COURSE OUTLINE

MECH 480 – Co-Op Experience in Mechanical Technology

Prepared By: Daniel Miller
A. **TITLE**: Co-Op Experience in Mechanical Technology

B. **COURSE NUMBER**: MECH 480

C. **CREDIT HOURS**: 1 – 6

D. **WRITING INTENSIVE COURSE**: No

E. **COURSE LENGTH**: 15 weeks

F. **SEMESTER(S) OFFERED**: Spring

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY**: 40 hours per week per credit hour request

H. **CATALOG DESCRIPTION**:

The course provides real world learning experience through professional cooperative education placement in a private/public organization related to the student's academic objectives and career goals. This course requires students to be involved in the design, fabrication, and testing of a system, a component, a software, or a machine where real world constraints such as manufacturability, reliability, safety, environment, aesthetics, and costs are important. In addition to their work experience, students are required to submit bi-weekly reaction papers and an academic portfolio and presentation to a Faculty Coordinator.

I. **PRE-REQUISITES**: Junior standing, consent of academic advisor, approval by Dean of CSEOET.

J. **GOALS (STUDENT LEARNING OUTCOMES)**

By the end of this course, the student will be able to:

<table>
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<th>Course Objective</th>
<th>Institutional SLO</th>
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| a. Demonstrate ability to plan and meet work responsibilities, and to communicate plans and progress to employer and faculty advisor. | 1. Communication  
2. Critical Thinking  
3. Professional Competence  
4. Inter-Intrapersonal Skills |
| b. Apply project management skills on engineering/manufacturing assignments. | 1. Communication  
2. Critical Thinking  
3. Professional Competence  
4. Inter-Intrapersonal Skills |
| c. Practice and improve professional communication skills. | 1. Communication  
2. Critical Thinking  
3. Professional Competence  
4. Inter-Intrapersonal Skills |
| d. Practice teamwork and gain familiarity | 1. Communication |
with economic, societal and ethical issues.

2. Critical Thinking
3. Professional Competence
4. Inter-Intrapersonal Skills

e. Accrue experience and insight that will enhance the student's potential for career growth upon graduation.

1. Communication
2. Critical Thinking
3. Professional Competence
4. Inter-Intrapersonal Skills

K. TEXTS: None

L. REFERENCES: None

M. EQUIPMENT: None

N. GRADING METHOD: A-F

O. MEASUREMENT CRITERIA/METHODS:
   • Bi-Weekly reports
   • Formal reports
   • Portfolio
   • Final Report/presentation
   • Field Assessment(s)

P. DETAILED COURSE OUTLINE:

I. Journal
   A. Daily hours worked
   B. Daily activities/observations
   C. Notation of relevance to course work

II. Bi-Weekly reports
   A. Cumulative hours worked
   B. Relevant activities and observations for the week
   C. Reflections on activities

III. Portfolio
   A. Cumulative bi-weekly reports with instructor feedback
   B. Site supervisor evaluations
   C. Formal Reports
   D. Photographs and other appropriate documentation

IV. Co-Op assessment
   A. Site Supervisor evaluation(s)
   B. Instructor evaluation

V. Final Report/presentation
   A. Oral presentation to faculty and/or students
   B. Summary of Co-Op experience formatted according to instructions in the Co-Op manual.