



ENGR 1304 – Engineering Graphics I

Course Syllabus: Spring 2018

“Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	11am-1:30pm	12:30-1:30pm 3:00-4:30pm	11am-1:30pm	12:30-1:30pm 3:00-4:30pm	By Appt.	NA

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Catalog Course Description (include prerequisites): 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, multiview projections and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics.

The course consists of three hours of lecture and three hours of lab each week. Prerequisite: MATH 1314 or equivalent.

Required Textbook(s):

- *Introduction to AutoCAD 2015: A Modern Perspective*, Paul Richard; Jim Fitzgerald, 2015. Publisher: Pearson. ISBN-13 Number: 978-0133144796
- *Autodesk Inventor 2017 Basics Tutorial*, Tutorial Books, 2016. Publisher: CreateSpace Independent Publishing Platform (Amazon). ISBN-13 Number: 978-1536972900

Recommended Reading(s):

None

Student Learning Outcomes:

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

1. Discuss the basic steps in the design process.
2. Demonstrate proficiency in freehand sketching.
3. Demonstrated proficiency in geometric modeling and computer aided drafting and design (CADD).
4. Communicate design solutions through sketching and computer graphics software using standard graphical representation methods.
5. Solve problems using graphical geometry, projection theory, visualization methods, pictorial sketching, and geometric (solid) modeling techniques.
6. Demonstrate proper documentation and data reporting practices.
7. Complete a project involving creation of 3D rapid prototype models.
8. Function as part of a design team as a team leader and as a team member.

SCANS Skills: N/A

Course Outline:

Chapter	Title	Week	Key Dates*
1	Course Overview / Intro to AutoCAD / Sketching	1	
2/3	Quick Start Tutorial / Controlling the Drawing Display	2	
4/5	Basic Drawing Commands / Drawing Tools and Drafting Settings / Form Project Teams	3	
6/7	Managing Object Properties / Basic Editing Techniques	4	
8	Advanced Editing Techniques / Exam 1	5	2/14/18
9/10/11	Drawing and Editing Complex Objects / Pattern Fills and Hatching / Adding Text / Submit Project Proposals	6	
12/13	Multiview Drawings / Dimensioning Drawings	7	
13	Dimensioning Drawings / Exam 2	8	3/7/18
	Spring Break		3/12-3/16
1/2	AutoDesk Inventor Getting Started/Part Modeling Basics	9	
2	Part Modeling Basics / 3D Printer Basics	10	
3	Assembly Basics / Printing Parts	11	
4	Creating Drawings / Work in Project Teams	12	
5	Additional Modeling Tools	13	
7	Top Down Assembly and Motion Simulation	14	
-	Team Project Presentations / Review for Final Exam	15	
	Final Exam	16	5/7/18

**This calendar will be adjusted to the needs of the course. Changes will be based on the course progress. The in-class exam dates could be moved one or two days up or down. The Final Exam date is fixed and will not change.*

Evaluation/Grading Policy:

Exams (2 @ 150 pts each)	25%	300 pts
Team Project	10%	100 pts
Final Exam	20%	200 pts
Drawings/Quizzes/Parts (Approx. 40)	40%	400 pts
Total	100%	1000 pts possible

Grading Scale:

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 0-59%

Other Course Requirements: Having access to a personal computer, outside of the classroom, that capable of running AutoCAD will be a valuable asset to the student during the course.

Student Responsibilities/Expectations: Regular and punctual attendance at all scheduled classes is expected. Attendance is necessary for successful completion of course work. There is no make-up on in-class quizzes and no allowance to turn in assignments late. Exams missed will be rescheduled only for instances of obvious emergencies, documented illness, and/or NTCC sponsored activities.

NTCC Academic Honesty Statement:

"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics:

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the [NTCC website - Special Populations](#).

Family Educational Rights And Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Other Course Policies:

There will be no cell phone usage in the classroom. Students will be warned if caught using a phone during class. A student will be removed from class if the disruption continues.

The college's official means of communication is via your campus email address. I will use your campus email address and Blackboard to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.