



ENGR1304-002 – Engineering Graphics

Room: Technical Arts Building, TA209A

T/R: Lecture: 1:00 PM – 1:50 PM

Lab: 2:00 M – 3:40 PM

Contact	Instructor: Mr. Vargas	Office Hours
	Email: evargas@southplainscollege.edu	
	Phone: (806) 716-4673	

MW	3:00 PM – 5:05 PM	Lubbock Downtown Center, B033
T	8:00 AM – 10:50 AM	Levelland Campus M101
F	9:00 AM – 10:00 AM	Lubbock Downtown Center, B033

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.
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| Supplies | <ol style="list-style-type: none"> 1. Pencils, erasers, and graphing paper 2. USB Flash Drive – Required 3. Pack of 6 different colored pens/pencils – Required 4. Calipers (measuring device) |
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Grading	A: 90-100	Pass – Excellent	Weights	Daily Assignments	400 pts (40%)
	B: 80-89	Pass – Good		Midterm Project	300 pts (30%)
	C: 70-79	Pass –Average		Final Project	300 pts (30%)
	D: 60-69	Depends – Below Average		Total	1000 pts (100%)
	F: 0-59	Fail – Failure			

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| Daily Assignments | <p>Each student must complete daily assignments that utilize specific functions and topics from the course calendar either by hand or via AutoCAD.</p> <ol style="list-style-type: none"> 1. Hand drawings will be drawn on graphing paper and turned into the instructor. 2. AutoCAD assignments will be drawn on the local machines, printed out, and turned in to the instructor. 3. No online submissions. 4. All assignments and instructions will be listed on Blackboard. 5. Grading will be based on neatness, presentation, and the ability to follow directions from the Rubric 6. Late submissions will be penalized or not accepted |
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| Projects | <p>Projects are a representation of a student’s ability to apply their knowledge in hand and computer drawings. There will be an individual and group project.</p> <ol style="list-style-type: none"> 1. Midterm Project (individual). Students are given a physical object to draft by hand and AutoCAD. 2. Final Project (group). Students work together to create a working assembly drawing on AutoCAD by building a model that has an engineering or architectural purpose. <p style="text-align: center; color: red;">More details will be given during each Project.</p> |
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Class Policies and Information

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor. If there are any changes, they will be announced over Blackboard and via your SPC email.



Attendance Policy

Attendance is recorded for each student for each day of class (excluding holidays or cancelled classes). If, for any reason, the student shall miss class then the student **MUST** email the instructor in a timely manner to discuss assignments missed. Attendances may be excused depending on the circumstances which may or may not require documentation.



Lecture and Lab Policy

The course is divided into Lecture time (**1:00 PM – 1:50 PM**) and Lab time (**2:00 M – 3:40 PM**). During Lecture, the instructor will provide and review PowerPoint notes along with Daily Assignment demonstrations. During this time, the instructor will assist students with completing all Daily Assignments.

Lab time will be devoted to personal student learning with little instructional help. The course requires hands-on learning experience with each student completing assignments at different paces. Students are encouraged to explore functionalities related to AutoCAD and work together during this time.



Computer Class Policy

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.



Office Hours

Office hours will be held at the listed times. Please come prepared with questions and/or examples of the attempted problem(s).



Instructor Email Policy

The instructor will respond to all emails **within 36 hours** during the weekday. Emails sent after 12:00 PM on Fridays may not be answered until the following Monday morning.

Drop/Withdrawal

Students should submit a [Student Initiated Drop Form](#) online to drop from the course. If the student wishes to withdraw from this or other courses, the student needs to contact the Advising Office.

Important Drop Dates:



- **August 25th** : Last day 100% refund
- **September 16th** : Last day 70% refund
- **September 16th** : Class rosters certified
- **September 23rd** : Last day 25% refund
- **December 2nd** : Last day to drop Fall courses
- **Students cannot be dropped or removed from courses beyond December 2nd**

ENGR1304.002 Fall 2024 Calendar		
Week	Lesson	
1	Aug 27 Aug 29	AutoCAD Software Introduction Drawing and Modify Commands Layer Properties
2	Sept 3 Sept 5	Creating the Title Block Creating Dimensions, Center Lines, and Hidden Lines
3	Sept 10 Sept 12	Orthographic Projections: Front, Right, and Top Side Views
4	Sept 17 Sept 19	Isometric Projections
5	Sept 24 Sept 26	Section Views: Full, Half, and Offset Sections
6	Oct 1 Oct 3	Auxiliary Views: Partial and Full Views
7	Oct 8	Hand Drawings
	Oct 10	October 10: Midterm Project Assigned
8	Oct 15 Oct 17	October 17: Midterm Project Due @ End of Class
9	Oct 22 Oct 24	Introduction to 3D Modeling – Drawing and Modify Commands Projecting Orthographic Views on the Layout View
10	Oct 29 Oct 31	Applying Center Lines and Dimensions to 3D Models
11	Nov 5 Nov 7	3D Section Views Creating Assembly Drawings
12	Nov 12 Nov 14	Creating Bill of Materials
13	Nov 19 Nov 21	November 19: Final Project Assigned
14	Nov 26	November 27-30: Thanksgiving Break – All campuses closed.
15	Dec 3 Dec 5	December 2: Last day to drop Spring courses
16	Dec 12	December 12, Thursday: Final Project due @ 2:15 PM

South Plains College
Common Course Syllabus: ENGR 1304
Revised December 2022

Department: Mathematics, Engineering, and Computer Science

Discipline: Engineering

Course Number: ENGR 1304

Course Title: Engineering Graphics I

Available Formats: conventional and hybrid

Campuses: Levelland, Lubbock Center, and Dual Credit

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:

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.

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 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 attend at least eighty percent (80%) of the **total** class meetings **and** submit at least eighty percent (80%) of the **total** class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor may remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student can not receive an X, the instructor will assign an F.

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.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect from the student and the instructor. Neither the instructor nor the student should be subject to others' rude, disruptive, intimidating, aggressive, or demeaning behavior. 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.

South Plains College policies concerning diversity, disabilities, non-discrimination, Title IX Pregnancy Accommodations, and Campus Concealed Carry Statements can be found here: <https://www.southplainscollege.edu/syllabusstatements/>. South Plains College policies, return to campus plan, and protocols regarding COVID-19 can be found here: <https://www.southplainscollege.edu/emergency/covid19-faq.php>.

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.

South Plains College Syllabus Statements

Intellectual Exchange Statement

In South Plains College courses, the instructor 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 intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Disabilities Statement

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations 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 accommodation 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, Lubbock Centers (located at the Lubbock Downtown Center) 806-716-4675, or Plainview Center (Main Office) 806-716-4302.

Non-Discrimination Statement

South Plains College does not discriminate based on 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 and Parenting Accommodations Statement

If you are pregnant or parenting (paternal or maternal) with children under the age of 18 per [Texas Education Code 51.982](#) and Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a [Title IX pregnancy and parenting accommodations request](#), along with specific medical documentation, to the Health and Wellness Center. 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 Health and Wellness Center at 806-716-2529 or email rcanon@southplainscollege.edu for assistance.

CARE (Campus Assessment, Response, and Evaluation) Team

South Plains College is committed to ensuring the safety, health, and well-being of its students and community. To support its campus community SPC has a CARE Team. This is a dedicated group of campus professionals responsible for assessing and responding to students who could benefit from academic, emotional, or psychological support, as well as those presenting risk to the health or safety of the community. If you see someone experiencing challenges, appearing distressed, posing a threat to their safety or someone else's safety, or causing a significant disruption to the SPC community, please submit a [CARE Team referral](#). You may also submit a referral for yourself if you would like additional support. NOTE: In cases where a person's behavior poses an imminent threat to you or another, contact 911.

COVID-19

If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or get tested for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376

1. SPC will follow the recommended 3-day isolation period for individuals that test positive.
 - a. **Please note that day 0 is the date of the positive test. Day 1 begins the first full day after the date of positive result.**
2. COVID reporting
 - a. Please have students and employees notify DeEtte Edens if they have tested positive to verify dates before returning to class or work.
 - b. The home tests are sufficient, but students need to submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at dedens@southplainscollege.edu.

- c. A student is clear to return to class without further assessment if they have completed:
 - The 3-day isolation period, symptoms have improved and
 - They are afebrile for 24 hours without the use of fever-reducing medication.
3. Please instruct students and employees to communicate with DeEtte Edens prior to their return date if still symptomatic at the end of the 3-day isolation.
4. Exposed individuals will not be required to quarantine. If exposed, SPC does request individuals closely monitor themselves. If an individual does become symptomatic, please do not attend class or work and be tested.

Artificial Intelligence Statement

· Purpose of Artificial Intelligence (AI) Applications:

AI applications such as ChatGPT, OpenAI, Bard, Grammarly, WordTune and others are advanced language models designed to aid and engage in meaningful conversations, as well as generate and revise content. AI is intended to supplement learning, stimulate critical thinking, and enhance academic discourse. However, its use comes with certain responsibilities.

· Academic Integrity:

Using AI to generate academic work, including essays, reports, or assignments, without proper attribution is a violation of SPC academic integrity policies. Plagiarism undermines the learning process and is strictly prohibited. Students must ensure that their work reflects their own ideas, research, synthesis, and analysis and appropriately cites all sources, including AI.

· Collaboration and Consultation:

While AI can be a valuable resource, it is essential to strike a balance between seeking assistance and maintaining personal responsibility. Collaboration with peers, consulting instructors, and utilizing other approved learning resources should be prioritized. Overreliance on AI for solutions without actively engaging in the learning process is discouraged and can be grounds for academic integrity violations. Utilizing AI as a tool for brainstorming or research is allowed but the writing should be the student's own work and thoughts.

· Critical Thinking and Originality:

AI usage can provide suggestions and information, but it is essential to critically evaluate the responses and exercise independent thought. Relying solely on AI for answers deprives students of the opportunity to develop their analytical and problem-solving skills. In assignments where originality, creativity, and independent thinking are valued, AI would be detrimental to the student learning process. Critical thinking and originality emphasize the importance of independent thinking in all academic endeavors as part of the student's learning experience apart from outside influence and offers the student the opportunity to refine their unique, individual voice through academic discourse with other students and faculty.

· Ethical Use and Bias Awareness:

AI is trained on large amounts of data from the internet, which may include biased or inaccurate information. Be mindful of the potential for bias and critically evaluate the responses provided by AI. Therefore, when using AI, just like with using any other database, students must verify that the information is from reliable sources, question any potential biases, and ensure that the information and sources used in the paper are neutral, peer-reviewed sources.

· Responsible Engagement:

Students should engage with AI in a respectful and responsible manner and avoid using offensive language, discriminatory remarks, or engaging in any form of harassment or inappropriate behavior. Students should also uphold the standards of respectful communication in addressing both AI and fellow classmates.

· Compliance with South Plains College Policies:

Policies regarding the appropriate use of AI in South Plains College courses are set by instructional departments and individual instructors. Appropriate use of AI may range from strict prohibition to assignments they may require the use of AI. Misusing or violating the guidelines outlined in this syllabus warning may result in disciplinary action, including academic penalties. Students are expected to familiarize themselves with the specific course policies regarding the use of AI and adhere to them throughout the semester.

Remember, AI can be a tool to support your learning in certain courses and assignments, but it cannot replace the critical thinking, creativity, and independent work that are integral to your overall academic growth.