Department of Electrical and Computer Engineering
ECE 416- Electrical and Computer Engineering Project II

3credits, 3 contact hours. The course is required in COE and EE programs
INSTRUCTOR: Dr. Marek Sosnowski Office: ECE 200 Tel: 973.596.8464
TEXTBOOK(S) REQUIRED: None

DESCRIPTION

Prerequisites: ECE 414. Continuation and completion of the project based on the proposal approved in ECE 414. Progress of the project is monitored by the instructor with demonstrations and presentations at posted due dates. An oral presentation and demonstration of the completed project by the student team must be given and a written report submitted at the end of the course. Successful projects are approved for the Senior Design Project Showcase where project teams make presentations and demonstrations in front of the audience of students, faculty and industry representatives.
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COURSE LEARNING OUTCOMES

1. Students proceed from an initial design to a successful project implementation.
2. Students assemble and test hardware, write software, analyze data, and make design decisions.
3. Students work in teams consisting of members with different skills and experience
4. Students enhance their technical skills as well as presentation (oral and writing) skills.

Relevant Student Outcomes	Course Learning Outcomes
a, b, e, f, k	1, 2
c	1
d	3
g	4

Relevant student outcomes (ABET criterion 3):

a) an ability to apply knowledge of mathematics, science and engineering
b) an ability to design and conduct experiments, as well as to analyze and interpret data
c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
d) an ability to function on multidisciplinary teams
e) an ability to identify, formulate, and solve engineering problems
f) an understanding of professional and ethical responsibility
g) an ability to communicate effectively (3g1 orally, 3g2 written)
k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Week	Activities
1-2	Feedback on the proposals and discussion with the instructor
3	**Updated Project Description and Schedule** due. For projects <u>not requiring major changes</u>. Describe work on the project accomplished to date. The schedule should list major project milestones and the dates when they will be achieved. This may be the schedule presented in the approved proposal but it is also an opportunity to update the schedule and milestones based on the feedback received on the proposal. The schedule will be used for monitoring the project progress and deviations from the schedule have to be reported. **Describe hardware status: what parts and component do you have now and what still have to be obtained.** Revised proposals. <u>Only for projects requiring major changes.</u>
4, 6, 8, 10	Project Work Progress Report. Follow provided template.
10	Project Report draft due. Follow provided report template.
11	Qualifying Review. Demonstration and oral presentation.
15	Senior Design Project Showcase

Successful demonstration and presentation of the working project will qualify teams for participation in the Senior Design Project Showcase Presentation at the date to be announced.

Penalty of 10% grade points for not delivering assignments on time.

Participation in the Showcase is required for A grade.