To Do List: Week 2

Coursework:

1. **Assignment 2: Functional Specification**
   Due Friday at 11:59pm. Assignment upload portal: link
   Notes:
   1. Provide a functional description of what your project will do (this description need not reference specific hardware or software components)
   2. Provide some information on the theory of operation; describe one or more scientific, engineering, or other principles behind your project.
   3. Describe the project's expected usage case. Detail the environment in which the project is expected to be used, and the nature of the people who are expected to use it.
   4. Detail some (reasonable) design constraints for your project. These constraints should be broken out into a variety of categories, including computational, electronic, thermal/power, mechanical, and economic.
   5. Provide a functional block diagram of the major functionality anticipated by your project.

Manlab:

1. **Progress Reports:** A preliminary test of the Progress Report feedback system will be conducted this week. Students are asked to detail their individual project accomplishments in a concise, technical, and professional manner. Progress reports should follow the course calendar (i.e., this week's progress report should be labeled “Week 2”, next week's “Week 3”, and so on). Feedback only will be given for progress reports this week; progress reports will be graded beginning next week. Additional information about course policy on progress reports can be found here: **https://engineering.purdue.edu/ece477/Course/Policies/ProgressReportPolicy.pdf**.

2. **Prototyping Hardware:** This week and next, students will begin identifying hardware of interest for use in their engineering projects. Once hardware selections have been made, particularly for microcontrollers (or FPGAs, CPLDs, SoCs, etc.) students should begin acquiring prototyping hardware to acquire experience with the microcontroller family, development tools, and so on. A wide variety of development tools and boards are available from the Digital Systems Laboratory Engineer (Joseph Bougher, bougher@purdue.edu); contact him to initiate the checkout process and to start undertaking prototyping fundamentals.

3. **PCB Layout Training:** ECE477 requires the creation of a printed circuit boards (PCBs), and some students may lack prior experience with PCB layout fundamentals. Students in charge of their project's printed circuit board layout and design who are unfamiliar with PCB layout tools are encouraged to begin learning the fundamentals of these tools. At the time of this writing, Altium and Eagle CAD are known to the course staff and have ECN support. A simple Eagle CAD PCB tutorial is available here: https://engineering.purdue.edu/ece477/Resources/T1-EaglePCBLayout.zip