**Course Syllabus**

ECE188A  
*Senior Electrical Engineering Project*  
*(Elective)*  
4 units

**Catalog Description:**
Student groups design a significant project based on the knowledge and skills acquired in earlier coursework and integrate their technical knowledge through a practical design experience. The project is evaluated through written reports, oral presentations, and demonstrations of performance.

**Prerequisites:** Completion of 4 upper-division EE courses with a GPA of 3.0 or higher; open to EE and computer engineering, majors only; consent of instructor. ECE188B must also be completed in order to achieve design credit toward graduation.

**Text, References, and Software:**
Varies with the particular project.

**Course Requirements:**
1. **Selection of project.** In electrical engineering, there are a wide range of possible project topics, all the way from more physics oriented areas such as electronics/photonics to the mathematical such as signal processing and controls. Projects can be selected from those suggested by the department, by industrial affiliates, from ECE research groups, interdepartmental projects or projects proposed by the student group. Project groups will submit a proposal describing the project that they wish to undertake regardless of the source.
2. **Groups.** Group size must be in the range between 3 and 5 depending on the size and complexity of the project.
3. **Goals.** The goal of the project must be clearly described and criteria established of what constitutes success.
4. **Design.** The design work will be completed during this quarter. This should include at least partial proof of concept established by analysis and/or simulations.
5. **Presentations.** A powerpoint presentation is required at the end of the quarter which clearly describes the project, its motivation, the approach taken and verification of concepts to date. This constitutes the first major design review.

**Class/Laboratory Hours:**
The course is similar to independent research. Meetings are scheduled with the faculty mentor for the particular project. Each student group will meet together weekly, keeping detailed minutes of the meetings.

**ABET Contributions:**
1. **Criterion 5.** ECE188A in conjunction with ECE188B will prepare students for engineering practice by consolidating skills acquired in previous courses and incorporating realistic constraints and appropriate engineering standards.

**Contribution to Program Outcomes:**

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