



ENGR-1304-101CL
Engineering Graphics I
Spring 2024
1:30 pm to 4:20 pm
Tuesday and Thursday

Instructor Information:

Instructor: Dr. Rebecca Fagan

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

Office: (409)933-8890

Student hours and location:

Tuesday, Thursday, Friday 9:30am to 12:00pm

Or by appointment

Location: STEAM 325-18

Required Textbook/Materials:

Textbook

Technical Drawing 101 with AutoCAD 2022: A Multidisciplinary Guide to Drafting Theory and Practice with Video Instruction

Douglas Smith, Antonio Ramirez, Ashleigh Congdon-Fuller

SDC Publications 1st edition (2021)

ISBN: 978-1-63057-430-7

Materials

- Drafting kits, Drafting boards and T-squares (supplied)

Online Resources

- COM BrightSpace: <https://com.brightspace.com/d2l/home>

If you have any questions regarding course access or training, please contact the Distance Education Support Team at <https://de-support.com.edu/requests/>

Course Description:

- (LECTURE 2, LAB 4). CREDIT 3. ACGM
- Introduction to computer-aided drafting using CAD software and sketching to generate two and three-dimensional drawings based on the conventions of engineering graphical communication; topics include spatial relationships, multi-view projections and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics.
- Prerequisite: MATH 1314, minimum grade "C" or better.

Course requirements:**Quizzes**

- There will be ten (10) Chapter quizzes.

Exams

- There will be no exams.

Chapter Projects / Exercises

- These projects / exercises will be linked to the course material to help reinforce the information covered in lecture.

Lectures

- Lectures will cover textbook material.

Projects

- There will be two final projects.

Policy on Electronic Devices

- Once students enter the classroom, all electronic devices should be silenced and put away such that they are not visible. These include cell phones, headphones, ear buds, etc. Students may only use electronic devices if authorized by the instructor.

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
Attendance (8 points each)	200	11%
Quizzes (20 points each)	200	11%
Chapter Projects / Exercises (25 points each)	625	34%
Projects (400 points each)	800	44%
Total	1825	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.

Chapter Projects / Exercises

- Late work will be accepted **ONE WEEK** late **ONLY** and given **HALF CREDIT**.

Projects

- There will be **NO late work accepted** for the K'nex final project.

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.
- IF you do have to miss class, it is your responsibility to obtain notes from a classmate.
- Missing lectures may affect your overall 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.

Students are not considered to be actively engaged when missing any part of a class. Points per class will be awarded on the schedule presented:

Attendance	Points per Class
entire class (full points)	8
partial (late or leaving early)	4
absent	0

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. Discuss the basic steps in the design process.	Communication Skills	Quizzes
2. Demonstrate proficiency in freehand sketching.	Critical Thinking Skills	Assignments
3. Demonstrate proficiency in geometric modeling and computer aided drafting and design (CADD).	Critical Thinking Skills	Assignments
4. Communicate design solutions through sketching and computer graphics software using standard graphical representation methods.	Communication Skills	Projects and Assignments

Student Learner Outcomes*	Core Objectives**	Assessed via this Assignment
5. Solve problems using graphical geometry, projection theory, visualization methods, pictorial sketching, and geometric (solid) modeling techniques.	Empirical and Quantitative Skills	Projects and Assignments
6. Demonstrate proper documentation and data reporting practices.	Communication Skills	Assignments
7. Complete a project involving creation of 3D rapid prototype models.	Empirical and Quantitative Skills	Project
8. Function as part of a design team as a team leader and as a team member.	Teamwork	Project

* <https://reportcenter.highered.texas.gov/agency-publication/guidelines-manuals/lower-division-academic-course-guide-manual-spring-2020/>

** <https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/waar-faq-texas-core-curriculum/>

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-1304-101CL, Engineering Graphics I – Tentative Course Schedule***

Class	Date	Lecture Topic	Reading / Quiz
1	Tuesday, January 16	Chapter 1: Technical Drawing	In-Class Ch1
2	Thursday, January 18	Chapter 2: Multiview Drawing	Chapters 1 & 2 In-Class Ch2 Quiz
3	Tuesday, January 23	Chapter 2: Multiview Drawing, Part 2	—
4	Thursday, January 25	Chapter 2: Multiview Drawing, Part 3	—
5	Tuesday, January 30	Chapter 3: Traditional Drafting	Chapter 3 In-Class Ch 3 Quiz
6	Thursday, February 01	Chapter 3: Traditional Drafting	—
7	Tuesday, February 06	Chapter 3: Traditional Drafting	—
8	Thursday, February 08	Chapter 4: Computer Aided Design Basics	Chapter 4 In-Class Ch4 Quiz
9	Tuesday, February 13	Chapter 4: Computer Aided Design Basics	—
10	Thursday, February 15	Chapter 4: Computer Aided Design Basics	—
11	Tuesday, February 20	Chapter 4: Computer Aided Design Basics	—
12	Thursday, February 22	Chapter 5: Dimensioning Fundamentals	Chapter 5 In-Class Ch5 Quiz
13	Tuesday, February 27	Chapter 5: Dimensioning Fundamentals	—
14	Thursday, February 29	Chapter 5: Dimensioning Fundamentals	—
15	Tuesday, March 05	Chapter 6: Dimensioning Architectural Drawings	Chapter 6 In-Class Ch6 Quiz
16	Thursday, March 07	Chapter 6: Dimensioning Architectural Drawings	—
Spring Break, March 11 – 17			

Class	Date	Lecture Topic	Reading / Quiz
17	Tuesday, March 19	Chapter 7: Isometric Drawings	Chapter 7 In-Class Ch7 Quiz
18	Thursday, March 21	Chapter 7: Isometric Drawings	—
19	Tuesday, March 26	Chapter 8: Section Drawings	Chapter 8 In-Class Ch8 Quiz
20	Thursday, March 28	Chapter 8: Section Drawings	—
21	Tuesday, April 02	Chapter 9: Blocks	Chapter 8 In-Class Ch9 Quiz
22	Thursday, April 04	Chapter 9: Blocks	—
23	Tuesday, April 09	Chapter 10: 3D Modeling Basics	Chapter 10 In-Class Ch1 & 2 Quiz
24	Thursday, April 11	Chapter 10: 3D Modeling Basics	—
25	Tuesday, April 16	Chapter 10: 3D Modeling Basics	—
26	Thursday, April 18	Capstone Mechanical Project - Toe Stop Project	—
27	Tuesday, April 23	Capstone Mechanical Project - Toe Stop Project	—
28	Thursday, April 25	Capstone Mechanical Project - Toe Stop Project	—
29	Tuesday, April 30	3D Printing K'nex Project	—
30	Thursday, May 02	3D Printing K'nex Project	—
31	Tuesday, May 07	3D Printing K'nex Project	—
—	Thursday, May 09	NO CLASS	—

Changes to this syllabus could be made at the discretion of the instructor and will be announced in class and on **D2L**.

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 February 28. The last date to withdraw from the 16-week session is April 22. The last date to withdraw for the 2nd 8-week session is May 1. The last date to withdraw for spring mini session is May 29.

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.