**Notebook Format Template**

ELEC 3040/3050 Spring 2019

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**Make sure to label each section, and number your in-lab steps!!!**

**Pre-Lab**

**Objectives:** Write a few sentences about objectives for this lab, or a bulleted list. Try to answer the question “What are we learning this lab?”

**Any requested Pre-Lab activities:** May vary depending on the lab for the week.

**Wiring Diagram:** Show a pin-level wiring diagram for the lab, sort of how you made diagrams in ELEC 2210. Show how you connect your STM board to your EEBoard and to other hardware (like keypads, motors, and IC chips). This seems like a waste of time in early labs, but as we go on wiring gets more complicated so it’s helpful both for you in lab and for the graders afterward.

**Program Flowcharts**: Show how your logic flows in your program. Often this is a state diagram or a sequence diagram. You can either do this by hand or make some charts in any drawing tool on a computer, just make sure it’s in your notebook. Again, this seems like busy work for the early labs but it’s super helpful for later labs where you have lots of different parts to your program.

**Testing Procedure:** Write some ways to test your system! This will include both software and hardware. Make some strategies to determine how each part of your system works. For future labs, the lab document doesn’t tell you how to test your program, just that you need to get certain data. Having good test cases will ensure that your program works, and by extension ensure that the data you collect is correct and accurate. In your in-lab section, be sure to note how each test case turned out (and if it didn’t work, how you fixed your system).

**Program Code**: Attach your program code. This can be either printed out and stapled in, or if you host your code online you can provide a URL to visit to view the code for this particular lab. I’d strongly recommend making a new file (and a new uVision project) for each lab session, as it makes keeping track of what works and what doesn’t work much, much easier for your team.

**In-Lab**

Here’s where you describe everything you do in lab. Don’t write an essay, but use numbered steps and descriptive wording. Anyone, including the TA, should be able to read your notebook and be able to tell exactly what you did in lab, including what you did for each step and exactly what data you collected. This means if you have to collect data in a table or graph, you should **include it in your lab notebook**. This can be either handwritten or printed, but each step and each item of data needs to be clearly and descriptively labeled and included in your notebook for each lab session. If you need to print something, I’d recommend using Lab 310 across the hall from our lab room. **Take screenshots any time you use a WaveForms Instrument, particularly Logic Analyzer and Oscilloscope.** This will be very helpful for memos, design reports, and future labs.

**Summary**

In two or three sentences, sum up the lab. What did you learn, what skills did you improve, and what were the lab objectives?