UNIVERSITY OF CALIFORNIA
College of Engineering
Department of Electrical Engineering and Computer Sciences

EE 105: MICROELECTRONIC DEVICES AND CIRCUITS

http://www-inst.eecs.berkeley.edu/~ee105

Spring 2008 Prof. Ming Wu

Course Information Sheet

Staff:
Professor: Ming C. Wu (wu@eecs.berkeley.edu, 643-0808)
Teaching Assistants: Eudean Sun (eudeansun@berkeley.edu)
Sung Hwan Kim (shpkim@eecs.berkeley.edu)
Abhinav Gupta (agupta@eecs.berkeley.edu)

Lectures (102 Moffitt)**:** Tuesdays, Thursdays 3:40 PM to 5:00PM

Discussion Sections (beginning on Monday 1/29):

Section 102 (293 Cory):	Mondays 4-5PM;
Section 103 (2305 Tolman):	Wednesdays 10-11AM;
Section 104 (140 Barrows):	Thursday 9-10AM;

Students are encouraged to ask relevant questions in class, and to regularly attend a discussion section. The TA's will review important concepts covered in the lectures and work through sample problems during the discussion sections.

Office Hours:

Ming C. Wu: (261M Cory):	Tuesday 2-3PM; Thursday 1-2PM
Eudean Sun (197 Cory):	TBD
Sung Hwan Kim (197 Cory):	TBD
Abhinav Gupta (197 Cory):	TBD

Laboratory Sections (beginning on Tuesday 9/4):

Section 10 (353 Cory):	Monday 9AM-12PM;
Section 11 (353 Cory):	Tuesday 10AM-1PM;
Section 12 (353 Cory):	Wednesday 2-5PM;
Section 13 (353 Cory):	Thursday 5-8PM; <New Time>

Students must sign up for one lab section outside 353 Cory by 5PM Friday 1/25, and regularly attend *the same* lab section. All of the lab assignments – along with helpful tutorials -- are posted online under Labs. Each pre-lab assignment is due at the beginning of the corresponding lab session. Post-lab assignments are due at the beginning of the following lab session. Although students will be allowed to work in pairs during the lab sessions, each student must individually turn in his/her own pre-lab and post-lab assignments.

Objective:
To provide a basic understanding of semiconductor devices and analog integrated circuits.

Prerequisite:
EECS 40: KVL and KCL, Thevenin and Norton equivalent circuits, impedance, frequency response (Bode plots), semiconductor basics, simple pn-junction diode and MOSFET theory and circuit applications, analog *vs.* digital signals.

Relation to Other Courses:
EE105 is a prerequisite for EE140 (Linear Integrated Circuits). It is also helpful (but not required) for EE141 (Introduction to Digital Integrated Circuits).

Textbook: *Fundamentals of Microelectronics* by Behzad Razavi, Wiley Press, January 2008.

Homework:
Weekly assignments will be posted online on Tuesdays, and will be due one week afterward (at the beginning of class). Late homework will not be accepted.

Students are encouraged to discuss homework problems with other students in the class, the TA's, and/or Prof. Wu. However, the work which you submit for grading must be your own.

Midterms:
Two midterms (80 minutes each) will be given in class. These are intended to gauge the student's understanding of the basic concepts covered in the course. Some numerical calculations might be required (*i.e.* do bring your calculator). All exams will be closed book.

Final Exam:
The final exam will be closed book, with 6 pages of notes allowed. Students will need to bring a calculator. The final exam will be given on **Thursday 5/22 from 12:30-3:30 PM**. No early final exam will be offered.

Grading:
The numerical score on which the course grade will be based is derived as follows:

Homework: 15%
Lab: 15%
Midterms: 15% each
Final Exam: 40%

Academic Dishonesty:
See Department policy at http://www.eecs.berkeley.edu/Policies/acad.dis.shtml

Course Accommodations:
Students may request accommodation of religious creed, disabilities, and other special circumstances. Please make an appointment with Prof. Wu to discuss your request, so that he can plan accordingly in advance.

Classroom Etiquette:

- Arrive in class on time!
- Bring your own copy of the lecture notes (posted online by 7AM on the day of the lecture).
- Turn off cell phones, pagers, MP3 players, etc.
- No distracting conversations -- relevant questions are encouraged