



# Senior Design Program

## Brief overview of the Fall 2011 / Spring 2012 Requirements

### About Senior Design Program:

*During senior year, all Electrical and Computer Engineering undergraduate students participate in a capstone senior design project. This unique educational experience allows students to develop practical, hands-on skills and teaches them how to succeed in an integrated, interdisciplinary engineering design environment. The program challenges students to think creatively and empowers them to take responsibility for all phases of their project, from design and manufacture to documentation and marketing.*

*Senior design experience includes presentations by industry professionals who share practical tips and useful information about the engineering workplace. Some projects are entered in international design competitions requiring them to travel across North America to compete with other engineering students.*

*Our students find that they are able to successfully compete for engineering positions as a result of their participation in the Senior Design Program and, once employed, they are well prepared for today's workplace.*

The purpose of Senior Design Program is to expose our senior students to:

- planning, setting project goals, and timeline
- design, manufacturing, testing, troubleshooting, and improving the product
- recommending future steps
- meeting project criteria and completing all necessary research in a timely manner
- writing a thorough report in a pre-defined form (fall and spring)
- effective oral presentation (fall and E-Days)
- poster presentation with the exposure to judging (E-Days)
- dealing with different vendors, soliciting donations, choosing and ordering components
- budget issues
- collaboration with industry (for most of the projects)
- **TEAM WORK**

In the past, we have used some of the projects suitable for the outreach to present to High School students visiting the Engineering Exploration Day; the response was tremendous. We have asked our senior design students to present their research during the Industrial Advisory Board (IAB) meeting. We have asked them to present the undergraduate research in our department during Alumni Awards Dinner. Some of our projects were featured in various media: ECE Bulletin, Engineering Online News, Today@ColoState, main CSU website, local and Colorado newspapers, and national and international TV stations.

## Fall 2011 / Spring 2012 Requirements:

1. **Work on the project and meet project objectives and timeline.**
2. Record ALL your work in the **Design Notebook**. First (inner) page in the Notebook should contain project info: title, supervising professor, project members and their contacts, companies they are collaborating with, and donating companies. Last page should have a table with four columns: Date, Time, Activity, and Total Time. This last page should be a valuable reference for you to periodically check how much time you have spent working on the project vs. accomplishments. One hour of weekly lecture time should be added to the total senior design time / recorded in the notebook.  
Notebooks will be collected on a monthly basis. Collection weeks will be the weeks of 9/19, 10/10, 11/07, and during the last week of the Fall semester (due date tba). Notebooks can be submitted any day *except* Wednesday. They are due in Mrs. Notaros' office or mailbox and *should not be left in front of the door!*
3. You will have to define **project objectives and timeline** within first two to three weeks of the fall semester. **Project websites** should be up by September 21<sup>st</sup>, 12-noon. More info on the websites will follow. In the mean time, you may visit previous years' web sites. It will be left up to the project members to define the look of their web site; we will provide you with required components. Your website should look professional as you may choose to refer to it during job interviews.  
Picture day will be August 31<sup>st</sup> after the weekly lecture.
4. The last week of classes, December 5-9<sup>th</sup> will be the week of **oral presentations**. Oral presentations are group effort of all team members. They are organized in the form of a conference: each team has a 15-20 minute time slot allocated for oral presentation with enough time left for questions and answers. Traditionally, student oral presentations are attended by professors, guests from industry, and other students. All students are required to attend 7 presentations beside their own and write a short critique that will be forwarded to the presenters. More information about this event will follow.
5. **Written reports** will be due on December 9th, at midnight. Required format of the written report will not change significantly from the last year and will be posted on the web well in advance. It is very important to write your report in compliance with the required format. If your report is not compliant, it will be returned for finalization. You may access and read last year's final reports on individual project web sites.
6. Along with the written report, a few **other documents will be due at the end of each semester**. More info on the accompanying documents is on the web. Some of the documents need to be submitted by a group and some individually.
7. Participation in the **E-Days** event is required for all Senior Design students. E-Days are organized by the College of Engineering students in mid-April and will expose you to the judging procedures. More information on the E-Days event will follow.
8. **Final reports** will be due approximately the week before the end of spring semester. All final reports will enter the Best Paper Award contest and will be subject to review by the Industrial Advisory Board members. The best paper award winner will be announced during the graduation ceremony. Since written report due date is connected with judging timeline, exact due date will be announced in the spring.
9. There is **no public oral presentation** at the end of spring semester. Oral presentations will be in the closed form, organized upon the supervisor's request.
10. Keep all the receipts for **reimbursement**. You are entitled to \$50 per student, per semester. Reimbursement procedure will be announced in class and e-mail will be sent to all students enrolled in senior design.
11. **Grade** will be based on the three inputs: supervisor (60%), head of senior design (30%), and peers (10%).
12. Keep careful track of the missed **weekly lectures**. Do not wait until the end for the make-ups as there is hardly anything going on after the last week of the classes.
13. Questions? Contact [olivera@colostate.edu](mailto:olivera@colostate.edu)