ECE 1250
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SYLLABUS

Instructor:	Neil E. Cotter, 3104 MEB Office Hours TBA necotter@ece.utah.edu
Website:	http://www.ece.utah.edu/eceCTools/ECE1250/ This is an attendance-based class. You are accountable for all information presented in class.
Required Text:	Practical Electronics for Inventors Paul Scherz This book contains the basic theoretical material we cover in this class at an introductory level and in a way that develops an intuitive feel for the concepts. Beyond that, it also covers a great deal of practical, useful information that isn't found in most textbooks. It should prove to be a good reference for you to have on your bookshelf. Unfortunately it contains many errors (See: http://www.eg.bucknell.edu/physics/ph235/ & download the errata pages).
Required Supplies:	Lab notebook (bound or spiral) Breadboard and lab parts available for purchase at lab A 3-ring binder for class notes and handouts
Useful Software:	*Student Edition of Matlab®* Available from Bookstore
Prerequisites:	Math 1050 Algebra and Math 1060 Trigonometry However, if you are not currently taking Math 1220 Calculus II and Phys 2210 Physics I for Scientists and Engineers, you are already behind where you should be to get an engineering degree.
Class Objectives:	This class is designed for students who are considering a major in Electrical and Computer Engineering (ECE). It has four main objectives, which, together, should help you determine if Electrical and Computer Engineering is the major for you.

1) Introduce students to the basic concepts of Electrical and Computer Engineering in a way that relates to objects and devices that you may have personally touched, used, and hopefully, been curious about.

2) Cover these concepts with sufficient rigor that this class is still a meaningful part of the curriculum and that you are not deceived into thinking that ECE will be an easy major.

3) Touch on many of the major areas of ECE in such a way that you come away with an idea of what you would like to pursue and , specifically relating each subject of this class to other classes that may be taken later.

4) Provide an introduction to Matlab®.

To do well, you should master concepts rather than just memorize. The best students can teach the course material to someone else.

Midterms:	You will take four 50-minute midterms throughout the semester. They will cover material up to the time of the test. The exams are designed to see if you learned concepts and problem solving strategies and whether you can work with them, sometimes in new and different ways. Exams also cover what you learn in the labs. The midterm exams will be closed book exams unless specified otherwise in class. Listen in class for details.
Final Exam:	Friday, August 3, 10:00-12:00 a.m., regular classroom. The final will be comprehensive with greater emphasis on the most recent material
Homework:	Due at 5:00 on day indicated in calendar unless you are told otherwise in class. No late HW accepted without arrangement <u>before</u> due date. Turn in: locker 3rd floor MEB near southeast stairway

I will assign many problems for you to turn in, most of which will come from handouts. Expect homework several times each week. Homework will be your main study tool. As such, I'll give you some of the answers so that you can check your work immediately. In fact, you'll have to self-correct your homework. If you can't get the answer, check the web site for corrections, study some more, come to a problem session or the tutoring center, ask for help, or see the posted solutions. Sometimes I even post solutions before the homework is due. So, you might ask, "Why is it handed in and 'graded'?". Well, to answer a question with a question, "Would you even do it otherwise?"

Your homework should be neat and clear and show all your work. For most problems, the grader will simply check to see that you've done it and that your paper shows the necessary work to get the answer. Only a few problems will be checked in greater detail. You may collaborate with others to learn how to do the homework, but will need to hand in your own work. Mechanically copying or allowing another student to mechanically copy your work is considered cheating.

You will probably learn more from doing the homework than any other part of this class. If you thoroughly understand the homework, you will know what the class is about, and the exams should give you no trouble.

Near the ECE office on the 3rd floor of MEB you'll find some lockers with slots in the doors. Drop your homework in the ECE 1250 HOMEWORK locker by 5:00 p.m. of the due date. Solutions will be posted in a glass case, also near the ECE office. Graded homework, lab work, and exams will be returned to MEB 3269 if you've signed the release, otherwise you'll have to ask me for it.

Labs:	Labs will be held every week, beginning Monday, May 21. Many of the subjects covered in lab aren't covered anywhere else in class, so make sure you pay attention and read the lab instructions. You will have to keep a laboratory notebook as a requirement of the lab. Your lab TA will collect and grade these notebooks. Labs are not optional. For each lab that you miss or fail ($< 60\%$ score), your final grade will suffer roughly a half letter drop (5% of possible points). Be sure to make-up any labs you miss or fail.

Grades: Grades are on an absolute scale by % of total possible point.

	Pts	% ot Total Pts	Grade
Homework	150	93	A
Labs	150	90	A–
Midterms	400	87	B+
Final	200	83	B
Total	900	80	B–
		77	C+
Missed Lab	–45	73	C
Failed Lab	–45	70	C–
		67	D+
Cheating	–900	63	D
		60	D-
		<60	E