

EECS170LA Electronics I Laboratory: Section B

Fall 2007

Goal and Description:	Laboratory accompanying EECS170A for students to improve experimental skills and enhance the understanding of lecture materials by conducting hand-on experiemnts. The experiments focus on semiconductor material properties, semiconductor device physics and operation principles, transistor switches, and transistor amplifiers.	
Prerequisites:	Physics 7D, EECS70A, and EECS70B	
Co-requisites:	Physics 7E, EECS 170A	
No. of Units:	1 unit	
No. of Design units:	1 unit	
Experiments:	<ol style="list-style-type: none">1. Introduction and equipment operations2. Soldering technology and RC filters3. Characterization of semiconductors4. Characterization of P-N junction and Schottky diodes5. Transient responses of diodes6. Characterization of bipolar junction transistors and MOSFETs7. Bipolar junction and MOS transistors as switches8. Bipolar junction transistor amplifier	
Objectives & Outcome:	This course partially satisfies Obj-EE 1 and EE3. It partially contributes to a successful assessment of outcomes Out-EE(c), Out-EE(d), and Out-EE(f). It partially satisfies the program criterion Crit-EE 2.	
Outcomes:	Students will learn how to use modern electronic equipment, how to characterize diodes and transistors, and how to build basic circuits and measure them. At the end of course students will be able to design, build, and measure single-stage transistor amplifiers.	
Laboratory Location:	MSTB 224	
Instructor:	Peter J. Burke, Professor Electrical and Computer Engineering 2232 Engineering Gateway 949-824-7462 pburke@uci.edu	
Teaching Assistant:	Gloria Yang gyyang@uci.edu	
Grading Components:	Lab. reports	50%
	Quiz (Thursday Nov. 29, 2007 3:30-4:50 pm)	50%
Laboratory Manual:	Available ~ \$6 per copy at the Engineering Copy Center	

You must be present in the entire lab period to get credit.

The lab course starts on Tuesday, October 2, 2007.