athlete Transitions. 1 hours. Skills necessary to become a successful student-athlete at Pittsburg State University. NCAA eligibility and rules education; press communication, career development, drug and alcohol awareness, time management, and general orientation to the University. Required for all incoming student athletes.

UGS 201. Introduction to Research. 2 hours. Overview of research for students interested in completing an undergraduate research experience. Research methods and activities from different disciplines will be presented by faculty from different departments. Students who complete the Introduction to Research course, an undergraduate research experience and the Research Futures course will be eligible for recognition by the PSU Undergraduate Research Program.

UGS 601. Research Futures. 1 hours. This course will teach skills and knowledge needed to apply research experience to future academic and career opportunities across disciplines. Students will gain understanding of what is needed to apply to and be successful in professional and/or graduate school. Other career avenues involving research skill will also be explored.

Women's and Gender Studies

WGS 200. Introduction to Women's Studies. 3 hours. Interdisciplinary survey focuses on women's lives and experiences to investigate connections between gender and race, class, nationality, sexuality, and other cultural differences.

WGS 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WGS 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WGS 399. Global Women's Issues. 3 hours. Interdisciplinary analysis of feminist theory and global women's issues.

WGS 500. Topics in Women's and Gender Studies. 1-3 hours. Studies in some aspect of feminism; gender, race, class and/or nationality as related to women's and gender studies; sexuality; feminist theory; or other aspects of women's and gender studies as viewed from a variety of disciplines. May be repeated if topic varies.

WGS 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WGS 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WGS 600. Project in Women's Studies. 3 hours. Individual study and field work in various settings appropriate to the analysis of gender and women's issues. Includes a two credit hour field-work project. For Women's Studies minors only. Prerequisites: WGS 200 Introduction to Women's Studies or WGS 399 Global Women's Issues.

WGS 700. Topics in Women's Studies. 1-3 hours. Studies some aspect of feminism; gender, race, class and/or nationality as related to women's studies; sexuality; feminist theory; or other aspects of women's studies as viewed from a variety of disciplines. May be repeated if topic varies. Prerequisites: WGS 200 Introduction to Women's Studies or WGS 399 Global Women's Issues or permission of Director of Women's Studies.

Wood Technology

WT 103. Experiences in Wood Technology (___). 1-3 hours. Competency-based learning experiences in wood technology. May be repeated if subject matter is different for a maximum of six hours. Permission of instructor.

WT 181. Introduction to Woodwork. 3 hours. Basic hand and machine tool operations associated with fine woodworking. Emphasis on individual craftsmanship. Class appropriate for any individual interested in learning basic woodworking.

WT 182. Wood Science. 3 hours. Basic structure of wood, its anatomy, and the identification of the various commercial woods used in the United States. Wood moisture relationships.

WT 185. Fundamentals of Wood Technology. 3 hours. Wood technology fundamentals including wood as a manufacturing material, basic machine processes, assembly and finishing practices, and computer applications in secondary wood manufacturing. Also provides wood technology majors an orientation to overall wood program, laboratories, safety, and operating procedures.

WT 226. CAD for Wood Product Development. 3 hours. Introduction to drafting/design and use of CAD software (e.g., AutoCAD) in wood product design and development.

WT 227. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.
WT 228. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WT 282. Machine Woodworking. 3 hours. Use and care of major stationary and portable woodworking equipment. Introduction to mass production concepts of product design and fixtures. Prerequisite or corequisite: WT 185 Fundamentals of Wood Technology or permission of instructor.

WT 286. Primary Wood Processing. 3 hours. The study of primary wood processing techniques including: harvesting, log grading and scaling, lumber yield, and wood seasoning practices. Applications, properties, grades and purchasing of composite materials.

WT 300. Wood Internship (___). 3-6 hours. A planned work experience in a wood industry or business. The student will be employed by a wood industry or business, and both parties will submit reports and evaluations of experiences to the department coordinator. May be repeated for up to six credit hours. Offered on a Pass/Fail basis only. Prerequisite: Permission of instructor.

WT 301. Finishing. 3 hours. Use, application, and rubbing of all kinds of transparent and opaque finishes that are applied by brush, spray, and the wipe-on methods for wood. Special attention is given modern techniques and finishing procedures.

WT 326. CAD for Wood Product Development II. 3 hours. A continuation of WT 226 CAD for Wood Product Development, advancing the user level of AutoCAD. Exposure to 3-D modeling and other engineering software. Prerequisite: WT 226 CAD for Wood Product Development or GT 360 Computer Aided Drafting.

WT 333. Tool Technology. 3 hours. Basic machine maintenance, setup and adjustment, including electrical, lubrication, cleaning and precision measurement. Tooling materials and tooling for specific machines. Tool design and tooling variations related to wood species, chip load, quality of cut and manufacturing method.

WT 382. Construction Methods and Materials. 3 hours. Materials, methods, and equipment used in house construction, including location and excavation, foundation, framing, roofs, interior, and exterior finishes, insulation, and acceptable practices of assembly.

WT 383. Computer-Aided Manufacturing in Wood Technology. 3 hours. Focus on CAM software to develop CNC programs for the wood industry. Emphasis on manual programming, tooling considerations, speed and feed rates, post-processors and transferring data from CAD, CAM and CNC.

WT 399. Wood Technology Professional Development. 2 hours. Preparation of students for employment in wood technology internships and full-time positions. Emphasis is placed on academic planning, certification opportunities and procedures, resume content, job search skills, job interview, business etiquette, time management and goal setting. Prerequisite: Permission of instructor.

WT 400. Wood Internship (___). 3-6 hours. A planned work experience in a wood industry or business. The student will be employed by a wood industry or business, and both parties will submit reports and evaluations of experiences to the department coordinator. May be repeated for up to six credit hours. Offered on a Pass/Fail basis only. Prerequisite: Permission of instructor.

WT 403. Current Topics in Wood Technology (___). 1-3 hours. Current technical and managerial topics related to wood business and industry are presented. Guest lecturers and presenters from industry may be utilized. May be repeated if subject matter is different for a maximum of nine credit hours. Prerequisite: Permission of instructor.

WT 412. Overlay and Laminate Materials. 3 hours. Characteristics, processes, applications of decorative laminates and other overlay materials utilized in wood industries. Emphasis on overlays, adhesives, substrates, and fabrication techniques. Industrial applications and trade standards for materials and products manufactured. Prerequisite: WT 282 Machine Woodworking or permission of instructor.


WT 454. CNC Application for Wood Industry. 3 hours. Learn the use of CNC routers emphasizing manufacturing methods found in the wood industry. Use of 3 axis and 5 axis routers to construct projects. Prerequisites: WT 383 Computer-Aided Manufacturing in Wood Technology.

WT 511. Production Techniques in Woods. 3 hours. Explorations of various techniques used in mass production. Analyze plant layouts, selection and justification of equipment and evaluate production processes, through group production project. Prerequisites: WT 454 CNC Application for Wood Industry and WT 426 Millwork and Casework.

WT 523. Computer Applications in Cabinetmaking. 3 hours. Applications of computer software in the cabinetmaking industry. Setup and use of popular computer software used in the manufacture of kitchen cabinets. Applications of such software as applied to custom furniture design and CNC applications. Corequisite: WT 525 Cabinets and Fixtures.

WT 525. Cabinets and Fixtures. 3-5 hours. Practical production problems involving contemporary materials and production techniques used in cabinet fixtures. Planning, layout and design, terminology, estimating, production sequence, types of construction, surface decorations, plastic laminates and installations. Prerequisites: WT 282 Machine Woodworking and WT 301 Finishing.

WT 539. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WT 585. Wood Production Estimating. 3 hours. Survey of the estimating techniques commonly used by secondary wood product manufacturers with emphasis on computer applications. Prerequisites: WT 380 Production Techniques in Woods.

WT 589. Workshop (___). 1/2 - 5 hours. Specialized instruction offered as a short-term workshop. May be repeated when the title is different. Neither course nor credit hours can be counted toward a degree, but may be utilized in creation of a credential certificate. May be graded as pass/fail or letter grade.

WT 602. Manufacturing Facility Maintenance and Management. 3 hours. A study of manufacturing facility systems. Management of maintenance programs and personnel. Design, inspection, and maintenance of electrical, pneumatic, hydraulic, and environmental systems. The wood manufacturing industry is the primary focus of this course. Prerequisite: WT 333 Tool Technology.

WT 682. Residential Construction Software: Planning and Management. 3 hours. Residential construction computer software applications for creating architectural drawings, and doing project planning, scheduling, and estimating. Prerequisites or corequisites: WT 382 Construction Methods and Materials or permission of instructor.

WT 691. Furniture Design and Development. 3 hours. (2 hours lecture, 2 hours laboratory). Study of the design phase (both historical and futuristic) of furniture design. Design prototypes, create conceptual drawings of furniture, develop and interpret sets of production drawings.

WT 692. Furniture Manufacturing. 3-5 hours. Development, fabrication and finish a prototype piece of furniture. Prerequisites: WT 691 Furniture Design and Development and WT 511 Production Techniques in Woods.

WT 699. Wood Technology Senior Seminar. 1 hour. A capstone wood course simulating situations students encounter in employment and assessment of personal, professional, and technological competencies. Authentic assessments such as portfolios will be used. Prerequisite: Senior or second semester junior standing.

WT 780. Wood Industries Seminar. 3-6 hours. The American Woodworking Industries: products, processes, and organization. Individual reports and group discussion of the problems current to this topic. Prerequisite: 9 hours in woodworking or permission of the instructor.

WT 795. Special Topics in Wood Technology (___). 1-3 hours. Selected topics in wood technology. Regularly scheduled classroom and laboratory study pertaining to a distinct body of technical knowledge. May be repeated if subject matter is different. May be taken on a pass-fail basis.
Faculty and Staff

For the most up to date contact information use the online directory.

*Has an earned doctorate.

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