Wilkes University Curriculum Committee

PROPOSAL SUBMITTAL FORM

Directions:
- Use this set of forms for all proposals sent to the Curriculum Committee.
- Pages 1-3 of this document are required. Any unnecessary forms should be deleted from the packet before submissions. If multiple forms are needed (course addition, course deletion, etc), simply copy and paste additional forms into this packet.
- Note that all new programs (majors and minors), program eliminations, significant program revisions and all general education core revisions must be reviewed and approved by the Provost and Academic Planning Committee (APC) prior to submission to the Curriculum Committee. The Provost will make the decision if a program revision requires APC review.
- Completed and signed forms are due no later than the second Tuesday of every month. Submit one signed original hard copy and a scanned electronic copy with all signatures to the Chair of the Curriculum Committee.

1. Originator: Edward T. Bednarz III, Ph.D.
   Associate Professor
   Department of Mechanical Engineering and Engineering Management
   (570)408-7913 / Edward.Bednarz@Wilkes.edu

2. Proposal Title: Advanced CADD

3. Check only one type of proposal: (double click on the appropriate check box and change default value to “checked”).

☐ New Program. (Major or Minor Degree Programs). This requires prior review and approval by the Provost and APC.
☐ Elimination of Program. (Major or Minor Degree Programs). This requires prior review and approval by the Provost and APC.
☐ Program Revision. Significant revisions to a program require review and approval by the Provost. The Provost determines if review and approval by APC is necessary.
☐ General Education Revision. Submissions only accepted from the General Education Committee (GEC). Must be reviewed and approved by the Provost.
☐ Creation of new departments, elimination of existing department. This requires prior review and approval by the Provost and APC.
☒ Course additions or deletions not affecting programs (such as elective courses, transition of “topics” courses to permanent courses).
☐ Change in course credit or classroom hours.
☐ Incidental Changes. Includes changes in course/program title, course descriptions, and course prerequisites. (Although these changes do require approval by the Curriculum Committee, they do not go before the full faculty for approval).
☐ Other (Specify)
4. Indicate the number of course modification forms that apply to this proposal:

___ 1  Course Addition Form (plus syllabi)
     ___  Course Deletion Form
     ___  Course Change Form

5. Executive Summary of Proposal.
   Briefly summarize this proposal. The breadth and depth of this executive summary should reflect the complexity and significance of the proposal. Include an overview of the proposal, background and reasoning behind the proposal and a description of how the proposal relates to the mission and strategic long-range plan of the unit and/or university. For incidental changes a one or two sentence explanation is adequate.

Advanced CADD is intended to serve as a technical elective for undergraduate and graduate Mechanical Engineering students. The course has successfully run three times under ME 398 and ME 498 Special Topics and is looking to transition to a permanent course number of ME 380.

6. Other specific information. (Not applicable for incidental changes.)

   What other programs, if any, will be affected by this proposal? Describe what resources are available for this proposal. Are they adequate? What would be the effect on the curriculum of all potentially affected programs if this proposal were adopted? Include any potential effects to the curriculum of current programs, departments and courses.

   The proposed course would be taken by ME juniors or seniors as an advanced technical elective or by MSME students. The course has successfully run three times with enrollments up to 25 students. The engineering curriculum requires technical electives and this course provides depth to the subject of Computer Aided Drafting and Design (CADD).

7. Program Outline. (Not applicable for incidental changes).

   A semester-by-semester program outline as it would appear in the bulletin for a new program or any modified program with all changes clearly indicated.

Not applicable
Signatures and Recommendations. (please date)

- Signatures of involved Department chair(s) and Dean(s) indicate agreement with the proposal and that adequate resources (library, faculty, technology) are available to support proposal.
- If a potential signatory disagrees with a proposal he/she should write “I disagree with this proposal” and a signed statement should be attached to this submission.

Henry J. Castejon  Sep. 19, 2018

Print Name/Title:  Signature:  Date:
Department chair(s) of all potentially affected programs – Dr. Henry Castejon, Mechanical Engineering and Engineering Management

PRAHLAD MURTHY, Interim Dean, CSE  9/20/18

Print Name/Title:  Signature:  Date:
Dean (s) of any potentially affected College/School – Dr. Prahlad Murthy, CSE

Susan Hritzak  9/21/18

Print Name:  Signature:  Date:
Registrar – Susan Hritzak
Wilkes University Curriculum Committee
COURSE ADDITION FORM

1. Course Title: Advanced CADD

2. Course Number: ME 380

3. Course Credit Hours:
   Classroom Hours ___3___   Lab Hours _____   Other _____

4. Course Prerequisites: ME 180, ME 335

5. Course Description (as proposed for the Bulletin): Course descriptions provide an overview of the topics covered. If the course is offered on a scheduled basis, i.e. every other year, or only during a set semester, note this in the description. Course descriptions should be no more than two to three sentences in length.

   An advanced course in Computer Aided Drafting and Design (CADD) using SolidWorks. This course will introduce topics such as advanced modeling, advanced assemblies, Finite Element Analysis (FEA) and sheet metal.

6. Required Documentation:
   Proposed Syllabus Attach proposed syllabus immediately after this document. In some situations the official syllabus may contain information which is beyond the review needs of the Curriculum Committee (such as extensive rubrics, etc). It is permissible to attach an abbreviated syllabus. In general, syllabi (whether full or abbreviated) should contain the following information: Course Title, Course Number, Credit hours, Faculty Information (name contact information, office hours), Course Description, Course Outcomes or Objectives, Assessment (grading) information, required texts (or other things such as tools, software, etc), pertinent policies and a proposed schedule of topics.
Wilkes University - Department of Mechanical Engineering and Engineering Management
Syllabus – Advanced CADD – ME 380

A. GENERAL INFORMATION:  Technical Elective
Instructor:   Dr. Edward T. Bednarz III, Associate Professor of Mechanical Engineering
Contact Info: SLC 375, Phone: 570-408-7913
E-Mail:      Edward.Bednarz@wilkes.edu

B. CATALOG DESCRIPTION:
ME 398 – Advanced CADD
Three credits
An advanced course in Computer Aided Drafting and Design (CADD) using SolidWorks. This course will introduce topics such as advanced modeling, advanced assemblies, Finite Element Analysis (FEA) and sheet metal.
Prerequisites: ME 180, ME 335

C. LEARNING OBJECTIVES:
1. Learn techniques of advanced modeling (a, c, e, g, k)
2. Construct top down and bottom up advanced assemblies (a, c, e, g, k)
3. Utilize SolidWorks Finite Element Analysis (FEA) as well as modal analysis (a, c, e, g, k)
4. Learn how to draw sheet metal parts (a, c, e, g, k)
5. Work with a small group to utilize engineering design for a set purpose while under certain constraints (a, b, c, e, f, g, h, i, j, k)
   * The letters in parenthesis refers to ABET outcomes

D. RELATIONSHIP OF THE COURSE OUTCOMES TO ABET (Criterion 3) OUTCOMES:
The Accreditation Board for Engineering and Technology (ABET) Criteria 2000 define a number of program outcomes that all graduates of ABET accredited Engineering programs must have. How this course is related to ABET outcomes (a-k) is listed below:
Outcomes a, c, e, g and k are central to the course. These outcomes are attained by learning principles of advanced computer aided drafting and design. The student will use computer tools for successful engineering design.
Outcomes b, f, h, and i will be obtained through the group design project where students will use constraints and teamwork to solve a problem.

E. TOPICS COVERED:
Advanced modeling, advanced assemblies, Finite Element Analysis (FEA) and sheet metal

F. PREREQUISITES BY TOPIC:
Parametric CAD modeling

G. HOMEWORK AND PROJECT SCHEDULE:
1. Homework, attendance and class participation will consist of 1/3rd of the final grade.
2. Late HW will receive partial credit.
3. If working with other people on a homework assignment, be sure to list their names.
4. Each assignment is to be turned in individually.
5. Attendance is mandatory! Two sessions absentee will receive a zero final grade for the course.
6. There will be two design projects worth 1/3rd each of the final grade.
H. GRADING:
The final course grade will be determined as follows: \( \geq 90\% = 4.0; \) \( 85-89.9\% = 3.5; \) \( 80-84.9\% = 3.0; \)
\( 75-79.9\% = 2.5; \) \( 70-74.9\% = 2.0; \) \( 65-69.9\% = 1.5; \) \( 60-64.9\% = 1.0; \) \(< 60\% = 0.0 \)

I. Methods of Assessment:
- Graded HW
- Graded Exams
- Instructor Judgment
- Course Evaluations by Students
- Design Project
- Faculty Course Assessment
- Program skills surveys (performance criteria)

* Academic dishonesty will not be tolerated. The punishment of cheating or plagiarism can range from a 0% on an assignment, 0.0 for course or expulsion from school.