Version 01/20/03

EECS 42 – Introduction to Electronics for Computer Science

Spring 2003, **Prof. A. R. Neureuther**
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Course Web Site **http://www-inst.eecs.berkeley.edu/~ee42/**

EECS 42 Introduction to Electronics for Computer Science

Brief Overview: This 3-unit, lower-division EECS course covers fundamental hardware topics at the device and circuit level. Topics include: (1) Essential quantities for circuit analysis, (2) Circuit laws and DC circuit analysis, (3) Transients and step response of RC circuits, (4) Digital logic and gates, (5) Essential analog elements for digital circuits, (6) CMOS integrated circuits and static logic gates (7) Switch models and performance of CMOS logic gates, (8) Speed, power and scaling of CMOS.

Textbook: "Electrical Engineering, An Introduction", Schwarz and Oldham, 2nd ed., 1993, Saunders.

WEB Information: **www-inst.eecs.berkeley.edu/~ee42** Lectures, homework and solutions, sample exams, Faculty/TA office hours, emails, access to our NEWSGROUP, etc. **There will be no handouts of lecture notes at class so print them in advance fro the web.**

Discussion Sections: M 9 247 Cory and W 10 293 Cory. **Drop Th 3? (Decision 01/24/03) Discussion Sections start Monday January 27th.**

Homework: Posted Monday. Due at 2:30 PM the Wednesday of the following week. (Mar 4th and April 15 are exceptions.) Work should be **labeled by section** and placed in the boxes marked 'EECS 42 Homework' in the hall near room 275 Cory. **Homework will not be collected in lecture** and will be **returned in section.** You are encouraged to learn together with fellow students, but **the work submitted must be your own (See EECS/class Policy).**

Examinations: There will be two in-class midterms (Wednesday March 5 and Wednesday April 16) and a Final (Tuesday May 20, 5-8 PM). All exams are closed book, but we supply a list of formulas with the exam.

Laboratory: We encourage students to take EECS 43, a P/NP lab that reinforces through 'hands-on' work (including a microcrontroller-based Calbot vehicle) most of the basic concepts taught in this course. **See the EE43 web site and then sign up on TeleBears by noon on Jan 24.**

Grading: The course grade is made up as follows: Homework: 5% ; Midterm I: 23% ; Midterm 2: 23% ; Final Exam: 49%. The grading is a balance between being "curved" and being based on overall performance. Typical ranges A: >85 ; B: 70 to 85 ; C: 55 to 70.