UNIVERSITY OF UTAH
Department of Electrical and Computer Engineering
ECE 2100 Fundamentals of Engineering Electronics
Syllabus

Prerequisites: MATH 2250, PHYCS 2220, and ECE 2000

Lecturer: Professor Angela Rasmussen
Office: MEB 3254
Phone: 971-1096
Email: ece2100@comcast.net

Textbook: Sedra and Smith, Microelectronic Circuits, 5th edition

Course Objective:
- Understanding of signals and frequencies (Bode Plots)
- Characteristics of operational amplifiers
- Characteristics of diode, BJTs, and FETs
- Analysis and design of diodes, BJTs, FETs in electronic circuit
- Efficient at using PSPICE
- Become a better problem solver
- Improve presentation and writing skills

Lecture: It is essential that you attend the lecture and take complete and accurate notes. Not all material given in lecture will necessarily be from the text. You are responsible for all topics, discussions, handouts and announcements made in class.

Homework: In general, assignments will be due on Wednesday by 5pm. No late assignments will be accepted. However, your lowest homework grade will be dropped. If you plan on being absent on a day that a homework set is due, you may either turn it in earlier or have a friend turn it in for you. Homework will not be accepted late.

Although collaboration with fellow students on homework assignments and studying is encouraged, you will benefit most from the homework if you attempt to do the problems before consulting with your friends. While it is perfectly reasonable to discuss your approach to solving the problems with a friend, the final write-up of the solution must be your own work. Copying or allowing another student to copy your work is considered cheating.

Homework will be your main study guide. Therefore, think of it as preparation for each exam. Please write clearly, show all of your work in an organized manner, put problems in the proper order and staple each homework set. Make sure you understand all of the homework.

Weekly Quiz: Each Friday at the beginning of class, there will be a quiz. The quiz will cover material from class, lab, homework of the previous week. No make-up quizzes will be given. However, your lowest quiz score will be dropped. Open book/notes.

SPICE Projects: Three computer simulation problems will be assigned during the semester. One letter grade (10% off grade) will be dropped per day late or per weekend that the completed project is late. After 5 days, the completed project will be given 25 points.
Exams: Three exams and a final will be given as noted on the class schedule. Exams will be open book, open notes. In NO CASE will make-up exams be given unless the student obtained approval from the instructor PRIOR to the time of the exam. In emergency situations, students will be expected to produce a doctor’s certificate indicating the nature and time of the medical emergency.

Labs: Lab will be held every week. Many of the subjects covered in lab aren’t covered anywhere else in class, so make sure you pay attention and read the lab handouts. You will have to keep a laboratory notebook as a requirement of the lab. Your lab TA will collect and grade these notebooks. You will write three formal reports as part of your lab. You will also make 2 individual presentations (3-5 minutes each) in your lab section.

Labs are not optional. For each lab that you miss or fail your final grade will suffer a half letter drop (5% of possible points). Be sure to make-up any labs you miss or fail by making arrangements with your TA.

Extra credit will be available throughout the semester. A total of 5 points can be earned to increase your laboratory grade by at least half a grade. Extra credit will also be given throughout the semester toward your lab grade by handing in corrections and/or improvement suggestions to laboratory experiment handouts. These will be given between 1/10 – ½ point per lab.

Grading: Your final grade will be determined based on the homework, weekly quizzes, SPICE assignments, midterms, and final exam. Your lowest weekly quiz grade and your lowest homework grade will be dropped. Your grade will be determined in two different ways:

1st:
- Homework – 9% (lowest score dropped)
- Quizzes – 7% (lowest score dropped)
- Spice – 9%
- Labs – 20%
- 3 Midterms – 35%
- Final – 20%

2nd:
- Homework – 9% (lowest score dropped)
- Quizzes – 7% (lowest score dropped)
- Spice – 9%
- Labs – 20%
- 3 Midterms – 20%
- Final – 35%

The best grade from the above two will be used as your final grade.

Grades: Your grade will be determined as follows:

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<th>Grade</th>
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<td>A</td>
<td>94 - 96</td>
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<td>A-</td>
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<td>B+</td>
<td>87 - 90</td>
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<td>B</td>
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<td>B-</td>
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<td>C+</td>
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Each student must do his/her own work. Copying from other students or allowing other students to copy on homework, quizzes, SPICE assignments, or exams is cheating. It is not tolerated and will result in a grade of “0” for the assignment/exam and possibly an automatic “F” for the course and may be referred to the University Judicial Procedures office.

Americans with Disabilities Act Information:
The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD) to make arrangements for accommodations.