

## EE 492

1. **Course Number & Name:** EE 492, Senior Design Project Planning
2. **Course Credit and Contact Hours:** 1 Unit, 3 hours lab
3. **Course Coordinator:** Dr. Farid Farahmand
4. **Textbook:** None
5. **Supplemental Materials:** Slides will be available online.
6. **Specific Course Information:**
  - a. **Description:** This course calls on the professional skills of the discipline; it draws on the core disciplines of the students' major field of study, as well as exploring necessary topics such as scheduling, organization, budgeting,, prototyping, develop teamwork, customer liaison skills, employ creativity in proposing new solutions, and so forth. Hence, by the end of the capstone process students are expected to have a good understanding about various design phases, including analysis phase, a design phase, a validation phase and a production phase.
  - b. **Prerequisites:** EE 310 and EE 330 and senior standing, or consent of the instructor.
  - c. **Co-Requisite:** None
  - d. **Status:**  Required for EE program,  Elective,  Selected Elective
7. **Specific Goals for the Course:**
  - a. **Specific outcomes of instruction:** Upon successful completion of this course the students will gain:
    - i. Ability to operate in team and work together towards a common goal.
    - ii. Ability to apply engineering design principles to formulate problem statement, analyze requirements and produce a system-level block diagram.
    - iii. Ability to prototype an electronic and/or software system to meet given specifications.
    - iv. Ability to take a systems approach to problem solving.
    - v. Ability to work productively in a team environment.
    - vi. Ability to effectively communicate technical ideas and concepts.
    - vii. Ability to manage a team project, deliver timely, and be attentive to customer relationship.

viii. Ability to understand the environmental and social impacts of the design.

**b. This course supports the following ABET Student Outcome:**

- i. *SO-2*: an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

**8. Brief List of Topics to be Covered:**

- a. Customer Requirement
- b. Engineering Requirement
- c. Preparing a funding proposal
- d. Developing high-level block diagram
- e. Developing project schedule
- f. Project sustainability and engineering ethics
- g. Developing customer survey
- h. Conducting product survey