

South Plains College
Common Course Syllabus: ENGR 1304
Revised August 2020

Department: Mathematics, Engineering, and Computer Science

Discipline: Engineering

Course Number: ENGR 1304

Course Title: Engineering Graphics I

Available Formats: conventional/flex

Campuses: Levelland and Lubbock Center

Course Description: 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: Successful completion with a grade of 'C' or better in MATH 1314

Credit: 3 **Lecture:** 2 **Lab:** 4

Textbook:

Supplies: Please see the instructor's course information sheet for specific supplies.

This course partially satisfies a Core Curriculum Requirement: None

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

Discuss the basic steps in the design process.

Demonstrate proficiency in freehand sketching.

Demonstrated proficiency in geometric modeling and computer aided drafting and design (CADD).

Communicate design solutions through sketching and computer graphics software using standard graphical representation methods.

Solve problems using graphical geometry, projection theory, visualization methods, pictorial sketching, and geometric (solid) modeling techniques.

Demonstrate proper documentation and data reporting practices.

Complete a project involving creation of 3D rapid prototype models.

Function as part of a design team as a team leader and as a team member.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors.

Attendance/Student Engagement Policy: Attendance and effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. The student will be allowed to miss twenty percent (20%) of class assignments for the semester, **for any reason**. Should this number be exceeded, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion.

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

COVID Syllabus Statement: Should be provided by the Vice-President of Student Services over email.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Nondiscrimination Policy: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To [activate](#) accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact the Director of Health and Wellness at 806-716-2362 or [email cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

Campus Concealed Carry: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and

Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.



Engineering 1304 – Engineering Graphics
Section 001: Monday/Wednesday 8:00 AM – 10:40 AM
Room: Technical Arts Building, Room 209A, Levelland Campus

Instructor: Mr. Evan Vargas

Email: evargas@southplainscollege.edu

Office: Math Building, M101, Levelland Campus

Phone: (806) 716-4673

Office Hours

M-R: 10:40 AM-11:55 AM [TA209A]

M/W: 11:00 AM – 11:30 AM [M101]

M: 2:45 PM – 5:20 PM [Reese: 229]

W: 2:45 PM – 3:00 PM [Reese: 229]

F: 9:00 AM – 12:30 PM [M101]

Course Information

Textbook *Engineering Graphics Essentials with AutoCAD 2020* Instruction by Kirstie Plantenberg
ISBN: 9781630572624 - Optional

Materials Flash drive, pencils, erasers, ruler, and graphing paper. Please set \$10-\$15 aside for the final project.

Grading Policy

Grading Scale:	90-100	A	Weights:	Daily Assignments	40%
	80-89	B		Projects (2)	30% each
	70-79	C		Total	100%
	60-69	D			
	0-59	F			

Daily Assignments

Each student must complete daily assignments that utilize specific functions or topics from the course calendar either by hand or via AutoCAD.

- Hand drawings will be drawn on graphing paper and turned into the instructor.
- AutoCAD assignments will be drawn on the local machines, printed out, and turned into the instructor. Please no online submissions.
- All assignments and instructions will be listed on Blackboard.
- Grading will be based on neatness, presentation, and the ability to follow directions.
- Please complete all daily assignments before the due date.
- Extra Credit assignments will be offered during the semester and will help replace low scoring assignments

Projects

There will be two projects assigned during the semester in lieu of examinations. Projects will be a representation of each student's ability to demonstrate their skills using AutoCAD. Each project will be addressed during class as the semester progresses. Instructions will be outlined and detailed in what is required.

- Project #1 will be done individually.
- Project #2 will be a group project.

Classroom Policies

Attendance Policy

Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. The student is expected to submit at least eighty percent (80%) of the class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor can remove the student from the class with an X or F upon their discretion.

Computer Class Policy

ABSOLUTELY NO FOOD ALLOWED. Drinks must have a threaded cap to be allowed and must be put away when not in use. Music devices during lab assignment times are accepted. Each workstation must be cleaned and straightened before leaving the area.

Blackboard PowerPoint Lectures and In-Class Demonstrations

PowerPoint notes will be provided to the student along with an explanation and/or demonstration of the topic(s). Demonstrations will be done in class and recorded to help students who may struggle or fall behind. All material will be uploaded to Blackboard on a daily basis.

Office Hours

Office hours will be held at the listed times or virtually. Virtual office hours will be held using Zoom. Please make an appointment [here](#) to ensure time availability.

South Plains College Email Policy

The instructor will only acknowledge, respond, and send emails to the student assigned South Plains College email. This ensures the intended recipient receives all correspondence from the instructor. It is the students' responsibility to have their email set up and ready to use by the end of the first week of class.

Drop/Withdrawal

Students should submit a Student Initiated Drop Form online to drop from the course. An instructor signature is not required. If the student wishes to withdraw from this or more courses, the student needs to contact the Advising Office.

COVID Syllabus Statement

Consistent with the latest CDC recommendations, we have revised our guidance for students, faculty, and staff who have a known exposure or have tested positive. Anyone with a known exposure should wear a mask for 10 days and should seek a COVID-19 test on day five after exposure. If you test positive or develop symptoms, you should immediately self-isolate and seek a COVID-19 test. Please immediately notify your instructor, supervisor, and DeEtte Edens, Associate Director of Health and Wellness, any time you test positive for COVID-19. Anyone who tests positive is required to self-isolate for five days. Following the five-day isolation period, if you are asymptomatic or your symptoms are resolving, you may return to work or class but should wear a mask for five additional days. If you are still symptomatic, please contact DeEtte Edens at dedens@southplainscollege.edu or 806-716-2376 prior to your return date.

Course Calendar

Week 1	Jan. 17 Jan. 19	Introduction into AutoCAD Software: Drawing and Modify Commands Layer Properties: Creating Line Types Review of Geometry and Trigonometry
Week 2	Jan. 24 Jan. 26	Creating a Title Block Drawing Objects: Hand Drawing and Software Drawing Dimensioning Objects – Dimension Style Manager
Week 3	Jan. 31 Feb. 2	Drawing Orthographic Projections: Front, Right, and Top Side Views
Week 4	Feb. 7 Feb. 9	Pictorial Drawings – Drawing the Isometric View
Week 5	Feb. 14 Feb. 16	Section Views: Half and Full Sections Auxiliary Views: Perpendicular Projections
Week 6	Feb. 21 Feb. 23	Tolerances: Leader Style Manager Threads and Fasteners: ASME Standards
Week 7	Feb. 28 Mar. 2	Springs: Compression and Torsion Gears: Number of Teeth, Gear Ratios
Week 8	Mar. 7 Mar. 9	Creating Assembly Drawings Creating Bill of Materials
Mar. 14 – Mar. 18		Spring Break
Week 9	Mar. 21 Mar. 23	March 23rd : Project #1 Due 11:00 AM
Week 10	Mar. 28 Mar. 30	Introduction to 3D Modeling – Drawing and Modify Commands Utilizing Layout Projection
Week 11	Apr. 4 Apr. 6	Dimensioning 3D Objects Section Views of 3D Objects
Week 12	Apr. 11 Apr. 13	Creating Assembly Drawings Creating Bill of Materials
Week 13	Apr. 18 Apr. 20	Project #2 – Group Project
Week 14	Apr. 25 Apr. 27	
Week 15	May 2 May 4	
Week 16	May 10	Project #2 Due 10:00 AM