

Syllabus

Aug 28, 2023

Course Staff and Office Hours

Instructor: tatiana.tchoubar@stonybrook.edu
Office Hours: Wednesdays 3-5 pm (online) or by appointment

Project Coordinator: wendy.tang@stonybrook.edu Rm 231 Light Engineering, (631) 632-8404
Office hours: Tuesdays and Thursdays 2-4 pm or by appointment.
Online: <https://stonybrook.zoom.us/j/6316328404> Meeting ID: 631 632 8404

Office hours and locations may change. Please check Brightspace for most up-to-date information.

Project Advisors: David Westerfeld, Tom Robertazzi, etc.

Course Description

This is a two-semester, year-long capstone design project in which students acquire a culminating design experience by working on a design project that involves realistic constraints including economic, environmental, sustainability, manufacturability, ethical, health, and safety, social, and political factors. Implementation and testing are carried out. Two comprehensive technical reports (one for EEO 440 and one for EEO 441) and oral presentations are required. Fall and Spring. **Prerequisites:** EEO Major
Credits: 3

Textbooks: R. M. Ford and C. S. Coulston, Design for Electrical and Computer Engineers, McGraw-Hill, 2008, ISBN: 978-0073380353/ 0073380350

Course Learning Objectives

- demonstrated skills in engineering design, implementation and testing
- some knowledge of contemporary issues;
- an awareness of the importance of lifelong learning
- practiced communication skills
- an increased ability or awareness on how to participate effectively in a community of learners.

Student Learning Outcomes

Student Outcomes	% contribution
1 an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	25%
3 an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	25%
3 an ability to communicate effectively with a range of audiences.	10%
4 an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal	10%
5 an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	10%
6 an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.	10%
7 an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	10%

Grading

- Project Grade: 80%;
- Online Discussions 15%;
- E-Portfolio : 5%.

For EEO 440, the grade will be “R” pending completion of EEO 441.

Upon completion of EEO 441, the grade for EEO 440 will be changed to that of EEO 441.

Project: Students work on a project under the supervision of a project advisor. A list of available projects is posted under Brightspace. In some of these projects, a BSEE online student works with a team of ESE students in the in-person EE or CE program. Students can also propose their own project which must be approved by a project advisor. After reviewing a list of available projects, students submit a survey to indicate their project preferences. The project coordinator will assign a project to each student based on the submitted preferences.

Meetings with Advisor: Periodic online meeting and consultation with advisors are required. We anticipate weekly meetings in the beginning and end of the semester and bi-weekly meeting in between.

Project Reports: Submission of a final report for EEO 440 and another for EEO 441 is required.

E-Portfolio: Each project is required to prepare an online e-portfolio of the project in EEO 441.

Asynchronous Discussions You will be expected to actively participate in all group discussions. Active participation means providing meaningful expression and well thought out answers to the questions. Participation online means posting an answer to each of the discussion questions and responding to other students' posts. The student who actively participates and adds relevant content to the discussion during the entire period will receive full credit.

General Schedule:

Weeks 1- 4: Project Specification

Week 5-6: New Knowledge Acquisition and Application Lecture

Week 7-8: Engineering Ethics Lecture (ENGINEERING, ECOLOGY, AND ECONOMICS)

Week 9: Project Description

Week 10-11: Review E-Portfolio Video

Week 12: E-Portfolio Site (due)

Week 13: Project Progress Presentation and E-Portfolio Update

Week 14: Project Presentation on E-Portfolio

Student Accessibility Support Center Statement

If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at sasc@stonybrook.edu. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Academic Honesty and Integrity:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow

their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

BLACKBOARD If you need technical assistance, please contact Client Support at (631) 632-9800 or supportteam@stonybrook.edu.

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