Department of Electrical and Computer Engineering  
University of Massachusetts Amherst  

ECE 303: Junior Seminar  
Spring 2010

**Time:** Monday, 1:25 – 2:15 pm  
**Location:** Engin. & Comp. Science II, room 119 (auditorium)

**Instructors:** Maciej Ciesielski  
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**Description:** Overview of the electrical and computer engineering field, including introduction to various sub-disciplines and the corresponding upper-level ECE courses. (1 credit)

**Prerequisite:** Grade of C or better in E&C-ENG 211, 212, 232 and 242.

**Objective:** To increase awareness of important aspects of the electrical and computer engineering profession through discussions of the roles and responsibilities of electrical and computer engineers in society, overviews of technical sub-disciplines, and an introduction to the process for conducting engineering projects.

**Web Site:** https://spark.oit.umass.edu

**Office Hours:** Open door policy or by appointment.

**Tentative Seminar Schedule**

- January 25  
  Course Overview  
  Planning Your Future: What You Need to Know to Get From Here to There  
  Prof. Maciej Ciesielski  
  Ms. Cheryl Brooks

**Part 1 – Technical Overview of Electrical and Computer Engineering**

- February 01  
  Communications, Signal Processing and Systems  
  Profs. Christopher Hollot and Patrick Kelly
- February 08  
  Microwaves and Electronics  
  Profs Anderson and Vouvakis
- February 16 (*Monday schedule*)  
  Computer Systems Engin.  
  Prof. Russel Tessier
- February 22  
  Professional Ethics  
  Prof. Linda Enghagen
Part 2 – Societal Roles and Responsibilities of Electrical and Computer Engineers

- March 01  PANEL: Future of Electrical & Computer Engineering - ECE Faculty
- March 08  Graduate and Continuing Education  Prof. Dennis Goeckel
- March 22  Technology and Society  Prof. David Jensen
- March 29  Engineering Projects: Intro+ Examples  Profs. Wolf and Tessier
- April 05  Innovation and Entrepreneurship  Prof. James Theroux

Part 3 – The Engineering Project Process

- April 12  Engineering Management  Vice Chancellor Michael Malone
- April 21  (Monday schedule)  Project Management  Prof. Tilman Wolf
- April 26  Review of Submitted Problem  Prof. Wolf and Tessier
- May 03  Career Paths – Alumni Examples  Prof. Baird Soules

Course Requirements

- Attendance: Attendance at all seminars is a course requirement. Unexcused absences will result in a grade penalty (see section on Grading below). You are expected to come to class on time and to stay for the full period.

- Writing Assignments: There are three writing assignments, all of which must be completed satisfactorily in order to pass the course (see section on Grading below):

  1. **Essay on Engineering Ethics** – This is a brief essay that will explore ethical issues in a case study of engineering practice.

  2. **Essay on Technology and Society** – This is a brief essay that will discuss issues related to the social, political, or cultural impact of a particular ECE-related technology.

  3. **Engineering Project Problem Statement and Requirements Specification** – This will be a brief document that defines and specifies the requirements for a prospective engineering project (suitable for an ECE Senior Design Project).

  Detailed descriptions of the written assignments will be posted on the course web site.

- Writing Assignments and due dates:
  - March 1st  Engineering Ethics essay
  - March 08  Brief (one paragraph) description of topic for Technology and Society essay
  - April 05  Technology and Society essay
  - April 12  Engineering Project Problem Statement (preliminary)
  - May 03  Engineering Project Problem Statement (revised)
Grading

- In order to pass the course, all written assignments (including the one-paragraph Science and Technology essay topic description and the preliminary Engineering Project problem statement) must be completed satisfactorily – failure to complete any of the assignments in a satisfactory manner will result in a failing grade for the course.

- If all assignments are completed satisfactorily and there are no unexcused absences or late assignments, then the course grade will be “A.”

- If all assignments are completed satisfactorily but there are one or more unexcused absences and/or late assignments, the course grade will be as follows:
  - One unexcused absence or late assignment: Course grade = A-
  - Any combination of two unexcused absences and/or late assignments: Course grade = B
  - Any combination of three unexcused absences and/or late assignments: Course grade = C
  - Any combination of four unexcused absences and/or late assignments: Course grade = D
  - Any combination of five or more unexcused absences and/or late assignments: Course grade = F

Important Notes

- An attendance sheet will be circulated during each class – it is your responsibility to make sure that you sign the sheet before you leave at the end of class. Failure to sign the attendance sheet will be treated as an absence.

- You will not be penalized for legitimate absences, but in order to have them excused, it is your responsibility to contact one of the instructors in a timely manner and to produce any required documentation.

- Signing the attendance sheet for anyone other than yourself will be considered an act of academic dishonesty.

- All submitted assignments must be your own work. Any acts of plagiarism or other forms of academic dishonesty will result in a failing grade for the course and referral to the University Academic Honesty Office, which may impose additional sanctions.

- For definitions and University policies on academic honesty and absences please see the Academic Regulations, available at the web site of the Undergraduate Registrar http://www.umass.edu/registrar/.

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