

EE 235: Continuous Time Linear Systems

Fall 2012

Department of Electrical Engineering, University of Washington

Course objectives:

This course introduces undergraduate students to continuous time signals and systems, which is the starting point for work on signal processing, communications and control. Students who complete this course should gain:

- an understanding of basic theory of continuous-time signals and systems, particularly linear time-invariant systems;
- an intuitive understanding of system properties and how to test for these properties;
- the ability to translate between different types of system descriptions, including input-output equations, Laplace transforms, and Fourier transforms;
- insights into the relationship between time and frequency domains, and into which domains (time, frequency, etc) are most convenient for different types of problems; and
- familiarity with MATLAB.

Class Information:

Instructor: Tai-Chang Chen tcchen@uw.edu

Office Hours: Wednesdays & Fridays 1-2pm

Webpage: <http://faculty.washington.edu/tcchen/EE235/>

Make sure to check the class web frequently for class announcements, and reading assignments. Exam dates, holidays, The solution to the problem sets will be posted after collecting HWs as well.

Lectures: MTuWF 2:30-3:20pm at **EEB 125**

Textbook:

Signals & Systems, 2nd edition, Oppenheim & Willsky, Prentice Hall

Lab Handbook: Print from the class webpage

Grading:	<u>Segment</u>	<u>Weighting</u>
	Homeworks	18% (the lowest will be dropped)
	Laboratory Reports	20% (6 total)
	Midterm #1	18%
	Midterm #2	18%
	Final Exam	26%
		Total: 100%

Homeworks: There will be weekly homework assignments. Be prepared since some of the assignments may require a significant time commitment. Homeworks will be handed out each Friday and collected at the beginning of the class the following Friday. Unless previously discussed, no late homework will be accepted. You are encouraged to discuss the problems with other

students but the final work that you hand in should represent your own understanding of the solution. You will have the option of dropping the one with the lowest grade.

Exams: There will be two in-class midterms and a final exam. No make-up exam will be given. Failure to attend an exam or to make prior arrangements will result in a zero. The exams are normally closed book, closed-note, and closed homework. You are allowed one 8 1/2 x 11 sheet of paper of notes which you can handwrite whatever you want on. No electronic devices (calculators, laptops, smartphones, tablets, organizers, cell phones, beepers, iPods, cd players, radios, parrots or babies etc.) are allowed to be used during any exam..

Laboratory: You will get hands-on experience with the class material and sharpen your programming skills through Matlab labs. Note: CS142 is a prereq for this class! You may take it concurrently. However, we expect that you **KNOW PROGRAMMING FUNDAMENTALS**. In particular, you should be comfortable with what a function is in programming-speak, and the code $x = x + 1$ should make sense to you. We will teach you Matlab, but we cannot teach you basic programming skills. Thus, if you haven't already had some pascal, C, C++ or Java, it is strongly recommended that you first take CS142, then take this class.

Lab Sections: AA F 11:30 – 1:20pm
AB T 8:30 – 10:20am
AC W 3:30 – 5:20pm
AD Th 11:30-1:20pm
AE F 8:30-10:20am

Academic Integrity

If you cheat, you cheat yourself of the opportunity to learn the material, and you cheat your classmates — all of your classmates — out of grades they have earned. If you let someone else copy your work, you are allowing them to devalue your grade and that of your fellow students. Cheating is a bad way to embark on a career in engineering. Cheaters make bad engineers, and you should be a good one. You can help by not tolerating cheating by your fellow students. The TAs and I will monitor for cheating and I will resolve all cheating cases in accordance with College of Engineering and University policy. Please help avoid this by avoiding even the appearance of possible cheating. Cheating can result in failure of the course and/or eventual expulsion from the University.