EE133: Solid State Electronics

Prerequisite: EE100A or similar course

Note for undergraduate students: silicon, transistors and computer chips stay forever (at least for our lifetime)

Note for graduate students: this course or similar are prerequisites for the EE graduate courses in the Devices & Circuits area

This course is designed to provide you with fundamentals of solid state electronics. It will cover a wide selection of topics from the solid state physics fundamentals to the device operation and fabrication of integrated circuits. If you want to find a job in semiconductor electronic or optoelectronic industry this course is for you.

In this course you will learn
- Properties of the technologically important semiconductors and other materials
- Basics of materials growth and device fabrication
- Fundamental principles that govern electron motion in semiconductor devices
- How Field-Effect Transistors and Bipolar Junction Transistors look like and how they work
- What is CMOS and why without CMOS you would not be even reading this text
- Different types of IC and what will come after VLSI
- What you need to know to find a job in Silicon Valley

The class will be held in WAT 1111 on MWF at 2:10pm-3pm

For more information visit: http://www.ee.ucr.edu/~alexb/teaching.htm