LABORATORY 0

Welcome to Fundamentals of Electric Circuits

Welcome to Electronic World! This course, "Fundamentals of Electric Circuits" may be your perfect guide to the marvelous world of electronic. So, let's do something interesting in the coming labs!

The lab 0 is of most importance, please read patiently and **carefully**.

You must have learnt some knowledge in the class before the labs. Please make sure that you figure out the theory in your textbook. Some of the labs can be somewhat difficult for some of you. But don't be afraid, you will have a teammate, with whom you can discuss to find a solution. You can also turn to your teaching assistant when neither of you could find a way out, but don't expect he would do anything for you, except some advice. Don't try to help other teams, or your team and the team that you help won't get TA's check off, in other words, you will get no point.

Regards,

Your Teaching Staff

Labs and Projects for this Course

You will work on 11 **labs** in the first 12 weeks, namely one per week, starting from the 2nd week. After the labs, you will have 4 weeks to finish a **final project**.

Labs

Each lab assignment consists of three components: **lab-guide**, **pre-lab** and **lab**.

Lab-guide: In the lab-guide, we will usually cover the basic theory that will be presented in lab. **You should read carefully before the labs to make sure you know what to do when can come to the lab sessions**.

Pre-lab: The pre-lab sections of each lab are designed to prepare you adequately for the lab component. In these pre-lab sections, it is important for you to understand the concepts presented and, if asked, simulate a functional circuit before coming to the lab. If you do not complete the pre-lab, there is good chance that you will **NOT** be able to complete the lab in the allotted three-hour lab section.

For every pre-lab, you are responsible for **answering all of the questions** presented, in addition to **reading through the entire lab document**. It is your responsibility to ask your lab partner/friend/TA for help if you do not understand something in the lab.

The pre-lab should be completed individually so that both partners in the tag team understand the basis and reasoning behind the lab. Hand in your pre-lab to your TA to get his signoff before you start working on the lab.

Lab: If you finish the guide and pre-lab above, it's time for lab. Most of the lab sections will be held in our electronic laboratory (located in SIST 1A-101), except Lab2, which you will finish in the University's computer lab, located in 205 Teaching Building, Haike Campus. Each lab section is three-hour long, during which you will complete the laboratory component of the lab.

For each lab, you will be required to demonstrate the working implementation of the circuit presented to your TA for check off. If you do not get these lab check offs, you will not get full credit for the lab component.

The labs are written and tested to be completed in three hours, provided that you adequately prepare yourself with the pre-lab. If you ever try and attend another lab section to finish your circuit, be aware that the TA will not be obligated to help you. In addition, you cannot ask the TA during your makeup section to check you off.

In principle, the lab should be completed in pairs, because there are not enough workstations for each student to complete the lab individually. There will be NO groups of 3 or more; this rule will be strictly enforced. Finally, there is **ABSOLUTELY NO FOOD OR DRINK** allowed in the labs **AT ANY TIME**.

That said, it is **ABSOLUTELY CRITICAL** that you find a lab partner who you are willing to snuggle up with for the entire semester. These labs are designed to be completed in groups of two, so it is imperative that you do not let your partner jump ship halfway into the semester.

Take Home Instruments

We will be offering to check out to each pair of students a kit of circuit components to take home and use. But without TAs' permission, don't take anything out.

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The kit that you will be receiving will contain the parts you will be using frequently in your labs. If you need more parts, your TA will have some spares, but if you become the master of disaster, we reserve the right to begin docking points from your overall lab score.

Final Project

Throughout the laboratory set, you will be building modules that may culminate into your final project. The final project for this semester will be revealed to you in due time. Every team works on **ONLY** one project. You will choose one project from a given set of projects. Alternatively, you can propose something by yourself, providing that it is approved by the teaching staff. You have 4 weeks to complete your project.

Warnings:

We would like to remind you that your behavior in the lab is also a part of every lab score. If you have any misconducts, your TA reserve the right to take some points off. Examples including being late for the lab, improper operation of the instruments, late report submission and so on.

Enjoy your lab time!

Reference

[1] UC Berkeley, course EE43-100, Spring 2012.