A. **TITLE:** Capstone Project

B. **COURSE NUMBER:** MECH 477

C. **CREDIT HOURS:** 3

D. **WRITING INTENSIVE COURSE:** Yes

E. **COURSE LENGTH:** 15 weeks

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

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**
   3 lecture hours per week

H. **CATALOG DESCRIPTION:**

This course provides a learning experience that allows a student to design, implement, test, and analyze a project that was proposed in MECH377.

I. **PRE-REQUISITES/CO-REQUISITES:**
   Pre-Requisite: MECH377 – Capstone Research & Proposal
   Co-Requisite: Completion of 90 credit hours or permission of instructor.

J. **GOALS (STUDENT LEARNING OUTCOMES):**
   By the end of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Course Objective</th>
<th>Institutional SLO</th>
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<tbody>
<tr>
<td>1. Perform basic research</td>
<td>1. Communication</td>
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<tr>
<td>2. Demonstrate ability to project design and implementation</td>
<td>1. Communication</td>
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<td>2. Critical Thinking</td>
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<td>3. Identify and propose a solution to a specific engineering technology problem</td>
<td>1. Communication</td>
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<td>2. Critical Thinking</td>
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<td>3. Professional Competence</td>
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<td>4. Prepare a standard project report</td>
<td>1. Communication</td>
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<td>5. Demonstrate classroom presentation skills</td>
<td>1. Communication</td>
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<td>4. Inter-Intrapersonal Skills</td>
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K. **TEXTS:** None

L. **REFERENCES:**


M. **EQUIPMENT:** MET and/or ACET laboratory is used. Students are responsible for materials or components that may be needed to complete an approved project.

N. **GRADING METHOD:** A-F
O. MEASUREMENT CRITERIA/METHODS:
   • Weekly updates
   • Final report
   • Final presentation
   • Portfolio

P. DETAILED COURSE OUTLINE:

1. Project Update
   A. Individual or team project updates (bi-weekly or weekly)

2. Project Report
   A. Must follow a standard design report outline: problem definition, objectives, background information, diagrams, sketches, drawings, and tables.

3. Presentation
   A. Individual/group project presentations
   B. Public speaking/dress code
   C. Project demonstration
   D. Q&A from students, faculty and staff

Q. LABORATORY OUTLINE: None