Engineering Design Lab III

ENGR-103 Spring 2013

Week 1 Lecture

Introduction to ENGR-103

Overview of Freshman Design

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Course Structure and Policies

Structure of ENGR-103 course

- Lectures held Monday morning, 1 hour
  - Freshman design deliverables are discussed
  - Guest speakers from CoE engineering and related topics
- Labs held Tuesday through Friday, 2 hours
  - Used as a common meeting time for your group
  - Students in “externally advised” groups will meet with their advisor weekly at an agreed upon time/place

Course Policies

- Lab attendance
  - Weekly lab attendance is required. Unexcused absence from more than two labs may result in failure of the course.
  - For those working with external advisors, weekly meetings are required
- Lecture attendance
  - Throughout the quarter, attendance will be taken randomly. You must have your Dragon Card to receive attendance credit.
- Assignment submission
  - Due by the start of lab in the week the assignment is due.
  - Late reports docked 5% per day
  - All reports must be submitted in PDF format BbLearn.
- Vandalism/Theft
  - Punishment ranges from failure of the course to expulsion from the University.
  - Labs are under video surveillance

Course Website

- All course related material is available at http://core.coe.drexel.edu
  - Student Resources section contains: syllabus, report templates, guidelines
- BbLearn is used for grade reporting
- Some lab section instructors will use their BbLearn pages for additional content

Communication with Course Personnel

- Email me with questions regarding:
  - Lecture content
  - Course policies
  - General course related issues
  - primerano@mail.decc.drexel.edu
- Email your advisor or lab instructors regarding:
  - Course grades
  - Assignment submission issues
  - Issues with team members
- Always include your course/section number and your university ID in correspondences !

Forming Groups and Working on Projects

Freshman Design Structure

- Groups of 3 to 5 students specify an engineering project and work on it for the duration of Spring term.
- Final Deliverables Include
  - Final Report
  - Presentation
  - Tangible deliverable
- Groups will work with a technical advisor and a teaching fellow, each providing input on their final grade.
- All projects are required to contain a substantial engineering component and clearly defined deliverables.

Freshman Design Deliverables

- All projects are expected to result in a tangible deliverable.
- This is dependent on the type of project, e.g.
  - A completed program, app, or game for a software based project
  - A functioning mechanism for a robotics based project
  - A *detailed study* for an environmental engineering project
- You are expected to define a *reasonable* set of deliverables and meet them.
- “Report only” projects will not be approved

Freshman Design Project Formation
Lab Section Based Projects

- There are approximately 50 lab sections in the Spring quarter
- Each lab section has a project(s) associated with it
  - Registration for a lab section will require that you work on an associated project
  - Section instructors may also give you the option to work on other non-listed projects
  - Some instructors will allow students to develop a project related to the official lab section project
  - All questions about lab section topics should be directed to lab section instructors
- All members of your freshman design group must register for the same lab section
- A complete list of section projects is available here.

Freshman Design Project Formation
Externally Advised Projects

- An online lab section has been established for groups wishing to pursue a project with an advisor outside of the course
  - You should have been placed in this section by now
  - Your advisor will be given access to the online section for assignment grading
- Advisors generally must be faculty or Ph.D. students
- You are expected to meet with your advisor weekly, in place of a weekly lab meeting

Lab Meeting Times

- The weekly lab meeting time should be used as a common meeting time for your group
- You should also use this time to meet with your lab instructors regarding progress on your project.

- If you are having any issues with group members, please inform lab instructors immediately.
  - There is a 10% teamwork component in your grade
  - Not all members are required to receive the same grade

- ***You are expected to meet regularly outside of the lab period os well.***

Grading Components and Deliverables

Grade Components

- Lecture Participation - **5%**
- Design Proposal – **5%**
- Website and Weekly Progress – **25%**
- Draft Final Report – **5%**
- Final Report - **20%**
- Presentation and Deliverable - **30%**
- Teamwork Evaluation – **10%**

- ***Due to the variability of projects, individual advisors may modify the basic grading components and requirements.***

The mapping between percent grade and letter grade is:

A+	98-100.9	B+	87-89.9	C+	77-79.9	D	60-69.9
A	93-97.9	B	83-86.9	C	73-76.9	F	<60
A-	90-92.9	B-	80-82.9	C-	70-72.9		

Freshman Design Deliverables

Week		Lecture	Deliverables/Notes
1	1-Apr	Overview of Spring Quarter	Group Info Form
2	8-Apr	Library Resources	Blog Check #1; Design Proposal
3	15-Apr	Guest Lecture #1	
4	22-Apr	No lecture - Philly Robotics Expo	Teamwork Evaluation #1
5	29-Apr	Guest Lecture #2	
6	6-May	Review of Project Deliverables	Blog Check #2
7	13-May	Approximations in Engineering	Draft Final Report
8	20-May	Guest Lecture #3	Teamwork Evaluation #2
9	27-Jun	No lecture - Memorial Day	Blog Check #3
10	3-Jun	Guest Lecture #4	Final report Final presentation

Freshman Design Blog

- Week 2 – Initial Setup
  - Basic blog must be set up
  - All group contact info must be entered
- Week 6 – Progress Check #1
- Week 9 – Progress Check #2

- Blogs must be updated weekly with group progress
- Creativity
  - 10% of the *Website and Weekly Progress* component is based on creativity in presentation and design of the blog
  - ***Just posting weekly updates is not enough to receive full credit for the Blog portion***

Maintaining Your Blog

- This must be updated weekly
- Advisors will provide feedback, possibly as blog comments

- The content in the blog will act as: a lab notebook, a design proposal, progress reports
- This content accounts for 25% of your course grade

Draft and Final Report

- Due in weeks 7 and 10, respectively
- The final report should be a comprehensive report stating the activities you engaged in over the 10 weeks of the term
- A template is provided and gives the minimum requirement for content and structure
- Your advisor should provide project specific guidance.

Final Presentation

- In week 10 of the quarter, your group will present your project to faculty and your peers
  - 10 minute presentation
  - 5 minute Q&A
- Presentations will be held in departmental conference room
- Demonstrations should be given in this time period as appropriate

How to Prepare for Week 1 Lab

- If you have identified a group and project
  - You should have a clear idea of the problem statement, objectives and deliverables
  - If you are not in the same lab section as the remaining group members, attend your assigned lab for week 1.

- If you have not identified a group and project
  - Look at the lab section project list available here and be prepared to develop a specific project during week 1 lab
  - You must form a group by the end of the lab period.

By the End of Week 1 Lab

- You must have defined a group and project
- You must submit group member names to your lab instructor

By The Start of Week 2 Lab

- Your group's blog must be set up. See the instructions here.
- You must submit a project proposal. Use the template here.