

# EE 4981H/4982V – Senior Design Project

*Updated: April 26, 2013*

*This course outline is to serve as a reference for instructors and students. It gives a general overview of course content and ABET Outcomes. Please consult the semester specific syllabus produced by the course instructor for more detailed information.*

## **Course Prerequisites, Basic Content, and Outcomes**

### **Catalog Description**

(2.0 cr Fall + 2.0 cr Spring; Prereq-ECE honors, sr, #; fall, every year)

Experience in research/design for electrical/computer engineering. Oral/written reports.

**Contact Hours:** Independently scheduled.

**Texts:** N/A

**Prerequisites by Topic:** Senior level student in Electrical or Computer Engineering with exceptional record.

### **Course Outcomes:**

- Familiarity with the nature of open-ended research and design projects.
- Ability to formulate a project, and design and conduct relevant experiments.
- Ability to analyze and interpret analytical and experimental results, and to modify the course of the project accordingly.
- Familiarity with research and design in several disciplines and specialties.
- Ability to effectively communicate technical issues in written and oral forms.
- An appreciation for the necessity of life-long learning and the utility of post-baccalaureate education.
- Familiarity with ethical issues in the conduct of research, and the reporting of result.

**Relationship to Student Outcomes:** In accordance with ABET accreditation criteria, all engineering programs must demonstrate that their students achieve certain outcomes. This list of outcomes may be found on the ABET.org website. Of the outcomes listed in the ABET criteria (enumerated as (a) through (k)), this course teaches skills which help the student achieve the following outcomes:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (i) a recognition of the need for, and an ability to engage in life-long learning

## Course Outline

### Date

Beginning of October  
End of January  
End of April  
End of semester

### Topics

Submission of written proposal and oral presentation  
Written progress report due and oral presentation  
Final project results and oral presentation  
Final written report due

## Departmental and University Policies

**Student Academic Integrity and Scholastic Dishonesty:** Academic integrity is essential to a positive teaching and learning environment. All students enrolled in University courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own, can result in disciplinary action. The University Student Conduct Code defines scholastic dishonesty as follows:

**Scholastic Dishonesty:** Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging , or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis.

Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" or "N" for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

**Incompletes:** A grade of I for Incomplete is given at the discretion of the course instructor when, due to extraordinary circumstances, the student who has successfully completed a substantial portion of the course's work with a passing grade was prevented from completing the work of the course on time. Students must fill out an Incomplete Grade Agreement form found in Keller 3-166. The maximum time to remove and replace an incomplete grade is one year.

**Makeup Work for Legitimate Absences:** Consult university policy here:  
<http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html>

**Personal Electronic Devices:** Consult university policy here:  
<http://policy.umn.edu/Policies/Education/Education/CLASSROOMPED.html>

**Mental Health:** As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website at <http://www.mentalhealth.umn.edu>