COURSE DESCRIPTION

Microelectronic Devices and Circuits aims to provide a basic understanding of analog integrated circuits, as well as an introduction to electronic devices. See the attached “Instructional Objectives” for more detail. The course consists of three 50-minute lectures per week, one discussion session at which the homework and lecture material will be reviewed, and one three-hour laboratory per week. The prerequisite is EECS 40.


A reader including the Laboratory Manual and excerpts on basic circuit analysis and frequency-domain circuit analysis is available from Copy Central (Southside), 2560 Bancroft Way.

Reserve Books: In addition to the textbook and the reader, the following references are helpful and will be on two-hour reserve at the Bechtel Engineering Library:

Parallel Textbooks: *very useful for around 75% of the course material.*


SPICE references:


Exams and Grading: There will be two midterms and a final exam. The midterms will be held on Wednesday, October 10 and on Wednesday, November 14 from 6:00 - 7:30 pm and the final exam will take place 8:00 – 11:00 am on Wednesday, December 12 in rooms to be announced.

Your grade for the course will be made up approximately as follows:

Homework 10%, Laboratory, 25%; Midterm I, 15%; Midterm II, 20%, Final exam, 30%.

Laboratory: The laboratory is based on a BiCMOS tile-array chip set from MicroLinear, Inc. that allows a series of experiments that are closely connected with the lecture material. Satisfactory completion of the laboratory is required in order to receive a grade in the course. See the Lab Policy handout for a description of the lab.

Homework Assignments: There will be weekly assignments during the semester, distributed on Wednesday and due at 4:00 pm the following Tuesday in a box labeled “EE 105” located in the hallway outside 275 Cory. Assignments that would have been due just prior to a midterm exam will instead be due Thursday at 4:00 pm. For homework assignments that include SPICE, no credit will be given unless the SPICE portions are completed. Solutions to the homework will be distributed at the next lecture on Wednesday.

Academic Dishonesty: The EECS Department policy on academic dishonesty, which applies to EE 105, is stated at http://buffy.eecs.berkeley.edu/~ruth/ac.dis.html