



ENGR-1201-101CL
Intro to Engineering
Fall 2023
9:30 am to 11:20 am
Monday and Wednesday

Instructor Information:

Instructor: Dr. Rebecca Fagan

E-mail: rfagan@com.edu (preferred method of communication)

Office: (409)933-8244

Student hours and location:

Tuesday, Wednesday, and Friday 9:30am to 12:00pm

Or by appointment

Location: STEAM 325-18

Required Textbook/Materials:

Textbook

- Engineering Fundamentals: An Introduction to Engineering
Saeed Moaveni
Cengage Learning; 6th edition (2019) ISBN-13: 978-1337705011

Materials

- Engineer Pad, 5 Squares per Inch, 8.5" x 11", Green
- "Exam Book" for Labs
- Scantrons – 882E

Online Resources

- COM BrightSpace: <https://de.com.edu/webapps/login/>
Training is required to access. If you have any questions regarding course access or training, please contact the Distance Education department at ext. 8476.

Course Description:

- (LECTURE 1, LAB 3). CREDIT 2. ACGM
- An introduction to the engineering profession with emphasis on technical communication and team-based engineering design.
- Prerequisite: MATH 1314 with a grade of "C" or better.

Course requirements:**Calculators**

- <https://nces.org/exams/calculator/>
- NCEES approved calculators will be used for exams. After your first warning, your exam will be collected and your grade will be a zero if you are caught using a non-approved calculator.
 - Casio: All fx-115 and fx-991 models
(Any Casio calculator must have “fx-115” or “fx-991” in its model name.)
 - Hewlett Packard: The HP 33s and HP 35s models, but no others
 - Texas Instruments: All TI-30X and TI-36X models
(Any Texas Instruments calculator must have “TI-30X” or “TI-36X” in its model name.)

Exams

- There will be two exams (non-cumulative) and a final exam (non-cumulative).
- Exams will be given during the scheduled class time.
- Exams questions will be based on the course textbook material and will consist of multiple choice, T/F, diagram identification, and short answer style questions.
- A formula sheet will be provided in the exam.
- There are NO make-up exams so please make every effort to not miss a test.

Laboratory

- Lab Notebook
 - Lab activities will be in-class events.
 - The data to be recorded in the lab notebook and used to complete the lab report.
- Lab Reports
 - Lab reports are due for each lab activity.
 - There are NO make-up labs.
 - You may use another student’s lab data with a statement to that effect in your submitted lab report.

Homework Assignments

- These assignments will be linked to the course material to help reinforce the information covered in lecture.
- Homework has deadlines and must be completed on time for full credit.

Journal Assignments

- These will be used to describe the various disciplines in the engineering profession.

Classwork Assignments

- These activities are based on the course material to help reinforce the information covered in lecture.

Lectures

- Each class will cover textbook material.

Projects

- There will be two assigned projects.
 - Project Graduation will be an individual evaluation inclusive of a full formal report.
 - Impact of Engineering will be a team project inclusive of a class time presentation.

Determination of Course Grade/Detailed Grading Formula:

The details of how each item will be added to your final total are shown in the following chart.

Task	Total	% of the FINAL grade
Exams (100 points each)	300	14%
Attendance (10 points each)	300	14%
Classwork (15 points each)	225	10%
Assignments (Homework & Journals) (15 points each)	390	18%
Lab Reports (30 points each)	270	13%
Lab Book (30 points each lab)	270	13%
Projects (200 points each)	400	19%
Total	2155	100%

Percentage	Letter Grade
90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
0 – 59%	F

Late Work, Make-Up, and Extra-Credit Policy:

Any deviations from the policies described below are at the sole discretion of the instructor.

NO LATE WORK ACCEPTED

- Late Project(s) submittal will NOT be accepted.
- Late Lab Book submittal will NOT be accepted.
- Late work for assignment #25 and #26 will NOT be accepted.

Late Work

- Late work will be accepted ONE WEEK late ONLY and given **HALF CREDIT**.
 - Classwork
 - Assignments (Homework & Journals)
 - Lab Reports

Make-Up**Exams**

- There are NO MAKE-UP EXAMS.
- You may be allowed to replace ONE missed exam with HALF the value of your LOWEST exam grade.
- Any additional missed exams will be issued a ZERO.

Labs

- There are NO MAKE-UP LABS.

Lab Report

- You may be allowed to use another student's data IF you have that student's approval IN WRITING and documented in your report to that effect.

Attendance Policy:

COM recognizes no excused absences other than those prescribed by law: religious holy days and military service <https://www.com.edu/student-services/student-handbook.html>.

- Students are expected to attend all class sessions as listed on the course calendar.
- Attendance will be taken at the beginning of each class.
- Leaving early from class (without approval from the instructor) may result in an absence for that day.
- IF you do have to miss class, it is your responsibility to obtain notes from a classmate.
- Missing lectures may affect your all over class performance.
- Should you anticipate an absence, you must contact your instructor by email PRIOR to the absence.
- Each situation will be evaluated independently.
- You must provide legitimate proof for your absence.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means.

Student Learner Outcomes:

Upon successful completion of this course, students will successfully demonstrate mastery of the Student Learner Outcomes listed below.

Student Learner Outcomes*	Core Objectives**	Assessed via this Assignment
1. Describe the engineering profession and engineering ethics, including professional practice and licensure.	Personal Responsibility	Exams
2. Use technical communication skills to explain the analysis and results of introductory laboratory exercises in engineering and computer science.	Critical Thinking Skills	Lab Notebook
3. Explain the engineering analysis and design process.	Empirical and Quantitative Skills	Lab Reports
4. Analyze data collected during laboratory exercises designed to expose students to the different engineering disciplines.	Teamwork	Labs
5. Describe the impact engineering has had on the modern world.	Social Responsibility	Journals

Student Learner Outcomes*	Core Objectives**	Assessed via this Assignment
6. As part of a team, design a simple engineering device, write a design report, and present the design.	Teamwork	Project
7. Demonstrate computer literacy.	Communication Skills	Homework

** <https://reportcenter.highered.texas.gov/training-materials/lower-division-academic-course-guide-spring-21/>

** <http://leaptx.org/coreobjectives/>

Academic Dishonesty:

- College of the Mainland is committed to a high standard of academic integrity. In becoming a part of the academic community, students are responsible for honesty and independent effort. Incidents of academic and scholastic dishonesty (including cheating, plagiarism, and collusion) will be dealt with in a manner consistent with College Policy and the Student Handbook.
- Violations may result in a penalty. The maximum penalty will be a grade of "F" for the course. Violations may also be reported to the Judicial Coordinator as instances of Inappropriate Behavior. Please see the section on Privileges and Obligations in the Student Handbook for a more complete discussion of Inappropriate Behavior, and of your rights and responsibilities.
- There are many situations where you will be required to submit written work to earn points. It is important that the work you submit be your own. You cannot copy the work of another, or have your work copied by another. Doing so will be considered a violation of Academic Honesty.
- The work that you submit must be a product of your own mind. When completing assignments, for example, you are encouraged to collaborate with others to try to come to an understanding. But when you set pen to paper to write your answer, what you write must be a product of your own mind. When identical, or nearly identical, writings are submitted by students, it will lead me to suspect that work was copied. You could then be in violation of the standards of academic honesty, as described above.

Student Concerns:

If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact the department chairperson, Professor Sheena Abernathy, either in person, by telephone at 409-933-8330, or by email at sabernathy@com.edu.

Course outline:***ENGR-1201-101CL, Introduction to Engineering – Tentative Course Schedule***

Class	Date	Lecture Topic	Reading Due	Homework / Lab Report Due
1	Monday, August 28	Introduction Lecture: Introduction to the Engineering Profession	Chapter 1	—
2	Wednesday, August 30	Lecture: Preparing for an Engineering Career	Chapter 2	—
—	Monday, September 4	LABOR DAY — NO CLASS	—	—
3	Wednesday, September 6	Lecture: Introduction to Engineering Design Lab: Tower	Chapter 3	#01
4	Monday, September 11	Lecture: Engineering Ethics Class Work: Ethics Case Studies	Chapter 5	#02
5	Wednesday, September 13	Lecture: Engineering Communication Class Work: memo email	Chapter 4	#03 Tower Lab Report
6	Monday, September 18	Lecture: Engineering Communication Class Work: Progress report email Project Graduation	Chapter 4	#04
7	Wednesday, September 20	Lecture: Computational Engineering Tools – Excel Class Work: Excel	Chapter 14	#05
8	Monday, September 25	Exam Chapters 1 - 5	—	—
9	Wednesday, September 27	Lecture: Computational Engineering Tools – Excel Class Work: Excel	Chapter 14	#06
10	Monday, October 2	Lecture: Engineering Drawing and Symbols Class Work: Hand Drawing	Chapter 16	#07
11	Wednesday, October 4	Lecture: Engineering Drawing and Symbols Class Work: Drafting	Chapter 16	#08
12	Monday, October 9	Lecture: Engineering Drawing and Symbols Class Work: AutoCad	Chapter 16	#09
13	Wednesday, October 11	Lecture: Fundamental Dimensions and System of Units Lab: Bridge	Chapter 6	#10
14	Monday, October 16	Lecture: Fundamental Dimensions and System of Units Lab: Bridge	Chapter 6	#11
15	Wednesday, October 18	Lecture: Length and Length-Related Variables in Engineering Lab: Velocity	Chapter 7	#12

Class	Date	Lecture Topic	Reading Due	Homework / Lab Report Due
16	Monday, October 23	Lecture: Length and Length-Related Variables in Engineering Lab: Velocity	Chapter 8	#13 Bridge Lab Report
17	Wednesday, October 25	Lecture: Mass and Mass-Related Variables in Engineering Lab: Boat Design	Chapter 9	#14
18	Monday, October 30	Exam Chapters 14, 16, 6, 7, 8	—	Velocity Lab Report
19	Wednesday, November 1	Lecture: Force and Force-Related Variables in Engineering Lab: Mobile	Chapter 10	#15 Boat Lab Report
20	Monday, November 6	Lecture: Force and Force-Related Variables in Engineering Lab: Mobile	Chapter 10	#16
21	Wednesday, November 8	Lecture: Force and Force-Related Variables in Engineering Lab: Mobile	Chapter 10	#17
22	Monday, November 13	Lecture: Temperature and Temperature-Related Variables in Engineering Lab: Volumetric Flow	Chapter 11	#18
23	Wednesday, November 15	Lecture: Electrical Current and Related Variables in Engineering Lab: Circuits	Chapter 12	#19 Mobile Lab Report
24	Monday, November 20	Lecture: Electrical Current and Related Variables in Engineering Lab: Circuits	Chapter 12	#20 Volume Lab Report
25	Wednesday, November 22	Lecture: Electrical Current and Related Variables in Engineering Lab: Circuits	Chapter 12	#21
26	Monday, November 27	Lecture: Energy and Power Lab: Viscosity	Chapter 13	#22
27	Wednesday, November 29	Lecture: Engineering Materials Lab: Materials	Chapter 17	#23 Circuit Lab Report
28	Monday, December 4	Exam Chapters 9, 10, 11, 12, 13, 17	—	#24 Viscosity Lab Report
29	Wednesday, December 6	Impact Of Engineering Team Work	—	#25 Material Lab Report
30	Monday, December 11	Impact Presentations	—	#26

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2023-2024_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is October 11. The last date to withdraw from the 16-week session is November 28. The last date to withdraw for the 2nd 8-week session is December 7.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.