

Lab Activity Report Guidelines

Lab reports provide a description of your work in the lab. There are two basic forms of information in the lab report: an objective portion and a subjective portion. The objective portion of the lab report should document what you did in the lab (designed stuff, took data points, etc.) while the subjective portion should provide your interpretation of the results you obtained during the lab (namely the conclusion).

As you'll find out in Cal Poly Land, each instructor has their own set of rules and expectations regarding the lab report. Generally speaking, lab reports are graded on how well you follow those rules and meet those expectations. The goal of the following comments is to help you generate a quality lab report while minimizing the amount of time you spend writing the report. Please do not hesitate to ask if you have questions.

General Rules:

- Lab reports should be written using a suitable word processor and submitted in hard copy form.
- Each lab group should submit one lab report. Each member of the lab group should write their own conclusion independently from other group members and submit it with the lab report.
- Wording in the lab report should be brief but concise. Longer lab reports rarely correlate to higher quality lab reports. Moreover, using concise wording save you time writing the report and someone else time reading it.
- Wording in the lab report should use “good English” and appropriate technical style. Correct spelling, appropriate use of technical terms, and appropriate technical style allows you to create a professional document that highlights your lab activities. If you are new to technical report writing, strongly consider having someone else read over your report before you submit it. There are also many feature in MS Word that can help you with the grammar.
- Lab reports should be neat and well organized. Handwritten items such as circuit diagrams should be neat (use appropriate drawing software if necessary). Neatness definitely counts.
- All figures and diagrams should contain captions and/or titles and be referenced from the body of the report. Your word processor should have a referencing feature so plan learning how to use it.
- Different sections and diagrams in the lab report should be well delineated from each other. Using extra space to in the lab report generally creates a more professional document.

General Form:

Each lab report should at least contain the following clearly indicated sections. More sections are permissible but the document should remain concise and well organized.

- Objectives: This section states that point of performing the lab activity. This section is generally a rewording of the stated activities objectives in such a way as to show that understood what you're attempting to do with in the lab activity. Don't just copy the state lab activity's objectives: use your own words.
- Activity Description: Describe what you did during the lab activity.
 - The use of wording in this section should be minimized in favor of more expressive items such as truth tables, equations, circuit diagrams, block diagrams, timing diagrams.
 - Someone should be able to read though this section and know exactly where you started, where you ended, and the steps you used to arrive at your destination. The flow of this section should match the flow of tasks during the lab activity. This section should not

depend on the description of the lab. In other words, assume that the person reading your lab report does not have a copy of the lab description.

- This section should be written using normal English sentences and paragraphs as opposed to bulleted or numbered lists of tasks and/or commands.
- Testing Procedures: Describe the testing procedures you used to verify your circuitry actually worked.
- Answers to Questions: Lab activities generally contain some questions. Answers to these questions should be included with the lab report.
- Conclusion: Conclusions should contain the following information:
 - A brief description of what was done in the experiment (2-3 sentences).
 - Wording that implies you understand the concepts presented in the experiment.
 - Wording that describes how the experiment relates to other experiments and/or topics discussed in lecture or in the world in general.
 - Wording that indicates the objectives of the experiment were met. Don't simply state that the experiment's objectives were met; support the assertion indirectly with your wording.

A conclusion should *not* contain the following:

- Detailed descriptions of the procedure followed during the experiment.
- Detailed descriptions of the circuits designed or used during the experiment.
- Comments regarding whether you liked the experiment or not.
- Comments regarding how much you learned during the experiment.
- Comments that state directly that the experiments objectives were met.

General Comments Regarding Lab Activity Reports:

- Lab reports should be stapled in the upper-upper-left corner. Staples that drift away from the upper-left corner make the report harder to read. ***Unstapled lab reports will not be accepted.***
- All source code (VHDL, assembly language, etc) should be attached to the end of the report. Do not include source code in the body of the report; reference the source code from the body of the report if necessary. If fragments of source code are included in the report, you should use a courier font to make the code readable.
- All source code (VHDL, assembly language, etc) should use appropriate form. This includes reflect proper indentation (associated with the particular language), proper vertical spacing (different sections of code should be well delineated), proper commenting, and an overall highly professional appearance. Make sure you verify that the hardcopy of your source matches the appearance of the source code on your computer monitor.
- All source code (VHDL, assembly language, etc) should be well commented and contain a file banner. The final banner should include appropriate information such as the names of experimenters, description of file contents, revision numbers, and pertinent dates.
- Don't submit a crappy lab report in an effort to obtain partial credit. Instead, plan ahead and submit a timely, neat, and organized report.