Initial Design Review

ECE 3331.303 // Project Laboratory I // Fall 2017

Description

Before beginning work on any project, it is important to perform a critical review of the project design, and logistics. In this first week of the main project, you will evaluate the specifications laid out in the project description document, develop a high-level design proposal, and outline a development schedule (with milestones), and propose a budget.

This proposal will lock-in the project specifications that are unique to each group. Your performance on the project will be measured in accordance to your group's ability to adhere to the budget, timeline, and design agreed upon during the oral proposal defense.

Expectations

Your project design proposal should thoroughly answer the following questions:

- What are the major hardware blocks that will be used to complete the project?
  - i.e. Baysys3 Board, Rover 5 Chassis, sensors, etc.
- What additional circuit blocks will need to be developed?
  - i.e. Filters, motor controllers, etc.
- How do we plan to architect our software?
  - You should have a top-level state diagram prepared.
- What non-electrical systems will need to be built?
  - i.e. Firing mechanism, projectiles, magazine, etc.
- How much do we expect to spend on the project?
  - This should be a deductive process. For example, if you include a filter circuit block in your design, you should have looked at filter topologies and seen what components are required, and in what quantities. Always plan to purchase 3x of a component required to build a circuit block.
- When should the project be completed?
- What milestones should we hit along the way, and when should be hit them.
  - i.e. Working motor control by October 1st, A first build of the Verilog project done by November 1st, etc.

Submission

The design review will consist of **a written project proposal**, and **an oral defense of the proposal**. The project proposal should be submitted in IEEE Journal Format (ieee.org/documents/trans_jour.docx) and submitted as a .pdf document. T