

## Lab Purpose:

The purpose of 3254 lab is to reinforce the electrical and electronics theory you learn in the lecture, and give you some experience with electronic construction and vocabulary.

## Attendance:

You are expected to be in the lab at your scheduled time unless absence is pre-approved. If you have do not have prior approval to miss a lab you will receive a 0 on the prelab, and there is a penalty of 10% per day for late report submission. You do not want to get behind; it can be very difficult to make up missed labs.

If you are ill on the day of your scheduled lab, contact your instructor by phone or email before the scheduled lab time (leaving a message is acceptable). Clearly state who you are, that you are ill, and that you can not (or should not - if you are infectious!) attend the lab.

To make up the lab with no penalty if you do not contact your instructor before lab, you will need a note from your doctor, clinic or infirmary. The note should clearly show the date of the illness, and that you were too ill/ infectious to attend the lab session.

## Lab Reports:

Prelabs are due at the beginning of the class. Collaboration with classmates is OK as long as each person completes his/her own work. DO NOT COPY your partner's prelab in front of your instructor - that is just asking for a JR. The prelab should take no more than 30 minutes to complete. See your instructor during office hours, or Dave Fritz in 234 Whittemore for assistance if you are stuck.

Do not write on equipment or lab benches. If needed, blank removable stick-on labels will be provided for you to label circuit components. Please ask.

There are no formal lab reports to be completed outside of the lab. Enter the data and answer the questions in your handout as you complete the lab. Analysis is an important part of your lab data, take the time to think about the underlying causes and principles in the project and explain them carefully - your analysis and conclusions will be graded. Attach the jpeg captures from Labview. Make sure that the attached captures are labeled as requested and have your names on them. Submit the completed handout to the instructor before you leave.

Tip: NEVER leave something blank or fail to turn in a lab/prelab. With some (not all) instructors, twice as many points would be deducted for a blank answer than would have been deducted for an attempt to answer a question, and a blank prelab with only your name on it is still worth some points. See your instructor for the grading policy for your section.

Quizzes will cover the material in the Labs, Prelabs, and Prelab Notes from the previous weeks. All work on the quiz must be your own without assistance from any one else. The quizzes will be administered on Scholar. You may use your graded lab and prelab, and a copy of the prelab notes posted on the web for reference.

## **Lab Safety:**

- Leave the building immediately if a fire alarm sounds.
- Never work with voltages above 24V (DC or RMS) from the power mains.
- Always wire a circuit completely before connecting it to the power source. This will avoid the handling of energized wires. Also, damage to components will be avoided due to accidentally misplacing the wire in the circuit.
- Always disconnect the source end of a wire first.
- If something is unclear, ask the instructor before proceeding.
- Do not eat or drink in the labs.

## **Lab use:**

Whittemore 251, 253, and 219 are similarly equipped. You may use the labs any time during the day outside of your scheduled lab to finish incomplete lab work or to work on your own projects. If a lab bench is available, the instructor may allow you to use it. Go to the EE shop in 222 Whittemore for lab access and any needed components, and be sure to return them when finished.

Never leave a lab unattended with the door blocked open. Tech Support personnel in 234 Whittemore will be happy to let you back into the lab as many times as necessary.

Please observe the lab schedule posted on the door so as not to interfere with other scheduled labs. You must vacate the lab by 4:00 p.m. unless an instructor is present. Any violations of these procedures will result in access being denied except during your regularly scheduled lab sessions.

## **If you have a problem in the lab:**

- If you blow a fuse or find one already blown, it must be replaced with the correct value and physical size. Each fuse holder is labeled with the correct fuse size in amperage. Your instructor will provide replacement fuses after the instructor checks your circuit for errors.
- If you have a defective component (transistor, diode, IC, etc.), your instructor will provide a replacement.
- Do not remove equipment from one bench to another. If you have an instrument that is or seems to be defective, notify your instructor at once; please red-tag defective equipment and briefly describe the problem. The lab instructor should notify ECE Tech Support personnel in 234 Whittemore and they will replace any defective instrument as soon as possible.

## **When you are finished with the lab:**

- Return your used parts to the CORRECT bins.
- Hang up your probe cables and put the coax adapters in your box.
- Shut down windows.
- Turn off the bench power – do not turn off each individual instrument/computer.
- Place your seat under the bench.
- Attach the prints to your lab report and submit the report to your instructor.
- Don't forget to take your stuff!
- Failure to comply will cost points on your lab grade. Resistance is futile!