EGR 497/498 Bioengineering Capstone Project I/II

Proposal Guidelines

1. Course Description

Two + Two Credits (Fall + Spring Semesters)

A lab skill and knowledge application course. The course starts with EGR 497 and
ends with EGR 498 in two consecutive semesters with 2 credits in each semester.
Students will, either alone or as a team, conduct a project related to real bioengineering
problems with some design components. The project can be either initiated by the
student or part of a larger project. The project includes activities ranging from presenting
literature review to writing a formal thesis. It is expected that the project, when is
completed successfully, can lead to a peer-reviewed paper. Students are also required to
attend seminars, lab and group meetings, and share lab maintenance duties. When the
capstone project is part of a larger project, a graduate student is usually assigned as
mentor.

2. Proposal Preparation

2.1. A capstone project should be proposed by student/s usually in the Spring
semester and approved by the department faculty.

2.2. Students should notify, in a form of "Proposal Summary", the department by
February 20th in the Spring semester of their intention to do the capstone project.
The following should be included in the Proposal Summary.
   2.2.1. Title of proposed project
   2.2.2. Background
   2.2.3. Problem to be solved or objectives
   2.2.4. Brief work plan
   2.2.5. Team members
   2.2.6. Sponsor. Sponsors can be either a faculty member or a company
   2.2.7. Signatures of team members
   2.2.8. Signature and date of approval

2.3. The department should either approve or reject the Proposal Summary in two
weeks.

3. Proposal

3.1. If a Proposal Summary is approved, a proposal should be submitted by email to a
faculty advisor (to be assigned by the department) 2 weeks in advance of a
planned proposal presentation at which a PowerPoint presentation will be
presented by the project team (either an individual student or a group of students).
3.2. A submitted proposal should contain the following sections
3.2.1. Title Page (could be the approved Proposal Summary)
3.2.2. Abstract: this is a concise summary of the project.
3.2.3. Introduction (background information, the problem/s to be solved)
3.2.4. Literature Review (The state of the art; what have been done to the problem to be solved; theory; principle; patents etc.; proof of not repeating already solved problem)
3.2.5. Objectives
3.2.6. Technical approach (to address the objectives)
3.2.7. Experimental (materials, instruments, experimental design to translate the technical approach)
3.2.8. Expected results and deliverables
3.2.9. Time lines
3.2.10. Cost
3.2.11. Reference cited

3.3. At proposal presentation, questions will be asked by faculty and audience, and rational answers are expected to defend the proposal.

4. Outset of the Capstone Project.

As soon as the proposal is approved at the end of proposal presentation by the department faculty, students can start the capstone project.