## Syllabus EECS170A, Section B Fall 2005 Electronics I

**Code 15520** 

**Textbook:** Semiconductor Device Fundamentals, Robert F. Pierret, Addison-

Wesley, 1996.

**Prerequisites:** Physics 7D, EECS70A, and EECS70B

**Co-requisites:** Physics 7E

## What I want you to learn about ("Outcomes"):

1. Basic properties of semiconductors

- 2. Carrier transport in semiconductors
- 3. p-n junction diodes and bipolar junction transistors
- 4. Transistor equivalent circuits and single stage amplifiers
- 5. How to design:
  - a. doping profiles of basic p-n junction diodes, basic bipolar junction transistors
  - b. single-stage transistor amplifiers

**Lecture Hours:** 3:30-4:50 P.M. T/Th

**Lecture Classroom:** SSL 228

**Discussion Sessions:** B1: Fr 9:00-9:50 A.M. IERF B011

B2: W 12:00-12:50 IERF B011

B3: Tu 7-7:50 A.M. CS 209 (might be cancelled)

Note: The first discussion of the quarter will be Wed. Sept. 28, 2005. There will be no discussion on Friday Sept. 23 or Tues Sept 27.

**Instructor:** Peter Burke, Prof. of Electrical Engineering and Cptr. Science

2232 Engineering Gateway 949-824-9326 pburke@uci.edu

**Instructor Office Hours:** 2-3:30 Tu/Th

**Lab quiz** Tuesday of 10<sup>th</sup> week 3:30-4:50 pm, Oct. 29, 2005

**Teaching Assistant:** Chris Rutherglen

T.A. Office: MSTB 216

**T.A. Office Hours:** To be announced

Grading Components: Homework 5%

Midterm Exam (date to be announced) 45% Final Exam (Tuesday Dec. 6, 4-6 pm) 50%