# Master of Engineering Program (MENG)

## Capstone Project Course Guidelines

The following minimum general guidelines are provided to fulfill the expectations of the MENG Capstone course:

- The students should start thinking about the capstone project before their last semester and submit a *Project Proposal* for approval before registering for the Capstone course.
  - All MENG students are strongly encouraged to develop capstone projects with faculty individually, by which the students will learn how to develop/formulate research projects. To this end, a student should contact faculty with whom the student is interested in working with at least one semester ahead of the capstone project semester. Once an advisory agreement is reached, the student and the faculty should summarize the planned project scope/schedule/milestones, and submit to the Director of Graduate Studies of the department for approval. The deadline for this is one week before the semester starting date. If a student is unable to reach the advisory agreement but still plans to perform the capstone project, the student needs to submit the request to the Director of Graduate Studies one week before the semester starting date. In that case, a faculty will be assigned to work with the student, and the project will be decided based on the faculty's input.
  - The proposal is to include:
    1. Concise description of the project
    2. Need for the work
    3. Technical approach to be taken
    4. Work to be done
    5. Initial planned project schedule.
  - The proposal is evaluated in terms of:
    1. Its importance
    2. Project definition
    3. Project application and its application likelihood
    4. Student's background and ability to perform the project
    5. Project's promise to advance known capabilities and/or the state of the art

- The Graduate student is expected to spend same amount of time for this project course as for any graduate 3-credit course, which is about **9-12 hours per week** for 15 weeks.

- Ideally the subject of the project selected is one that supports the company for which the graduate student is employed by.

- The project should draw upon and demonstrate the application of material taught in the MENG program.

- The Graduate student should be in contact (meet or by telephone) with his/her advisor(s) at least every two weeks (or by mutually agreed upon time schedule) during the semester. The Graduate student will ***brief*** the advisors of his/her progress. Copies of the report or power point briefings should be sent to the advisors approximately three days before the briefing.

- At Mid-Term, approximately 7 weeks into the semester, the students "Progress Mid-Term Briefing" should provide sufficient results of completed research, analysis and testing (as applicable) such that project can be successfully projected to be completed by the end of the semester.
- The **deliverables** of the project are to include:
    1. A set of Progress Briefings
    2. A Final Report
    3. A 45-60 minute oral presentation at the end of the term. The Final Report and Oral presentation constitute the Final Exam.
- The outline of the Final report is to include the following general suggested sections:
    - Abstract including goals/objectives of the project
    - Introduction
    - Analysis
    - Experimental data if applicable
    - Results including comparison of analysis and experimental data
    - Conclusions
    - Recommended future work
    - Survey of related literature to the Project subject

| Time | Deliverable | Format |
|---|---|---|
| Pre-work | Think about project topic and learn software/technology for the project. | N/A |
| Week 1 | Finalize and get approval on the topic. Begin research/work | One page proposal |
| Week 3 | Progress Briefing | Power Point or Report |
| Week 5 | Progress Briefing | Power Point or Report |
| Week 7 | Progress Mid-term Briefing | Power Point or Report |
| Week 9 | Progress Briefing | Power Point or Report |
| Week 11 | Progress Briefing | Power Point or Report |
| Week 13 | Progress Briefing | Power Point or Report |
| Week 15 | Final Project Deliverable | Final Oral Presentation and Completed Final Report |