Change Request Forms: 10% off the top if not present.

Title Page

Project name, team members listed, project sponsor and faculty advisor.

Executive Summary 10%

Have a brief summary of your entire project. This is the section that will be most read so you need to explain the project for someone who has never seen it before, and discuss the problem as well as summarize your design. This section can be no longer than 3 pages.

Grading Rubric: Clarity of writing, concise explanation of project

Problem Statement (Vision) 5%

Provide a brief description of your problem. This should be based upon the original problem statement you have been working from for the year. You can derive this from your User Needs but it should be in paragraph form. This will explain why you did your project for someone who has never seen your project before.

Grading Rubric: Clarity of writing. Addressing any relevant social, economic, environmental or global context necessary to fully understand your project.

Requirements 7%

Your complete set of requirements. This should include system level, subsystem level and component level requirements.

Grading Rubric: Completeness. Clarity of writing.

Final Design 25%

Present your final design here. This needs to be a thorough description of your design. Every major component should be a section and be fully explained. Key CAD drawing, circuit layouts, flow charts and other visualizations of your design go here. A full set of CAD drawings and such go in the appendices, but central drawings needed to understand your design should be included here. A stranger should be able to replicate your prototype EXACTLY from this section. You cannot have too much detail here. All of the design decisions you made throughout the past year need to be justified here.

Grading Rubric: Completeness. Clarity of ideas presented. Proper figure/table labels and references. Does the design meet the original requirements?

Design Analysis 15%

Any analysis needed to justify your design decisions should be explained here. This section would include things such as stress and strain calculations, electrical power calculations and computational efficiency calculations. In the Final Design section you present what you did, here is where you justify why.

Grading Rubric: Completeness. Clarity of writing. Proper use of engineering analysis tools such as modeling analysis, circuit analysis software, software performance metrics…

Acceptance Test Plan 25%

The acceptance test plan needs to include all of the tests you performed to ensure your design met the specification. Every test needs to have a specification listed that it is testing for, and every specification you have needs to have at least one test. The results of your test results needs to be summarized in a table at the beginning of the Plan with each test then being described for the remainder of the plan. An emphasis on the traceability of tests to requirements will be looked for.

Grading Rubric: Completeness- was every requirement tested? Did the test accurately measure the requirement? Were appropriate engineering tools identified for use in the testing? Were the tools selected used properly?

Final Schedule 2.5%

The schedule that your team actually followed needs to be presented. Show the hours worked by each team member on all of the tasks.

Grading Rubric: Accuracy and clarity.

Final Budget 2.5%

Show your final budget. Compare the final cost of your prototype to your initial estimation.

Grading Rubric: Accuracy and clarity.

Lessons Learned 5%

If you were able to go back 9 months, what changes would you make to your design? What changes would you make to how you completed your design and prototype? How will this experience guide you in future engineering design efforts? What were your biggest learning outcomes?

Grading Rubric: Clarity. Ability to articulate experience into larger educational experience.

Future Work 3%

What things still need to be done on your prototype to make it complete? What features would you like to have added if you had more time?

Grading Rubric: Clarity.

Appendices

Glossary of terms and acronyms

Engineering Drawings

Circuit Schematics

Code

Bill of Materials