Department of Electrical and Computer Engineering

Senior Design Project

The senior design project is your opportunity to turn the knowledge and skills you acquired during your first 3 years in ECE into a real project. It is also an opportunity to hone your skills in documentation, presentation, and working in a team.

The senior project consists of two courses:

- ECE414 (1 credit)
- ECE416 or ECE 417 (3 credits)

In ECE 414 you develop and submit a project proposal; in ECE416 or ECE417, you do the proposed project and document the results. Note that substantial design work (at least preliminary), component selection, etc. has to be done in ECE 414. Not enough work done in 414 is the main source of students running out of time at the end of the project (in ECE 416 or ECE 417).

The difference between ECE416 and ECE417 is as follows: In ECE416 you and your team members do the project in a classroom or laboratory setting, meeting at the scheduled time each week, with the instructor of the course serving as your project advisor. In ECE417, each team has its own advisor, and meets with the advisor at times of mutual convenience.

Frequently asked questions:

Q. What is the size of each project team?

A. Ideally, each team should have 2 or 3 members.

A team of 4 may be permitted for projects of unusual complexity, or requiring specific skills of 4 different individuals. If your project involves four students, consider dividing it into two coordinated sub-projects, each with a team of two.

"Solo" projects are strongly discouraged, except for students who are proposing to do a project as part of their job or in conjunction with an industrial sponsor.

Q. What is a reasonable project scope?

A. A project of appropriate scope would take approximately 150 hours of effort from each team member.

Q. Who funds the project and how much should it cost?

A. In general the project is funded by the team members themselves. For that reason, the cost of the project should not exceed $500. If the project is done under the aegis of a faculty advisor, the advisor may have access to additional funding or hardware that you may need.

Q. How can we find a suitable project?

A. One source of projects is your own particular interest, hobbies, for example. There are several web sites which might give you some ideas. Perhaps the IEEE Student Chapter can be of assistance. Some faculty members have ideas which they may share with their classes.

Q. How can we find an advisor for ECE417?

A. The research interests of each faculty member are posted outside the ECE department office on the 2nd floor of ECEC. If you find a faculty member whose research interests match yours, visit the faculty member during his/her office hours or make an appointment for a meeting. Some faculty members have an "inventory" of suitable projects; others may be willing to advise and assist you on the project of your own design.

Q. May the project faculty advisor be from another department?

Yes, but the advisor must agree to comply with the ECE department requirements.

Q. May members of the team be from another department?

Yes, but the project must conform to ECE requirements. If a student is also using the project to satisfy senior project requirements of another department, the requirements of that department must be satisfied.

Q. Must I do the project the semester following ECE414?

A. Yes. Other team members will be completing the project in that semester and if you do not work with the tem, you will be left without a project and cannot graduate.

Q. Must the project entail hardware, or can it be only software?

A. The project requires designing, building, and testing something—a "thing". Only in special situations software only projects are acceptable, for example writing a program that runs equipment provided by an industrial or academic sponsor. In such cases testing of operation of the system with the software is expected.