

**ECE 331: Electronics Principles I**  
**Fall 2011**  
**Laboratory Guidelines**

**Contact Information:**

Instructor: Professor Steven C. Reising  
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**Lab Sessions:**

There are three lab sessions each week in C107 Engineering Bldg., as follows:

L01 Monday 2:00-4:40  
L02 Tuesday 3:30-6:10 pm  
L04 Wednesday 2:00-4:40 pm

**Attendance at each lab session is mandatory. You are required to attend the lab session for which you are registered.** If you come to a different session and no chairs are available, the TA may ask you to leave and return during your scheduled lab session. If you need to attend an alternate lab session for one week, an e-mail request must be submitted to the TA by noon on Monday of the week requested.

**The TA will take attendance at the beginning of each lab period, which will be included in calculating your lab grade.**

**Prelabs and Reports:**

There is a lock box labeled “ECE 331” next to the printer in C107. This is where all work for the labs needs to be turned in. **All Prelab Reports (for all except Lab 0) are due by noon (12:00) on the date listed in the upper left corner of the assignment and on the Laboratory Schedule. All Laboratory Reports are due at the beginning of your lab period during the week listed on the Laboratory Schedule.** All work must be turned in at the time it is due. If you will be out of town on a due date for any reason, you must arrange for the material to be turned in ahead of time.

There are six laboratory assignments for ECE 331, labeled “Lab 0” through “Lab 5”. Each of these labs lasts two weeks, as shown in the accompanying schedule. Each lab has prelab exercises due on Monday of the first week of the lab, except for Lab 0, which has no prelab. Each lab lasts two weeks, and a lab report is due at the beginning of the following lab period (except for the extra credit at the end of the semester, which has no lab following it).

The prelab exercises consist of two or three questions on the general topic of the lab. For problems that require calculation, show all your work. For conceptual questions, explain your answer. In addition to testing your knowledge, the prelab exercises also test your ability to explain related topics. You may type or write out the prelab exercises. They must be legible and be written on only one side of the paper. Torn-out notebook paper will not be accepted.

### **Lab Report Grading:**

For the lab reports, answering all questions and including all relevant graphs and/or data will result in a passing grade. Explaining why you achieved the results you did and analyzing any inconsistencies or unexpected results in your data will result in a substantially higher grade. The highest possible grade will be awarded only when a student demonstrates a firm grasp of all the concepts covered in the lab and presents the results in a comprehensive manner. All lab reports must be typed.

Students are encouraged to work with one lab partner in the lab, but each student must turn in his/her own prelab exercises and lab report.

### **Graph vs. Sketch:**

This is an important distinction in ECE 331. If the problem asks for a **sketch**, what is required is only the general shape of the curve with the axes labeled, including units. When looking at a **sketch**, one should be able to tell what is being plotted and the type of curve represented (linear, logarithmic, etc.). If the problem asks for a **graph**, an accurate representation of the curve is required, including value labels of all minima, maxima, and axis crossing points. A specific, numbered axis scale is required, and needs to be to scale for the entire **graph**. A person should be able to make a decent computer plot using only the data in a **graph**.

### **Resources:**

All files for the ECE 331 Labs will be available on the following T-drive directory:  
T:\classes\ECE\ECE331\lab\_files

The second weeks of each of Lab 0 and Lab 2 will require a breadboard. This can be the one used in ECE 202. Each student is responsible for bringing his/her own breadboard. If for some reason you cannot bring a breadboard to these labs, please e-mail the TA at [chihai@rams.colostate.edu](mailto:chihai@rams.colostate.edu) by **Friday, August 26**.