

ENGR 10: Introduction to Engineering

Spring 2021
Section #54097

Class:

Hybrid; Online, plus face-to-face meetings on scheduled Tuesdays in PHY 70.

Instructor:

Dr. John Heathcote

Office:

FEM-1B (in the math study center)

Phone:

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Virtual Office Hours:

M 11:00 am-12:50 pm

W 9:00-9:50 am

ThF 11:00-11:50 am

These are my official office hours, but you can find me at many other times!

Send me an email or a Canvas message to set up a Zoom meeting!

During virtual office hours, I will be monitoring my Canvas messages closely. Send me a message and I will quickly answer your question or we can set up an instant Zoom meeting.

Course Communication Policy:

My instructions to you each week will be posted in a weekly module. Be sure to read through all instructions posted in the module so that you fully understand what you need to complete each week. (Do not simply look at assignments posted in your course calendar. You will miss some important instructions if you do that.)

I will send Canvas messages regularly to keep you updated on the progression of the class and any important announcements. You will need to read these to stay informed about the class.

I will be available for virtual office hours as shown above. During these times, you can expect a quick response from a Canvas message or we can set up a Zoom meeting.

Please contact me with any questions or concerns you have about this class. Contact me through a Canvas message. I will reply within 24 hours on weekdays. I may be able to respond on weekends as well, but it is not guaranteed. (If I do not respond within 24 hours, please resend your message.)

I also encourage you to communicate with your classmates. There is a student Question and Answer discussion board that is open for any questions you want to discuss with your classmates.

Introduction:

I would like to welcome you to ENGR 10. This is a fun and enlightening course in which you will learn more about the career field of engineering while taking part in design projects and other group activities that will keep you engaged. We will also prepare you for the challenging academic study of

engineering by discussing the types of personal study skills you will want to develop. I look forward to helping you in this course and I hope to see you in many more engineering courses in the future!

Required Text:

Landis, R., Peuker, Steffen, and Mott, Jennifer, Studying Engineering, 5th Edition, Discovery Press, 2019

Catalog Description:

This course is an introduction to the engineering profession for students interested in a career in engineering or technology. Topics include opportunities in engineering, education plans, internships, the design process, analytical problem solving techniques, project management, and professional ethics. Hands-on projects are used extensively in the course.

Grading:

Grading will be based upon the total points earned by students through the semester. Here are some of the typical point totals that could be earned through common activities:

- 20 points: Face-to-face meeting attendance (These points can be made up if you let me know you will be absent.)
- 10 points: Online assignments and discussions
- 10-30 points: Group Projects (Online and Face-to-Face)
- 30 points: Student Education Plan
- 80 points: Final Exam

The total number of points for the semester will be approximately 700-750 points.

Grading Scale:

Grades will be determined from the percentage of points earned by a student from the total possible points.

90-100%	A
80-89.9%	B
70-79.9%	C
60-69.9%	D
0-59.9%	F

Face-to-Face Meeting Attendance:

There are 8 face-to-face class meetings at which we will perform hands-on design activities. In order to reduce the number of students in a particular meeting, the class is divided into four groups as listed at the beginning of the syllabus.

Attendance at these meetings will count towards your grade. In addition, you will earn points based upon the activities held during these meetings.

If you are sick or if you have been exposed to the coronavirus, you should not attend the class. Instead, please contact me to let me know you will not attend. I will give you an alternate assignment to make up for your missed points.

Individual Assignments:

You will be given regular assignments that you will need to complete on your own. These will be submitted on Canvas. Many of these assignments will involve reading from the textbook and then

writing your answers to questions based upon your thoughts of the reading. You will also complete other assignments such as developing your student education plan, career planning exercises, and constructing a resume.

Group Discussions and Projects:

Working as an engineering team is a big theme of this course. Both during our face-to-face meetings and online, we will have you work together in groups in design challenges, discussions, and research projects.

Final Exam:

As a way of summing up what you have learned from this course, a final exam will be taken during finals week. This will involve topics that we have discussed or studied throughout the term. The exam will be taken as a Canvas quiz.

Late Work:

Please do your best to keep up with this course. You will not receive full credit for tasks completed after the due date. Assignments and projects will be accepted after the deadline. However, your grade will drop by 2% for each day that you are late. Due to the interactive nature of discussions, they must be completed by the deadline. Late discussion posts will not be accepted.

HOWEVER, I do understand that circumstances to come up. If you have a good reason to ask for an extension for a task, please communicate that to me as early as possible. Depending on the situation, I will consider an extension for you.

Attendance and Drop Policy:

Your first assignment is a discussion post in which you introduce yourself to your classmates. If you do not post an introduction by Wednesday night, you will be considered a "No Show" for the class and will be dropped.

If you do not complete any assignment during a particular week, you will be considered absent for that week. If you are absent for two weeks (not necessarily in a row), you will be dropped from the class.

Cheating and/or plagiarism:

Cheating and/or plagiarism will not be tolerated. A student will receive no credit for the assignment if in the opinion of the instructor the individual has cheated. Further problems with cheating or plagiarism may cause a report to the Dean of Students.

Accommodations for Students with Disabilities:

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Add Date: Friday, January 29

Drop Date: Friday, March 12

Holidays: Monday, January 18

Friday, February 12-Monday, February 15

Monday-Friday, March 29 – April 2

Last day to add a course

Last day to drop this course

Martin Luther King Jr. Day

Presidents' Day Holidays

Spring Break

End of Semester: Friday, May 21

Student Learning Outcomes:

Upon completion of this course, students will be able to:

1. analyze issues using the guidelines of engineering ethics.
2. apply engineering teamwork skills and the engineering design process towards group projects.
3. identify the engineer's role in society.
4. make informed decisions about their educational and career plans.

Objectives:

In the process of completing this course, students will:

1. describe the role of engineers in society and classify the various branches of engineering, the functions of an engineer, and the industries in which they work.
2. describe how products are designed and created by engineers.
3. investigate new products being developed by engineers.
4. develop and apply effective strategies to succeed academically.
5. identify and describe academic pathways to bachelor's degrees.
6. investigate engineering career and internship opportunities.
7. develop a resume and cover letter for an engineering internship.
8. evaluate an engineering job and compare it to their own career interests.
9. discuss the standards of engineering ethics.
10. apply ethical standards towards engineering case studies.
11. analyze the application of the engineering design process toward the creation of a product.
12. work in engineering teams to apply the engineering design process toward meeting an engineering challenge.
13. write technical documents and present oral presentations based upon an engineering project.