To: All students in ME 240

From: Mitch Cottrell (Instructor)

Date: 8/10/10

Subject: Format of engineering memo format

This memo is to form the general format of an engineering memo. This first paragraph is intended to give a general statement of the intent and purpose of the memo. This paragraph should never exceed four or five lines of text. All other information should appear in the following paragraphs.

The main body of an engineering memo is designed to convey the bulk of the information and should be separated by an extra space from the opening paragraph to set it off. As a general rule, an engineering memo should not exceed two pages, not counting attachments, with either single or 1.5 spacing (memos are never to be double spaced), however this is not a limit, but a guideline . It is important to use as many pages as required to convey the required information. No matter how many pages are included, they should all be concise and to the point. The header indicates who the memo is to. In the case of this course, that will generally be your TA or myself. The "from" line needs to list all the participants. In this case, include all the group members if it is a group project or just yourself if it is an individual assignment. The date should be the date you create the memo, and the subject line should include a few words to indicate the subject of the memo, including the name of the experiment.

The body of the memo is going to describe whatever information needs to be conveyed. In the business world, these memos are used to formalize information that has been discussed, or to convey results of tests that have been requested. This could include what tests were run, what the general results were and any special information, such as problems or difficulties. For this course, if you are asked to submit in a memo format, you should write enough that the audience can understand what you did, how you did it in general terms and any conclusions. For this course, some assignments will ask specific questions, which will be answered in this section as well. Graphs can be placed in the body if they are imperative to understanding the text of the memo, but should be limited. If there are a lot of graphs they are better placed in an attachment, labeled and referenced in the text.

Graphs and charts should follow standards for good engineering graphs, and all attachments must be labeled and referenced in the body. As an example, you might say that you have attached the detailed schematics of the project showing all components, wiring layouts and functional blocks as requested. Another possible example might be that you have included the raw data or summary data for such and such of a test. If attachments are made, they must be well labeled so the reader can easily discern each attachment. You would not, for example, want to include eleven pages of raw data in tabular form, followed by eleven pages of post processed data in tabular form without somehow indicating what they were. You would also not want to include data that is not needed. For instance, consider the eleven

pages of raw data. Ask yourself these questions; Is the attachment required? Was it asked for specifically or is it required for understanding of the test results or another attachment? Is the attachment fluff? Adding pages of attachments to make a memo look "important" will quickly lead to your memo's getting circular filed and earn you a reputation you really don't want to have.

In general, be brief and to the point but not so stingy with your words that the sentences are difficult to read, fragmented or unclear. Use good grammar and punctuation. Many times, an engineering memo may stay in a file for years, so a poor job of writing may be seen for a long time. They are also frequently forwarded up the chain of command, so a memo you wrote to your boss may end up in the hands of a company vice president. If your work and writing looks professional and well thought out, it will aid your career. If it looks poorly written and shoddy, then you will be seen by those superiors as a shoddy engineer and your career could easily be affected.

Special notes for this course: The main portion of each experiment should be included in the body of the memo. Lab extensions should follow the main portion explanation, results and conclusions, and not be mixed together. If multiple extensions are done, each should be listed separately, since they will be graded separately. For each extension, be sure to list enough description of your procedures so that any other student or TA in the course can reproduce your work.

Each extension will be graded separately based on the grading rubric. The first extension placed in the lab will be counted for full points as per the grading rubric. Following extensions will be scored at half points. This effectively means that additional extensions work as extra credit. Scores of greater than 50 points are possible if multiple extensions are done.

Always finish your memo with some kind of closing, also set off by an additional blank line. Don't leave your memo hanging. It should be obvious that it's the end of the memo. Also, finish your memo with the list of attachments that are being sent with the memo.

Attachments:

Grading Rubric

Grading:

Required sections **2 points**

Are all the required sections there and complete? Are there missing portions or incorrect portions, such as the title block and experiment name in the subject field?

Opening paragraph **2 points**

Did they say anything meaningful? Did the writer introduce what the memo was about?

Main Body of memo

Clarity and accuracy **6 points**

Was it complete and accurate? Did the writer actually seem to understand what they were writing about? Was the length appropriate for the material being covered?

Comments **10 points**

Were the comments accurate and useful? Did the writer convey information that was of value, or was it all just fluff that served no real purpose. Were all the questions posed answered appropriately?

Results and graphs **15 points**

Did the results make sense? Did the results shown have relevance to the experiment and convey useful information? Subtract points for lack of discussion of the results or for graphs with no discussion. Subtract points for inappropriately formatted graphs. There should be discussion for each portion of the experiment, detailing what was learned from that section. Were all the questions answered adequately and completely?

Extension:

Procedures 2 points

Did the group discuss how the experiment was done? Was the description adequate so you could replicate their work? Did they indicate or list what equipment was required to do the extension?

Results and graphs 5 points

Did the results make sense? Did the results shown have relevance to the experiment and convey useful information? Subtract points for lack of discussion of the results or for graphs with no discussion. Subtract points for inappropriately formatted graphs. There should be discussion for each portion of the experiment, detailing what was learned from that section. Were all the questions answered adequately and completely?

Discussion 5 points

Did the group discuss what they learned from the extension? Did they draw any conclusions based on the extension? Did these conclusions make sense?

Attachments **3 points**

Were the attachments appropriate and necessary? Were there attachments that should have been there and weren't?

Memo Total **50 points**