ECE 1050
Electrical Engineering for Nonmajors
Spring 2005 Class Syllabus

Instructor: Arn Stolp
Office: MEB 3256
Phone: U of U: 581-4205
Home: 969-5553 (Only if it’s important)
E-mail: arnstolp@ece.utah.edu (I don’t check my e-mail very regularly, so it may be a
while before I read what you send)
Office hours: My “office hours” are the problem sessions. Otherwise it’s catch me if
you can. To increase your chances, talk to me in class, or leave a
phone message to say when you’d like to see me. I’m usually around
until at least 2:00 p.m. W & F. If I’m not in my office, check the lab.

Web Site: http://www.ece.utah.edu/~ece1050/

Required books and lab supplies:
Textbook: Foundations of Electric Circuits, by J. R. Cogdell
Lab notebook (bound or spiral)
Super-strip (proto-board)
Lab card to buy parts

Prerequisites:
MATH 2250 and PHYCS 2220

Introduction:
In case you haven’t noticed, you’re surrounded by electrical and electronic devices.
Electrical measurement and control is powerful and cheap, so it’s used everywhere and
affects every technical career, including yours. Maybe you can find a job where other
people make all the decisions concerning wiring, power distribution, electric motors,
communications systems, instrumentation, and control; but do you really want that? Do
you really want to be the clueless one?

This class will try to introduce you to some of the basics of electrical engineering.
These may not seem important now, but I think you will find these concepts very useful
in your future classes and jobs. Besides, they’ll help you pass the FE exam, and that
should be of immediate concern.

I teach concepts and the use of those concepts to solve problems, not formulas and
memorization. The hands-down easiest way get a good grade in this class is to learn
those concepts.

This class consists of:
Lectures: W & F 9:40 -10:30 am in EMCB 101
Lectures set the direction and tone of the class and cover more than the written
material. You will be held accountable for everything discussed in the lectures, so your
attendance is important.
Problem Sessions: time and place to be determined
We cover a lot of material in this class and there is rarely enough lecture time to work examples or to answer your questions in detail. I will not cover new material in the problem session, so you can get by without staying, but I think you'll find it worth your while.

Textbook:
It’s not great, but it’s cheap and it covers much of what we need. I add supplements throughout the semester and most of your homework will come from handouts.

Homework, homework, and more homework: 100 pts.
I will assign many problems for you to turn in, most of which will come from hand-outs, expect some at every lecture.

Homework will be your main study tool. As such, I’ll give you all 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 the problem session, ask for help, or see the posted solutions. This semester I’m going to experiment with posting some 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?” The grader will simply check to see that you’ve done all the problems and that your paper shows the necessary work to get the answer. The grader may also check your work on some problems in greater detail. That means that so you will have to work neatly and clearly and show all your work. I will accept some late homework for some credit. Bring it directly to me, and don’t do it habitually.

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 1050 locker by 5:00 p.m. of the due date. Solutions will be posted in a glass case, also near the office. Graded homework, lab notebooks and exams will be returned by your TAs.

Midterms: 300 pts.
You will take three 50 minute midterms throughout the semester. They will cover material up to the time of the test. My 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. Don’t try to memorize formulas or specific problems. Exams also cover what you learn in the labs. All exams are open book, open notes.

Final: Friday, April 29, 7:30 - 10:00 pm 180 pts.
The final will be comprehensive with greater emphasis on the most recent material.

Labs: MEB 2365 120 pts.
Lab will be held every week, beginning Thursday, 1/13/05 and including the last week of class. I will hand out lab assignments in class. Many of the subjects covered in lab
aren’t covered anywhere else in class, so make sure you pay attention and read the lab handouts. You will have to keep a laboratory notebook as a requirement of the lab. Your lab TA will collect and grade these notebooks.

Two labs will be replaced by a special lecture during lab time. The Monday lab section will be required to make up holiday time and attend a lecture as well as lab those times.

Labs are not optional. For each lab that you miss or fail (< 60% score), your final grade will suffer a half letter drop (5% of possible points). Be sure to make-up any labs you miss or fail.

Grades:

<table>
<thead>
<tr>
<th></th>
<th>Pts</th>
<th>% of total</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework:</td>
<td>100</td>
<td>&gt; 93</td>
<td>A</td>
</tr>
<tr>
<td>Labs:</td>
<td>120</td>
<td>90-93</td>
<td>A-</td>
</tr>
<tr>
<td>Midterms:</td>
<td>300</td>
<td>87-90</td>
<td>B+</td>
</tr>
<tr>
<td>Final:</td>
<td>180</td>
<td>83-87</td>
<td>B</td>
</tr>
<tr>
<td>Total:</td>
<td>700</td>
<td>80-83</td>
<td>B-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>77-80</td>
<td>C+</td>
</tr>
<tr>
<td>Failed lab:</td>
<td>-35</td>
<td>73-77</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70-73</td>
<td>C-</td>
</tr>
<tr>
<td>Cheating:</td>
<td>-700</td>
<td>67-70</td>
<td>D+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63-67</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60-63</td>
<td>D-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 60</td>
<td>E</td>
</tr>
</tbody>
</table>

If you want any deviations from the normal requirements (say credit for labs, if you’re taking the class for a second time) you will need to see me before the work would normally be due and get an agreement in writing. You’ll need to turn in your copy of the agreement with your final, so I’ll remember to grade you properly.

Handouts:

There will be a lot of handouts for, homework, labs, notes, etc.. I will hand these out before class and/or place them by the doors, look for them as you enter class. I will leave any extras outside my office until they are all gone (my virtual web site). Finally, many of the handouts may be downloaded from the class web site; http://www.ece.utah.edu/~ece1050/

You may need to buy one or more packets of handouts throughout the semester.

Americans with Disabilities Act Information:

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD) to make arrangements for accommodations.

All written information in this course can be made available in alternative format with prior notification.