Department of Electrical and Computer Engineering

Texas A&M University

ECEN 449/749 - Microprocessor Systems Design

Fall 2020 Lab Policy

Introduction:

This document describes instructions to be followed by ECEN 449/749 students while attending lab sessions and while completing and submitting lab work.

Laboratory Work:

1. COVID-Related Notices:

a. Labs sessions will have a hybrid schedule, wherein students have the option to attend the in-person lab room for some of their lab sessions. All other lab sessions will be done over Zoom. Attendance is not mandatory; students can always choose to do a lab exercise from home. The schedule of in-person lab sessions is described in the Lab Cohorts section below.
b. All students are strictly mandated to wear PPE masks, long pants, sleeved shirts, and closed-toed shoes when entering the lab room.
c. All students are required to reserve a workstation through iLab before attending an in-person lab session.
d. All students are required to scan a QR code to verify their reservation before entering the lab room. You may only reserve a workstation for a time during your in-person lab schedule. This schedule is described in the Lab Cohorts section.
e. Students are allowed to reserve only the following machines: EM1(L, N) and EM2(O, Q). When reserving a spot for in-person labs, reserve one of whichever of these 4 machines is available.
f. All the students are required to clean their workstation/equipment before and after use. Cleaning equipment will be provided by Zach lab staff.

2. Lab Cohorts:

a. As indicated in the COVID-Related Notices section, students will have some opportunities to attend their lab session physically in the lab room, which is ZACH 333. We are mandated to have only 4 students in the lab room at any given time, so each student will only have the opportunity to attend physically for ½ of the lab session, every other week.
b. The way we describe this schedule is with the notion of cohorts.
    i. Each student will be assigned to one of four cohorts: A, B, C, and D.
    ii. Each cohort has the option to attend the in-person lab for ½ a lab period(55mins), every other week during their respective time slots, which are indicated on the lab schedule posted on the course website.

iii. Students are strictly not allowed to switch their assigned cohorts or swap time slots.

c. The TA will choose a cohort for each student. Students are not allowed to dispute this decision or change their cohort, nor are they allowed to trade cohorts with another student.

3. Instructions for Lab Session

a. Utilize the lab manuals available on the course website. It is advised that you read over the lab exercise before attending the session for that exercise.

b. Students are to work individually on every lab. Each student is also required to submit their own lab report. These will be scanned for plagiarism.

c. Each laboratory exercise has a demonstration component which must be completed before the lab deadline.

d. Each lab exercise has a report that will need to be submitted before the lab deadline.

e. You are required to purchase your own equipment for completing the labs. You will need to purchase everything in the equipment list provided, unless you already own the equipment.

4. Grading Policy

a. There are two graded components to every lab exercise: a lab report and a demonstration.

i. Demo
This will involve showing your TA some program output or board behavior, either over Zoom or in person in the lab room. Each lab exercise has multiple demo components, and they are all indicated in the lab manual.

ii. Lab Report
Each exercise will require you to write a report after you complete the exercise. This report will need to be submitted on eCampus. There are more instructions about lab reports below.

Both the report and demo for lab *i* will be due at the end of the first session of lab *i+1.* For instance, the Lab 1 report and demo will be due at the end of the first Lab 2 session. Late demos will not be accepted. Late reports will be accepted up to one week late, but with reduced credit, as described in the Lab Report Instructions section.

b. The demonstration procedure is as follows:

i. If the demo works during the lab session: show your TA the demo and you will receive credit.

ii. If the demo is not completed during the lab session: If you do not complete the demo for lab i by the end of lab session i, you will have until the end of lab session i+1 to complete the lab and show your TA the demo.

c. Demos can be shown during office hours or during a lab session before the due date. Additionally, you can schedule a Zoom meeting with your TA outside of office hours or lab hours to show your demo.

d. Labs typically have multiple demo parts. Every demo is indicated in the lab manual.

e. If a demo is not done correctly then the student will lose points for that part of the demo. The demo needs to be functionally correct and approved by the TA.

f. Attendance at your regularly scheduled lab period is not required. You are graded only for the demo and lab report when submitted before their respective due dates. The lab sessions are intended to provide a time for you to get help from your TA.

5. Lab Report Instructions:

a. You must submit a post-lab report that captures your efforts during the lab. *Note: Your lab report should be detailed enough such that another engineer with a similar skill set could easily reproduce your results.*

b. Each lab manual provides a break-down of points for the various sections of your lab report. Pay close attention to the number of points each portion is worth.

c. Your post-lab report must be of standard report format and include a Title Page, Introduction, Body (i.e. Procedures and Results), and Conclusion.

d. Other items such as simulator output files requested in the lab manual must be included in your lab report submission. Be sure to read the lab manual carefully, as it will tell you everything that is required for your lab report

e. Specific questions asked in the lab manual should be answered completely in your lab report. Be thorough as this displays your understanding of the lab to the graders.

f. Be sure to include any code from the lab with your lab report.

g. Lab submission should be done electronically via the eCampus system. The lab report for lab i is due by the end of lab session for lab i+1. The time stamp will be checked on eCampus to ensure you turn it in on time. Ignore the submission deadline that is posted on eCampus.

h. Post-lab reports turned in up to a week late can receive only up to 50% credit. In other words, the best you can do is a 50. After a week late, the post-lab report will receive no credit (student will receive a 0 for the report).

6. Plagiarism Policy:

Plagiarism is defined as taking someone else's work, words, or ideas and using them as one's own without citing their source. Be careful and abstain from copying someone else's work, even if it is from previous semesters. This does not mean that you cannot communicate with your classmates, on the contrary, this is encouraged. However, the submitted work must be your own and the consequences of plagiarism will be severe.

7. Suggestions for Surviving and Enjoying Lab:

a. Start each lab exercise prior to the appropriate lab session. A large part of each lab exercise will be fairly straight forward and clearly outlined in the lab manual. You will want to have as much of this part done prior to the lab session so you can spend the majority of time in lab asking questions. This after all is the time you can get help from the TA.

b. Attend course lectures regularly. The lectures and labs for this course are tightly coupled so you will not succeed in lab if you are not attending lecture and vice versa. Be on time to lab as the TA will present a summary of the lab exercise at the beginning of the session.

c. Read the reference material provided on the course website. When in doubt, look it up. A large portion of the skill set you will receive in the class has to do with learning where to find the information necessary to complete a design. In many cases, the references provided in this course will include examples that are very close to what is asked of you in lab.

d. Include figures where necessary in your post-lab report. This can help clarify the concepts you are trying to portray to the grader and shows a deeper level of understanding of the material.
e. Though not required, LaTeX is recommended for your lab reports. This is a useful skill to obtain especially if you are considering graduate work in the future. LaTeX has a bit of a learning curve, but it worth the investment.
f. Spend time understanding the questions provided in lab. These questions test your ability to comprehend what is going on in lab.
g. The material in the labs are design to build upon itself. You will need to continually reference steps carried out in previous lab sessions. Taking notes as you go along is extremely helpful.
h. Do not fall behind! As mentioned above, the labs typically build on themselves so failing to complete one lab often results in failure to complete the next lab. Stay on schedule and consult the TA if you are having trouble. We will usually be happy to meet over Zoom to help you, even outside of office hours.