ELEC 3509 Electronics II - Fall 2015
Lab Guidelines

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General Lab Notes:

- Students will work in **groups of 2**. If an odd number of students are present then one person has to work on their own. Other solo groups may be allowed as the situation dictates. **Groups of 3 not permitted at all**.
- Lab partners remain constant for the entire term.
- If only one student in the group shows up to do the lab then:
  - The student can complete the lab alone at that time. The other student will have to complete the lab separately.
  - Both students can return at a later date to do the lab together. This must be arranged through the head TA.
- Students must attend the lab for the report to get marked otherwise you get a 0.
- Once you decide which lab to attend, you must stay in that section.

Lab reports:

- Each group will submit **1 collective report per lab**.
- Both students will receive the same mark regardless of how the workload was distributed.
- Reports are due **one week after the lab has been completed** (i.e. Lab 1 takes two weeks so the report for Lab 1 is due on the third week). They are due 30 minutes after the beginning of your lab session (e.g. at 9AM for an 8:30AM lab or at 3PM for a 2:30PM lab). Labs will be handed electronically through CULearn.
- **TIP:** Do not wait until the day before to start your lab. Remember, that **you will also have a PRELAB due for your next lab the same day.**
- Late Reports:
  - **Late reports will lose 25% for 1 day and an additional 10% for every day after.**
  - If you are knowingly submitting your lab late, **contact your TA immediately** and an electronic submission may be accepted.
  - If your lab is late due to illness, a Doctor's note will be required and an extension can be granted.
  - If you are going to need an extension for any other reason, be sure to request it to the head TA **well in advance**
- It is ultimately **YOUR** responsibility to hand in the labs on time and in the correct location.

- Regardless of whether the lab is late or not, **all labs (including reports) must be completed to pass the course**. Repeat, if you are missing a lab, you will **NOT** pass the course.
- Partners are expected to work together on reports. They are considered a collaborative effort with both partners contributing equally to a single report. If it becomes apparent that a single partner is contributing the vast majority of the work, both partners will need to write separate reports.
- Both partners must be present during the lab and must show considerable effort into achieving the results for which they are presenting on their reports.
- **Plagiarism** is a serious offense. Your TAs will actively look for plagiarism and offenders will be sanctioned according to Carleton's Academic Integrity policy: (http://carleton.ca/studentaffairs/academic-integrity/)

Pre-labs:

- The labs in this course are heavily weighted in technical content, and thus students are expected to keep up in the course material. To assist in this, all labs have **assigned pre-lab sections** which must be performed satisfactorily.
- The pre-lab will be checked at the beginning of each lab period. Marking is on an all or nothing basis. If a good effort has been made full marks will be awarded even if there are errors, otherwise nothing is awarded.
- **Pre-labs are to be done before the lab period**. The pre-lab calculations are often necessary to proceed with the lab, and the labs are lengthy enough on their own that they will require your full 3 hours. Attempting to perform the pre-lab during the lab period will result in failure to complete in time
- **Hint: consider the pre-labs as assignments** and start work on them well in advance of the lab. This will give you a chance to ask questions and make your actual lab time more efficient.
- All pre-lab material, including calculations and explanations, is to be included in the report, incorporated in a way which is conducive to logical flow. Any calculations performed are to be accompanied by explanation identifying what is being calculated. The assumption is that the reader is not aware of the specific questions being asked.

Conducting the Lab:

- Component kits, consisting of a bread board, 6 transistors, 3 op-amps and polyester capacitors will be sold on the first lab day. 1 kit will be sold per group, possibly with more available depending on supply. If you lose or damage any components, we may not be able to supply replacements. Treat your equipment with care. You are responsible for your lab results regardless.
- Resistors will be supplied in lab, as will dielectric capacitors.
- Potentiometers (pots) are available, but may **not be removed from the lab**. Each one must be signed out before taking them, and they must be signed back in before you can check out.

- **We consider that, due to the requirements to get into an engineering program, and due to your presumed experience in order to get to a third year course, that you are capable of conducting the lab on your own, with the resources provided. We will assist you as much as possible but ultimately, you are responsible for getting the work done.**

Lab Checkout:

- Prior to leaving, each lab group must have their experiment set-up and results checked by the lab TA. This helps ensure that egregious errors are caught before using them to write a detailed report.
- Like pre-lab checks, marks are given on an all or nothing basis, depending on whether the lab is finished or not.
- No more labs will be checked out after the end of the period and students will be asked to leave.
- You don't need us to sign anything on your way out. We will have our own records as to whether or not you finished. By extension, you should not leave without us checking your work if you want to get your lab checkout marks.
- Certain labs (e.g. Lab 2, 3 and 4) require you to **demonstrate a working circuit** in order to check out.
    - Therefore if you miss your checkout at the end of the lab, you will need to arrange an alternate time to demo your circuit to a TA.
    - Late demos will get a check out mark of zero, but you **MUST demo** otherwise your lab mark is **zero.**

Lab Marking:

- If you have an inquiry regarding your mark, wait at least 24 hours and send your TA an e-mail. If your issue cannot be resolved then you may request a meeting. Do **NOT** confront your TA in the lab and demand an explanation on the spot. You should both be spending your time on the current lab.
- At any time, we reserve the right to remark labs if we feel circumstances warrant it (such as a technical error in the lab notes, a concept that was not explained fully in the lectures, errors in marking, etc.). In such cases, if your mark changes, we will inform as soon as possible.

Marking Scheme:

- There is no required format for your lab reports. They are to be semi-formal engineering reports where you clearly state what you have done and display your results.
- For the explanation and justification of your design, you must show the calculations used to derive schematics and component values.
- Compare predicted performance to observed results where appropriate

- Most of your pre-lab work will be incorporated in the lab. The calculations and their explanation must flow together.
- Any use of graphs and plots is to be accompanied by detailed explanations showing how you got the results, and more importantly, what they mean. Whenever possible, you must compare measured results with calculated values, simulated value or the required specifications, ideally graphically on the same plots as your measured values.
- Note that an appendix by definition is something that is unnecessary. Anything you put in any appendices of your report is, by extension, something that is ancillary to the material in your report. Therefore, do not put vital discussion, calculations, plots or anything that you might want marked inside an appendix.