ECE 3200 Introduction to Semiconductor Physics  
Spring 2015

Overview

The class covers the fundamental operating principles of the basic semiconductor electronic devices including pn junctions, a variety of transistors and integrated devices.

Website

http://lons.utah.edu → ECE 3200 Spring 2015 under Courses tab.

Required Textbook


Instructor

Rajesh Menon, rmenon@eng.utah.edu

Prerequisites: Full major status in EE or CS

Course Outcomes

The students should be able to:

• Intuitively understand the flow of electrons within semiconductors
• Calculate the current voltage relationships of pn junctions
• Calculate the current voltage relationships of field-effect transistors
• Calculate the current voltage relationships of MOSFETs
• Understand transient and time dependent behavior of semiconductor devices

Homework Problem Sets

Problem sets are typically assigned weekly. Due dates are specified in the problem sets.

Mid-term exam

An exam is scheduled for March 5. This will be conducted in class for the duration of the lecture.

Final exam

The final exam is scheduled for April 28. This will be conducted in class for the duration of the lecture.

Grading
1/3 problem sets
1/3 mid-term exam
1/3 final exam

Disability Accommodations: 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 the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Cheating Policy: Just don't. Here are some things that constitute cheating:

Copying someone else's exam. If you accidentally see another student's work on an exam, WRITE a NOTE in your exam and tell me during the exam. Honesty is of great value. You will not be penalized for this. Do not pass any papers to anyone for any reason during the exam. Do not sit near your study partners during the exam. If you use any scratch paper for doing exam problems, just staple it at the back of your exam. Loose scratch paper could look like notes passed between students.

Copying someone else's work on homework. I hope you WILL work in groups on your homework, labs, software assignments, etc. Every team member must contribute and complete each assignment / lab / homework. If you do not contribute (had to work late and couldn't make the group meeting), then do not copy their work.

Copying things (ANYthing) from a book, web, magazine, etc. Give a complete reference and clearly "quote" anything that you want to reference that someone else has done. Even if you don't use their words, but you mention or discuss their ideas, give them a reference. If you are asked to write a report or essay, it must all be in your own work. Just rearranging the words is called paraphrasing. Paraphrasing is also NOT your work.

What happens if you cheat? Under UofU policy (http://www.saff.utah.edu/code.html), you could receive an F in the class, be suspended from school, be fined, or be expelled from the university. So just don't cheat.

What happens if someone else cheats? Statistically, this could lower YOUR grade. Please tell the instructor or any other professor or TA (anonymously is fine) if you see instances of cheating in this or any other class. The ECE Department is committed to reducing instances of cheating in our labs and classes in order to provide the best possible education for all students.

College of Engineering Guidelines: Additional guidelines that govern all courses in the University of Utah College of Engineering are found here:

http://www.coe.utah.edu/guidelines.pdf

Your comments and feedback are appreciated! Please drop a note in my mailbox in
the ECE office or talk to me in person about what I can do to help you in this course.