

Department of Electrical and Computer Engineering
University of Massachusetts Amherst
ECE 212: Circuits Analysis II
Spring 2010 Syllabus

This page is available on the web: <http://www.ecs.umass.edu/ece212>.

Catalog Description:

With lab. Continuation of ECE 211. Analysis techniques for ac circuits, frequency response, resonance, Bode plots, phasor representation of sinusoidal steady-state systems, complex frequency domain, transfer functions. MOSFETs as amplifiers; operational amplifiers. Transformers, two-port networks, Fourier series. Lab includes circuit hardware and PSPICE simulation experiments. Prerequisite: grade of C or better in E&C-ENG 211.

Prerequisites:

In order to take ECE 323, students must have received a grade of C or better in each of the courses: ECE 211, ECE 212, ECE 232 and ECE 242 or have a Grade Point Average of 3.100 or better in the set of courses: ECE 211, ECE 212, ECE 232, and ECE 242. Students must be familiar with PSPICE because it is used extensively in laboratory analysis and required for the reports.

Instructors:

Lectures, Exam, and HW's s: Robert W. Jackson, 215K, jackson@ecs.umass.edu
Labs, Disc: Paul Siqueira, 113D, siqueira@ecs.umass.edu

Lectures:

Section 1: MWF 11:15 – 12:05 Eng. & CompSci 119

Laboratories:

Lab Section 1: M 2:30 - 5:30 pm Marston 221
Lab Section 2: Th 2:30 - 5:30 pm Marston 221
Lab Section 3: F 2:30 - 5:30 pm Marston 221

Note: For all lab sections, see the Course Schedule to determine lab weeks.

Discussion Sections:

Disc. Section 1: Tu 9:30 - 10:45 am Marston 15
Disc. Section 2: Tu 1:00 - 2:15 pm Elab 325
Disc. Section 3: Tu 2:30 - 3:45 pm Elab 325

Textbook (Required):

Ulaby, F. T., M. M. Maharbiz, *Circuits*. National Science and Technology Press, 2009.

References:

PSpice for Linear Circuits (w/CD-ROM), by J.A. Svoboda, Wiley, 2007. Comer, David, and Donald Comer, *Fundamentals of Electronic Circuit Design*. John Wiley & Sons, 2003.

Office Hours:

Professor Jackson, 215K Marcus, MWF, 1-2 pm.
Professor Siqueira, 113D KEB, WTh, 9-10 am, M 4 pm.

Teaching Assistants

Brian Paulsen bpaulsen@ecs.umass.edu
Jason Donovan jdonovan@ecs.umass.edu

Justin Chin chin@ecs.umass.edu

Undergraduate Teaching Assistants

Brennan Burns
Mandy Liem

Grading policy:

Projects 25% of total grade
Exams I, II & III: 14% of total grade each (total of 42%)
Final (Cumulative) 23% of total grade
Homework 10% of total grade

Comments:

- (1) In order to pass the course, a student must have at least a passing score on the average of the midterms and the final exam.
- (2) In order to pass the course, a student must have a passing grade on each of the six labs. All laboratory results will be certified as complete by the laboratory instructor or T.A.
- (3) Prelabs must be completed prior to the lab. Students showing up to lab without a completed prelab will not be allowed to perform the lab on that day. Prelabs include written entries into the lab reports as well as printouts related to running simulations in PSpice. So that the work can be verified, all PSpice simulations must include the student's name in the filename of circuit and waveform printouts.
- (4) Each lab will be graded on the preparatory design/simulation ("prelab report") as well as performance during the lab. Prelab reports are to be the work of individual students alone. Students who turn in a design that duplicates the design submitted by another student will cause all the students involved to get zero credit.
- (5) The first week of labs begins on Monday, Jan 25th. No prelabs are due at that time. Rather, the lab time will be used for orientation and questions.

ECE ACADEMIC HONESTY POLICY

An Honor Code Policy has been adopted for all ECE students at UMass Amherst, the result of a joint initiative between students in Eta Kappa Nu (the ECE student honor society) and the Faculty of the ECE Department. The purpose of this policy is to emphasize engineering ethics as an important part of your education and career, and to enhance the value of your ECE degree from UMass. Simply put, the policy requires that each ECE student demonstrate high ethical standards by attesting to personal honesty and integrity for each examination taken and laboratory report completed. The policy fits within the framework of the existing Academic Honesty Policy of the University, and is similar to that used by other universities. On the last page of your ECE 323 midterm and final exams, you will be expected to write out and sign your name to the Honor Code Pledge: **"On my honor, I have not given nor received aid on this exam."** This statement reflects your personal commitment to honesty and ethical practice in the taking of an exam. If you have not written and signed this, you will be contacted by the instructor. Cheating will not be tolerated. A student found cheating on an exam will receive an automatic grade of F on the exam, and likely will fail the course as well.