

## ABET Course Syllabus for MET 489C: Senior Project III

1. Course number and name: MET 489C: Senior Project III
2. Credits and contact hours: 4 credit hours, 6 hours per week
3. Instructor's Name: Dr. Jeunghwan "John" Choi, Charles Pringle, PE
4. Textbook, title, author, and year:
  - *Project Management Body of Knowledge, 4th ed.*, Project Management Institute, Inc., 2008.
  - *Machinery's Handbook, current ed.*, Industrial Press;
  - *Mark's Standard Handbook for Mechanical Engineers, current ed.*, McGraw Hill.
  - a. Other supplemental materials:
    - Internet access
    - Word processing
    - Spreadsheet
    - Electronic device
5. Specific course information:
  - a. Brief description of the content of the course (catalog description): This capstone course includes planning, design, and analysis (A), construction (B), and test and evaluation (C). The students select an engineering problem and design a solution. Two hours of lecture and four hours of practice. Formerly MET 495C; students may not receive credit for both. Course will be offered every year (Spring).  
Notes: Course must be taken in sequence. Failure to complete any course in this sequence, requires restarting the sequence at 489A.
  - b. Pre-requisites: MET 489B.
  - c. Required, elective, or selected elective (as per Table 5-1) course in the program: Required
6. Specific goals for the course:

Capstone course providing the students a culminating engineering experience.

  - a. Specific outcomes of instruction:
    - Demonstrate the ability to apply mechanical engineering skills through optimized design, construction, and evaluation of their project.
    - Demonstrate 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.
    - Demonstrate an ability to design systems, components, or processes for broadly defined engineering technology problems appropriate to program educational objectives.

- Demonstrate an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- Demonstrate a knowledge of the impact of engineering technology solutions in a societal and global context.
- Apply organizational skills to promote progress.
- Communicate their progress and achievements through meetings, reports, and presentations.

b. Criterion 3 student outcomes addressed by course:

3 (1)

7. Brief list of topics covered:

- Project management
- Design optimization
- Manufacturing process selection
- Proposal generation

Analysis and critique of engineering methods