ECE 351 Lab Policy

General Information

Lab is a group effort, and therefore lab grades will be assigned to the entire group. Each partner must obtain a lab notebook. Rotate duties for maintaining the lab notebook and using the lab equipment each lab period. Only one lab notebook for each group will be turned in. Alternate which partner's lab notebook is turned in each week.

Prelabs must be written in your lab notebook. Before coming to lab, photocopy the prelab pages and turn them in BEFORE entering the lab. I will NOT answer prelab questions during lab.

Lab notebooks are due at the BEGINNING of lab the following period. Missed lab work MUST be made up regardless of the reason a lab was missed. A late penalty of 10% grade reduction per day will apply unless prior arrangements have been made with the professor. If for some reason, excused or unexcused, you are behind on a lab, the lab may be made up outside of lab hours if a lab station is available at another time. If another lab is going on and you want to work at an empty station, ASK the professor before using the station. During lab hours, BOTH partners must be working TOGETHER on the same lab.

Prelab

The pre-lab is a separate grade from your lab grade. It is your responsibility to read through the lab and identify what must be done before coming to the lab. The pre-labs will be graded on neatness and completeness. A general guideline for laboratory write up is that your notebook should contain enough information and procedure so that someone else with your level of expertise could repeat your pre-lab calculations.

By doing the prelab, you should know what every circuit is supposed to do before you enter the lab!

Pre-lab includes the following:

- Hand calculations - Place all hand calculation results in a table so I can easily see all calculations.
- Hand drawn graphs.
- Explanatory notes as to what I am looking at.
- PSpice simulations.
- PSpice results (numerical results and graphs)
- PSpice documentation should include enough information so that someone else could repeat your simulations
- Tables comparing hand calculations to PSpice results.
- Printouts from MathCAD or Maple
- Anything else that may be important for a particular lab.

Laboratory Results

Add enough procedural information so that someone else with your level of knowledge could repeat your lab measurements. Feel free to cut and paste whenever it is convenient.

Laboratory results must include:

- scope traces
  - all scope settings
  - measured from what circuit? (show circuit diagram or reference figure number if already drawn elsewhere in your notebook)
  - what ports did you measure in the circuit?
  - Channel 1 is what? Channel 2 is what?
  - Why did you measure this?
  - numerical values
- Give circuit diagrams for all circuits used in the lab
- Give all figures a number and refer to those numbers in your book
- Paste all relevant data sheets in your notebook

Notebook Guidelines

- Add enough procedural information so that someone else with your level of knowledge could repeat your lab measurements. Feel free to cut and paste whenever it is convenient.
- Always use a pen when writing in your notebook
- Never use white-out. Simply cross out any mistakes and resume writing. (Some "mistakes" wind up not being mistakes. This way, your thinking is recorded.)
- Have explanatory notes - could someone else reproduce your results with the information in your notebook?
- Initial and date each completed page in your notebook.
- Tables comparing measured, calculated, and PSpice results. You must ALWAYS do this, whether or not I specifically ask for it in the lab.
- Presentation of results (graphs, scope traces, PSpice, etc.)
- Your notebook should have a summary section for each lab. The summary should be neat and very readable. You should have tables that summarize calculated, measured, and PSpice results. I should be able to easily find any measurement and see how it compares. If it takes me more than a few seconds to find a result in the summary, I will assume that you did not make the measurement. This way, even if your notebook is a bit disorganized, the summary should present all the important information that I need to grade it.

Things You MUST Do to Make Your Lab Experience Easier

- While making lab measurements, compare measurements to expected results (hand calculations and PSpice). If results do not agree, DO NOT CONTINUE. Find out why things don't work and fix it. If you compare results as you take the measurement, you won't have to rebuild circuits later.
- If your pre-lab calculations included calculating a minimum and maximum value of a quantity, measure the quantity in lab and make sure that the measured value falls within the minimum and maximum limits. If it does not, find out why and fix it. By doing this, you won't have to rebuild circuits later.