Engn 379: Capstone Design II

## Technical Design Review Rubric

| Design Details and Rationale                                     |  |   |  |   |  |  |
|--|--|---|--|---|--|--|
| Description of final design                                      | Presented final design in complete and rigorous detail   | Presented final design in coherent fashion but some details missing   | Presented final design<br>but important details<br>were missing  | Failed to adequately describe final design  |  |  |
| Justification of final design decisions                          | Justified design<br>decisions based upon<br>detailed technical merit.  | Justified design<br>decisions but some<br>details of technical merit<br>were missing.   | Justified design<br>decisions but technical<br>merit was lacking.  | Failed to justify design decisions.   |  |  |
| Application of quantitative engineering analysis                 | Accurately applied relevant quantitative engineering analysis with appropriate rigor.                                      | Applied relevant quantitative engineering analysis with appropriate rigor.  | Applied relevant quantitative engineering analysis, but rigor was lacking.   | Failed to apply relevant quantitative engineering analysis.                       |  |  |
| Testing and Evaluation: Procedures, Analysis, and Interpretation |  |   |  |   |  |  |
| Empirical methods of testing                                     | Designed and implemented appropriate empirical methods to fully characterize system behavior in complete technical detail. | Designed and implemented appropriate empirical methods to characterize most aspects of system behavior with some missing technical details. | Designed and implemented appropriate empirical methods to characterize some aspects of system behavior but technical details for others were insufficient. | Failed to design and implement empirical methods to characterize system behavior. |  |  |

|                         | T                         | T                        | T                        |                          |  |
|-------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--|
| Analysis and            | Appropriately analyzed    | Analyzed and             | Insufficiently analyzed  | Failed to present the    |  |
| Interpretation of       | and interpreted results   | interpreted results of   | and interpreted results  | results and analysis of  |  |
| empirical methods       | of engineering tests      | engineering tests with   | of engineering tests but | engineering tests and    |  |
|                         | and/or experiments in     | some technical detail    | technical detail         | experiments.             |  |
|                         | complete technical detail | missing                  |                          |                          |  |
| Project Management      |                           |                          |                          |                          |  |
| Projected timeline      | Provided detailed         | Provided an appropriate  | Provided a timeline but  | Failed to provide a      |  |
|                         | timeline for sufficiently | timeline for project     | some major way points    | timeline for project     |  |
|                         | completing all            | completion but some      | toward project           | completion.              |  |
|                         | remaining aspects of the  | details were missing.    | completion were          |                          |  |
|                         | project                   |                          | missing                  |                          |  |
| Projected cost analysis | Provided an appropriate   | Provided an appropriate  | Provided an appropriate  | Failed to provide an     |  |
|                         | projected cost of the     | projected cost of the    | projected cost of the    | appropriate projected    |  |
|                         | engineering design        | engineering design       | engineering design       | cost of the engineering  |  |
|                         | process and final design  | process and final design | process and final design | design process and final |  |
|                         | solution in complete      | solution with some       | solution but technical   | design solution          |  |
|                         | technical detail          | missing technical        | detail was lacking.      |                          |  |
|                         |                           | details.                 |                          |                          |  |

| Presentation                  |           |      |            |  |  |  |
|-------------------------------|-----------|------|------------|--|--|--|
|                               | Excellent | Good | Needs Work |  |  |  |
| Clearly presented the         |           |      |            |  |  |  |
| technical aspects             |           |      |            |  |  |  |
| Concisely presented the       |           |      |            |  |  |  |
| technical aspects             |           |      |            |  |  |  |
| Presented for a person        |           |      |            |  |  |  |
| trained in the field of       |           |      |            |  |  |  |
| engineering                   |           |      |            |  |  |  |
| Team presented and            |           |      |            |  |  |  |
| conducted themselves in a     |           |      |            |  |  |  |
| professional manner           |           |      |            |  |  |  |
| Text, schematics, images,     |           |      |            |  |  |  |
| plots, and tables are         |           |      |            |  |  |  |
| professional and used         |           |      |            |  |  |  |
| effectively                   |           |      |            |  |  |  |
| Team was well prepared to     |           |      |            |  |  |  |
| answer questions, fielded     |           |      |            |  |  |  |
| them appropriately, and       |           |      |            |  |  |  |
| offered relevant and succinct |           |      |            |  |  |  |
| answers                       |           |      |            |  |  |  |
|                               |           |      |            |  |  |  |

**Comments:**