1. Approval of minutes for the meeting of February 21, 2017
2. Dean’s Report (Amr Elnashai)
3. Updates from Undergraduate Studies Committee (Chris Giebink)
4. Updates from Graduate Studies Committee (Esther Gomez)
5. Updates from Engineering Technology Committee (Engr Tech Chair)
6. Updates from Faculty Senate (Doug Wolfe)
7. Other Business
Meeting Minutes

1. Approval of minutes for the meeting of January 24, 2016
   Unanimously approved.

2. Dean’s Report (Amr Elnashai)
   • Dean search: The ad for the Dean’s search was out. The committee has been assembled, chaired by Charles Whiteman, Dean of Business. He was connected with our Director of Communications, Dana Marsh, who helped put together impressive looking brochures that can be shared with candidates. All faculty members are asked to seek candidates.
   • Volunteer retirement program: Lost 13 staff, 8 tenure-system and 1 fixed-term faculty due to VRP, got back 13 staff, 9 tenure-system and 1 fixed-term faculty from Provost.
   • MS/MEng program: 1-yr program continues to expand. 99 students the first year and 170 the second year. $700K income for the first semester (50/50 shared by COE and the University), Just under $1 million last fall.
   • The graduate school has accepted that MS programs do not have to be research programs.
   • Research Initiatives: Led by Chris Rahn. Four thrusts: Optimal and Secure Cyber-environments, Advanced Manufacturing for Medical and Manufacturing Sciences, Resilient Infrastructure Systems, Water-Energy-Food Nexus. Four working groups have been reactivated. White papers describing these four thrusts will be published.
   • First COE-led trip to NSF for junior faculty. Request was sent for nomination.
   • Head searches for Departments of Architecture Engineering and Aerospace. Architecture Engineering has submitted candidates. Aerospace is at the final stage of interviewing.
   • Faculty searches: 40 searches, largest ever. Hired 14 so far.
   • Five-year review: Three departments: IE, CE and ESM. Reviews will be done this fall. Exceptionally strong external reviewing committees are assembled.
   • Annual report: Will issue the first annual report of COE. Will use the model from the University Toronto. It’s scheduled to publish in June by the Office of Data Analysis and Assessment.

3. Updates from Undergraduate Studies Committee (Chris Giebink).
   Three course changes:
   • BE 460 – Biological Engineering Design I
   • BE 466 – Biological Engineering Design II
   • CMPSC 442 – Artificial Intelligence
   Unanimously approved.

4. Updates from Graduate Studies Committees (Esther Gomez).
   No items to report.
5. Updates from Engineering Technology Committee (Engr Tech Chair)
   No items to report.

6. Updates from Faculty Senate (Doug Wolfe)
   - Next Senate Council meeting is this afternoon
   - Next Faculty Senate meeting is March 14th, 2017
   - Educational Equity and Faculty Forensic discussion
   - WorkLion: Development and Implementation Plan – Forensic
   - Penn State Adult Learners: Forensic

   **Legislative**
   - Revisions to Senate Standing Rules Article II Section 6(k) Committee on Outreach
   - Change to Senate Policy 43-00 (Syllabus)
   - Change to Senate Policy 43-70 Online Student Progress Report
   - Revision of AD 84 Preferred Name and Gender Identity Policy
   - Proposed Revision to HR21. Recommendation for Standardizing Titles for Non-tenured Faculty across Units.
   - Provision of Multi-Year Contracts for Fixed-term Faculty.
   - Library Space Planning.
   - Office of Educational Equity Middle and High School Pre–College Programs TRIO
     Upward Bound, Upward Bound Migrant, Upward Bound Math and Science, and Talent Search

   **Informational Reports**
   - New Member Information – Senate Committee on Committees and Rules
   - CLGBTQE Commission Reads
   - Election Commission – Roster of Senators by Voting Units for 2017-2018
   - Student Rating of Teaching Effectiveness (SRTE) Evaluations: Effective Use of SRTE Data
   - Senate Committee on Faculty Rights and Responsibilities
   - On-line Education at Penn State
   - Report on Fall 2016 Campus Visits
   - Nomination Committee Report for 2017-2018
   - Policy Harmonization – Susan Basso
   - All Gender Restrooms at PSU
   - Senate Committee on University Planning – Connecting Operations with Students, Faculty, and Researchers

7. Other Business.
   N/A.
<table>
<thead>
<tr>
<th>Type and Description of Change</th>
<th>Description or Rationale for Curricular Actions</th>
</tr>
</thead>
</table>
| **EDSGN 468 – Engineering Design and Analysis with CAD**  
Submitted by: Sven Bilen and Xinli Wu | This course delivers methods and techniques necessary to become proficient in applying CAD as a design tool for engineering design and analysis. Students will gain a deep understanding in principles, best practices, and strategies for solid-model representation of engineering designs. The use of CAD as a design tool will prepare students to effectively develop, analyze, and communicate engineering designs. Learning is reinforced through lectures, tutorials, quizzes, laboratory assignments, design projects, and online design portfolios.  
Students will learn how to recognize and capture design intent by using symmetry and parametric associativity; virtually test fit, form, and function of assembled components; analyze and improve models using analysis tools (e.g., finite element analysis); obtain, edit, and integrate existing non-native file formats; prepare models for stereolithography apparatus and other CNC machinery for prototyping; produce and manage part family models, and prepare technical drawings and illustrations. Through all these, students will be able to master special techniques for engineering design and analysis with CAD. The exercises, laboratory assignments, quizzes, midterm design projects, final design projects, and online design portfolios will enhance students’ understanding of how engineering design and analysis efforts are supported through the use of CAD as a design tool and will prepare students to effectively develop, analyze, and communicate engineering designs with the use of CAD.  
The course will be taught in each semester with different sections utilizing different CAD packages, such as AutoCAD, CATIA, and SolidWorks. The course may be repeated if taken to learn a second software package. Credit toward the major will not be granted a second time for taking the course with the same CAD package. |
| **ME 397 - Special Topics**  
Submitted by: Eric Marsh | Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.  
This course proposal for ME 397 has been created to enable the department the ability to offer junior-level special topics. |
<table>
<thead>
<tr>
<th>ME 422 - Principles of Turbomachinery</th>
<th>Change Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submitted by: Eric Marsh</td>
<td>Conservation laws pertinent to energy conversion and fluid mechanics are applied to pumps, centrifugal compressors, axial compressors and turbines, hydro turbines and wind turbines. Ideal performance is established, and conventional loss correlations are applied to define potential performance of turbomachinery. The applications of similarity and dimensionless parameters towards characterizing turbomachines are outlined.</td>
</tr>
<tr>
<td></td>
<td>The existing course description does not accurately reflect the contents of the course or that of all suitable textbooks on turbomachinery. Hence, an update is requested.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Engineering Program Proposal</th>
<th>Program Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submitted by: Eric Marsh</td>
<td>Four Program changes are being requested in this proposal.</td>
</tr>
<tr>
<td></td>
<td>#1. The objectives for the ME major were changed in accordance with the mandated ABET review cycle. Faculty, students, and industry advisors were consulted to develop the needed changes. The new objectives better reflect our program’s educational objectives.</td>
</tr>
<tr>
<td></td>
<td>#2. A change was made to the supporting courses and related areas updating verbiage to clarify degree requirements for our students. We now will have a list of approved courses in the department to meet supporting course requirements. The document is attached to this proposal.</td>
</tr>
<tr>
<td></td>
<td>#3. A change was made to the additional courses section adding the recently developed capstone course option of ME 442 and ME 443 for our students to meet student demand.</td>
</tr>
<tr>
<td></td>
<td>#4. Removal of the Integrated BS-MS degree in Mechanical Engineering for the following reasons:</td>
</tr>
<tr>
<td></td>
<td>a. There has been very little student participation in the Integrated BS-MS degree program. Over the past ten years, only four students have completed the degree, with a fifth student entering the program but not completing the MSME degree.</td>
</tr>
<tr>
<td></td>
<td>b. Following the BSME degree, it is difficult for students to finish the requirements for the MSME degree in only one year. The coursework and research components of the MSME degree typically require two years.</td>
</tr>
<tr>
<td></td>
<td>c. It is difficult for students to find an MS advisor to support them in thesis research since they are a graduate student for only one year.</td>
</tr>
<tr>
<td></td>
<td>This is a program change and no other colleges are affected, only ME majors.</td>
</tr>
<tr>
<td></td>
<td>We are not updating other department lists.</td>
</tr>
</tbody>
</table>
SENATE COMMITTEE ON CURRICULAR AFFAIRS
COURSE SUBMISSION AND CONSULTATION FORM

Principal Faculty Member(s) Proposing Course

<table>
<thead>
<tr>
<th>Name</th>
<th>User ID</th>
<th>College with curricular responsibility</th>
<th>Department</th>
<th>Type of Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>XINLI WU</td>
<td>xxw101</td>
<td>Engineering (EN)</td>
<td>Not Available</td>
<td>Add</td>
</tr>
<tr>
<td>SVEN BILEN</td>
<td>SGB100</td>
<td>Engineering (EN)</td>
<td>Not Available</td>
<td>Change</td>
</tr>
</tbody>
</table>

College with curricular responsibility: Engineering (EN)
Type of Proposal: Add  Change  Drop

Course Designation
(EDSGN 468) Engineering Design and Analysis with CAD

Course Information

Special categories for Undergraduate (001-499) courses

Foundations
- Writing/Speaking (GWS)
- Quantification (GQ)

Knowledge Domains
- Health & Wellness (GHW)
- Natural Sciences (GN)
- Arts (GA)
- Humanities (GH)
- Social and Behavioral Sciences (GS)

Additional Designations
- Bachelor of Arts
- International Cultures (IL)
- United States Cultures (US)
- Honors Course
- Common course number - x94, x95, x96, x97, x99
- Writing Across the Curriculum

First-Year Engagement Program
- First-Year Seminar

Miscellaneous
- Common Course

GE Learning Objectives
- GenEd Learning Objective: Effective Communication
- GenEd Learning Objective: Creative Thinking
- GenEd Learning Objective: Crit & Analytical Think
- GenEd Learning Objective: Global Learning
- GenEd Learning Objective: Integrative Thinking
- GenEd Learning Objective: Key Literacies
- GenEd Learning Objective: Soc Resp & Ethic Reason
Course Outline

A brief outline or overview of the course content:
This course delivers methods and techniques necessary to become proficient in applying CAD as a design tool for engineering design and analysis. Students are grounded in the principles, best practices, and strategies for solid-model representation of engineering designs. The use of CAD as a design tool prepares the students to effectively develop, analyze, and communicate engineering designs. Learning is reinforced through lectures, tutorials, quizzes, laboratory assignments, design projects, and online design portfolios.

The course will be taught in each semester with different sections utilizing different CAD packages, such as AutoCAD, CATIA, and SolidWorks. Therefore, the course has been made repeatable (3 credits per section; maximum of 6 credits) so students may learn two different software applications. The Course Topic will show in LionPATH on the student transcript by adding a title to the “Free Format Topic” field, and check marking “Print Topic on Transcript”. This will enable course schedules and degree audits to be monitored to ensure no student receives credit twice for taking the course with the same CAD package.

A listing of the major topics to be covered with an approximate length of time allotted for their discussion:
● Introduction and navigating the virtual design environment (1 week)
● Sketch tools and techniques (1 week)
● Reference geometry and base features (0.5 week)
● Part design (1 week)
● Drafting (1 week)
● Assembly design (1 week)
● Generative shape design (1 week)
● Digital Mock Ups and real-time rendering (1 week)
● Parametric design (1 week)
● Rapid prototyping (0.5 week)
● CAD analysis (e.g., finite element analysis, building information management) (3.5 weeks)
● Advanced CAD design and analysis (2 weeks)
● Design portfolios (0.5 week)

Course Description:
This course delivers methods and techniques necessary to become proficient in applying CAD as a design tool for engineering design and analysis. Students will gain a deep understanding in principles, best practices, and strategies for solid-model representation of engineering designs. The use of CAD as a design tool will prepare students to effectively develop, analyze, and communicate engineering designs. Learning is reinforced through lectures, tutorials, quizzes, laboratory assignments, design projects, and online design portfolios.

Students will learn how to recognize and capture design intent by using symmetry and parametric associativity; virtually test fit, form, and function of assembled components; analyze and improve models using analysis tools (e.g., finite element analysis); obtain, edit, and integrate existing non-native file formats; prepare models for stereolithography apparatus and other CNC machinery for prototyping; produce and manage part family models, and prepare technical drawings and illustrations. Through all these, students will be able to master special techniques for engineering design and analysis with CAD. The exercises, laboratory assignments, quizzes, midterm design projects, final design projects, and online design portfolios will enhance students’ understanding of how engineering design and analysis efforts are supported through the use of CAD as a design tool and will prepare students to effectively develop, analyze, and communicate engineering designs with the use of CAD.

The course will be taught in each semester with different sections utilizing different CAD packages, such as AutoCAD, CATIA, and SolidWorks. The course may be repeated if taken to learn a second software package. Credit toward the major will not be granted a second time for taking the course with the same CAD package.
The name(s) of the faculty member(s) responsible for the development of the course:

Name: XINLI WU (xxw101)
Title: ASST. PROF OF ENGR DESIGN
Phone: +1 814 863 1537
Address: 0213S HAMMOND BLDG
Campus:
City:
Fax:

Name: SVEN BILEN (SGB100)
Title:
Phone:
Address:
Campus:
City:
Fax:

Course Justification

Instructional, Educational, and Course Objectives:
This section should define what the student is expected to learn and what skills the student will develop.
Computer design tools are used in engineering designs and for analysis in all engineering fields. Virtually all modern engineering designs employ computer-aided design (CAD) tools for three-dimensional solid modeling and analysis. Engineers with demonstrated proficiency in the ability to design with CAD are in high demand worldwide. Through this course, students will gain the ability to use CAD and to understand the importance of using CAD as a design tool for complex engineering design and analysis. Students will also be able to critically evaluate different tool-sets within solid modeling software and adopt the ones that can be used for their design tasks. The methodology of engineering design and analysis that students learn in this course can be readily applied to demanding design activities in their university design courses and in their future careers.

The course is designed to introduce students to effectively develop, analyze, and communicate engineering designs using CAD.

Upon successful completion of this course, students will be able to:
• Develop, analyze, and communicate designs with CAD
• Virtually test the fit, form, and function of assembled components
• Analyze and improve models using analysis tools (e.g. finite element analysis, building information management)
• Prepare models for stereolithography apparatus and other CNC machinery for prototyping

Evaluation Methods:
Include a statement that explains how the achievement of the educational objective identified above will be assessed. The procedures for determining students' grades should be specifically identified.
Students will be evaluated through exercises, homework assignments, midterm project, final project, quizzes, and online design portfolios. The grade breakdown will be:

Assignments Weight

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercises</td>
<td>20%</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Project</td>
<td>15%</td>
</tr>
<tr>
<td>Final Project</td>
<td>25%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Design Portfolio</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Relationship/Linkage of Course to Other Courses:
This statement should relate the course to existing or proposed new courses. It should provide a rationale for the level of instruction, for any prerequisites that may be specified, or for the course's role as a prerequisite for other courses.
The course is not a prerequisite or part of a series. EMCH 210 or EMCH 211 are required prerequisites due to the fact that EDSGN 468 uses Finite Element Analysis (FEA) tools used for advanced CAD analysis, which requires an understanding of statics.

Relationship of Course to Major, Option, Minor, or General Education:
This statement should explain how the course will contribute to the major, option, or minor and indicate how it may function as a service course for other departments.
This course may satisfy an engineering technical elective at the discretion of each major. It can be used as an elective in the Engineering Design Certificate.

A description of any special facilities:
Modern computer lab with specific CAD software installed, dual or large monitors preferred. Different sections of the courses will employ different CAD packages.
Frequency of Offering and Enrollment:
Based upon enrollment data (for courses EDSGN 497B, 497G, and 497K) that averaged 24 students per class for the past two years. We anticipate a total enrollment (through 4-5 sections) in a regular semester to be 96-120 students.

The course will be taught in each semester with different sections utilizing different CAD packages, such as AutoCAD, CATIA, and SolidWorks. Therefore, the course has been made repeatable (3 credits per section; maximum of 6 credits) so students may learn two different software applications. The Course Topic will show in LionPATH on the student transcript by adding a title to the “Free Format Topic” field, and check marking “Print Topic on Transcript”. This will enable course schedules and degree audits to be monitored to ensure no student receives credit twice for taking the course with the same CAD package.

General Education Designation Requirements

Campuses That Have Offered ( ) Over The Past 4 Years

| semester | AB | AL | BK | BR | BW | CR | DS | ER | FE | GA | GV | HB | HN | HY | LV | MA | NK | PC | SH | SL | UP | WB | WC | WS | XC | XP | XS | YK |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

Review History

This section represents all consultation history that has occurred on this proposal

Legend

- Approve
- Rejected
- Waiting Review
- User Action Required
- Pending Action(s)
- Moved to Rejected Status
- Approved
- (#) - Review Order Sequence Number

Consultation

Recipient Name: DAVID SALVIA  
Department: Electrical Engineering  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS

Title: ASST PROF ELECT. ENGR.

Request sent: 3/3/2016 at 2:57 PM
Concur: Yes  
Comments: This course proposal seems fine, for the most part. However, it looks like the course is repeatable and there is no mention of this in the proposal itself. Under what conditions can the course be repeated? This should probably be addressed in the proposal.
Reviewed On: 3/3/2016 at 5:04 PM

Initiator Comments: The course will be taught in each semester with different sections utilizing different CAD packages, such as AutoCAD, CATIA, and SolidWorks. Therefore, the course has been made repeatable (3 credits per section; maximum of 6 credits) so students may learn two different software applications. Course schedules and degree audits will be monitored to ensure no student receives credit twice for taking the course with the same CAD package.

Request sent: 9/22/2016 at 1:31 PM
Concur: Yes  
Comments:
Reviewed On: 9/22/2016 at 5:00 PM

Recipient Name: DAVID SPENCER  
Department: AEROSPACE ENGINEERING  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS
Title: PROFESSOR AEROSPACE ENGR

(1) Request sent: 3/3/2016 at 2:57 PM
Concur: Yes
Comments:
Reviewed On: 3/3/2016 at 3:02 PM

Recipient Name: ELENA JOSHI
Department: INDUSTRIAL AND MANUFACTURING ENGINEERING
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: INSTR

(9) Request sent: 3/14/2016 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 3/18/2016 at 7:15 AM

Recipient Name: ERIC MARSH
Department: MECHANICAL ENGINEERING
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: PROFESSOR OF MECH ENGR

(2) Request sent: 3/3/2016 at 2:57 PM
Concur: Yes
Comments: It would be nice to see some GD&T in the course but only if the instructor was comfortable with the most recent Y14.5-2009 standard and only if at least 3 lectures could be devoted to the topic. One or two lectures isn't enough to be worth it. Any discussion of "plus-minus" tolerancing would be counterproductive. My experience is that you don't have a design until you've thought through the tolerances (ie, a parasolid is not a design). Our mechanical engineering students see a little smidge of GD&T in IE 312 but a refresh would be fine; other majors probably don't get any GD&T at all?
Reviewed On: 3/3/2016 at 3:33 PM

Recipient Name: JOHN HANNAN
Department: COMPUTER SCIENCE AND ENGINEERING
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: INTRM ASC HEAD CMPSCI&ENG

(6) Request sent: 3/3/2016 at 2:57 PM
Concur: Yes
Comments:

Recipient Name: LUCAS PASSMORE
Department: ENGINEERING SCIENCE AND MECHANICS
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: Assistant Professor

(8) Request sent: 3/14/2016 at 7:30 AM
Recipient Name: MARGARET SLATTERY
Department: Biomedical Engineering
Title: ASST PROFESSOR
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS

Request sent: 3/3/2016 at 2:57 PM
Concur: Yes
Comments: Echo David and Megan’s questions about repeatability.
Reviewed On: 3/4/2016 at 8:38 AM

Initiator Comments: As indicated to David Salvia, the course will be taught in each semester with different sections utilizing different CAD packages, such as AutoCAD, CATIA, and SolidWorks. Therefore, the course has been made repeatable (3 credits per section; maximum of 6 credits) so students may learn two different software applications. Course schedules and degree audits will be monitored to ensure no student receives credit twice for taking the course with the same CAD package.
Thank you and best wishes!

Recipient Name: MEGAN MARSHALL
Department: Agricultural And Biological Engineering
Title: INSTR AG & BIO ENG
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS

Request sent: 3/3/2016 at 2:57 PM
Concur: Yes
Comments:
Reviewed On: 9/22/2016 at 2:32 PM

Initiator Comments: BE students routinely take EDSGN 497G (AutoCAD) and EDSGN 497B (Solidworks) as electives, so it will be great to have a permanent course number. Two comments -- E MCH 210 or 211 is listed as the prereq, but I didn’t see any mention of the rationale for this. Also, the course is proposed to be repeatable. I assume this is so a student could take Solidworks one semester and AutoCAD the next -- but what would prevent a student from just repeating the same software (course section) twice?
Reviewed On: 3/3/2016 at 7:01 PM

Initiator Comments: Course schedules and degree audits will be monitored to ensure no student receives credit twice for taking the course with the same CAD package. Additionally, the schedule of courses and the degree audit will list the subtopic for the course; i.e. the software application package being taught.
Thank you and best wishes!

Request sent: 9/22/2016 at 1:36 PM
Concur: Yes
Comments:
Reviewed On: 9/25/2016 at 10:56 AM
College Administrator Review

Recipient Name: MOSES LING  
Department: ARCHITECTURAL ENGINEERING  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS  
Title: ASSOC PROF

Request sent: 3/14/2016 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 3/18/2016 at 7:15 AM

Recipient Name: NORMAN FOLMAR  
Department: CIVIL AND ENVIRONMENTAL ENGINEERING  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS  
Title: DIRECTOR OF UG PROGRAMS

Request sent: 3/14/2016 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 3/18/2016 at 7:15 AM

Recipient Name: THEMIS MATSOUKAS  
Department: CHEMICAL ENGINEERING  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS  
Title: PROFESSOR OF CHEM ENGR

Request sent: 3/3/2016 at 2:57 PM  
Concur: Yes  
Comments:  
Reviewed On: 3/11/2016 at 10:05 AM

College Administrator Review

Recipient Name: Sven G. Bilén  
Department: School of Engr Design, Technology and Prof Prgrms  
Position: College Administrator Review  
Campus: UNIVERSITY PARK CAMPUS  
Title: DEPT HEAD/SEDTAPP

Request sent: 1/24/2017 at 4:47 PM  
Concur: Yes  
Comments: In response to David Salvia, Margaret Slattery, and Megan Marshall's question about monitoring the course to ensure a student does not receive credit for taking the same software package version of the course, we have verified within LionPATH that the Course Topic will show on the student transcript. Advisers, faculty, and staff across the University will be able to see which software package(s) the student has taken. This will occur by adding a title to the "Free Format Topic" field, and check marking "Print Topic on Transcript". This will enable course schedules and degree audits to be monitored to ensure no student receives credit twice for taking the course with the same CAD package.  
Reviewed On: 1/24/2017 at 4:47 PM

Initiator Comments: The benefit to the student is that they properly understand that the objectives of the course are centered on the use of advanced CAD.

(10) Request sent: 3/14/2016 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 3/18/2016 at 7:15 AM

(11) Request sent: 3/14/2016 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 3/18/2016 at 7:15 AM

(7) Request sent: 3/3/2016 at 2:57 PM  
Concur: Yes  
Comments:  
Reviewed On: 3/11/2016 at 10:05 AM

(16) Request sent: 1/24/2017 at 4:47 PM  
Concur: Yes  
Comments: In response to David Salvia, Margaret Slattery, and Megan Marshall's question about monitoring the course to ensure a student does not receive credit for taking the same software package version of the course, we have verified within LionPATH that the Course Topic will show on the student transcript. Advisers, faculty, and staff across the University will be able to see which software package(s) the student has taken. This will occur by adding a title to the "Free Format Topic" field, and check marking "Print Topic on Transcript". This will enable course schedules and degree audits to be monitored to ensure no student receives credit twice for taking the course with the same CAD package.  
Reviewed On: 1/24/2017 at 4:47 PM

Initiator Comments: The benefit to the student is that they properly understand that the objectives of the course are centered on the use of advanced CAD.
tools in engineering design, and not simply training in the use of an advanced CAD package. Although this may be one of the reasons that a student takes a specific section over another (i.e., they wish to use and improve their skills in SolidWorks, rather than AutoCAD, due to, say, career prospects), the use of the software package name in the short course description (with corresponding different course numbers) might create the perception that it is primarily focused on skills acquisition in the specific package. The course focuses on the use of the CAD software package in transferable ways and toward applications in advanced design (i.e., a loft procedure may require a different set of menus in different packages, but functionally it performs the same operation). This will also assist the student in discussions with a potential employer since they can highlight these transferable aspects, for example, if the employer uses NX rather than Catia. We also do not expect that degree programs would accept more than one EDSGN 468 to meet degree requirements. However, two such offerings, using different packages as differentiated via the Course Topic will show in LionPATH on the student transcript by adding a title to the “Free Format Topic” field, and check marking “Print Topic on Transcript”. This will enable course schedules and degree audits to be monitored to ensure no student receives credit twice for taking the course with the same CAD package, may be used to meet ENDSN Certificate requirements. Additionally, CAD packages can change depending on sponsors, industry interest, changing landscape in CAD tools, etc., which would require a new course proposal to be submitted for each package change. Logistically, this does not make sense considering the objectives of the course are meant to be broader than a specific CAD package.

Request sent: 2/13/2017 at 7:38 AM
Concur: Yes
Comments:
Reviewed On: 2/13/2017 at 8:06 AM

Recipient Name: Sven G. Bilén
Department: (Not Available)
Position: College Administrator Review
Campus: (Not Available)
Title:

Request sent: 1/26/2017 at 11:55 AM
Concur: Yes
Comments: Under “the Relationship/Linkage of Course to Other Courses” section of the proposal, Dr. Bilén has added for following statement:
EMCH 210 or EMCH 211 are required prerequisites due to the fact that EDSGN 468 uses Finite Element Analysis (FEA) tools used for advanced CAD analysis, which requires an understanding of statics.
Reviewed On: 1/26/2017 at 11:55 AM

Head of Department

Recipient Name: SVEN BILEN
Department: (Not Available)
Position: Head of Department
Campus: UNIVERSITY PARK CAMPUS
Title:

Request sent: 9/22/2016 at 2:02 PM
Concur: Yes
SCCA Representative

Recipient Name: ROBERT MELTON
Position: SCCA Representative
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Dean of the College

Recipient Name: PETER BUTLER
Position: Dean of the College
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

SCCA Subcommittee Review

Recipient Name: KADI CORTER
Position: SCCA Subcommittee Review
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: CORTNEY SMITH
Position: SCCA Subcommittee Review
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
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<td>Faculty Senate Review</td>
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- Request sent: 2/17/2017 at 2:02 PM
- Concur: [Not Yet Reviewed]
- Comments: [Not Yet Reviewed]
- Reviewed On: [Not Yet Reviewed]
Recipient Name: KADI CORTER  
Department: (Not Available)  
Position: Faculty Senate Review  
Campus: UNIVERSITY PARK CAMPUS  
Title:  

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Recipient Name: ALLISON ALBINSKI  
Department: (Not Available)  
Position: Faculty Senate Review  
Campus: UNIVERSITY PARK CAMPUS  
Title:  

Request sent: 2/17/2017 at 2:01 PM  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Curricular Information  
Blue Sheet Item #:  
Review Date:  

SCRID Numbers  
(EDSGN 468):
Principal Faculty Member(s) Proposing Course

<table>
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<tr>
<td>ERIC RUSSELL MARSH</td>
<td>erm7</td>
<td>Engineering</td>
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College with curricular responsibility: Engineering (EN)

Type of Proposal: [X] Add  [ ] Change  [ ] Drop

Course Designation

(ME 397) Special Topics

Course Information

Cross-Listed Courses:

Prerequisites:

Corequisites:

Concurrents:

Recommended Preparations:

Abbreviated Title: Special Topics

Discipline:

Course Listing:

Special categories for Undergraduate (001-499) courses

Foundations

- Writing/Speaking (GWS)
- Quantification (GQ)

Knowledge Domains

- Health & Wellness (GHW)
- Natural Sciences (GN)
- Arts (GA)
- Humanities (GH)
- Social and Behavioral Sciences (GS)

Additional Designations

- Bachelor of Arts
- International Cultures (IL)
- United States Cultures (US)
- Honors Course
- Common course number - x94, x95, x96, x97, x99
- Writing Across the Curriculum

First-Year Engagement Program

- First-Year Seminar

Miscellaneous
Course Outline

A brief outline or overview of the course content:
Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

A listing of the major topics to be covered with an approximate length of time allotted for their discussion:
Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Course Description:
Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

The name(s) of the faculty member(s) responsible for the development of the course:
- Name: ERIC RUSSELL MARSH (erm7)
- Title:
- Phone:
- Address:
- Campus: UP
- City:
- Fax:

Course Justification

Instructional, Educational, and Course Objectives:
This section should define what the student is expected to learn and what skills the student will develop.
N/A

Evaluation Methods:
Include a statement that explains how the achievement of the educational objective identified above will be assessed. The procedures for determining students' grades should be specifically identified.
N/A

Relationship/Linkage of Course to Other Courses:
This statement should relate the course to existing or proposed new courses. It should provide a rationale for the level of instruction, for any prerequisites that may be specified, or for the course's role as a prerequisite for other courses.
N/A

Relationship of Course to Major, Option, Minor, or General Education:
This statement should explain how the course will contribute to the major, option, or minor and indicate how it may function as a service course for other departments.
This course proposal for ME 397 has been created to enable the department the ability to offer junior-level special topics.

A description of any special facilities:
None

Frequency of Offering and Enrollment:  
Formal courses given infrequently to explore, in depth, a comparatively narrow subject which may be topical or of special interest.

Campuses That Have Offered ( ) Over The Past 4 Years

Review History
This section represents all consultation history that has occurred on this proposal

Legend

Approve
Rejected
Waiting Review
User Action Required

Pending Action(s)
Moved to Rejected Status
Approved
(#) - Review Order Sequence Number

Head of Department

Recipient Name: KAREN THOLE
Position: Head of Department
Title:
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

SCCA Representative

Recipient Name: ROBERT MELTON
Position: SCCA Representative
Title:
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Dean of the College

Recipient Name: PETER BUTLER
Position: Dean of the College
Title:
Concur: [Not Yet Reviewed]
SCCA Subcommittee Review

Recipient Name: CORTNEY SMITH  
Department: (Not Available)  
Campus: UNIVERSITY PARK CAMPUS

Position: SCCA Subcommittee Review

Title:

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: KADI CORTER  
Department: (Not Available)  
Campus: UNIVERSITY PARK CAMPUS

Position: SCCA Subcommittee Review

Title:

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: ALLISON ALBINSKI  
Department: (Not Available)  
Campus: UNIVERSITY PARK CAMPUS

Position: SCCA Subcommittee Review

Title:

Request sent: 2/17/2017 at 2:02 PM  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

SCCA Review

Recipient Name: CORTNEY SMITH  
Department: (Not Available)  
Campus: UNIVERSITY PARK CAMPUS

Position: SCCA Review

Title:

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: KADI CORTER  
Department: (Not Available)  
Campus: UNIVERSITY PARK CAMPUS

Position: SCCA Review

Title:
Faculty Senate Review

Recipient Name: ALLISON ALBINSKI  
Department: (Not Available)  
Position: SCCA Review  
Campus: UNIVERSITY PARK CAMPUS  

Request sent: 2/17/2017 at 2:02 PM  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: CORTNEY SMITH  
Department: (Not Available)  
Position: Faculty Senate Review  
Campus: UNIVERSITY PARK CAMPUS  

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: KADI CORTER  
Department: (Not Available)  
Position: Faculty Senate Review  
Campus: UNIVERSITY PARK CAMPUS  

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: ALLISON ALBINSKI  
Department: (Not Available)  
Position: Faculty Senate Review  
Campus: UNIVERSITY PARK CAMPUS  

Request sent: 2/17/2017 at 2:01 PM  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Curricular Information
Blue Sheet Item #:
SCRID Numbers

(ME 397):
### Course Submission and Consultation Form

#### Principal Faculty Member(s) Proposing Course

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**College with curricular responsibility:** Engineering (EN)

**Type of Proposal:**
- [ ] Add
- [X] Change
- [ ] Drop

- [ ] I am requesting recertification of this course for the new Gen Ed and/or University Requirements Guidelines?

#### Course Designation

**Course:** (ME 422) Principles of Turbomachinery

#### Course Information

- **Cross-Listed Courses:**
- **Prerequisites:**
  - ME 320
- **Corequisites:**
- **Concurrents:**
- **Recommended Preparations:**

- **Abbreviated Title:** Turbomachinery

#### Special categories for Undergraduate (001-499) courses

- **Foundations**
  - [ ] Writing/Speaking (GWS)
  - [ ] Quantification (GQ)

- **Knowledge Domains**
  - [ ] Health & Wellness (GHW)
  - [ ] Natural Sciences (GN)
  - [ ] Arts (GA)
  - [ ] Humanities (GH)
  - [ ] Social and Behavioral Sciences (GS)

- **Additional Designations**
  - [ ] Bachelor of Arts
  - [ ] International Cultures (IL)
  - [ ] United States Cultures (US)
  - [ ] Honors Course
  - [ ] Common course number - x94, x95, x96, x97, x99
  - [ ] Writing Across the Curriculum

- **First-Year Engagement Program**
  - [ ] First-Year Seminar
Course Outline

A brief outline or overview of the course content:
Working principles of turbomachines based on energy and momentum conservation laws.

A listing of the major topics to be covered with an approximate length of time allotted for their discussion:

Course Description:
Conservation laws pertinent to energy conversion and fluid mechanics are applied to pumps, centrifugal compressors, axial compressors and turbines, hydro turbines and wind turbines. Ideal performance is established, and conventional loss correlations are applied to define potential performance of turbomachinery. The applications of similarity and dimensionless parameters towards characterizing turbomachines are outlined.

The name(s) of the faculty member(s) responsible for the development of the course:

- Name: ERIC RUSSELL MARSH (erm7)
  Title: 
  Phone: 
  Address: 
  Campus: UP 
  City: 
  Fax: 

- Name: HORACIO PEREZ-BLANCO (hpb1)
  Title: PROF ENGR
  Phone: +1 814 865 7842
  Address: 0204 REBER BUILDING UNIVERSITY PARK UNIVERSITY PARK, PA 16802
  Campus: 
  City: University Park 
  Fax: 

Course Justification

Instructional, Educational, and Course Objectives:
This section should define what the student is expected to learn and what skills the student will develop.

Evaluation Methods:
Include a statement that explains how the achievement of the educational objective identified above will be assessed. The procedures for determining students’ grades should be specifically identified.
Campuses That Have Offered (ME 422) Over The Past 4 Years

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Review History
This section represents all consultation history that has occurred on this proposal

Legend

- Approve
- Rejected
- Waiting Review
- User Action Required
- Pending Action(s)
- Moved to Rejected Status
- Approved
- (#) - Review Order Sequence Number

Consultation

Recipient Name: ISSAM ABU-MAHFOUZ
Department: Science, Engineering And Technology
Position: Consultation
Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE
Title: ASSOC PRF ENGINEERING

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Recipient Name: RICHARD CIOCCI  
Department: Science, Engineering And Technology  
Position: Consultation  
Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE  
Title: ASSOC PROF MECH ENG

Request sent: 1/4/2017 at 2:56 PM  
Concur: Yes  
Comments: I concur with the need for a new course description and agree with the suggested description. However, won't Senate be expecting a longer description more in line with the 400-word versions requested for recent course changes?  
Reviewed On: 1/4/2017 at 3:38 PM  
Initiator Comments: Hi Richard, my understanding is that the descriptions can be up to 400 words. The course instructor doesn't have anything to add, so hopefully this will be satisfactory. Thank you, Eric

Request sent: 1/19/2017 at 10:37 AM  
Concur: Yes  
Comments:  
Reviewed On: 1/19/2017 at 10:52 AM

Recipient Name: RUNGUN NATHAN  
Department: Engineering, Business and Human Development  
Position: Consultation  
Campus: BERKS CAMPUS  
Title: ASSOC PROF ENGINEERING

Request sent: 1/16/2017 at 7:30 AM  
Concur: Yes  
Comments: Only the bulletin wording has been changed - no changes have been made to the course  
Reviewed On: 1/16/2017 at 3:53 PM  
Initiator Comments: Thanks Rungun

Request sent: 1/30/2017 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 2/3/2017 at 7:15 AM

Recipient Name: RUSSELL WARLEY  
Department: Engineering  
Position: Consultation  
Campus: PENN STATE ERIE, THE BEHREND COLLEGE  
Title: Interim Director, School of Engineering

Request sent: 1/4/2017 at 2:56 PM  
Concur: Yes  
Comments:  
Reviewed On: 1/12/2017 at 9:34 AM
Title: PROFESSOR MECH ENG
Recipient Name: WILLIAM LASHER
Department: Engineering
Position: Consultation
Campus: PENN STATE ERIE, THE BEHRENDEX COLLEGE

(2)
Request sent: 1/4/2017 at 2:56 PM
Concur: Yes
Comments:
Reviewed On: 1/4/2017 at 7:00 PM

Head of Department
Recipient Name: KAREN THOLE
Department: (Not Available)
Position: Head of Department
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

SCCA Representative
Recipient Name: ROBERT MELTON
Department: (Not Available)
Position: SCCA Representative
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Dean of the College
Recipient Name: PETER BUTLER
Department: (Not Available)
Position: Dean of the College
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

SCCA Subcommittee Review
Recipient Name: CORTNEY SMITH
Department: (Not Available)
Position: SCCA Subcommittee Review
Campus: UNIVERSITY PARK CAMPUS

Title:
Recipient Name: KADI CORTER  
Position: SCCA Subcommittee Review  
Campus: UNIVERSITY PARK CAMPUS  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Recipient Name: ALLISON ALBINSKI  
Position: SCCA Subcommittee Review  
Campus: UNIVERSITY PARK CAMPUS  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Request sent: 2/17/2017 at 2:02 PM  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Recipient Name: CORTNEY SMITH  
Position: SCCA Review  
Campus: UNIVERSITY PARK CAMPUS  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Recipient Name: KADI CORTER  
Position: SCCA Review  
Campus: UNIVERSITY PARK CAMPUS  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Recipient Name: ALLISON ALBINSKI  
Position: SCCA Review  
Campus: UNIVERSITY PARK CAMPUS  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]
Faculty Senate Review

Recipient Name: CORTNEY SMITH  Department: (Not Available)
Position: Faculty Senate Review  Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: KADI CORTER  Department: (Not Available)
Position: Faculty Senate Review  Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: ALLISON ALBINSKI  Department: (Not Available)
Position: Faculty Senate Review  Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Curricular Information
Blue Sheet Item #: 
Review Date: 

SCRID Numbers
(ME 422):

Uploaded Documents:
Context Type: Supporting Documents
File Description: Consultation from the Vice President of Commonwealth Camp
File Name: Commonwealth Vice President Consultation ME 422 and ME 467.pdf
Uploaded Documents Follow:
For the best experience, open this PDF portfolio in Acrobat X or Adobe Reader X, or later.

Get Adobe Reader Now!
Proposal Designation: Mechanical Engineering
This is a proposed Change to Undergraduate Stand Alone Major

Initiators

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<th>Name</th>
<th>User ID</th>
<th>College</th>
<th>Department</th>
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<tr>
<td>ERIC MARSH</td>
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College with curricular responsibility: Engineering (EN)

Program Definition
Degree Offered: Bachelor of Science (BS)
Effective Semester: Summer 2016
    Offering College(s)
    Engineering

Entrance and/or Retention Policies

Entrance Requirement
Requested Policy: In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

Justification: - Not updating Entrance Information - T

Retention Requirement
Requested Policy: None

Justification: None
Objectives and Justification

Objectives:

ME Program Educational Objectives (updated and affirmed September 2016)
The overall educational objective of the Mechanical Engineering program is to help prepare our graduates to succeed and provide leadership in a range of career paths. To that end we endeavor to maintain and continuously improve a curriculum that prepares our graduates to:
1. Apply foundational knowledge, critical thinking, problem solving, and creativity in engineering practice or in other fields.
2. Grow as leaders while maintaining the highest societal responsibility and ethical standards in the global workplace.
3. Develop innovative solutions through effective communication, collaboration, and teamwork.
4. Seek advancement in their knowledge and careers through continuing technical and/or professional studies.

Justification:

Justification For The Change Proposal:

Four Program changes are being requested in this proposal. 

#1. The objectives for the ME major were changed in accordance with the mandated ABET review cycle. Faculty, students, and industry advisors were consulted to develop the needed changes. The new objectives better reflect our program’s educational objectives.

#2. A change was made to the supporting courses and related areas updating verbiage to clarify degree requirements for our students. We now will have a list of approved courses in the department to meet supporting course requirements. The document is attached to this proposal.

#3. A change was made to the additional courses section adding the recently developed capstone course option of ME 442 and ME 443 for our students to meet student demand.

#4. Removal of the Integrated BS-MS degree in Mechanical Engineering for the following reasons:
   a. There has been very little student participation in the Integrated BS-MS degree program. Over the past ten years, only four students have completed the degree, with a fifth student entering the program but not completing the MSME degree.
   b. Following the BSME degree, it is difficult for students to finish the requirements for the MSME degree in only one year. The coursework and research components of the MSME degree typically require two years.
   c. It is difficult for students to find an MS advisor to support them in thesis research since they are a graduate student for only one year.

This is a program change and no other colleges are affected, only ME majors.
We are not updating other department lists.

Proposal Outline

CIP Code: 141901

Faculty Member(s) in Charge:

- Name: KAREN THOLE (KAT18)
  Title: DEPT HEAD MNE
  Phone: +1 814 865 2519
  Address: 0137 REBER BUILDING
  Campus:
  City:
  Fax:

- Name: ERIC MARSH (ERM7)
  Title: PROFESSOR OF MECH ENGR
  Phone: +1 814 865 5242
  Address: 0331 REBER BUILDING
  Campus:
  City:
  Fax:

Program Description:

Mechanical Engineering is one of the broadest engineering disciplines and is central in many new technological developments.
Mechanical engineers create things that help improve the health, happiness and safety of our everyday lives such as biomedical devices, aircraft propulsion, and ways to store renewable energies. Mechanical engineering is divided into two broad areas: mechanical systems and thermal systems. Mechanical systems include the design of mechanisms and the analysis of the strength and wear of materials. Thermal systems include methods of energy conversions, heat transfer and fluid flow.

Program Educational Objectives:

The overall educational objective of the Mechanical Engineering program is to help prepare our graduates to succeed and provide leadership in a range of career paths. To that end we endeavor to maintain and continuously improve a curriculum that prepares our graduates to:

1. Apply foundational knowledge, critical thinking, problem solving, and creativity in engineering practice or in other fields.
2. Grow as leaders while maintaining the highest societal responsibility and ethical standards in the global workplace.
3. Develop innovative solutions through effective communication, collaboration, and teamwork.
4. Seek advancement in their knowledge and careers through continuing technical and/or professional studies.

Program Outcomes (Student Outcomes):

The Program outcomes are knowledge, skills, and/or behavior that are derived from the program educational objectives.

a. An ability to apply knowledge of mathematics, science, and engineering.
b. An ability to design and conduct experiments, as well as to analyze and interpret data.
c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
d. An ability to function on multidisciplinary teams.
e. An ability to identify, formulate, and solve engineering problems.
f. An understanding of professional and ethical responsibility.
g. An ability to communicate effectively.
h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
i. A recognition of the need for, and an ability to engage in life-long learning.
j. A knowledge of contemporary issues.
k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

For a Bachelor of Science in Mechanical Engineering a minimum of 131 credits are required.

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

Academic Outline

REQUIREMENTS FOR THE MAJOR:
A minimum of 113 credits are required
(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

GENERAL EDUCATION: 45 Credits
(27 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

FIRST-YEAR SEMINAR:
Included in Requirements for the Major

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
Included in General Education Requirements

WRITING ACROSS THE CURRICULUM:
Included in Requirements for the Major

COMMON REQUIREMENTS FOR THE MAJOR: (113 Credits)

PRESCRIBED COURSES (83 Credits)

CHEM 110 GN(3)[1], EDSGN 100 (3), MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], PHYS 211 GN(4)[1](Sem: 1-2)
ADDITIONAL COURSES (18 Credits)

(Select 1 credit of First-Year Seminar (Sem: 1-2))
(CHEM 112 GN(3); BIOL 141 GN(3)(Sem: 1-2))
(ENGL 15 GWS(3); ENGL 30 GWS(3)(Sem: 1-2))
(ECON 102 GS(3); ECON 104 GS(3); ECON 14 GS(3); ENNEC 100 GS(3)(Sem: 1-2))
(CAS 100A GWS(3); CAS 100B GWS(3)(Sem: 3-4))
(ME 440 WAC(3); ME 442 WAC(2), ME 443 WAC(1); ME 441 WAC(3)(Sem: 7-8))
(Select 2 credits from: ME 325 (1); ME 315 (1); ME 375 (1); ME 355 (1); EMCH 316 (1)(Sem: 7-8))

SUPPORTING COURSES (12 Credits)

Select 3 credits in a 400-level ME Technical Elective course from department list excluding ME 410(3), ME 440(3), ME 441(3), ME 442(2), ME 443(1), ME 450(3), ME 494(1-9), and ME 496(1-18)
Select 6 credits in Engineering Technical Elective courses from department list
Select 3 credits in General Technical Elective courses from department list
(Students who complete Basic ROTC may substitute 6 of the ROTC credits for 3 credits of GTE and 3 credits of GHA.)
Three rotations of Engr Co-op (ENGR 295, ENGR 395, and ENGR 495) can be used as 3 credits of GTE.

[1] A student enrolled in this program must receive a grade of C or better, as specified in Senate Policy 82-44.

Existing Courses Added to or Moved Within Requirements for This Program
ME 440 ; ME 441 ; ME 442 ; ME 443

Existing Courses Removed from or Moved Within Requirements for This Program
ME 440W ; ME 441W

Academic Program Costing Analysis Form
Anticipated Costs: No costs are anticipated.

Academic Program Admissions Form

Baccalaureate (4-year) programs
First-year: N/A
Transfer: N/A
Non-Degree: N/A
Already graduated: N/A

Associate (2-year) programs
First-year: N/A
Transfer: N/A
Non-Degree: N/A
Already graduated: N/A

Review History
This section represents all consultation history that has occurred on this proposal

Legend

Approve  Rejected  Waiting Review  User Action Required
Consultation

Recipient Name: RUNGUN NATHAN
Department: Engineering, Business and Human Development
Position: Consultation
Campus: BERKS CAMPUS
Title: ASSOC PROF ENGINEERING

(1) Request sent: 11/8/2016 at 4:09 PM
Concur: Yes
Comments: The PEO (Program Education Objectives) are fine and are as approved by the constituents. The ETM requirements just seem to reflect what has already been suggested.
Reviewed On: 11/8/2016 at 4:19 PM
Initiator Comments: Thank you and we agree.

(7) Request sent: 11/23/2016 at 11:24 AM
Concur: Yes
Comments: Reviewed On: 11/23/2016 at 11:52 AM

Recipient Name: AMIT BANERJEE
Department: Science, Engineering And Technology
Position: Consultation
Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE
Title: ASSOC PROF OF MECH ENG

(4) Request sent: 11/21/2016 at 7:30 AM
Concur: Yes
Comments: Reviewed On: 11/22/2016 at 11:32 AM

Recipient Name: ISSAM ABU-MAHFOUZ
Department: Science, Engineering And Technology
Position: Consultation
Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE
Title: ASSOC PRF ENGINEERING

(5) Request sent: 11/21/2016 at 7:30 AM
Concur: Yes
Recipient Name: WILLIAM LASHER  Department: Engineering

Position: Consultation  Campus: PENN STATE ERIE, THE BEHREND COLLEGE

Title: PROFESSOR MECH ENG

Request sent: 11/8/2016 at 4:09 PM

Concur: Yes

Comments:
The substance of the changes is fine. Editorial comment - I do think you should be consistent as to whether to use the W suffix or not (see prescribed courses vs. supporting courses, excluded list). Also the space between M and E should be removed for the supporting courses exclusion list.

Reviewed On: 11/8/2016 at 5:42 PM

Initiator Comments:
Thank you for noticing this detail. Our office just reviewed the proposal and updated the spacing and W suffix for our courses.

Request sent: 11/23/2016 at 11:24 AM

Concur: Yes

Comments:

Reviewed On: 11/23/2016 at 3:24 PM

Recipient Name: RICHARD CIOCCI  Department: Science, Engineering And Technology

Position: Consultation  Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE

Title: ASSOC PROF MECH ENG

Request sent: 11/21/2016 at 7:30 AM

Concur: Yes

Comments:
#1. The program educational objectives look good.
#2. Changes to the supporting courses section appear in order.
#3. Including ME 442 and ME 443 as capstone course options is a good idea.
#4. The rationale for removing the IUG option is solid. You make a strong case for the more traditional means for student to earn the MSME.

Reviewed On: 11/21/2016 at 8:26 AM

Initiator Comments:
Thank you and we agree.

Request sent: 11/23/2016 at 11:25 AM

Concur: Yes

Comments:

Reviewed On: 11/29/2016 at 8:29 AM

Recipient Name: RUSSELL WARLEY  Department: Engineering
Position: Consultation  
Campus: PENN STATE ERIE, THE BEHREND COLLEGE

Title: Interim Director, School of Engineering

Request sent: 11/21/2016 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 11/23/2016 at 7:15 AM

Head of Department

Recipient Name: KAREN THOLE  
Department: (Not Available)

Position: Head of Department  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

SCCA Representative

Recipient Name: ROBERT MELTON  
Department: (Not Available)

Position: SCCA Representative  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Dean of the College

Recipient Name: PETER BUTLER  
Department: (Not Available)

Position: Dean of the College  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
SCCA Subcommittee Review

Recipient Name: CORTNEY SMITH
Position: SCCA Subcommittee Review
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: KADI CORTER
Position: SCCA Subcommittee Review
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: ALLISON ALBINSKI
Position: SCCA Subcommittee Review
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Request sent: 2/17/2017 at 2:02 PM

SCCA Review

Recipient Name: CORTNEY SMITH
Position: SCCA Review
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
Recipient Name: KADI CORTER
Department: (Not Available)
Position: SCCA Review
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: ALLISON ALBINSKI
Department: (Not Available)
Position: SCCA Review
Campus: UNIVERSITY PARK CAMPUS
Title:

Request sent: 2/17/2017 at 2:02 PM
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Faculty Senate Review

Recipient Name: CORTNEY SMITH
Department: (Not Available)
Position: Faculty Senate Review
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Recipient Name: KADI CORTER
Department: (Not Available)
Position: Faculty Senate Review
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
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Request sent: 2/17/2017 at 2:01 PM
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
Recipient Name: ALLISON ALBINSKI  
Department: (Not Available)  
Position: Final Confirmation  
Campus: UNIVERSITY PARK CAMPUS  
Title:  

Request sent: 2/17/2017 at 2:03 PM  
Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]  

Curricular Information  
Blue Sheet Item #:  
Review Date:  

Program Codes  
Engineering: ME_BS  

Option Codes  
Mechanical Engineering:  

UPLOADED DOCUMENTS:  
Context Type: Prospectus Memo  
File Description: ME_BS IUG Drop - GRAD  
File Name: ME_BS-MS IUG_Drop_FINAL_Page_1.pdf  
Context Type: Prospectus Memo  
File Description: ME_BS IUG Drop - Grad 2  
File Name: ME_BS-MS IUG_Drop_FINAL_Page_2.pdf  
Context Type: Prospectus Memo  
File Description: ME_BS IUG Drop - Grad 3  
File Name: ME_BS-MS IUG_Drop_FINAL_Page_3.pdf  
Context Type: Prospectus Memo  
File Description: ME_BS IUG Drop - Grad 4  
File Name: ME_BS-MS IUG_Drop_FINAL_Page_4.pdf  
Context Type: Prospectus Memo  
File Description: ME_BS IUG Drop - Grad 5  
File Name: ME_BS-MS IUG_Drop_FINAL_Page_5.pdf  
Context Type: Prospectus Memo  
File Description: ME_BS IUG Drop - Grad 6  
File Name: ME_BS-MS IUG_Drop_FINAL_Page_6.pdf  
Context Type: Supporting Documents  
File Description: MNE GTE LITS  
File Name: GTE List.pdf
UPLOAD DOCUMENTS FOLLOW:
Graduate Council
Program, Option, or Minor Proposal Form

Submit 1 original, signed Graduate Council proposal form and 2 hardcopies of the graduate program proposal document, with a copy of the signed proposal form attached to each proposal copy, to the Curriculum Coordinator, University Faculty Senate, 101 Kern Graduate Building, University Park. The proposals will be transmitted to the Office of the Dean of the Graduate School for entry into the Graduate Council curricular review process; for more information about the process, see the Overview of the Graduate Council Curricular Review Process.

The Program Proposal Procedures provide guidance for the development of a graduate program proposal. If you have questions regarding the preparation of a graduate program proposal or how to complete this Graduate Council proposal form, contact the Office of the Dean of the Graduate School.

College/School: Engineering
Department or Instructional Area: Mechanical and Nuclear Engineering

New Graduate Program, Option, or Minor: ❑ Add

Designation of new graduate program:
Classification of Instructional Programs (CIP) Code: ______________
Designation of new graduate option:
Designation of new graduate minor:

Indicate effective semester:
❑ First semester following approval
❑ Second semester following approval

Existing Graduate Program Option, or Minor: ❑ Change ❑ Drop

Current designation of graduate program: B.S./M.S. IUG program
Current designation of graduate option:
Current designation of graduate minor:

New designation of existing graduate program (if changing):
New designation of existing graduate option (if changing):
New designation of existing graduate minor (if changing):

Brief description of the change (if not noted above):

Indicate effective semester:
❑ First semester following approval
❑ Second semester following approval

Submitted by Graduate Program Head

Mary L. Frecker
Printed name
Signature
Date: 10/24/16

Noted by College/School Representative to Graduate Council Subcommittee on New and Revised Programs and Courses:

Matthew Parkinson
Printed name
Signature
Date: 10/27/16

Approved by College/School Dean/Chancellor (or Designee):

Peter J. Butler
Printed name
Signature
Date: 12/1/16
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Recommended by Chair, Graduate Council Committee on Programs and Courses:

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Noted by Dean of the Graduate School:

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DATE: October 3, 2016

FROM: Mary Frecker

TO: The Graduate Council and University Faculty Senate

SUBJ: Removal of Integrated BS-MS degree in Mechanical Engineering

The Department of Mechanical & Nuclear Engineering proposes dropping the Integrated BS-MS degree in Mechanical Engineering for the following reasons:

1. There has been very little student participation in the Integrated BS-MS degree program. Over the past ten years, only four students have completed the degree, with a fifth student entering the program but not completing the MSME degree.

2. Following the BSME degree, it is difficult for students to finish the requirements for the MSME degree in only one year. The coursework and research components of the MSME degree typically require two years.

3. It is difficult for students to find an MS advisor to support them in thesis research since they are a graduate student for only one year.

This change does not affect other units, therefore no consultation has been done.
University Bulletin
Undergraduate Degree Programs

Mechanical Engineering

*University Park, College of Engineering (M E)*

**PROFESSOR KAREN A. THOLE, Head, Department of Mechanical and Nuclear Engineering**

Mechanical Engineering is one of the broadest engineering disciplines and is central in many new technological developments. Mechanical engineers create things that help improve the health, happiness and safety of our everyday lives such as biomedical devices, aircraft propulsion, and ways to store renewable energies. Mechanical engineering is divided into two broad areas: mechanical systems and thermal systems. Mechanical systems include the design of mechanisms and the analysis of the strength and wear of materials. Thermal systems include methods of energy conversions, heat transfer and fluid flow.

**Program Educational Objectives:**

Three to five years after graduation, Mechanical Engineering graduates will be:

1. Working in industry and government including computer-aided design, simulation and analysis of products or systems, experimentation and testing, manufacturing, and technical sales.
2. Assuming increasing levels of responsibility in project, personnel, and budget management.
4. Communicating effectively and recognizing the global, social and ethical contexts of their work.
5. Entering into graduate and professional studies.

**Program Outcomes (Student Outcomes):**

The Program outcomes are knowledge, skills, and/or behavior that are derived from the program educational objectives.

a. An ability to apply knowledge of mathematics, science, and engineering.
b. An ability to design and conduct experiments, as well as to analyze and interpret data.
c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
d. An ability to function on multidisciplinary teams.
e. An ability to identify, formulate, and solve engineering problems.
f. An understanding of professional and ethical responsibility.
g. An ability to communicate effectively.
h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
i. A recognition of the need for, and an ability to engage in life-long learning.
j. A knowledge of contemporary issues.
k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

The program offers a balance of engineering applications and theory with an emphasis on design from the first year through the industry-based capstone design experience in the senior year. In
addition, mechanical engineering students find it easy to incorporate co-operative educational experiences as well as many minors into their program.

ENTRANCE TO MAJOR -- In addition to the minimum grade point average (GPA) requirements* described in the University Policies, all College of Engineering entrance to major course requirements must also be completed with a minimum grade of C: CHEM 110 (GN), MATH 140 (GQ), MATH 141 (GQ), MATH 250 or MATH 251, PHYS 211 (GN) and PHYS 212 (GN). All of these courses must be completed by the end of the semester during which the admission to major process is carried out.

*In the event that the major is under enrollment control, a higher minimum cumulative grade-point average is likely to be needed and students must be enrolled in the College of Engineering or Division of Undergraduate Studies at the time of confirming their major choice.

For the B.S. degree in Mechanical Engineering, a minimum of 131 credits is required. This baccalaureate program in Mechanical Engineering is accredited by the Engineering Accreditation Commission of ABET, Inc., www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem:1-2)

GENERAL EDUCATION: 45 credits
(27 of these 45 credits are included in the REQUIREMENTS FOR THE MAJOR)
(See description of General Education in front of Bulletin.)

FIRST-YEAR SEMINAR:
(Included in REQUIREMENTS FOR THE MAJOR)

UNITED STATES CULTURES AND INTERNATIONAL CULTURES:
(Included in GENERAL EDUCATION course selection)

WRITING ACROSS THE CURRICULUM:
(Included in REQUIREMENTS FOR THE MAJOR)

REQUIREMENTS FOR THE MAJOR: 113 credits
(This includes 27 credits of General Education courses: 9 credits of GN courses; 6 credits of GQ courses; 3 credits of GS courses; 9 credits of GWS courses.)

PRESCRIBED COURSES (83 credits)
CHEM 110 GN(3)[1], EDSGN 100(3), MATH 140 GQ(4)[1], MATH 141 GQ(4)[1], PHYS 211 GN(4)[1] (Sem: 1-2)
CMPSC 200 GQ(3), E MCH 211(3)[1], E MCH 212(3)[1], E MCH 213(3)[1], E MCH 214(3)[1], M E 300(3)[1], MATH 220 GQ(2-3), MATH 231(2), MATH 251(4)[1], PHYS 212 GN(4)[1], PHYS 214 GN(2) (Sem: 3-4)
E E 212(3), E MCH 315(2), ENGL 202C GWS(3), M E 320(3)[1], M E 340(3)[1], M E 345(4)[1], M E 360(3)[1], M E 370(3)[1], M E 410(3)[1], MATSE 259(3) (Sem: 5-6)
I E 312(3), M E 450(3)[1] (Sem: 7-8)

ADDITIONAL COURSES (18 credits)
Select 1 credit of First-Year Seminar (Sem: 1-2)
CHEM 112 GN(3), or BIOL 141 GN(3) (Sem: 1-2)
ENGL 015 GWS(3) or ENGL 030 GWS(3) (Sem: 1-2)
ECON 102 GS(3), ECON 104 GS(3), ECON 014 GS(3), or ENEC 100 GS(3) (Sem: 1-2)
CAS 100A GWS(3) or CAS 100B GWS(3) (Sem: 3-4)
M E 440W(3) or M E 441W(3) (Sem: 7-8)
Select 2 credits from M E 325(1), M E 315(1), M E 375(1), M E 355(1), or E MCH 316(1) (Sem: 7-8)

SUPPORTING COURSES AND RELATED AREAS (12 credits)
Select 3 credits in a 400-level M E Technical Elective course excluding M E 410(3), M E 440W(3), M
E 441W(3), M E 450(3), M E 494(1-9), and M E 496(1-18) (Sem: 5-8)
Select 6 credits in Engineering Technical Elective courses, any 400-level courses in the College of Engineering not required for a B.S. in M.E. (Sem: 5-8)
Select 3 credits in General Technical Elective courses from department list (Sem: 7-8)
(Students who complete Basic ROTC may substitute 6 of the ROTC credits for 3 credits of GTE and 3 credits of GHA.)
Three rotations of Engr Co-op (ENGR 295, ENGR 395, and ENGR 495) can be used as 3 credits of GTE.

**Integrated B.S. and M.S. in Mechanical Engineering**

A limited number of undergraduate students in the B.S.M.E. program will be considered for admission to the integrated undergraduate/graduate program leading to the B.S.M.E. and the M.S.M.E. degrees. Students with a junior standing in the B.S.M.E. degree program may be admitted to the integrated B.S.M.E./M.S.M.E. program, following a positive review of an application specific to this program by the faculty committee on graduate admissions. Students must have attained a GPA of at least 3.0. Students admitted to the integrated program must maintain a GPA in all classes used toward the M.S.M.E. degree of at least 3.0.

[1] A student enrolled in this major must receive a grade of C or better, as specified in Senate Policy 82-44.

Last Revised by the Department: Summer Session 2010

Blue Sheet Item #: 38-05-038

Review Date: 02/23/2010

R & T: Approved 5/24/2013

UCA Revision #1: 8/9/06
UCA Revision #2: 7/30/07

**Comments**

EN
MNE General Technical Elective List
Effective Spring 2015

The General Technical Elective (GTE) provides the opportunity for a student to enhance his/her technical mechanical and/or nuclear engineering education with greater breadth. To qualify as a GTE the course needs to meet one of the following criteria:

1. Any permanent engineering, math or science course listed below which does not have similar content to a course for which credit has been received. For courses outside MNE a GTE form must be submitted.
2. \textit{497x (temporary) courses offered outside of MNE require pre-approval via e-petition.} Approval criteria: (a) Course must have substantial technical content and (b) student can demonstrate how the topic adds value to his/her academic and/or career plans.
3. Three Co-op rotations (ENGR 295, ENGR 395, and ENGR 495). A GTE Form must be submitted.
4. Six credits of ROTC training (3 credits applied as GTE and 3 credits applied as GHA).

### College of Engineering:

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<td>C E</td>
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### College of Earth and Mineral Sciences:

<table>
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<td>EGEE</td>
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### College of Earth and Mineral Sciences (continued)

<table>
<thead>
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<td>MIN E</td>
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<tr>
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### Eberly College of Science:

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<td>3xx, 4xx</td>
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<tr>
<td>PNG</td>
<td>4xx</td>
</tr>
</tbody>
</table>

3/15/2017
Graduate Studies and Research Committee Activity Summary
for EFC Meeting- March 21, 2017
Prepared by Lori Long
Proposal report and proposals attached to email

Program Proposals:
  • None

Course Proposals:  
  Approved
  • (CE 835_Change) Integrated Project Management for Civil Engineers

Graduate Faculty Nominations:
  • None
### Proposals Submitted to EFC

<table>
<thead>
<tr>
<th>Proposal Type</th>
<th>Title</th>
<th>Mnemonic</th>
<th>Number or Degree</th>
<th>Action Requested (Add/Change/ Drop)</th>
<th>Vote</th>
<th>GS&amp;R*</th>
<th>Justification (Why/What for)</th>
<th>Summary of Discussion Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>Integrated Project Management for Civil Engineers</td>
<td>CE</td>
<td>835</td>
<td>Change</td>
<td>Approve</td>
<td>We are changing the course number from CE 535 to CE 835 because it will align better with the University's description for an 800 level course. The course content is specifically designed to be the culminating experience for a professional practice oriented degree program, the Master of Engineering in Civil Engineering. Additionally, there is no research focus or preparation for research included in the course.</td>
<td>I agree with the proposed change. The change in course # is appropriate given the subject material. The proposed change looks fine to me. I agree with the change in course number from 500- to 800-level given the course's focus on application of project management skills.</td>
<td></td>
</tr>
</tbody>
</table>
Graduate Council Subcommittee On New And Revised Programs and Courses

COURSE SUBMISSION AND CONSULTATION FORM

Principal Faculty Member(s) Proposing Course

<table>
<thead>
<tr>
<th>Name</th>
<th>User ID</th>
<th>College</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALI MEMARI</td>
<td>AMM7</td>
<td>Engineering (EN)</td>
<td>Not Available</td>
</tr>
<tr>
<td>THOMAS JAMES SKIBINSKI</td>
<td>tjs36</td>
<td>Engineering (EN)</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

College with curricular responsibility: Engineering (EN)

Type of Proposal: □ Add  [ ] Change  □ Drop

Current Bulletin Listing

Abbreviation: CE
Number: 535

Course Designation
(CE 535) Integrated Project Management for Civil Engineers

Course Information

Cross-Listed Courses:

Prerequisites:

Corequisites:

Concurrents:

Recommended Preparations:

Abbreviated Title: Integ Proj Mgmt

This course will be delivered:

[ ] in residence
[ ] off-site
[ ] online

Bulletin Listing

Minimum Credits: 3
Maximum Credits: 3
Repeatable: NO

Department with Curricular Responsibility: Civil And Environmental Engineering (UPEN_CEE)

Effective Semester: Upon Approval

Travel Component: NO

Campuses That Have Offered (CE 535) Over The Past 4 Years

| semester | AB | AL | BK | BR | BW | CR | DS | ER | FE | GA | GV | HB | HN | HY | LV | MA | NK | PC | SH | SL | UP | WB | WC | WS | XC | XP | XS | YK |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

Course Outline

A brief outline or overview of the course content:

The course will utilize a project/group based learning process to teach project management's value, methodology and application to civil and environmental engineering projects in the student's particular emphasis area (Infrastructure, Transportation Systems, or Water and Environment). Students will learn how to initiate, plan, organize, staff, direct, control and closeout a project. This course will be required by all M.Eng. students in Civil Engineering in the second semester of their degree program and serve as a
culminating experience for their emphasis area courses. This course will be invaluable to those students who have or will pursue careers in professional practice or industry.

A listing of the major topics to be covered with an approximate length of time allotted for their discussion:

<table>
<thead>
<tr>
<th>Topic</th>
<th>#Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Elements of Project Management</td>
<td>3</td>
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<tr>
<td>*The Project Management Process</td>
<td></td>
</tr>
<tr>
<td>*Engineering Project Evolution Process</td>
<td></td>
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<tr>
<td>*Organization Structures</td>
<td></td>
</tr>
<tr>
<td>*Project Manager's Skills and Responsibilities</td>
<td></td>
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<tr>
<td>*Importance of Communication</td>
<td></td>
</tr>
<tr>
<td>*Communication Skills</td>
<td></td>
</tr>
<tr>
<td>*Roles of Stakeholders Pertaining to Civil Engineering Projects</td>
<td></td>
</tr>
<tr>
<td>*Client Relations</td>
<td></td>
</tr>
<tr>
<td>*Ethics and Ethical Decision Making in Professional Civil Engineering Practice</td>
<td></td>
</tr>
<tr>
<td>II. Project Procurement and Proposal Development</td>
<td>2</td>
</tr>
<tr>
<td>*Project Procurement</td>
<td></td>
</tr>
<tr>
<td>*Identification and Selection of Civil Infrastructure Projects</td>
<td></td>
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<tr>
<td>*Proposal Development</td>
<td></td>
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<tr>
<td>*Scope of Civil Engineering Services</td>
<td></td>
</tr>
<tr>
<td>*Fee Strategies and Negotiations</td>
<td></td>
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<tr>
<td>*Professional Services Contracts</td>
<td></td>
</tr>
<tr>
<td>III. Project Team Development</td>
<td>2</td>
</tr>
<tr>
<td>*Project Team Development and Effectiveness</td>
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<tr>
<td>IV. Project Design Management</td>
<td>5</td>
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<tr>
<td>*Scope Management</td>
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<td>*Work Breakdown Structure (WBS)</td>
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<td>*Scheduling/Time Management</td>
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<td>*Budgeting/Cost Management</td>
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<td>*Risk Management</td>
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<td>*Resource Management</td>
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<td>*Crisis Management</td>
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<tr>
<td>*Earned Value</td>
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<tr>
<td>*Construction Safety</td>
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<tr>
<td>V. Project Closeout and Team Presentations</td>
<td>3</td>
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<tr>
<td>*Project Evaluation and Control</td>
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<tr>
<td>*Project Closeout and Termination</td>
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<tr>
<td>*Presentation Skills</td>
<td></td>
</tr>
<tr>
<td>*Team Project Presentations</td>
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</tbody>
</table>

Course Description:

Apply the project management process to civil and environmental engineering projects. C E 835 Integrated Project Management for Civil Engineers (3) This course will present the project management process to students pursuing a graduate degree in Civil Engineering. The course will utilize a project/group based learning process to teach project management's value, methodology and application to civil and environmental engineering projects in the student's particular emphasis area (Infrastructure, Transportation Systems, or Water and Environment). Students will learn how to initiate, plan, organize, staff, direct, control and closeout a project. Key topics to be discussed include: the role of the project manager, civil engineering project procurement/proposal development, importance and skills of communications, project team development and leadership, team conflict resolution, design management, scope management, work breakdown structure (WBS), scheduling/time management, budgeting/cost management, risk management, resource management, crisis management, earned value, project evaluation and control, and project closeout and termination. Students will be evaluated on their comprehension of the course through homework, exams and/or quizzes, class participation and successful completion of a team-based project. The team-based projects will be specific to the student's engineering emphasis and may be developed by the instructor or student selected from previous project experience. This course will be required by all MEng students in Civil Engineering in the second semester of their degree program and serve as a culminating experience for their emphasis area courses. This course will be invaluable to those students who have or will pursue careers in professional practice or industry. The course will be offered every Spring Semester and approximately 30 - 40 students are expected to enroll.

The name(s) of the faculty member(s) responsible for the development of the course:

- Name: ALI MEMARI (AMM7)
  Title: HANKIN PROF/DIR PHRC
  Phone: +1 814 863 9788
  Address: 0219 SACKETT BUILDING
  Campus: City: Fax:

- Name: THOMAS JAMES SKIBINSKI (tjs36)
  Title:
  Phone:
  Address:
  Campus:
Course Justification

Instructional, Educational, and Course Objectives:
This section should define what the student is expected to learn and what skills the student will develop.
Upon completion of this course, students will be knowledgeable of the project management process, its value and application to Civil and Environmental Engineering projects within their selected emphasis areas, specifically Infrastructure, Transportation Systems, or Water and Environment. Students will learn how to initiate, plan, organize, staff, direct, control and closeout a project. Students will learn how to manage the competing demands for a project’s scope, time, risk and quality. Breaking down a project into manageable tasks (e.g., work breakdown structure (WBS)) will be taught. Students will also learn how to apply computer software for scheduling, financial management and document control. This course will be invaluable to those students who have or will pursue careers in professional practice or industry.

Evaluation Methods:
Include a statement that explains how the achievement of the educational objective identified above will be assessed. The procedures for determining students' grades should be specifically identified.
Students will be assessed based upon their comprehension of the course material and successful completion of the course project. Assessment will be via homework assignments (5%), two exams or a series of quizzes (35%), class participation (10%) and a team based project (50%).

Relationship/Linkage of Course to Other Courses:
This statement should relate the course to existing or proposed new courses. It should provide a rationale for the level of instruction, for any prerequisites that may be specified, or for the course's role as a prerequisite for other courses.
This course combines the elements of project management into one course and applies these elements to Civil and Environmental Engineering projects. This course is complimentary to a student’s graduate program and will provide a culminating project based/integrated experience for the particular emphasis area (Infrastructure, Transportation Systems or Water and Environment) the student has chosen. There are a few courses in Architectural Engineering and Civil and Environmental Engineering Departments that are related to project management; however, they are mainly focused on certain aspects and types of projects or are designed specifically for undergraduate students. More specifically, the following courses discuss project management: C E 432 – Construction Project Management; A E 472 – Building Construction Planning and Management; and A E 471 – Construction Management of Residential Building Projects. The proposed course will complement such courses but will be different and more appropriate for M.Eng. graduate students and following a project-based learning approach.

Relationship of Course to Major, Option, Minor, or General Education:
This statement should explain how the course will contribute to the major, option, or minor and indicate how it may function as a service course for other departments.
Project management is critical to the successful completion of a civil engineering project. This course combines the elements of project management into one course and this needed instruction will prepare the student for their career in professional practice or industry. This course will be required by all students in the Civil Engineering M.Eng. program.

A description of any special facilities:
No special facilities are required for this course. Technology needs would require the use of an ITEC classroom.

Frequency of Offering and Enrollment:
Every spring semester with an anticipated enrollment of 30 – 40 students.

Justification for Changing The Proposal:
Include a justification for each change to the course. Particular attention should be paid to the effects of the course change within the discipline and in other disciplines where the course may be required within a major or used as a service course. When a unit submits several course changes, with or without new course proposals, a general statement covering the programmatic effects of the changes should be submitted.
We are changing the course number from CE 535 to CE 835 because it will align better with the University's description for an 800 level course. The course content is specifically designed to be the culminating experience for a professional practice oriented degree program, the Master of Engineering in Civil Engineering. Additionally, there is no research focus or preparation for research included in the course.

Review History
This section represents all consultation history that has occurred on this proposal

Legend
- Approve
- Rejected
- Waiting Review
- User Action Required
Consultation

Recipient Name: ALEKSANDRA RADLINSKA
Position: Consultation
Title: ASST PROF CIVIL ENGR

Department: Civil And Environmental Engineering
Campus: UNIVERSITY PARK CAMPUS

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments:
Reviewed On: 12/13/2016 at 11:40 AM

Recipient Name: ALFONSO MEJIA
Position: Consultation
Title: ASST PROF CIVIL ENGR

Department: Civil And Environmental Engineering
Campus: UNIVERSITY PARK CAMPUS

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments:
Reviewed On: 12/13/2016 at 1:15 PM

Recipient Name: ALI MEMARI
Position: Consultation
Title: HANKIN PROF/DIR PHRC

Department: Civil And Environmental Engineering
Campus: UNIVERSITY PARK CAMPUS

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments:
Reviewed On: 12/14/2016 at 2:53 PM

Recipient Name: BRUCE LOGAN
Position: Consultation
Title: EVAN PUGH/KAPPE PROF

Department: Civil And Environmental Engineering
Campus: UNIVERSITY PARK CAMPUS

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 1/18/2017 at 7:15 AM
Recipient Name: FRED CANNON  
Department: Civil And Environmental Engineering  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS  
Title: PROF CIVIL & ENV EN

Request sent: 1/16/2017 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: GORDON WARN  
Department: (Not Available)  
Position: Consultation  
Campus: (Not Available)  
Title: ASSOC PROF CIVIL ENGINEER

Request sent: 1/16/2017 at 7:30 AM  
Concur: Yes  
Comments: (Completed By Default - Exceeded Time Limit)  
Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: JEFFREY LAMAN  
Department: Civil And Environmental Engineering  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS  
Title: PROF CIVIL & ENVIR ENGR

Request sent: 1/9/2017 at 7:30 AM  
Concur: Yes  
Comments:  
Reviewed On: 1/9/2017 at 7:58 AM

Recipient Name: JOHN REGAN  
Department: Civil And Environmental Engineering  
Position: Consultation  
Campus: UNIVERSITY PARK CAMPUS  
Title: PROFESSOR CIVL & ENV ENGR

Request sent: 1/16/2017 at 7:30 AM  
Concur: Yes  
Comments:  
Reviewed On: 1/16/2017 at 2:16 PM

Recipient Name: JOSEPH CECERE  
Department: Science, Engineering And Technology  
Position: Consultation  
Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE
The course should include Information Modeling (BMI) for buildings. This is the way firms are communicating with each other on projects.

Reviewed On: 1/9/2017 at 10:09 AM

The review details from our RTE program coordinator at Penn State Altoona, Steve Dillen are provided below.

"The topics covered are more related to a graduate level course, thus the need to change the numbering from 535 to 835. I see no objections from my end."

Best,

Reviewed On: 1/9/2017 at 12:23 PM

The topics covered are more related to a graduate level course, thus the need to change the numbering from 535 to 835. I see no objections from my end.

Best,

Reviewed On: 1/9/2017 at 12:23 PM
Recipient Name: MARTIN PIETRUCHA  Department: (Not Available)
Position: Consultation  Campus: (Not Available)
Title: PROF CEE/DIRECTOR OF LTI

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: MICHAEL HILLMAN  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: KIMBALL ASST PROF

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments: 
Reviewed On: 1/5/2017 at 11:34 AM

Recipient Name: MING XIAO  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: ASSOCIATE PROFESSOR

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments: 
Reviewed On: 12/18/2016 at 4:48 PM

Recipient Name: NATHANIEL WARNER  Department: (Not Available)
Position: Consultation  Campus: (Not Available)
Title: ASST PROF ASST PROFESSOR

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: PARISA SHOKOUHI  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: ASSOCIATE PROFESSOR
Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: PATRICK FOX
Department: Civil And Environmental Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: PROF AND DEPT HEAD

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments:
Reviewed On: 12/13/2016 at 10:57 AM

Recipient Name: PEGGY JOHNSON
Department: Civil And Environmental Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: Professor Civil Engineering

Request sent: 1/9/2017 at 7:30 AM
Concur: Yes
Comments:
Reviewed On: 1/9/2017 at 8:36 AM

Recipient Name: RACHEL BRENNA
Department: Civil And Environmental Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: ASSOC PROF ENVIRONMENTAL ENGR

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments:
Reviewed On: 12/14/2016 at 10:50 AM

Recipient Name: SEROJ MACKERTICH-SENGERDY
Department: Science, Engineering And Technology
Position: Consultation
Campus: PENN STATE HARRISBURG, THE CAPITAL COLLEGE
Title: ASSOC PROF ENGR

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments:
Reviewed On: 12/15/2016 at 1:43 PM
Recipient Name: SHELLEY STOFFELS  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: PROFESSOR CIVIL

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments: Reviewed On: 12/13/2016 at 10:42 AM

Recipient Name: SUKRAN GULER  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: ASST PROF CIVIL ENGINEER

Request sent: 1/9/2017 at 7:30 AM
Concur: Yes
Comments: Reviewed On: 1/9/2017 at 11:43 AM

Recipient Name: TONG QIU  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: ASSOC PROF CIVIL ENGR

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments: Reviewed On: 12/13/2016 at 10:52 AM

Recipient Name: VENKATARAMAN SHANKAR  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: PROFESSOR CIVIL ENGINEER

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit) Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: VIKASH GAYAH  Department: Civil Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: ASST PROF CIVIL ENGR

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 1/18/2017 at 7:15 AM

Recipient Name: WILLIAM BURGOS  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: PROFESSOR CIVIL & ENV EN

Request sent: 12/13/2016 at 10:28 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 12/13/2016 at 10:29 AM

Recipient Name: XIAOFENG LIU  Department: Civil And Environmental Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: ASSISTANT PROFESSOR OF CE

Request sent: 1/16/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 1/18/2017 at 7:15 AM

Head of Department

Recipient Name: PATRICK JOSEPH FOX  Department: (Not Available)
Position: Head of Department  Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

College/School Representative to the Graduate Council Subcommittee on New and Revised Programs and Courses

Recipient Name: MATTHEW PARKINSON  Department: (Not Available)
Position: College/School Representative to the Graduate Council Subcommittee on New and Revised Programs and Courses  Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
Dean of the College

Recipient Name: **PETER BUTLER**  
Department: *(Not Available)*  
Position: Dean of the College  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Review on Behalf of the Dean of the Graduate School

Recipient Name: **VICKI HEWITT**  
Department: *(Not Available)*  
Position: Review on Behalf of the Dean of the Graduate School  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Feedback from the Graduate Council Joint Curricular Committee

Recipient Name: **ROBERT BANNON**  
Department: *(Not Available)*  
Position: Feedback from the Graduate Council Joint Curricular Committee  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Final Confirmation

Recipient Name: **CORTNEY SMITH**  
Department: *(Not Available)*  
Position: Final Confirmation  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]

Recipient Name: **KADI CORTER**  
Department: *(Not Available)*  
Position: Final Confirmation  
Campus: UNIVERSITY PARK CAMPUS

Concur: [Not Yet Reviewed]  
Comments: [Not Yet Reviewed]  
Reviewed On: [Not Yet Reviewed]
Recipient Name: Allison Albinski  Department: (Not Available)
Position: Final Confirmation  Campus: UNIVERSITY PARK CAMPUS

Request sent: 2/17/2017 at 2:01 PM
Concur: [Not Yet Reviewed]  Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Curricular Information
Blue Sheet Item #:  
Review Date: 

SCRID Numbers
(CE 835):
Proposal Designation: Electro-Mechanical Engineering Technology
This is a proposed Change to Undergraduate Stand Alone Major

Initiators

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<td>rlm18</td>
<td>University College (UC)</td>
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College with curricular responsibility: Altoona College (AL)

Program Definition
Degree Offered: Bachelor of Science (BS)
Effective Semester: Fall 2017
  Offering College(s)
  i Altoona College
  i Berks College
  i Engineering
  i University College

Entrance and/or Retention Policies

Entrance Requirement
Requested Policy:
Students are admitted directly into the EMET major at the time of admission. The "Undergraduate Degree Programs Bulletin" does not need to be changed. Only the Academic Advising Portal for COE: http://advising.psu.edu/entrance-major-college-engineering-2017

Justification:
In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made.

CONSULTATION
The R&T Proposal has been approved by all college deans and departments offering the program. The consultation list follows:

College of Engineering
Ivan Esparragoza Director of Engineering Technology – iee1
Sven Bilen Head, SEDTAP – sbilen
Peter Butler Assoc Dean for Education - pbutler
Christine Masters Asst Dean Undergraduate & Graduate Programs – cbm100

Berks College
R. Keith Hillkirk Chancellor – rkh5
Paul Esqueda Sr. Assoc Dean for Academic Affairs - pue1
Janelle Larson EBC Division Head – jbl6

Altoona College
Lori J. Bechtel-Wherry Chancellor – ljb3
Peter Moran Asst Dean for Policy and Planning – plm150

University College
David Christiansen Assoc VP & Sr Assoc Dean for Academic Programs – djc21

Kevin Snider Chancellor, PSU New Kensington – kjs33
Andrea Adolph DAA, PSU New Kensington – aea13
Objectives and Justification

Objectives:

Justification:

Justification For The Change Proposal:

The following changes are primarily being proposed to keep the program up-to-date with current technology and trends in the industry, and to enhance the student learning experience by reorganizing topics in the curriculum.

1) Add a new course EMET 100 (Computation Tools for Engineering Synthesis). This is a first semester course intended to introduce first-year EMET students to a core set of computational tools and simulation software that will be used repeatedly throughout the EMET curriculum. Teaching these tools and software in one course will remove duplication in other courses.

2) Replace IET 215 (Production Design) and IET 216 (Production Design Laboratory) with a new course EMET 215 (Manufacturing Engineering). IET 215 and 216 are both two-credit courses that originated in the 2MET (Mechanical Engineering Technology) associate degree program. Both courses have been included in the EMET program since its inception in 1995. The new three-credit EMET 215 offering provides an opportunity to update the course topics to reflect changes in technology. The revised EMET 215 course addresses the topics that are necessary for EMET students and better prepares them for the transition to industry. The combination of IET 215 and IET 216 will be accepted as a substitute for EMET 215 so campuses that currently offer these courses in order to allow students to satisfy associate degree requirements will still be able to do so.

3) Add a new course EMET 225 (Applied Dynamics). In the current EMET program, the topic of Dynamics is covered briefly in EMET 222 (Mechanics for Technology). At this point, EMET 222 covers strength of materials as well as Dynamics. The EMET curricular committee believes that increasing the Dynamics coverage by creating a standalone course would be a huge benefit students in their later coursework, particularly in EMET 325 (Electric Drives) and EMET 326 (Mechanical Drives). Therefore, EMET 225, a two-credit Dynamics course has been proposed and is a part of this program change proposal.

4) Change the name for EMET 222 and reduce its credit count for EMET 222 from 4 to 3. The name is being changed from Mechanics for Technology to Applied Mechanics to more accurately reflect the course's content. As stated previously, EMET 222 currently covers strength of materials as well as Dynamics. The Dynamics topics are being relocated to the new EMET 225 course. To reflect the associated reduction in topics in EMET 222, the proposal is to change EMET 222 from a four-credit course to a three-credit course. The new EMET 222 course will include strength of materials lecture and lab topics.

Proposal Outline

University College Locations:

- NEW KENSINGTON CAMPUS (NK)
- YORK CAMPUS (YK)

CIP Code: 150403

Faculty Member(s) in Charge:

- Name: SVEN BILEN (SGB100)
  Title: DEPT HEAD/SEDTAPP
  Phone: +1 814 863 1526
  Address: 0213N HAMMOND BLDG
  Campus: UP
  City: University Park
  Fax:

- Name: IVAN ESPARRAGOZA (IEE1)
  Title: ASSOC PROF ENGINEERING
  Phone: +1 610 892 1420
  Address: 0207K MAIN BUILDING
  Campus: BW
  City: Media
  Fax:
Program Description:

The Electro-Mechanical Engineering Technology (B.S. EMET) degree program provides the basic undergraduate education required for a career as an electro-mechanical engineering technologist. The program emphasizes a breadth of knowledge in all fields of engineering technology related to typical, highly-automated manufacturing, production, or assembly plant processes. Basic coverage is provided in all major areas to technology involved in the operation and control of manufacturing and production processes, including instrumentation and monitoring methods, principles of machine design, automated control techniques, thermal and fluid sciences, computerized manufacturing systems, principles of electrical and electronic circuit operation, computer-aided drafting and design, economics of production, and statistical analysis and quality control.

The primary aim of the EMET program is to provide graduates with the knowledge and skills necessary to apply current methods and technology to the development, design, operation, and management of electro-mechanical systems, particularly in those industries where automated systems are prevalent.

Program Educational Objectives:

Specific educational objectives of the program expect that graduates of the program, within five years of graduation will be:

1. Capable of and actively involved in the specification, procurement, or integration of electromechanical systems

2. Capable of and actively involved in the operation, testing, or maintenance of electromechanical systems

3. Capable of and actively participating in project team activities

4. Capable of and actively involved in the preparation and delivery of technical documentation and communication

Program Outcomes (Student Outcomes):

At graduation, EMET students should have:
a) An ability to select and apply the knowledge, techniques, skills, and modern tools of their disciplines 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 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 communicate effectively regarding broadly-defined engineering technology activities,
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.

In addition, EMET graduates must demonstrate the knowledge and technical competency to:

a) Use computer-aided drafting or design tools to prepare graphical representations of electromechanical systems.
b) Use circuit analysis, analog and digital electronics, basic instrumentation, and computers to aid in the characterization, analysis, and troubleshooting of electromechanical systems.
c) Use statics, dynamics (or applied mechanics), strength of materials, engineering materials, engineering standards and manufacturing processes to aid in the characterization, analysis, and troubleshooting of electromechanical systems.
d) Use appropriate computer programming languages for operating electromechanical systems.
e) Use electrical/electronic devices such as amplifiers, motors, relays, power systems, and computer and instrumentation systems for applied design, operation, or troubleshooting electromechanical systems.
f) Use advanced topics in engineering mechanics, engineering materials, and fluid mechanics for applied design, operation, or troubleshooting of electromechanical systems.
g) Use basic knowledge of control systems for the applied design, operation, or troubleshooting of electromechanical systems.
h) Use differential and integral calculus, as a minimum, to characterize the static and dynamic performance of electromechanical systems.
i) Use appropriate management techniques in the investigation, analysis, and design of electromechanical systems.

The major is organized as a four-year baccalaureate program with the corresponding Penn State admission requirements. Graduates of an associate degree in either electrical or mechanical engineering technology from Penn State may re-enroll in the EMET program. The College of Engineering ENGR students may enroll through "Change of Major" procedures. Students from an engineering technology program at another institution or community college accredited by TAC of ABET may transfer into the program with advanced standing.

For the B.S. degree in Electro-Mechanical Engineering Technology, a minimum of 130 credits is required. This program is accredited at Penn State Altoona, Penn State Berks, Penn State New Kensington, and Penn State York of the University College by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

Scheduling Recommendation by Semester Standing given like (Sem: 1-2)

For a Bachelor of Science in Electro-Mechanical Engineering Technology a minimum of 130 credits are required. 

Scheduling Recommendation by Semester Standing Given Like (Sem: 1-2)

**Academic Outline**

**REQUIREMENTS FOR THE MAJOR:**

109 - 114 credits are required

(This includes 24 credits of General Education courses: 6 credits of GQ courses; 9 credits of GN courses; 6 credits of GWS courses; 3 credits of GH or GS courses.)

**GENERAL EDUCATION:** 45 Credits

(24 of these 45 credits are included in REQUIREMENTS FOR THE MAJOR)

**FIRST-YEAR SEMINAR:**

Included in Electives

**UNITED STATES CULTURES AND INTERNATIONAL CULTURES:**

Included in General Education Requirements
WRITING ACROSS THE CURRICULUM:
Included in Requirements for the Major

ELECTIVES:
6 credits

COMMON REQUIREMENTS FOR THE MAJOR: (Min: 109 Max: 114 Credits)

PRESCRIBED COURSES (73 Credits)

MCHT 111 (3)[1](Sem: 1-2)
CMPET 117 (3)[1], CMPET 120 (1)[1], CMPET 211 (3), EDSGN 100 (3), EET 105 (3), EET 114 (4)[1], EET 118 (1)[1], EET 212W (4)[1], EET 275 (3), EGT 114 (2), EMET 100 (1), EMET 215 (3), EMET 222 (3)[1], EMET 225 (2), EMET 230 (3)[1], EMET 325 (3), EMET 326 (3), EMET 330 (3)[1], EMET 403 (1), EMET 350 (3)(Sem: 5-6)

ADDITIONAL COURSES (27-31 Credits)

Select 5-6 credits from:
(MATH 40 GQ(5)[1]; MATH 22 GQ(3)[1], MATH 26 GQ(3)[1]; MATH 81 GQ(3)[1], MATH 82 GQ(3)[1](Sem: 1-2))

Select 3 credits of GH or GS from:
(ENGR 320Y GS; US; IL; WAC(3), STS 200 GS(3); STS 233 GH(3); STS 245 GS(3)(Sem: 2-8))

Select 10-11 credits from:
(CAS 100 GWS(3), CAS 100A GWS(3); CAS 100B GWS(3)(Sem: 3-4)
MATH 83 GQ(4)[1]; MATH 140 GQ(4)[1](Sem: 3-4)
MATH 210 GQ(3); MATH 141 (4)(Sem: 3-4))

Select 3 credits from:
(MATH 211 GQ(3)[1]; MATH 250 (3)(Sem: 4-5))

Select 6-8 credits of GN courses from two of the following groups:
(CHM 110 GN(3), CHEM 111 GN(1)(Sem: 4-6)
PHYS 150 GN(3); PHYS 151 GN(3); PHYS 211 GN(4); PHYS 212 GN(4)(Sem: 4-6)
PHYS 250 GN(4)(Sem: 4-6))

SUPPORTING COURSES (9-10)

Select 3-4 credits of science courses, in consultation with an adviser, from the approved department list (Sem: 4-6)
Select 6 credits of General Technical Elective courses, in consultation with an adviser, from the approved department list (Sem: 7-8)

Further Clarification

*students taking MATH 081 GQ(3) and MATH 082 GQ(3) must take MATH 083 GQ(4)
**students taking MATH 083(4) must take MATH 210(3) and MATH 211(3)
***Note that MATH 250 does not carry a C-requirement

=================================================================

Electro-Mechanical Engineering Technology (EMET) Program Change Proposal Consultation

Includes:
EMET Program
EMET Retention & Transfer (part of program change)
EMET 100 Course Add
EMET 215 Course Add
EMET 225 Course Add
EMET 222 Course Change

The Engineering Technology Commonwealth Engineering “EMET Curriculum Committee” reviewed the program and highly
recommends the changes included in the proposal packet referenced above. Consultation has taken place with the Penn State Colleges and Campuses referenced below. A copy of the backup documentation is attached to this proposal.

Consultation with Affected Academic Units:
College of Engineering
--Esparragoza, Ivan – Director of Engineering Technology and Commonwealth Engineering, Associate Professor of Engineering, Penn State Brandywine – 9/14/2016
--Masters, Christine – Assist. Dean Undergraduate & Graduate Programs – 9/14/2016
--Butler, Peter – Assoc. Dean for Education and Professor of Biomedical Engineering
--Bilén, Sven – Head, School of Engineering Design, Technology, & Professional Programs – 9/21/2016
Altoona College
--Bechtel-Wherry, Lori – Chancellor, Penn State Altoona
Bucks College
--Hillkirk, R Keith – Chancellor, Penn State Berks – 9/14/2016
--Esqueda, Paul – SR Assoc. Dean for Academic Affairs, Penn State Berks – 9/14/2016
--Larson, Janelle – EBC Division Head, Penn State Berks – 9/15/2016
University College
--Christiansen, David – Assoc. VP & SR Assoc. Dean for Academic Affairs, Univ. College – 9/14/2016
--Snider, Kevin – Chancellor, Penn State New Kensington – 9/14/2016
--Adolph, Andrea – Director of Academic Affairs, Penn State New Kensington – 9/15/2016
--Chown, David – Chancellor, Penn State York
--Farrell, Robert – Director of Academic Affairs, Penn State York

[1] A student enrolled in this program must receive a grade of C or better, as specified in Senate Policy 82-44.

Courses modified by this proposal
EMET 222 (3)[1]; STS 200 GS(3); STS 245 GS(3)

Courses added by this proposal
EMET 100; EMET 215; EMET 225

Existing Courses Added to or Moved Within Requirements for This Program
CAS 100 ; EMET 100 ; EMET 215 ; EMET 225 ; ENGR 320Y

Existing Courses Removed from or Moved Within Requirements for This Program
IET 215 ; IET 216 ; MCHT 214

Academic Program Costing Analysis Form
Anticipated Costs: No costs are anticipated.

Academic Program Admissions Form

Baccalaureate (4-year) programs
First-year: N/A
Transfer: N/A
Non-Degree: N/A
Already graduated: N/A

Associate (2-year) programs
First-year: N/A
Transfer: N/A
Non-Degree: N/A
Already graduated: N/A

Review History
This section represents all consultation history that has occurred on this proposal
Consultation

Recipient Name: CHENG DONG
Department: Biomedical Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: DEPT HEAD/DIST. PROF BIO

Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/2/2017 at 8:38 PM

Recipient Name: JANIS TERPENNY
Department: Industrial And Manufacturing Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: DEPT HEAD & PROF INDUSTL

Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/10/2017 at 3:53 PM

Recipient Name: JOHN HANNAN
Department: Computer Science And Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: ASC HEAD CMPSCI&ENG

Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/3/2017 at 10:43 AM
Respond To Comments

Recipient Name: JUDITH TODD  Department: Engineering Science And Mechanics
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: HEAD/PROF ESM

(6) Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/2/2017 at 5:14 PM

Respond To Comments

Recipient Name: KAREN THOLE  Department: Mechanical Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: DEPT HEAD MNE

(2) Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/1/2017 at 8:56 PM

Respond To Comments

Recipient Name: KULTEGIN AYDIN  Department: Electrical Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: DEPT HEAD/PROF ELECT ENGR

(11) Request sent: 2/13/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 2/16/2017 at 7:15 AM

Respond To Comments

Recipient Name: M PARFITT  Department: Architectural Engineering
Position: Consultation  Campus: UNIVERSITY PARK CAMPUS
Title: PROFESSOR ARCH ENGR

(9) Request sent: 2/6/2017 at 7:30 AM
Concur: Yes
**Title:** PROF AND DEPT HEAD  
**Recipient Name:** PATRICK FOX  
**Department:** Civil And Environmental Engineering  
**Position:** Consultation  
**Campus:** UNIVERSITY PARK CAMPUS  
**Title:** PROF AND DEPT HEAD

**Request sent:** 2/1/2017 at 7:12 PM  
**Concur:** Yes  
**Comments:**  
**Reviewed On:** 2/2/2017 at 8:04 AM

**Title:** DEPT HD/PROF AG & BIO ENG  
**Recipient Name:** PAUL HEINEMANN  
**Department:** Agricultural And Biological Engineering  
**Position:** Consultation  
**Campus:** UNIVERSITY PARK CAMPUS  
**Title:** DEPT HD/PROF AG & BIO ENG

**Request sent:** 2/1/2017 at 7:12 PM  
**Concur:** Yes  
**Comments:**  
**Reviewed On:** 2/2/2017 at 9:05 AM

**Title:** BOEING PROFESSOR OF AERSP  
**Recipient Name:** PHILIP MORRIS  
**Department:** Aerospace Engineering  
**Position:** Consultation  
**Campus:** UNIVERSITY PARK CAMPUS  
**Title:** BOEING PROFESSOR OF AERSP

**Request sent:** 2/13/2017 at 7:30 AM  
**Concur:** Yes  
**Comments:** (Completed By Default - Exceeded Time Limit)  
**Reviewed On:** 2/16/2017 at 7:15 AM

**Title:** PROF/DEPT HEAD CHEM ENGR  
**Recipient Name:** PHILLIP SAVAGE  
**Department:** Chemical Engineering  
**Position:** Consultation  
**Campus:** UNIVERSITY PARK CAMPUS  
**Title:** PROF/DEPT HEAD CHEM ENGR
Request sent: 2/13/2017 at 7:30 AM
Concur: Yes
Comments: (Completed By Default - Exceeded Time Limit)
Reviewed On: 2/16/2017 at 7:15 AM

Respond To Comments

Recipient Name: SVEN BILEN
Department: School of Engr Design, Technology and Prof Pgrms
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: DEPT HEAD/SEDTAPP

Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/1/2017 at 8:37 PM

Respond To Comments

Recipient Name: THOMAS F LAPORTA
Department: Computer Science And Engineering
Position: Consultation
Campus: UNIVERSITY PARK CAMPUS
Title: LNHRDCHAIRPROF & DIR EECS

Request sent: 2/1/2017 at 7:12 PM
Concur: Yes
Comments:
Reviewed On: 2/1/2017 at 10:38 PM

Respond To Comments

Head of Department

Recipient Name: SVEN G BILEN
Department: (Not Available)
Position: Head of Department
Campus: UNIVERSITY PARK CAMPUS
Title:

Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]
Recipient Name: RICHARD SINGER
Position: SCCA Representative
Department: (Not Available)
Campus: ALTOONA CAMPUS
Title:
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Dean of the College

Recipient Name: PETER J BUTLER
Position: Dean of the College
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

Vice President Of The Commonwealth Campuses

Recipient Name: DAVID CHRISTIANSEN
Position: Vice President Of The Commonwealth Campuses
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
Reviewed On: [Not Yet Reviewed]

SCCA Subcommittee Review

Recipient Name: CORTNEY SMITH
Position: SCCA Subcommittee Review
Department: (Not Available)
Campus: UNIVERSITY PARK CAMPUS
Title:
Concur: [Not Yet Reviewed]
Comments: [Not Yet Reviewed]
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<td><strong>PAULA HAMATY</strong></td>
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<tr>
<th>Title</th>
<th>Recipient Name</th>
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<th>Campus</th>
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<td><strong>ALLISON ALBINSKI</strong></td>
<td>(Not Available)</td>
<td>UNIVERSITY PARK CAMPUS</td>
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<td>Position</td>
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<td>Concur</td>
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<td>Comments</td>
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**Request sent:** 2/17/2017 at 2:03 PM

**Concur:** [Not Yet Reviewed]
**Comments:** [Not Yet Reviewed]
**Reviewed On:** [Not Yet Reviewed]
Curricular Information

Blue Sheet Item #:
Review Date:

Program Codes

Altoona College: XX
Berks College: XX
Engineering: EMET_BS
University College: XX

Option Codes

Electro-Mechanical Engineering Technology:

UPLOADED DOCUMENTS:

Context Type: Prospectus Memo
File Description: ACUE Prospectus Committee EMET Memo Nov 8, 2016
File Name: ACUE-MEMO-Edmondson-EMET.pdf

Context Type: Supporting Documents
File Description: EMET-Consultation-Change-Proposal
File Name: EMET-Consultation-Attach-1.pdf

Context Type: Supporting Documents
File Description: EMET-Consultation-Retention-Transfer
File Name: EMET-Consultation-Attach-2.pdf
DATE: November 8, 2016

FROM: Jacqueline Edmondson

TO: Peter Butler

Thank you for the submission of your P-2 prospectus to make curricular revisions to the Bachelor of Science in Electro-Mechanical Engineering Technology. The ACUE Prospectus Committee has reviewed your prospectus and recommends continued consultation with the colleges offering the program (Altoona, Berks, and University College) as well as those that offer engineering degrees (Earth and Mineral Sciences, Behrend, Harrisburg). In line with AAPPM P-2 criteria and consultation, you may now move to the formal P-2 submission process.

cc: David J. Christiansen
    Kadi K. Corter
    Michele L. Duffey
    Anna M. Griswold
    Daniel R. Hagen
    Tracy S. Hoover
    Robert N. Pangborn
Electro-Mechanical Engineering Technology (EMET) Program
Change Proposal Consultation

Includes:

- EMET Program
- EMET Retention & Transfer (part of program change)
- EMET 100 Course Add
- EMET 215 Course Add
- EMET 225 Course Add
- EMET 222 Course Change

The Engineering Technology Commonwealth Engineering “EMET Curriculum Committee” reviewed the program and highly recommends the changes included in the proposal packet referenced above. Consultation has taken place with the Penn State Colleges and Campuses as referenced in the documentation that follows.
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<td>Department Head, SEDTAP, UP</td>
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</table>
From: Sven Bilen [mailto:SBilen@engr.psu.edu]
Sent: Wednesday, September 21, 2016 12:48 PM
To: Doc Mueller <docm544@gmail.com>
Cc: IVAN ESPARRAGOZA <iee1@psu.edu>
Subject: RE: [WARNING - NOT VIRUS SCANNED] EMET Program Change Proposal

Doc,

I have no concerns with the proposal and am supportive of the proposed changes.

Sven

Sven G. Bilen, Ph.D., P.E.
Head, School of Engineering Design, Technology,
and Professional Programs
Professor of Engineering Design, Electrical Engineering,
and Aerospace Engineering
Chief Technologist, Center for Space Research Programs

The Pennsylvania State University
213B Hammond Building, University Park, PA 16802-1401
(814) 863-1526 FAX (814) 863-7229 sbilen@psu.edu
http://sedtap.psu.edu/~sbilen http://csrp.psu.edu

From: Doc Mueller [mailto:docm544@gmail.com]
Sent: Wednesday, September 21, 2016 10:59 AM
To: Sven Bilen <SBilen@engr.psu.edu>
Cc: IVAN ESPARRAGOZA <IEE1@PSU.EDU>
Subject: [WARNING - NOT VIRUS SCANNED] EMET Program Change Proposal

A gentle reminder. If you have any comments I would to have them by Friday.
Thanks,
Doc

Dr. Sven Bilen
Department Head, SEDTAP, UP
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:48 AM
To: SHERRY WALK
Cc: IVAN ESPARRAGOZA
Subject: FW: EMET Program Change Proposal

Categories: Purple Category

COE reply.

From: IVAN ENRIQUE ESPARRAGOZA [mailto:iee1@psu.edu]
Sent: Wednesday, September 14, 2016 1:19 PM
To: Doc Mueller <docm544@gmail.com>
Subject: RE: EMET Program Change Proposal

Hi Doc:

I have reviewed the proposal and I support the proposed changes.

Best regards,
Ivan E.

Ivan E. Esparragoza Ph.D.
Director of Engineering Technology and Commonwealth Engineering
The Pennsylvania State University
Associate Professor of Engineering
Penn State Brandywine
25 Yearsley Mill Road
Media, PA 19063 USA
Phone: +1 610 892 1420
Fax: +1 610 892 1490

From: Doc Mueller <docm544@gmail.com>
Sent: Wednesday, September 14, 2016 11:54 AM
To: IVAN ENRIQUE ESPARRAGOZA
Subject: EMET Program Change Proposal

Dr. Ivan Esparragoza
Director of Engineering Technology,
College of Engineering,
University Park

Dear Dr. Esparragoza,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:48 AM
To: Sherry Walk
Cc: IVAN ESPARRAGOZA
Subject: FW: EMET Program Change Proposal

Categories: Sherry

COE reply.

From: Christine Masters [mailto:CBM100@engr.psu.edu]
Sent: Wednesday, September 14, 2016 11:25 AM
To: Doc Mueller <docm544@gmail.com>
Cc: IVAN ESPARRAGOZA <IEE1@PSU.EDU>
Subject: Re: EMET Program Change Proposal

Doc,
I have reviewed the proposal and do not see any concerns so I support the proposed changes.

~Chris.

Christine B. Masters, Ph.D.
Assistant Dean for Academic Support and Global Programs, College of Engineering
Associate Professor, Engineering Science and Mechanics
The Pennsylvania State University
208 Hammond Building, University Park, PA 16802
(814) 865-6674
cbm100@psu.edu

From: Doc Mueller <docm544@gmail.com>
Date: Wednesday, September 14, 2016 at 11:18 AM
To: Christine Masters <CBM100@engr.psu.edu>
Cc: IVAN ESPARRAGOZA <IEE1@PSU.EDU>
Subject: EMET Program Change Proposal

Dr. Christine Masters
Asst Dean Undergraduate & Graduate Programs, UP

Dear Dr. Masters

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.
UC reply.

From: DAVID CHRISTIANSEN [mailto:djc21@psu.edu]  
Sent: Wednesday, September 14, 2016 5:44 PM  
To: Doc Mueller <docm544@gmail.com>  
Cc: IVAN ENRIQUE ESPARRAGOZA <iee1@psu.edu>  
Subject: RE: EMET Program Change Proposal

Doc,

Thanks for getting back to me, Doc. It looks like you are consulting to all the affected units, so I will defer to their judgment.

Good luck with the proposal.

David

From: Doc Mueller [mailto:docm544@gmail.com]  
Sent: Wednesday, September 14, 2016 5:41 PM  
To: 'DAVID CHRISTIANSEN' <djc21@psu.edu>  
Cc: 'IVAN ENRIQUE ESPARRAGOZA' <iee1@psu.edu>  
Subject: RE: EMET Program Change Proposal

Hi David,

The list of people for consultation is below. They were emailed this morning and I have heard from a handful of them so far.

I shared the P2 proposal with the administrative units of those campuses and I am also including them in the preliminary consultation. After we get the approval from ACUE, the entire proposal (I have attached a copy for your reference), including new courses, will take place including all units that might be impacted by the proposed changes.

I made the correction to item #3. Thank you.

Doc

Consultation with Affected Academic Units

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From: DAVID CHRISTIANSEN [mailto:dc21@psu.edu]
Sent: Wednesday, September 14, 2016 11:49 AM
To: Doc Mueller <docm544@gmail.com>
Cc: IVAN ENRIQUE ESPARRAGOZA <iee1@psu.edu>
Subject: RE: EMET Program Change Proposal

Doc,

Have you been in consultation with the PICs at Berks, Altoona, York, and New Kensington? Are they supportive?
I see you are creating new courses and modifying an existing one. The Faculty Senate will require you to submit individual course proposals and have these proceed concurrently with the baccalaureate revision. It is my understanding that they won’t approve a revision to a program unless the relevant courses are in place.

Under the rationale, #3 should read “Add a new course EMET 225”

David

From: Doc Mueller [mailto:docm544@gmail.com]
Sent: Wednesday, September 14, 2016 11:36 AM
To: djc21@psu.edu
Cc: 'IVAN ENRIQUE ESPARRAGOZA' <jee1@psu.edu>
Subject: EMET Program Change Proposal

David Christiansen
Assoc VP & Sr Assoc Dean for Academic Programs
University College

Dear Dr. Christiansen,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curriculum Committee
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:47 AM
To: Sherry Walk
Cc: IVAN ESPARRAGOZA
Subject: FW: EMET Program Change Proposal

Categories: Purple Category

AA reply. In his initial email he says that the campus and EMET program support the change.

From: Peter Moran [mailto:plm150@psu.edu]
Sent: Friday, September 23, 2016 10:58 AM
To: Doc Mueller <docm544@gmail.com>
Cc: IVAN ENRIQUE ESPARRAGOZA <iee1@psu.edu>; JENNILYN M VALLEJERA <jmv22@psu.edu>; LORI J BECHTEL-WHERRY <ljb3@psu.edu>; BARBARA A. WIENS-TUERS <baw16@psu.edu>; JUNGWOO RYOO <jxr65@psu.edu>
Subject: Re: EMET Program Change Proposal

Thanks for the email, Doc. The suggestion resulted from our recent experience with a P2, so I thought that I would save you from a potential follow-up question.

Thanks again,

Peter

From: "Doc Mueller" <docm544@gmail.com>
To: "Peter Moran" <plm150@psu.edu>
Cc: "IVAN ENRIQUE ESPARRAGOZA" <iee1@psu.edu>, "JENNILYN M VALLEJERA" <jmv22@psu.edu>, "LORI J BECHTEL-WHERRY" <ljb3@psu.edu>, "BARBARA A. WIENS-TUERS" <baw16@psu.edu>, "JUNGWOO RYOO" <jxr65@psu.edu>
Sent: Friday, September 23, 2016 10:41:33 AM
Subject: RE: EMET Program Change Proposal

Good morning Peter,
I changed the last question as you suggested. The proposal is being submitted on behalf of the EMET Curriculum Committee which has representatives from the 4 campuses that offer the EMET Program. In addition, the people listed below were sent the P2 for comments.
Thank you for your input.
Doc

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**From:** Peter Moran [mailto:plm150@psu.edu]
**Sent:** Friday, September 23, 2016 8:45 AM
**To:** Doc Mueller <docm544@gmail.com>
**Cc:** IVAN ENRIQUE ESPARRAGOZA <iee1@psu.edu>; JENNILYN M VALLEJERA <jmv22@psu.edu>; LORI J BECHTEL-WHERRY <lib3@psu.edu>; BARBARA A. WIENS-TUERS <baw16@psu.edu>; JUNGWOO RYOO <jxr65@psu.edu>
**Subject:** Re: EMET Program Change Proposal

Doc,

Penn State Altoona and our EMET program support the prospectus to change the EMET degree. The only suggestion that we have relates to the last question about how the proposed changes will affect other campuses and colleges. Since multiple campuses offer the program, you may want to mention that the changes will affect those campuses, and they have participated in and/or have been consulted during the development of the proposal. Thanks for sharing and good luck.

Best,

Peter
Thank you so much Doc for your lead in making these changes. After reviewing the proposed changes, I am in full support of these changes.

Thanks,

Paul

Dr. Paul Esqueda
Senior Associate Dean for Academic Affairs
Penn State Berks College
Email: pue1@psu.edu
Phone 610 396 6417
http://www.berks.psu.edu/FacultyStaff/pEsqueda.htm

Dr. Paul Esqueda
Sr. Assoc Dean for Academic Affairs, Penn State Berks

Dear Dr. Esqueda,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.
Dear Doc,

I support these proposed changes.

Keith

Sent from my iPhone

On Sep 14, 2016, at 11:24 AM, Doc Mueller <docm544@gmail.com> wrote:

R. Keith Hillkirk  
Chancellor, Penn State Berks

Dear Dr. Hillkirk,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller  
Chair, EMET Curriculum Committee

<P2 Form - EMET 2016.docx>
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:48 AM
To: Sherry Walk
Cc: IVAN ESPARRAGOZ
Subject: FW: EMET Program Change Proposal

Categories: Purple Category

BK reply.

From: Janelle B. Larson [mailto:jbl6@psu.edu]
Sent: Thursday, September 15, 2016 9:55 AM
To: Doc Mueller <docm544@gmail.com>
Cc: IVAN ENRIQUE ESPARRAGOZA <iee1@psu.edu>; Terry Speicher <tls20@psu.edu>
Subject: Re: EMET Program Change Proposal

Yes, I support these changes.

best regards,
Janelle Larson

From: "Doc Mueller" <docm544@gmail.com>
To: "Janelle Larson" <jbl6@psu.edu>
Cc: "IVAN ENRIQUE ESPARRAGOZA" <iee1@psu.edu>, "Terry Speicher" <tls20@psu.edu>
Sent: Wednesday, September 14, 2016 11:27:34 AM
Subject: EMET Program Change Proposal

Dr. Janelle Larson
EBC Division Head, Penn State Berks

Dear Dr. Larson,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curriculum Committee
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:48 AM
To: Sherry Walk
Cc: IVAN ESPARRAGOZA
Subject: FW: EMET Program Change Proposal

Categories: Purple Category

NK reply.

From: KEVIN J G SNIDER [mailto:kjs33@psu.edu]
Sent: Wednesday, September 14, 2016 7:13 PM
To: Doc Mueller <docm544@gmail.com>
Cc: IVAN ENRIQUE ESPARRAGOZA <jee1@psu.edu>; Karl Andrew Harris <kah26@psu.edu>; ANDREA E ADOLPH <aea13@psu.edu>
Subject: Re: EMET Program Change Proposal

Ahh, didn't follow that very well. Thanks for the clarification. I am in support of the changes.

Kevin

From: "Doc Mueller" <docm544@gmail.com>
To: "Kevin Snider" <kjs33@psu.edu>
Cc: "IVAN ENRIQUE ESPARRAGOZA" <jee1@psu.edu>, "Karl Andrew Harris" <kah26@psu.edu>, "ANDREA E ADOLPH" <aea13@psu.edu>
Sent: Wednesday, September 14, 2016 7:09:17 PM
Subject: RE: EMET Program Change Proposal

Hi Kevin,

MchT214 (1 credit) is being removed. EMET 222 is changed from 4 credits to 3 credit and EMET 225 (2 credits) is being added. So there is no change in the credits from these “mechanical courses” changes.

EMET 100 (1 credit) is being added. Replacing JET 215/216 (2 credits each) with EMET 215 (3 credits) removes 1 credit. And so there is no change in the credits from these changes.

Net result ... no change in the credit count. However, what we will have to do is change the recommended academic plan b/c adding EMET 100 to the fall freshman semester would put that credit count to 19.

Thanks for your question.

Doc
Dear Doctor Mueller,

I have one question on the curricular changes you forwarded me on behalf of the EMET Curriculum Committee. The content of EMET 100 looks to be filling a real need in the major. My question is does the addition of EMET 100 add 3 credits to the overall number of credits needed to graduate with a degree in EMET? My only concern is that we are not adding more time to graduation. I’m sure you have discussed this and I’m curious as to the committee’s thinking on the issue.

Other than that concern, I am in support of these changes.

Thank you,

Sincerely,

Kevin Snider
Dr. Kevin Snider
Chancellor, Penn State New Kensington

Dear Dr. Snider,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,

R. L. (Doc) Mueller
Chair, EMET Curriculum Committee
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:47 AM
To: Sherry Walk
Cc: IVAN ESPARRAGOZ
Subject: FW: EMET Program Change Proposal

Categories: Purple Category

NK reply.

From: ANDREA E ADOLPH [mailto:aea13@psu.edu]
Sent: Friday, September 16, 2016 12:09 PM
To: Doc Mueller <docm544@gmail.com>
Subject: Re: EMET Program Change Proposal

Thanks! I have only personally worked on P3 documents, and we send those around in all their glory, so this detail of the P2 is new to me. Have a great weekend!

--AEA

From: "Doc Mueller" <docm544@gmail.com>
To: "ANDREA E ADOLPH" <aea13@psu.edu>
Sent: Friday, September 16, 2016 12:03:08 PM
Subject: RE: EMET Program Change Proposal

It's in the actual proposal which I have attached for your reference. We are making 2 other changes that are considered insignificant and so they weren't in the P2. Those changes were: 1) added CAS 100 to CAS 100A and CAS100B AND 2) added ENGR 320 to the STS list.

Doc

From: ANDREA E ADOLPH [mailto:aea13@psu.edu]
Sent: Friday, September 16, 2016 11:40 AM
To: Doc Mueller <docm544@gmail.com>
Subject: Re: EMET Program Change Proposal

Hi Doc,

These changes sound good to me. I do know that you also have planned to add the ENGR 320Y course to the list of additional courses grouped as "Select 3 credits of GH or GS from: S T S 200 GS(3), S T S 233 GH(3), or S T S 245 GS;IL(3) (Sem: 2-8)." Will that be added to this P2 proposal, or will that be proposed in another P2?

Best,
Andrea
Dr. Andrea Adolf
Director of Academic Affairs,
Penn State New Kensington

Dear Dr. Adolf,

According to the protocol for changes in undergraduate programs, we are carrying out a preliminary consultation on curricular changes that we are proposing for the Electro Mechanical Engineering Technology (EMET) program.

Please see the attached file for details on the proposed changes. If you find these changes acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by September 23, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curriculum Committee
Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Thursday, September 29, 2016 11:47 AM
To: Sherry Walk
Cc: IVAN ESPARRAGOZA
Subject: FW: Read: EMET Program Change Proposal

Categories: Purple Category

YK read receipt. Never got a reply.

From: DAVID W CHOWN [mailto:dwc17@psu.edu]
Sent: Wednesday, September 21, 2016 1:40 PM
To: Doc Mueller <docm544@gmail.com>
Subject: Read: EMET Program Change Proposal

Your message

To: dwc17@psu.edu
Cc: 'IVAN ENRIQUE ESPARRAGOZA'; 'Chuck Gaston'
Subject: EMET Program Change Proposal
Sent: 9/21/2016 11:02 AM

was read on 9/21/2016 1:40 PM.
CONSULTATION LIST
R&T Proposal

College of Engineering
Ivan Esparragoza  Director of Engineering Technology – iee1
Sven Bilen       Head, SEDTAP – sbilen
Peter Butler     Assoc Dean for Education - pbutler
Christine Masters Asst Dean Undergraduate & Graduate Programs – cbm100

Berks College
R. Keith Hillkirk  Chancellor – rkh5
Paul Esqueda      Sr. Assoc Dean for Academic Affairs - pue1
Janelle Larson    EBC Division Head – jbl6

Altoona College
Lori J. Bechtel-Wherry  Chancellor – ljb3
Peter Moran         Asst Dean for Policy and Planning – plm150

University College
David Christiansen  Assoc VP & Sr Assoc Dean for Academic Programs – djc21

Kevin Snider       Chancellor, PSU New Kensington – kjs33
Andrea Adolph      DAA, PSU New Kensington – aea13

David Chown        Chancellor, PSU York – dwc17
Robert Farrell      DAA, PSU York – jrf10
Good morning Sven,

We are on the process of adding comments that address transfer students and it will ensure that other students (especially ENGR students) will able to transfer into the EMET program.

Thank you for your input.

Doc

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I would assume that any students who wished to switch into EMET later would be able to be handled (say from another BS degree in engineering)? Although I would imagine that is a small number.

If so, I have no issues with the proposal. Please proceed. (please edit SEDTAP to SEDTAPP)

Sven

Sven G. Bilén, Ph.D., P.E.
Head, School of Engineering Design, Technology, and Professional Programs
Professor of Engineering Design, Electrical Engineering, and Aerospace Engineering
Chief Technologist, Center for Space Research Programs

The Pennsylvania State University
213B Hammond Building, University Park, PA 16802-1401
(814) 863-1526 FAX (814) 863-7229 sbilen@psu.edu
http://sedtap.psu.edu/~sbilen http://csrp.psu.edu

---

Dr. Sven Bilén
Head, SEDTAP
College of Engineering
Dear Dr. Bilen

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by October 21, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curricular Committee
Hi Doc:

I have reviewed this proposal and I don’t have any concerns; therefore, I support it.

Best regards,

Ivan E.

Ivan E. Esparragoza Ph.D.
Director of Engineering Technology and Commonwealth Engineering
The Pennsylvania State University
Associate Professor of Engineering
Penn State Brandywine
25 Yearsley Mill Road
Media, PA  19063 USA
Phone: +1 610 892 1420
Fax: +1 610 892 1490

Dr. Ivan Esparragoza
Head, SEDTAP
College of Engineering

Dear Dr. Esparragoza,

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by October 21, 2016.
Response to Chris Masters

Sherry Walk

From: IVAN ESPARRAGOZA  
Sent: Friday, October 14, 2016 2:28 PM  
To: Christine Masters; Doc Mueller  
Cc: SHERRY WALK  
Subject: RE: [WARNING - NOT VIRUS SCANNED] Consultation for EMET R&T Proposal

Hi Christine:

We have had a conversation regarding the issue you brought to our attention and we have developed a wording for the proposal and we would like to hear your comments. This is the wording:

Admissions: (<18 credits): High school trig or pre-calculus to be admitted directly into the EMET program.  
Transfer: (> 18 credits): Admission requirements plus completion of college trig (MATH 26 or equivalent with C or better) or higher level math and a cumulative GPA > 2.0.

Or for transfer students is sufficient to say: completion of MATH 26 or equivalent with C or better and cum GPA >2.0.

Is this wording appropriate?

Thanks in advance and we look forward to hearing from you.

Best regards,  
Ivan

Ivan E. Esparragoza Ph.D.  
Director of Engineering Technology and Commonwealth Engineering  
The Pennsylvania State University  
Associate Professor of Engineering  
Penn State Brandywine  
25 Yearsley Mill Road  
Media, PA 19063 USA  
Phone: +1 610 892 1420  
Fax: +1 610 892 1490

From: Christine Masters [mailto:CBM100@engr.psu.edu]  
Sent: Tuesday, October 11, 2016 6:17 PM  
To: Doc Mueller  
Cc: IVAN ESPARRAGOZA; SHERRY WALK  
Subject: Re: [WARNING - NOT VIRUS SCANNED] Consultation for EMET R&T Proposal

Doc,

Because EMET is a direct admission program, I have no objections to removing the change of major restriction that automatically denies students entrance until they have at least 29.1 total credits on their transcript. That said, it would be good to clarify what, if any, the program requires for approval of the change of major into EMET once the student has already started their studies in another PSU program.

For example, (I'm looking at this site https://advising.psu.edu/entrance-major-requirements for much of this information)
Doc,

Because EMET is a direct admission program, I have no objections to removing the change of major restriction that automatically denies students entrance until they have at least 29.1 total credits on their transcript. That said, it would be good to clarify what, if any, the program requires for approval of the change of major into EMET once the student has already started their studies in another PSU program.

For example, (I'm looking at this site [https://advising.psu.edu/entrance-major-requirements](https://advising.psu.edu/entrance-major-requirements) for much of this information)

there are only a few other direct admit programs at Penn State, and most do not allow change of major at all into their programs or say 'limited opportunities for change of major'. (see the attached screen captures). I doubt that you want this to be the case for EMET, but should there be some metric the students need to meet if they started in another program and want to transfer into EMET? I guess for other programs such as many offered by the College of Earth and Mineral Sciences don’t have entrance requirements other than third semester classification (such as the BS in Geography and the BA in Geosciences) while other programs require completion of MATH 140 (such as the BS in Geosciences or Meteorology).

It is possible that you don’t want to list any particular course requirement because I also noticed that the 4-year technology programs at Harrisburg and Berks just list 3rd semester classification for Entrance to Major, while the Erie technology BS programs list a few math and phys courses as entrance requirements. I just think the proposal should at least mention whether or not there is something the students need to have completed after starting at PSU to demonstrate suitability for being in the EMET program.

On a separate but related note, I’m wondering why Altoona does not list EMET at all under their entrance to major requirements?

~Chris.
Dr. Christine Masters  
Asst. Dean Undergraduate & Graduate Programs  
College of Engineering  

Dear Dr. Masters,

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by October 21, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller  
Chair, EMET Curricular Committee
Doc,

Thanks for your patience. After consulting with the four Commonwealth Campuses that offer the EMET program, we are supportive of the change to make EMET a direct admit major.

David

From: Doc Mueller [mailto:docm544@gmail.com]
Sent: Tuesday, October 11, 2016 4:00 PM
To: 'DAVID CHRISTIANSEN' <djc21@psu.edu>
Cc: 'IVAN ENRIQUE ESPARRAGOZA' <iiee1@psu.edu>; 'Sheery Walk' <sfw2@psu.edu>
Subject: Consultation for EMET R&T Proposal

Dr. David Christiansen  
Assoc. VP & Sr. Assoc. Dean for Academic Programs  
University College

Dear Dr. Christiansen

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by October 21, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller  
Chair, EMET Curricular Committee
From: KEVIN J G SNIDER [mailto:kjs33@psu.edu]
Sent: Thursday, October 13, 2016 1:36 AM
To: Doc Mueller <docm544@gmail.com>
Subject: Re: Consultation for EMET R&T Proposal

Dear Dr. Mueller,

I have reviewed this recommendation and approve.

Sincerely,

Kevin Snider

From: "Doc Mueller" <docm544@gmail.com>
To: "Kevin Snider" <kjs33@psu.edu>
Cc: "IVAN ENRIQUE ESPARRAGOZA" <ee1@ipsu.edu>, "Sheery Walk" <sfw7@psu.edu>, "Karl Andrew Harris" <kah26@psu.edu>
Sent: Tuesday, October 11, 2016 4:01:00 PM
Subject: Consultation for EMET R&T Proposal

Dr. Kevin Snider
Chancellor
Penn State New Kensington

Dear Dr. Snider,

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your
Dear Dr. Mueller,

We at P S Berks support this change.

Keith Hillkirk

Sent from my iPhone

On Oct 11, 2016, at 3:51 PM, Doc Mueller <docm544@gmail.com> wrote:

Dr. R. Keith Hillkirk
Chancellor
Penn State Berks

Dear Dr. Hillkirk,

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

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Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curricular Committee

<Retention and Transfer Proposal Form - EMET.pdf>
Dear Dr. Larson,

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by October 21, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curricular Committee
Janelle B. Larson, D.Phil.
Associate Professor of Agricultural Economics
Head, Division of Engineering, Business and Computing
Penn State Berks
Tulpehocken Rd, PO Box 7009
Reading, PA 19610
Tel: 610.396.6183
Fax: 610.396.6024
Hi Doc,

I approve of this change to the ETM for EMET. It has been informally in effect for some time.

Thanks,
Andrea
YK no reply,

Sherry Walk

From: Doc Mueller <docm544@gmail.com>
Sent: Tuesday, October 11, 2016 4:06 PM
To: jrf10@psu.edu
Cc: IVAN ESPARRAGOZA; SHERRY WALK; CHARLES GASTON
Subject: [WARNING - NOT VIRUS SCANNED] Consultation for EMET R&T Proposal
Attachments: Retention and Transfer Proposal Form - EMET.pdf

Dr. Robert Farrell
Director of Academic Affairs
Penn State York

Dear Dr. Farrell,

As part of this Retention and Transfer proposal, we are carrying out a consultation on the change of the requirements to enter into the EMET program.

In 2006 the EMET Program was changed from a 2+2 program to a 4-year program. Before 2006 the ETM requirement for EMET was 29 credits. When the change occurred the ETM requirement was not officially changed to make the new program a direct entry major. In eLion it was easy to manually override the ETM requirement and place a student into the EMET Program. However, LionPath is not as forgiving and so now the change must officially be made. This proposal removes any ETM requirement for entry into the EMET Program.

Please see the attached file for details on the proposed changes. If you find the change acceptable, please indicate your support via email reply. If you have any concerns, please reply and provide your comments by October 21, 2016.

Thanks for your time reviewing this proposal, and I appreciate any feedback you may be able to provide.

Best regards,
R. L. (Doc) Mueller
Chair, EMET Curricular Committee