

ENGR 103 – Engineering Design Lab III Drexel Engineering Core Curriculum

Course Coordinators:

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Direct any questions regarding assignments, grading, and lab specific content to your lab staff.

Course Website:

The course website for ENGR-100 through ENGR-103 can be found at: <http://core.coe.drexel.edu/>. On it, you will find contact information for all of the lab staff, weekly lecture and lab downloads, software video tutorials, and weekly announcements.

Course Materials:

- **Textbook:** None
- **Lab Journal:** 3 ring binder, one per group

Course Description:

The goal of the Engineering Design Lab sequence (ENGR-101, ENGR-102, and ENGR-103) is to introduce incoming students to engineering through a combination of lecture discussion and laboratory exercises. In ENGR-103, student groups are tasked with formulating a design solution to an open-ended engineering problem of their choosing (subject to advisor approval). Students will be responsible for evaluating existing solutions, developing design constraints, and designing/implementing an engineering design solution.

Lecture

Lecture sections meet one hour each week on Monday in Mitchell Auditorium in the Bossone Research Center. The material covered in the lecture supports the weekly lab exercises, and also introduces more general engineering topics.

Laboratory

Students meet once each week for two hours in their assigned laboratory section. Students are expected to attend each laboratory session. More than two unexcused absences will result in failure of the course. ***Laboratories are open Monday from 9AM to 5PM in Lebow 132 and are available for students who need access to lab facilities.***

Preparation:

Lab Journal

Groups are required to maintain a 3-ring binder documenting laboratory activities. The binder is used to record data and observations, make relevant sketches, and perform calculations related to your design project. Lab groups will be formed at the start of the Week 1 lab period. Once formed, the group must decide how to divide the work of maintaining their notebook among members. Maintenance of the group lab notebook must be divided evenly among group members. *Your advisor will give specific requirements about what must be recorded in your journal based on your design project.*

Software

You should have access to Microsoft Office (or equivalent) for lab report preparation, data analysis/plotting, and presentation generation. **All lab reports (technical briefs) must be submitted in PDF format, so you will also need a means of converting your report into this format.** Newer versions of MS Office can generate PDFs directly.

Blogs will be maintained through Blogger, which is free to use and accessible through any web browser.

Grading Components:

Your grade for ENGR-103 is derived from the following components:

- **Lecture Participation - 5%** Lecture attendance will be taken randomly during the quarter. You are expected to attend the lecture that you are registered to and missing a sign-in for that lecture will constitute an absence.
- **Design Proposal – 5%** Due at the start of week 2 lab. You are required to submit a draft proposal outlining your project's goals, technical activities, and deliverables. Your instructor will require edits and final submission as needed.
- **Website and Weekly Progress – 25%** Groups are required to maintain a website that tracks the progress of their projects. The website must be updated weekly and at the conclusion of the project. See the *Website Instructions* document for more information.
- **Draft Final Report – 5%** Due at the start of Week 7 lab. This must contain all data and progress made through week 6 as well as a complete outline of any remaining sections that will be completed through the remainder of the project. All other requirements of this deliverable are at the discretion of your advisor.
- **Final Report - 20%** Due in week 10 lab. The report must thoroughly document the progress and end result of your project. All other requirements of this deliverable are at the discretion of your advisor. See the *Final Report and Presentation Instructions* for more information.
- **Presentation and Deliverable - 30%** In Week 10, a group presentation will be given. The presentation should be based on the material within your final lab report. All other requirements of this deliverable are at the discretion of your advisor. See the *Final Report and Presentation Instructions* for more information.
- **Teamwork Evaluation – 10%** A measure of how strongly you contributed to your team's final deliverable. Any teamwork issues should be communicated to your advisors immediately, not at the end of the quarter.

The mapping between percent grade and letter grade is:

A+	98 - 100	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		

Weekly Schedule:

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

Teamwork Assessment:

In Weeks 4 and 8, you will be required to complete a BbLearn poll to assess the performance of yourself and your teammates. In the assessment, you will be asked to *briefly* list the responsibilities of each member, note any performance issues, and assign a numerical participation grade for each member. This will be used in deriving each member's teamwork score (worth 10% of your overall grade) for the quarter.

Academic Policies:

In addition to the course policies listed on this syllabus, course assignments or course website, the following University policies are in effect:

- Academic Honesty: http://www.drexel.edu/provost/policies/academic_dishonesty.asp
- Student Life Honesty Policy from Judicial Affairs:
<http://www.drexel.edu/studentlife/judicial/honesty.html>
- Students with Disability Statement: http://www.drexel.edu/ods/student_reg.html
- Course Drop Policy: http://www.drexel.edu/provost/policies/course_drop.asp
- The course coordinator may, at his/her/their discretion, change any part of the course during the term, including assignments, grade breakdowns, due-dates, and the schedule. Such changes will be communicated to students via the course web site [Announcements](#) page and via email. This page should be checked regularly for such changes and announcements.