

Judging Criteria for Engineering Projects

I. Research Problem (10 pts)

- ___ description of a practical need or problem to be solved
- ___ definition of process for proposed solution

II. Design and Methodology (20 pts)

- ___ exploration of alternatives to answer need or problem
- ___ identification of a solution
- ___ background research is diverse with multiple sources
- ___ procedure is sequential and describes the investigation clearly

III. Execution: Construction, Testing, and Results (25 pts)

- ___ prototype demonstrates intended design
- ___ prototype has been tested in multiple conditions/trials
- ___ prototype demonstrates engineering skill and completeness
- ___ quantitative, metric data collected and displayed appropriately
- ___ conclusion based on success in regard to the problem being solved and suggestions for further efforts or practical applications

IV. Creativity (10 pts)

- ___ project demonstrates significant creativity in one or more of the above criteria
- ___ project demonstrates imagination and inventiveness that offer different perspectives to new possibilities or new alternatives

V. Presentation (35 pts)

a. Poster (10 pts)

- ___ logical organization of material with supporting documentation displayed
- ___ clarity of graphics and legends

b. Interview (25 pts)

- ___ clear, concise, thoughtful responses to questions
- ___ understanding of basic science relevant to project
- ___ understanding interpretation and limitations of results and conclusions
- ___ degree of independence in conducting project
- ___ recognition of potential impact in science, society and/or economics and quality of ideas for further research