REGULAR COURSE SYLLABUS

School of: Professional Studies
Department: Engineering Technology
Prefix & Course Number: CET 1040  Crosslisted With*: EET 1040/ MET 1040
Course Title: Introduction to Engineering

Check All That Apply:  
Required for Major: _____  Required for Minor: _____  Specified Elective: _____
Required for Concentration: _____  Elective: _____  Service Course: X

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:
(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward to the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 3 (2+2)

Face-to-Face or Equivalent Hours per course:
Lecture 30  Lab 30  Internship _____  Practicum _____  Other (please specify type and hours): _____

Additonal Student Work Hours per course: 90

Schedule Type: L  Grade Mode: L

Variable topics umbrella course: No X Yes _____  If Yes, number of credit hours allowed _____

Specified repeatable course: No X Yes _____

APPROVED:

Department Chair OR Program Director:  
Date 2/7/2014

Dean OR Associate Dean:  
Date 3/21/14

Associate VP, Academic and Student Affairs:  
Date 3/25/14

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: CET 1040

Prerequisite(s): Minimum performance standard score on math placement test
Corequisite(s): __________
Prerequisite(s) or Corequisite(s): __________

Banner Enforced:
Prerequisite(s): Minimum performance standard score on math placement test
Corequisite(s): __________
Prerequisite(s) or Corequisite(s): __________

Registration restrictions: Level ______ Class ______ Program/Major ______ Student attribute ______

Catalog Course Description:
This course is an introductory engineering course exposing students to a cross section of topics in contemporary civil, electrical and mechanical engineering disciplines to assist them with their education career choices. Students are taught to work in teams, introduced to the design process, utilize math and computer programs to analyze raw data and properly display their results in a presentation to their peers. The history of the engineering profession and its relation to current national, social, industrial, ethical, and international issues and problems will be discussed.

Specific Variable Topics Course Description (if applicable, umbrella course description included above):

Required Reading and Other Materials will be equivalent to:
• Other course materials will be provided by the faculty.

Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to:
1. Describe concepts of social and political effects of Electrical Engineering, Civil Engineering and Mechanical Engineering on society.
   a. Social
   b. Cultural
   c. Ethical
   d. Environmental
2. Analyze, interpret and present engineering data using spreadsheets, graphs and computer software.
   a. Effective use of traditional and electronic reference sources
   b. Apply math and logic to engineering related problems
3. Describe the relationship between applied engineering and research in Natural Science fields.
4. Describe and relate historical achievements in civil, electrical and mechanical engineering
   a. Today’s life style and issues.
   b. Social, cultural, ethical, and environmental forces.
5. Define basic civil, electrical and mechanical engineering areas.

Detailed Outline of Course Content:
I. Role of Engineering and Technology in Society
   A. Job opportunities/professional careers
   B. Professional societies and professional registration
II. Being Successful in Engineering School
   A. Role of the University
   B. Learning in University Environment
   C. Effective Problem-Solving
   D. Maximizing Performance in Courses
III. Dimensions, Units, and Errors
   A. Dimensional Analysis
Prefix and Course Number: CET 1040

B. English system of units
C. SI system of units
D. Error Analysis

IV. Civil
A. Areas of Civil Engineering
B. Projects/Case studies and or guest lecture/fieldtrips in the Civil Engineering profession

V. Electrical
A. Areas of Electrical Engineering
B. Projects/Case studies and or guest lecture/fieldtrips in the Electrical Engineering profession

VI. Mechanical
A. Areas of Mechanical Engineering
B. Projects/Case studies and or guest lecture/fieldtrips in the Mechanical Engineering profession

VII. Use of computer software for Engineering Problems
A. Spreadsheets
B. Graphical presentations
C. Using Excel to analyze data
D. Power Point

VIII. Social and Political Effects
A. Engineering Ethics
B. Diversity-Respecting others
C. Impact on Decision-Making
D. Research
E. Influence of Technological Change

IX. Engineering Design
A. Individual project
B. Team project

Evaluation of Student Performance:
1. Exams
2. Homework
3. Projects
4. Reports
5. Oral Presentation
Metropolitan State University of Denver

COURSE CROSSLISTING AGREEMENT REQUEST

This is to confirm that the undersigned have met, discussed, and agreed that the following course be crosslisted as follows:

**Original/Standing Course:**

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EET</td>
<td>1040</td>
<td>Introduction to Engineering</td>
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**PRIMARY COURSE OWNER (Dept.):**

ETS

**Course to be crosslisted with (one or more courses):**

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<td>Introduction to Engineering</td>
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<tr>
<td>MET</td>
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<td>Introduction to Engineering</td>
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Beginning 201450 (semester and year).

**Approvals:**

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<th>Department Chair OR Institute Director</th>
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Office of Academic and Student Affairs Designee

**Date**

Please forward the completed form to the Office of Academic and Student Affairs for processing (SSB 330, Box 48). It will remain in force until rescinded by one of the parties using the Crosslisting Termination Form.