Request for Revision to Curriculum

Revision for: ☒ Major ☐ Minor ☐ Emphasis ☐ Certificate

Department: TWL College: Technology This program is to be offered 50% or more online as a Hybrid ______ This program is to be offered fully online ______

Submission Date: 12/6/19 (Year) Revision Effective: Fall, 2020

Contact Person: Byron McKay ☒ Faculty member ☐ Chair

Name of Existing Major or Minor/Emphasis/Certificate: BS Ed Technology & Engineering Education

If proposing a name change to major or minor/emphasis/certificate, indicate Proposed Name Change: ______

Description of Change: 1. Add a customizable technical specialization sequence (emphasis) which needs chair approval
2. Reflect name/credit hour change to major courses.
3. Add EDUC370- Organization and Management for the Middle & Secondary Classroom.
4. Add Pathway requirements to document

Rationale for Change (include changes to curriculum objectives): 1. Adding a customizable emphasis better serves T&EE majors by allowing them to obtain an emphasis in an area specific to their interests or their completed coursework. Under KSDE, licensure in T&EE is proper credentials for over 100 subject areas.
2. Course changes are approved or in legislation to be changed. TE496, TE479, GT370, TE579
3. Some elements were removed from TE496 which allowed it to be moved to a 2 credit hour course, and those elements are covered in EDUC370, along with other content believed to be valuable to our students.
4. Program guide needs to reflect 120 hour requirement.

Is this revision related to, and/or may affect, any degree program or minor/emphasis/certificate at any other Regent university?
☐ Yes ☒ No

Whether a “yes” or “no” response, please provide an explanation.

These changes only effect T&EE majors

Is this revision related to, and/or may affect, any other department’s/college’s/unit’s curricula or programs at Pittsburg State University?
☐ Yes ☒ No

Whether a “yes” or “no” response, please provide an explanation. Provide documentation of any discussions (e.g. copies of e-mails, memos, etc.) that have occurred.

These changes only effect T&EE majors

Existing Major or Minor/Emphasis/Certificate

Copy and paste the existing curriculum as it currently appears in the online catalog:

Technology and Engineering Education Content Core (28 hours)
• GT-190 Introduction to Technological Systems (2 hours)
• GT-191 Foundations of Technology and Engineering (2 hours)
• GT-300 Engineering Design and Problem Solving (3 hours)
• GT-320 Communication Systems in Technology (3 hours)
• GT-330 Engineering Materials and Processes (3 hours)
• GT-340 Power/Energy/Transportation Systems (3 hours)
• GT-360 Computer Aided Drafting for Automated Manufacturing (3 hours)
• GT-370 Construction Systems Technology (3 hours)
• GT-380 Manufacturing Enterprise (3 hours)
• GT-390 Fundamentals of Robotics and Coding (3 hours)

Technology and Engineering Education Professional Core (13 hours)
• TE-420 Professional Development (3 hours)
• TE-479 Teaching Techniques for Technology and Engineering Education (3 hours)
• TE-496 Organization and Management for Technology and Engineering Education (3 hours)
• TE-551 Integrated Technology for Educators (3 hours)
• TE-679 Senior Assessment in Technology and Engineering Education (1 hour)

Technical Specialization Sequence (9 hours) See notes *1

*1
• Student will need to select one emphasis and complete the 9 hours sequence.

Architectural Manufacturing and Technology
• AMMT-185 Fundamentals of Architectural Manufacturing (3 hours)
• AMMT-282 Machine Processes in Architectural Manufacturing (3 hours)
• AMMT-226 CAD for Architectural Product Development (3 hours)
• or
• AMMT-383 Computer-Aided Manufacturing (CAM) in Architectural Manufacturing Technology (3 hours)
• or
• AMMT-412 Overlay and Laminate Materials (3 hours)

Automotive
• AT-210 Brake Systems (3 hours)
• AT-211 Steering, Alignment and Suspension (3 hours)
• AT-213 Engine Systems (3 hours)

Construction
• CM CET-133 Construction Graphics (3 hours)
• CM CET-235 Methods of Construction-Light Frame and Finishes (2 hours)
• CM CET-330 Mechanical Systems (HVAC) (3 hours)
• or
• CM CET-331 Electrical Systems (3 hours)
• or
• CM CET-334 Methods of Construction-Sitework and Steel (3 hours)
• or
• CM CET-335 Methods of Construction-Concrete and Masonry (3 hours)

Digital Media
• GIT-231 Audio/Video Software (3 hours)
• GIT-310 Photography (3 hours)
• GIT-432 Digital Media Design (3 hours)

Electronics Engineering
• EET-144 D.C. Circuit Analysis Methods (3 hours)
• EET-244 Logic Circuits (3 hours)
• EET-247 Computer Programming for Electronic Systems (3 hours)

Graphic Design
• GIT-141 Vector Based Graphics (3 hours)
• GIT-142 Raster Graphics Software (3 hours)
• GIT-240 Page Layout Software (3 hours)
Manufacturing Engineering
- MFGET-263 Manufacturing Methods I (2 hours)
- and
- MFGET-268 Manufacturing Methods I Laboratory (1 hour)
- MFGET-363 Principles of Tool Design (3 hours)
- MFGET-367 Manufacturing Methods II (4 hours)

Metals Engineering
- MFGET-162 Welding Processes and Procedures (3 hours)
- MFGET-567 Principles of Metalcasting (3 hours)
- MFGET-568 Metalcasting Processing Laboratory (2 hours)

Plastics Engineering
- PET-180 General Plastics Laboratory (1 hour)
- and
- PET-185 General Plastics (3 hours)
- PET-272 Plastics Processing I Laboratory (1 hour)
- and
- PET-273 Plastics Processing I (3 hours)
- PET-281 Plastics Testing Technology (3 hours)

Web Design
- GIT-221 Web Graphics Software (3 hours)
- GIT-322 Web Site Design (3 hours)
- GIT-323 Web and Motion Graphics (3 hours)
- or
- GIT-421 Interactive Media Design (3 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.

Professional Education (15 hours)
- EDUC-261 Explorations in Education (3 hours)
- PSYCH-263 Developmental Psychology (3 hours)
- PSYCH-357 Educational Psychology (3 hours)
  Must be admitted to Teacher Education to enroll.
- SPED-510 Overview of Special Education (3 hours)
- EDUC-520 Methods and Materials for Academic Literacy (3 hours)
  Must be admitted to Teacher Education to enroll.

Professional Semester (15 hours)
- TE-579 Supervised Student Teaching and Follow-Up of Teachers (2 hours)
- EDUC-458 Methods and Curriculum (3 hours)
- EDUC-464 Measurement and Evaluation (3 hours)
- EDUC-475 Supervised Clinical Experience (9 hours)

Total 120 credit hours for a Bachelor of Science in Education degree with a Major in Technology and Engineering Education.

Proposed Major or Minor/Emphasis/Certificate:
List below, the proposed curriculum as you wish it to appear in the online catalog:
Technology and Engineering Education Content Core (27 hours)
- GT-190 Introduction to Technological Systems (2 hours)
- GT-191 Foundations of Technology and Engineering (2 hours)
- GT-300 Engineering Design and Problem Solving (3 hours)
- GT-320 Communication Systems in Technology (3 hours)
- GT-330 Engineering Materials and Processes (3 hours)
- GT-340 Power/Energy/Transportation Systems (3 hours)
- GT-360 Computer Aided Drafting for Automated Manufacturing (3 hours)
- GT-370 Construction Systems Technology (2 hours)
- GT-380 Manufacturing Enterprise (3 hours)
- GT-390 Fundamentals of Robotics and Coding (3 hours)

Technology and Engineering Education Professional Core (12 hours)
- TE-420 Professional Development (3 hours)
- TE-479 Effective Teaching Strategies for the Middle & Secondary Laboratory ( ) (3 hours)
- TE-496 Organization and Management for the Educational Laboratory ( ) (2 hours)
- TE-551 Integrated Technology for Educators (3 hours)
- TE-679 Senior Assessment in Technology and Engineering Education (1 hour)

Technical Specialization Sequence (9 hours) See notes *1
*1 Student will need to select one emphasis and complete the 9 hours sequence.

Architectural Manufacturing Management and Technology
- AMMT-185 Fundamentals of Architectural Manufacturing (3 hours)
- AMMT-282 Machine Processes in Architectural Manufacturing (3 hours)
- AMMT-226 CAD for Architectural Product Development (3 hours)
- or
- AMMT-383 Computer-Aided Manufacturing (CAM) in Architectural Manufacturing Technology (3 hours)
- or
- AMMT-412 Overlay and Laminate Materials (3 hours)

Automotive
- AT-210 Brake Systems (3 hours)
- AT-211 Steering, Alignment and Suspension (3 hours)
- AT-213 Engine Systems (3 hours)

Construction
- CMCET-133 Construction Graphics (3 hours)
- CMCET-235 Methods of Construction-Light Frame and Finishes (2 hours)
- CMCET-330 Mechanical Systems (HVAC) (3 hours)
- or
- CMCET-331 Electrical Systems (3 hours)
- or
- CMCET-334 Methods of Construction-Sitework and Steel (3 hours)
- or
- CMCET-335 Methods of Construction-Concrete and Masonry (3 hours)

Digital Media
- GIT-231 Audio/Video Software (3 hours)
- GIT-310 Photography (3 hours)
- GIT-432 Digital Media Design (3 hours)

Electronics Engineering
- EET-144 D.C. Circuit Analysis Methods (3 hours)
- EET-244 Logic Circuits (3 hours)
- EET-247 Computer Programming for Electronic Systems (3 hours)

Graphic Design
- GIT-141 Vector Based Graphics (3 hours)
- GIT-142 Raster Graphics Software (3 hours)
- GIT-240 Page Layout Software (3 hours)

Manufacturing Engineering
• MFGET-263 Manufacturing Methods I (2 hours)
• and
• MFGET-268 Manufacturing Methods I Laboratory (1 hour)
• MFGET-363 Principles of Tool Design (3 hours)
• MFGET-367 Manufacturing Methods II (4 hours)

Metals Engineering
• MFGET-162 Welding Processes and Procedures (3 hours)
• MFGET-567 Principles of Metalcasting (3 hours)
• MFGET-568 Metalcasting Processing Laboratory (2 hours)

Plastics Engineering
• PET-180 General Plastics Laboratory (1 hour)
• and
• PET-185 General Plastics (3 hours)
• PET-272 Plastics Processing I Laboratory (1 hour)
• and
• PET-273 Plastics Processing I (3 hours)
• PET-281 Plastics Testing Technology (3 hours)

Web Design
• GIT-221 Web Graphics Software (3 hours)
• GIT-322 Web Site Design (3 hours)
• GIT-323 Web and Motion Graphics (3 hours)
• or
• GIT-421 Interactive Media Design (3 hours)

Customized Technical Sequence (see notes *2)

*2 Nine hours of coursework related to a technical field from Technology & Engineering Education licensure as identified by KSDE, subject to approval by TWL chair.

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.

Professional Education (17 hours)
• EDUC-261 Explorations in Education (3 hours)
• EDUC-370- Organization and Management for the Middle & Secondary Classroom (2 hours)
• PSYCH-263 Developmental Psychology (3 hours)
• PSYCH-357 Educational Psychology (3 hours)
  Must be admitted to Teacher Education to enroll.
• SPED-510 Overview of Special Education (3 hours)
• EDUC-520 Methods and Materials for Academic Literacy (3 hours)
  Must be admitted to Teacher Education to enroll.
• TE-579 Supervised Student Teaching and Follow-Up of Teachers (1 hour)
• EDUC-458 Methods and Curriculum (3 hours)
• EDUC-464 Measurement and Evaluation (3 hours)
• EDUC-475 Supervised Clinical Experience (9 hours)

Pitt State Pathway Requirements (40 Hours) (see notes *3)

*3 Some program courses from major and professional courses may also meet pathway requirements

Total 120 credit hours for a Bachelor of Science in Education degree with a Major in Technology and Engineering Education.
Additional Questions

1. Additional resources required (e.g. library or multimedia resources, technology, space, major expense, etc.):
   na

2. Will any additional student fees be required (e.g. equipment, clothing, travel, licensing, etc.)?
   □ Yes  □ No  If “yes,” please realize that it will need to gain approval of the President’s Council.

   Please give the rationale for additional student fees:

   __________

3. Will this revision have specific General Education courses required? □ Yes  □ No
   Please realize that it will need to gain approval of the General Education Committee.

4. Will this revision affect any education majors? □ Yes  □ No
   If “yes,” please realize that it will need to have the approval of the Council for Teacher Education.

5. What additional costs will be required for this modification (e.g. staffing, equipment, etc.)?
   0

Additional Questions for certificate only:

1. Are students pursuing only this certificate eligible for federal financial assistance based on federal guidelines?
   (minimum of 24 hours) □ Yes  □ No

2. Does the course content contained within this certificate provide relevance to employment opportunities or
   meet professional objectives for the student? □ Yes  □ No

   If “yes,” to both questions, it is the department’s responsibility to send a copy of this legislation form to the
   Director of Financial Assistance to initiate Department of Education approval.
PITTSBURG STATE UNIVERSITY
LEGISLATIVE PROCESS
AUTHORIZATION/NOTIFICATION SIGN-OFF SHEET

☐ Approved: Department Chairperson
   Date 2.18.20  Signature, Department Chairperson

☐ Approved: College Curriculum Committee
   Date 4.7.20  Signature, College Curriculum Committee Chair

☐ Approved: Dean of College
   Date 4.7.20  Signature, Dean

☐ Approved: General Education Committee (if applicable)
   Date ______ Signature, General Education Committee Chair

☐ Approved: Council for Teacher Education (if applicable)
   Date ______ Signature, Council for Teacher Education Chair

☐ Approved: Faculty Senate University Undergraduate Curriculum Committee
   Date ______ Signature, Undergraduate Curriculum Committee Chair

☐ Approved: Faculty Senate
   Date ______ Signature, Recording Secretary, Faculty Senate

☐ Final approved packet forwarded to Provost’s office.
   Date ______ Signature, Recording Secretary, Faculty Senate

Notification to COCAO/Kansas Board of Regents (if required):  Date: ______

Each college curriculum representative will notify their respective college and department(s) of the completion of the approval process. If COCAO/KBOR approval is required, questions should be directed to the Provost’s administrative officer at x4113.

Originating Department(s): After completing this form, in its entirety, please upload it to the Zimbra Briefcase, “Undergraduate Curriculum Legislation” (within the appropriate College folder, “Preliminary Legislation”), to allow for review and questions. Any modifications should be saved as “original file name.version2.docx” and uploaded as well.

Following final College Curriculum Committee approval, please print the final version of this form, apply the appropriate signatures, and forward to the Office of the Registrar.

Following Faculty Senate Approval, SUBMIT (if required) SIGN-OFF SHEET AND FINAL COMPLETE PACKAGE, in electronic format, TO THE OFFICE OF THE PROVOST (220 RUSS HALL). Please check with the Provost’s administrative officer at x4113 if unsure.

Please Note: This is at least a 2-3 month process from the time of first submission and is designed to eliminate concerns and questions at the beginning of the process. Any questions/concerns not addressed prior to the review by the College Curriculum Committee and the Faculty Senate University Undergraduate Curriculum Committee, may result in an additional month added to the process, before it is sent (if required) to the Kansas Board of Regents, which may result in a delay in implementation.