

EOC 2801 Fabrications of Ocean Engineering Systems

ABET Course Syllabus

1. **Course number and name:** EOC 2801 Fabrications of Ocean Engineering Systems
2. **Credits and contact hours:** 1 credit / 1 50-minute lecture each week
3. **Instructor's or course coordinator's name:** Dr. R. Coulson
4. **Textbook, title, author, and year:**

U.S. Army's "Fundamentals of Machine Tools"; Training Circular number 9-524
metalworking.com/tutorials/ARMY-TC-9-524/9-524-index.html

5. **Specific course information:**

- (a) Brief description of the content of the course (catalog description): A laboratory course directed at acquainting ocean engineering students with the basic machinery and machining processes used to fabricate parts of engineering systems for use in an ocean environment.
- (b) Prerequisites or co-requisites: EGN 1111C (with a grade of C or above).
- (c) indicate whether a required, elective, or selected elective course in the program: Required

6. **Specific goals for the course:**

- (a) Specific outcomes of instruction (course-specific objective): The objective of the course is to provide the students with the basic knowledge of how to safely use the common machine tools in the OME machine shop to construct two simple projects.
- (b) Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course. The learning outcomes of the course (and related ABET Criterion 3) outcomes are:
 - Machining with emphasis on band saws, lathes, and milling machines (1,2,6)

7. **Brief list of topics to be covered:**

- Machine shop safety
- Measuring instruments
- Cutting speeds, feed rates, & lubrication fluids
- Machining with emphasis on drill presses, lathes, and milling machines
- Selection of materials.
- Designing O-ring seals
- Introduction to welding methods