

**EENG 4910 Senior Design**  
Spring 2019

Time: Tuesday 2:30 – 3:50 p.m.

Meeting Place: NTDP B217

Instructors: Murali Varanasi and Gayatri Mehta

Office: Discovery Park B-263

Office Hours: Tu 1-2:30 p.m.

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**Course Description**

The capstone senior design course is a comprehensive electrical engineering design course designed to satisfy ABET engineering design criteria. Each and every senior project will be reviewed by ABET evaluators. Students may choose a design topic in VLSI, communications, Signal Processing or any other relevant electrical engineering area. Substantial design work is required for passing this course. The course is administered as a two-semester sequence of courses EENG 4910, and EENG 4990. During the first part (EENG 4910), students are expected to develop a comprehensive project proposal and conduct research that results in a conceptual design. In the second part (EENG 4990), detailed design, implementation, and documentation are conducted. The project deliverables include a final report, oral presentation, and demonstration of the project. All work submitted must be approved by the faculty advisor.

**Textbook(s) and/or other required material**

R. M. Ford and C. S. Coulston, Design for Electrical and Computer Engineers - Theory, Concepts and Practice, New York: McGraw-Hill, 2008 (Recommended Reference)

**Prerequisite:** EENG 3810, 3910 and 3920.

**Learning Outcomes**

After completing the course students will be able to:

1. Design a system or process to meet specifications with engineering constraints.
2. Function as a member of an engineering team.
3. Utilize technical resources both from prior coursework, as well as from other relevant sources.
4. Demonstrate excellent written and oral communication skills related to design project results.
5. Demonstrate an understanding of ethical and professional issues as well as engineering standards related to their projects.
6. Demonstrate an understanding of contemporary issues as related to their projects.

## **General Policy**

- Class attendance is mandatory.
- It is strongly encouraged to get to know each other in the class. Discussions are allowed!
- Everyone must turn in her/his own individual work. Simply copying other's homework will be treated as a violation of academic honesty
- It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office (see <http://www.unt.edu/oda>)
- Please visit <http://www.unt.edu/csrr/> for your rights and responsibilities

## **Grading Policy**

- Attendance – 5%
- Class Participation/Assignments/Discussion – 15%
- Progress report – 20% ( At the end of the semester).  
(10% for presentation and 10% for the report. The report should follow the guidelines that will be discussed in class. The report will be graded for inclusion of a thorough discussion related to ethics, contemporary issues, globalization, and engineering standards. References cited should be mostly among textbooks and technical scholarly journals, not web page citations).
- Project proposal – 10%
- Project – 50%

## **Topics (Tentative)**

- Project Proposal + Engineering Design
- Professionalism and Ethics + Hyatt Regency Walkway
- Contemporary Issues.
- Guest Lecturer
- Globalization Discussion
- Progress Report Presentations
- Engineering Standards and Realistic Constraints.
- Guest Lecture
- Guest Lecture