

ECE 303 - Junior Seminar

Department of Electrical and Computer Engineering
University of Massachusetts at Amherst

Fall 2019

Day & Time: Wednesdays, 1:25-2:15
Place: Goessmann 20
Instructor: Prof. Neal G. Anderson (210E Marcus, anderson@ecs.umass.edu)
Office Hours: MW 2:30-3:30 or by appointment

Course Description

Overview of the electrical and computer engineering field, including introduction to various subdisciplines and the corresponding upper-level ECE courses as well as non-technical dimensions of educational and professional planning and practice.

Tentative Seminar Schedule

- September 4 Course Overview Professor Anderson

Part 1 - Technical Overview of Electrical and Computer Engineering

- September 4 Micro- / Nano- / Opto-electronic Devices Professor Anderson
- September 11 Security Engineering Professor Burleson
- September 18 Computer Software, Systems & Networks Professor Irwin
- September 25 Computer Hardware Professor Tessier
- October 2 RF & Microwave Engineering Professor Frasier
- October 9 Electronics Professor Jackson
- October 16 Communications, Signal Proc. & Controls Professor Duarte

Part 2 – Non-Technical Dimensions of Electrical and Computer Engineering

- October 23 Professional Ethics Professor Merton (Isenberg)
 - October 30 Technology and Society TBD
 - November 6 Innovation and Entrepreneurship Professor McLaughlin
 - November 20 Engineering Management TBD
 - December 4 Career Planning Sally Darby (CoE Career Dev.)
 - December 11 Graduate and Continuing Education Professor Goeckel
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Course Requirements

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

Writings: There are two required writing assignments, both of which must be completed satisfactorily in order to pass the course (see “Grading” below).

- *Technology and Society Essay* - This is a brief essay that will discuss an issue of interest to the student, subject to the instructor's approval, that is related to the social, political, or cultural impact of a particular ECE-related technology.
- *Engineering Ethics Essay* – This is a brief essay exploring a case study in engineering practice with ethical dimensions.

Detailed descriptions of both essay assignments will be posted on Moodle in the first half of the semester (due dates TBD).

Grading

- If both writing assignments are completed satisfactorily and on time and the student has *no* unexcused absences*, then the student will receive a course grade of “A”.
- If both writing assignments are completed satisfactorily but one or both are completed late *and/or* the student has one or more unexcused absences*, then the course grade will be assigned as follows:
 - Course Grade = A- for 1 unexcused absence or late assignment
 - Course Grade = B for 2 unexcused absences and/or late assignments (in any combo)
 - Course Grade = C for 3 unexcused absences and/or late assignments (in any combo)
 - Course Grade = D for 4 unexcused absences and/or late assignments (in any combo)
 - Course Grade = F for 5 unexcused absences and/or late assignments (in any combo)
- In addition
 - If the student fails to satisfactorily complete either of the two writing assignments, then the student will fail the course regardless of attendance record.
 - If an assignment is returned to the student as “unsatisfactory” and needs to be resubmitted, the grade will be lowered one notch (e.g. from X to X- or from Y+ to Y).

* **Important Notes for Students**

An attendance sheet will be circulated at each class, and ***it is your responsibility*** to register your attendance by signing this sheet before you leave at the end of class. Failure to sign the attendance sheet will be treated as an unexcused absence.

You will not be penalized in any way for legitimate absences, but in order to have them excused ***it is your responsibility*** to contact the instructor in a timely manner and to secure any required documentation.

Relation to EE and CSE Program Outcomes: This course supports the following educational outcomes of the EE and CSE programs:

- Understand professional and ethical responsibility.
 - Be able to communicate effectively.
 - Understand the impact of engineering solutions in a global, economic, environmental and societal context.
 - Recognize the need for, and be able to engage in, life-long learning.
 - Have knowledge of contemporary issues.
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Inclusivity

We are all members of an academic community with a shared responsibility to cultivate a climate where all students/individuals are valued and where both they and their ideas are treated with respect. If you feel that your contribution is not being valued or respected for any reason, please speak with me privately. If you wish to communicate anonymously, you may do so in writing, speak with Assistant Dean Dr. Paula Rees (rees@umass.edu, 413.545.6324, or in person in 128B Marcus Hall, within the Engineering Community, Equity and Inclusion Hub across from the coffee shop). You may also submit any concerns or comments through the College of Engineering Climate Concerns and Suggestions on-line form (<https://tinyurl.com/UMassEngineerClimate>) and/or the Positive and Negative Classroom Experience online form (<https://tinyurl.com/UMassEngineerClassroom>).

Accommodation

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Academic Honesty

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/academic_policy).

Updated 9.4.19