Lab Report Guidelines
ECEN 3250

Each lab has specific requirements given in the lab procedure. The lab report should address the specific requirements, and follow the general guidelines described here.

A lab report should have the following format:

Title page with the lab title, student names and date
1. Introduction and Objectives
2. Methods and Results
3. Discussion and Conclusions

The Introduction and Objectives section should include a brief description of the lab, and a summary of the lab objectives. What are the goals of the lab experiment? What are you trying to find out, or what are you trying to accomplish?

The Methods and Results section is the main part of the lab report. The experiments should be described in sufficient detail so that another engineer reading the report would be able to repeat your work. Specifically, include the following:

(a) Analytical and/or simulation work as requested in the prelab assignment or in the procedure. If you are doing simulations based on PSpice text files (.cir decks), include a hand-drawn schematic in the report, and include a copy of the .cir file in an Appendix at the end of the report.
(b) Detailed circuit diagram of the experimental circuit annotated with relevant signal names, component names and values. A sketch by hand is fine.
(c) Relevant equipment setup data: a brief description of which piece of equipment was used and how.
(d) Experimental results:
   a. Scope waveforms (sketch by hand is fine) should be annotated with signal names matching the signal names in the schematics, and scales (volts/div, and seconds/div), as well as important features of the waveform (such as peak value, peak-to-peak value, time delay, etc.)
   b. Numerical results (you may use Excel) should be presented in graphical format, with clearly labeled axes and important features of the plots. A table of measurement data tables should be included in an Appendix at the end of the report.
   c. Calculations, analysis, comparison to simulation results, and/or comments related to the experimental results.

Each plot or graph in the report should have a title or caption that clearly specifies what is shown in the figure. It is not sufficient to give references to parts of the lab procedure. For example, do not just say “Lab 2, part 1”; give a full title: “DC transfer characteristic of the op-amp amplifier shown in Figure X: Vout as a function of Vin.”
The Discussion and Conclusions section should be a brief summary of the lab results. Have the lab objectives been met? What conclusions can you draw? What are the limitations of the experiments? What have you learned from the lab? Give suggestions on how the lab could be improved or what other experiments could follow.

In general, in all sections of the lab report, be neat, brief and precise. Quality is much preferred to quantity. Your audience is fellow engineers and you do not want to waste their time with irrelevant data, verbose statements, or incomplete schematics.

Messy reports will be returned without grading and will receive zero credit.