

### Lab Report Guidelines

Some variation in lab report style is expected, depending on the lab activity in any particular week. In general, however, a written lab report should include the following:

- 1) a title
- 2) a brief description of the purpose of the lab
- 3) reference to an appended pre-lab, if there was one
- 4) for *each* experiment/measurement include:
  - brief description of the experiment/measurement, and objective of the measurement
  - sketch of experiment, identifying measurement locations and any other pertinent details
  - measured data, organized in tables if appropriate
  - plots of data that are appropriate
  - analysis or calculations requested in the lab handout *or as needed to interpret your data in a meaningful way*
  - comments about special circumstances, quality of data, confidence in results etc. as appropriate
  - technical interpretation of circuit performance and conformance to theory, thoughtful discussion of any divergence between expected and measured results. When sensible, plot theoretically predicted behavior on the same axes as your measured data for comparison.
- 5) Conclusions you drew from the activity, the most significant points, take-home message etc.
- 6) Appendix with pre-lab and any lengthy data that would distract from the flow of the report. You might also want to append data sheets for parts (or relevant portions thereof), for your future reference, or to support your analyses.

Your lab report grade will be based on:

- 1) Content – have you included the elements listed above, especially circuit diagrams and measurement descriptions, data (in an organized fashion), plots, analysis and appropriate calculations, interpretation of data and discussion of results
- 2) Quality – do your experiment descriptions make sense, was the data the *right* data, were your calculations the *appropriate* ones and did you do them *correctly*
- 3) Evidence of understanding – do your explanations make sense, can you tell the difference between reliable data and unreliable data, can you interpret your results in a meaningful way
- 4) Communication skills – is the report neat, is it well organized and succinct, is English usage satisfactory