ECE 480 – Senior Capstone Design Teams

Final Report, Poster and Presentation Judging Criteria

Criterion 1 – 20 Points. This criterion focuses on your overall technical approach, creativity, and originality in executing the technical design and meeting non-technical (cost and schedule) goals of the projects. To maximize your points, the evaluators will look for answers to the following questions from your technical report, Chapter 1:

- What are we trying to do? -- Chapter 1
- What is the problem we are trying to solve? – Chapter 1
- How is it done today, and what are the limitations of current practice? – Chapter 1
- What is new in our approach, and why do we think it will be successful? Is the solution creative, and why? - Chapter 1
- How much did the prototype cost, and why was it different than our expected cost? – Chapters 1 and 5. NOTE: Include the actual cost of your project and the cost to manufacture multiple units (on a per unit basis).

Criterion 2 – 20 Points. This criterion evaluates the degree to which your design worked and performed to your sponsor’s stated expectations. To maximize your points, the evaluators will look for the following items in your written and oral reports.

- Data tables summarizing Key Operational Performance Variables.
- Run Charts plotting Key Operational Performance Variables over time.
- Discussion of engineering and/or statistical analysis of design’s Key Operational Performance Variables and how your design met the sponsor’s expectations.
- Are the results sustainable? Provide data and an engineering discussion demonstrating the design performed to sponsor’s expectations over time. This may be multiple runs in a given day (like you will have at Design Day) and / or performance every day for many days.
- If the design did not work – either due to team’s fault, or lack of component availability:
  - Provide a detailed engineering discussion of why it did not work as planned.
  - What you would do differently if you had the opportunity for more time, or completely re-do the design project.

Criterion 3 – 35 points. This criterion will evaluate the level of technical skill, teamwork, and dedication manifested in the completed project. To maximize your points, the evaluators will evaluate thoroughly Chapters 2, 3, 4 of your report. Since this criterion will draw considerably from your final report, it is also an assessment of how well you documented your work in the report.

- What was your design concept in software and hardware? How did you implement your FAST diagram?
- If you changed your approach or design during the project, explain your reasons.
- What was technically challenging about the project? What were the test results (Chapter 4)? What was (were) the hardest requirement(s) to meet?
- If you didn’t meet them or the project didn’t work as expected, why and what could a future team do better? (From Chapters 2, 3,4, 5)
• What did each of the team members *technically contribute* to the project? (From Appendix I)

**Criterion 4 – 10 points.** This Criterion will examine your attention to non-technical aspects of the design such as cost, marketability, social impact, and manufacturability. Ideally, there should be enough information in Chapters 1-5 for the evaluators to address these non-technical details. This will also address the question “Assuming we are successful, what difference does it make to society, the market place, and your sponsor’s business”?

**Criterion 5 – 15 points.** Professionalism in the poster and oral presentation of the design project. This criterion will be based on the visual and oral quality of your POSTER SESSION in the hall and/or the ORAL PRESENTATION to your peers and the judges. Since you will be pulling visual materials and documentation from the final technical report, we expect a great deal of similarity to what you document in the final report and the presentation. If there is a great deal of new material in the posters/presentations that is *not* reflected in the final report, this may result in a lower score on Criteria 1 and 2.