EE105 – Fall 2014
Microelectronic Devices and Circuits

Prof. Ming C. Wu
wu@eecs.berkeley.edu
511 Sutardja Dai Hall (SDH)

Course Information

• Lecture
  – Tuesday / Thursday
  – 3:30 to 5:00 pm
  – 3106 ETCHEVERRY

• Instructor:
  – Professor Ming C. Wu
  – 511 Sutardja Dai Hall (SDH), wu@eecs.berkeley.edu
  – Office hours: Monday 11-12 am; Thursday 5-6 pm
  – Best way to communicate: Email

• GSIs:
  – Jared Carter, jaredc@eecs.berkeley.edu
  – Yongjun Li, yongjunli@berkeley.edu
  – “Andy” Li Zhu, lizhu@berkeley.edu
Textbook


- You need to read the assigned sections (minimum)
- The lecture does not repeat the book
- Best to read the relevant sections before lecture
- Enables meaningful in-class discussions

Course Web Sites

- Open website
  - General course info, lecture notes, Labs, HW problems
  - [http://www-inst.eecs.berkeley.edu/~ee105/fa14/](http://www-inst.eecs.berkeley.edu/~ee105/fa14/)

- bcourses
  - [https://bcourses.berkeley.edu/](https://bcourses.berkeley.edu/)
  - Grades (check frequently, and inform your GSI if you find any discrepancy)
  - HW solutions
  - Exam solutions

- Piazza
  - Discussions
Homeworks

• Posted Monday

• Due the following Monday at 5 pm in EE105 Drop Box in Cory (near TI Lab)
  – Late homework will not be accepted
  – Solution will be posted

• Be prepared to spend 6 - 10 hours to complete
  – Reading, Problem solving

• You can discuss homework problems with other students in the class, the GSIs, or the instructor.

• The work you submit for grading must be your own

Labs (@125 Cory)

• Lab is an integral part of this course

• You must complete all labs to pass the course!

• 3 hour lab sessions
  – Plenty of time if you do your Prelab in advance
  – Not enough time if you are trying to figure out what to do
  – Allow 5 to 10 hours for your Prelab. You may need to read ahead

• Prelab is due at the beginning of your lab session

• Lab reports are due at the beginning of the following Lab
  – Late report will be discounted by 50%.

• Work in groups of two (find your partner now)

• Each student must individually turn in his/her own Prelab and Lab reports
Grades

• Homework: 10%
  – Lowest score will be dropped from grade calculation
  – (You can miss one HW without impacting your grade)

• Lab: 30%
  – You must complete all labs to pass the course!

• Midterms: 15% x 2 = 30%

• Final Exam: 30%

• Cheating will result in automatic Fail

Midterm & Final Dates

• Midterm 1:
  – 10/7/2014 (Tuesday) in class

• Midterm 2:
  – 11/6/2014 (Thursday) in class

• Final Exam:
  – 12/19/2014 (Friday) 7-10 pm
  – Final Exam Group: 20

• General rule: no early or late exams
  – Rare exceptions, e.g., presenting a paper in a conference
  – Need to inform me well in advance
Circuit Simulation

• SPICE (Simulation Program with Integrated Circuit Emphasis)
  – Developed at UC Berkeley!
  – Outgrowth of CANCER (Computer Analysis of Nonlinear Circuits, Excluding Radiation)

• We will use HSPICE in class (Read the Tutorial online)

• Many other versions of SPICE
  – LTSPICE free download from Linear Technology
    http://www.linear.com/designtools/software/#LTspice
  – However, GSIs will only focus on HSPICE, and answer questions related to HSPICE