The General Practice of Engineering Notes

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Introduction

Engineering students should develop the useful and practical habit of keeping orderly engineering notes as a prelude to acceptable professional practice. In industry such notes are typically bound with numbered pages and often require signatures. Formally, they are legally required in any potentially patentable R&D work. Informally, they are quite valuable to providing us with documentation on any worthy engineering work that we might be engaged in. For this latter point, which is the perspective taken in this course, it does not mean that they necessarily be neat or even particularly readable, i.e., to someone else besides you (in the somewhat artificial context of our class, though, they should be readable by your instructors). It does, however, mean some form of technical notes (whether done in a “lab setting” or not) where a chronologically traceable record was kept of what you thought about, perhaps scribbling ideas, equations, schematics, taking data etc., that eventually led to a final acceptable engineering solution to a particular problem being worked out. Therefore, all design details, schematics and experimental results will be imbedded in them.

Lab Requirements

For this lab the format required for all lab notebooks is:

A bound (not loose leaf or spiral allowed) notebook. 8 ½ x 11 graph paper recommended strongly.
Each page should be numbered, starting with page 0.
The odd pages (1, 3, 5, 7, …) belong to the student for note taking.
The even pages (0, 2, 4, 6, …) belong to the instructor and are for reporting your results.

For our purposes the format will be quite simple: each page must have your name, date, lab number and a page number (if not preprinted) in the upper right corner; successive pages following the first in an obvious sequence can be abbreviated for brevity. A useful scheme is one where notes pertaining to the same topic in a series all have the same date, your initials and appropriate page number. Any notes you make to work on a given lab assignment - inside or outside of lab - should be written, scribbled, symbolized or thought about here on the odd pages. Be especially conscientious at keeping the upper right corner information filled in as you go along. If you have never done this before, learning to keep good engineering notes requires some initial discipline. Remember, they are not an end in themselves. They must, however, be complete and adequately support all work in this lab.

The general usage of the notebook will be this:

You will first do a write up on the EVEN pages of the lab notebook, describing the lab assignment.
You will do the lab assignment, taking notes and recording results as desired on the ODD pages.
When the lab is completed you will the report your lab results on the EVEN pages, neatly.
If desired you can tape schematics or other print outs in your lab notebook, again, on EVEN pages.
You will end the lab with a summary of you experience written on an EVEN page.
You will then call a TA or tutor over, hand them your lab note book for evaluation, and then demonstrate your lab.
The TA’s or tutor will give you a grade on the spot.

For more information on the lab report write up requirements please see the General Reporting Guidelines document on the class website. Note that if you work in teams of two, each of you must still keep your own respective engineering notes (not merely copies passed between you).