



# Pittsburg State University College of Technology Program Guide

Degree: Bachelor of Science in Technology  
Major: Automotive Technology  
Emphasis/Option:  
Minor (if required):

As of Fall 2016

## Support Courses

ECON 200: Introduction to Microeconomics .....	3
MATH 143: Elementary Statistics .....	3
ENGL 301: Technical/Professional Writing .....	3

## \*\* Approved Electives (7 credit hours selected from the following)

AT 300: Automotive Internship (____) .....	3-6
AT 301: Fundamentals of Collision Technology .....	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 464: Damage Analysis, Estimating and Insurance Appraisal .....	3
AT 511: Service Techniques Laboratory .....	3
AT 611: Diesel Engine Fundamentals .....	3
AT 630: On Highway Systems .....	3
AT 635: Advanced Engine Performance .....	3
AT 640: Off Highway Systems .....	3
AT 650: Dynamometer and Performance Testing .....	3
AT 662: Automotive Finishing and Refinishing .....	3
AT 697: Corporate Sales 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 Automotive Technology .....	1
AT 112: Engine Analysis .....	3
AT 210: Brake Systems .....	3
AT 211: Steering, Alignment and Suspension .....	3
AT 215: Automotive Electrical/Electronic Equipment .....	3
AT 216: Automotive Electrical/Electronic Equipment Laboratory .....	3
AT 314: Manual Transmission and 4WD Mechanisms .....	3
AT 399: Automotive Professional Development .....	2
AT 410: Emerging Developments in Automotive Technology .....	1
AT 414: Automatic Transmissions .....	3
AT 510: Automotive Climate Systems .....	3
AT 519: Mobile Fuels, Lubricants and Alternate Fuels .....	3
AT 615: Engine Performance Laboratory .....	3
or AT 621: Advanced Diesel Electronics and Diesel Engine Lab .....	3
AT 679: Future Power for Automobile Technology .....	3
AT 690: Dealership and Manufacturer Management .....	3
AT 699: Automotive Senior Seminar .....	1

## At least one of the following options must be completed

### Option One: Automotive Manufacturing Management

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: Automotive Service Management and Marketing

ACCTG 202: Managerial Accounting .....	3
AT 301: Fundamentals of Collision Technology .....	3
AT 511: Service Techniques Laboratory .....	3
AT 697: Corporate Sales Management .....	3
MGMKT 327: Management and Organizational Behavior .....	3
MGMKT 330: Principles of Marketing .....	3
MGMKT 444: Legal and Social Environment of Business .....	3
ACCTG 202 can be substituted through approval of an accounting elective.	

### Option Three: Diesel and Heavy Equipment

MFGET 162: Welding Processes and Procedures .....	3
AT 416: Fluid Power .....	3
AT 418: Failure Analysis .....	3
AT 611: Diesel Engine Fundamentals .....	3
AT 630: On Highway Systems .....	3
AT 640: Off Highway Systems .....	3
AT 654: Advanced Hydraulic Systems and Off Highway Systems Laboratory .....	3

### Option Four: Automotive Collision Repair and Insurance Management

MFGET 162: Welding Processes and Procedures .....	3
AT 301: Fundamentals of Collision Technology .....	3
MGMKT 444: Legal and Social Environment of Business .....	3
AT 462: Structural and Non-Structural Analysis .....	3
AT 464: Damage Analysis, Estimating and Insurance Appraisal .....	3
AT 662: Automotive Finishing and Refinishing .....	3
AT 695: Corporate Service and Part Management .....	3

### Option Five: Automotive Technical

#### Complete 21 hours (7 of the 8 courses)

AT 301: Fundamentals of Collision Technology .....	3
AT 416: Fluid Power .....	3
AT 418: Failure Analysis .....	3
AT 511: Service Techniques Laboratory .....	3
AT 611: Diesel Engine Fundamentals .....	3
AT 635: Advanced Engine Performance .....	3
AT 650: Dynamometer and Performance Testing .....	3
EET 141: Introductory Electronics .....	3

### Option Six: Automotive Mechanical Design##

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 424: Mechanics of Materials Laboratory .....	1
MECET 428: Thermodynamics .....	3
MECET 523: Mechanical Design I .....	3

## MATH 150 Calculus I is required to satisfy General Education Basic Skills Requirements. PHYS 100 Physics I with PHYS 130 Elementary Physics I Laboratory is required to satisfy the Physical Sciences area of General Education Requirements.

# GENERAL EDUCATION REQUIREMENTS

(46-54 hrs.)

## 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 133	Quantitative Reasoning .....	3
MATH 150	Calculus I .....	5

## Sciences 8-10 hours

### Natural Sciences (Select one)

BIOL 111/112	General Biology and Laboratory.....	5
BIOL 113	Environmental Life Science .....	4
BIOL 211	Principles of Biology I .....	4

### Physical Sciences \*\* (Select one)

CHEM 105/106	Introductory Chemistry and Laboratory .....	4
CHEM 107/108	Chemistry for Life Sciences and Laboratory.....	4
PHYS 100/130	College Physics I and Lab.....	5
PHYS 160/165	Physical Geology and Laboratory .....	4
PHYS 171/172	Physical Science and Laboratory .....	4

## Social Studies 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 MGMKT 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

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

(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 111	Ethics: Applied Emphasis (____).....	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

Notes \*MATH 150 is required for Automotive Mechanical Design Option.

\*\*PHYS 100 and PHYS 130 are required for Automotive Mechanical Design Option.

NOTE: The information contained herein is intended to be used for the planning of a student's academic program and does not constitute a contract. While this guide was prepared with the latest information, courses, graduation requirements, and curricula are subject to change.

When a student attains 85 semester hours of credit (including current enrollment) the student must apply for a degree check in the Office of the Registrar (Degree Checking Section), Room 102 Russ Hall.

**MINIMUM GENERAL REQUIREMENTS:** The minimum requirements for graduation include 124 semester hours of which 60 hours must be from a four year university. In addition, 45 semester hours must be upper division and 30 hours in residence at PSU (including 24 of the last 30). Minimum GPA for non-education degree is 2.0 overall [2.0 in major], secondary education degree is 2.5 overall [2.75 in major], and early/late childhood/unified degree is 2.80 overall [3.0 in major]. A minimum GPA of 2.0 in any minor and in residence coursework is required. General Education and all degree requirements are provided in the online catalog. Refer to individual departments for specific requirements.