Glendale Community College
Engineering Department

ENGR 122, Engineering Graphics, 3-Units (2 Lect, 1 Lab) Spring 2024

C-ID Descriptor ENGR150, Engineering Graphics

Instructors Contact Information:

Professor Christopher Herwerth, M.S., P.E.

- Mechanical and Heat Transfer Engineer, Worley 2007 - 2013
- cherwerth@glendale.edu
- 818-240-1000 ext. 5628
- Office Hours: **Monday, Wednesday, Friday 10 AM to 11:45 AM via Zoom ID 7044608855**

Professor Manooki, M.S.

- MS Product Development Engineering,
- BS Aerospace Engineering
- Propulsion Design Engineer at the Boeing Co. (since 2006)
- **GCC Email: nmanooki@glendale.edu**
- **Office Hours: Thursday 4:30 to 5:00 pm via Canvas Chat**
- **Engineering Department WebsiteLinks to an external site.**

Course Description

ENGR 122 presents the fundamental principles of engineering graphical communication and drawing using computer aided design (CAD) software as an integral teaching and learning methodology. Students develop 3-D visualization and spatial acuity skills in practical applications of descriptive geometry. Topics include orthographic projection, glass box theory, auxiliary views, sectioning, dimensioning, and geometric dimensioning and tolerancing (GD&T) as well as the engineering design process. Theory and practice of engineering graphics is taught using two professional CAD software packages. Students develop skills in both 2-D and 3-D CAD modeling.

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About This Class

- This course is 100% online: We will not meet on-campus for any reason.
- This 16-week, **asynchronous** course officially starts Tuesday September 3 and ends Wednesday December 18th.
- **Expected Hours:** ENGR 122 is a 3-unit course, 2 units lecture and 1 unit lab, which means that in person class meetings are 5 hours a week with about 6 hours worth of out of class assignments. So, **DE *students should expect to spend about 11 hours per week studying, exercising assignments and interacting in discussion posts.***
- **Check in Assignment:** Students must log into CANVAS during the first week of this online class and complete two assignments: 1. the Icebreaker discussion (self-introduction) and 2. the syllabus quiz, **both before Sunday 11:59 pm, September 8.**
  - Students who **do not** log in and complete the Syllabus Quiz, **will be dropped from the course.**
  - Syllabus Quiz: Click on the syllabus assignment **after** carefully reading the course syllabus, and follow the steps to answer the questions of the quiz.
- For more information on course drops, See Refund/Payment Policy: https://www.glendale.edu/home/showdocument?id=25858 REFUND/REPAYMENT POLICY A. Refund Policy for All Students - glendale.edu

- Below are a few resources for students about what it means to drop a class:

  - It's okay to drop a class, really!
  - Should I Drop a Class?
  - To Drop or Not to Drop?
- As a fully online class, it's important to understand and follow basic rules for **netiquette**:
  - *Be kind and respectful to others*
  - *Use full sentences*
  - *Don't use too much jargon*
  - *Treat others online as you wish to be treated*
  - *Use language that supports others*

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Browser Compatibility:

I highly recommend using the most recent version of Google Chrome as your browser to make sure everything works correctly in Canvas.

Student Learning Outcomes

1. Apply the standards of orthographic projection in computer aided designs to efficiently communicate detailed drawing information by creating completely defined drawings without excess information.
2. Evaluate engineering design needs and use judgement to include proper dimensioning and tolerances in a CAD design for efficient manufacturing of the part, construction or machine.
3. Demonstrate the engineering design process in a computer aided drafting and design project

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Textbook(s) and Required Materials

This class will utilize open educational resources, but I also highly recommend the following textbooks, which the material of this class is mostly based on:

1. Engineering Graphics EssentialsLinks to an external site. Fifth Edition by Kirstie PlantenbergLinks to an external site. ISBN: 978-1-63057-052-1

- The first link above provides a free preview of most of the book you can access by clicking on the link then "Google Preview" right below the photo of the book.
- Please let me know right away if any materials are not accessible in this course and I will ensure access in a timely matter.
- Glendale Community College Bookstore Website

Course Communication

If you have any questions, please email me through Canvas by clicking on "Inbox" on the left side of your homepage. Click on "Compose a new message", select this course and then select "Teachers" under the "To" field and you will find my name, **Nareh Manooki**.

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This is email inside Canvas; I am not supposed to receive any personal email...Canvas or college email only, please! **I will respond to your email within 24-36 hours, M-F.** If you do not hear back from me within this time, please assume I did not receive your email and resend it.

I normally will be sending out class or personal communications every 1-2 days including and not limited to:

- **Weekly Announcements** and Modules will be posted by Fridays reminding students about the upcoming week's plan and Module.
- **Assignments and Discussions** will be graded within one week of being turned in with detail feedback and constructive criticism for improvement of work in the assignment comments column.
    - Not sure where to find Grades and feedback? Click on this video: Grades Overview in CanvasLinks to an external site.
- **Quizzes** will be graded within 24-48 hours with detailed feedback in the quiz comments regarding questions that were answered incorrectly and how to improve in the future.
- After quizzes are graded, **Quiz Feedback Announcements** will be posted providing overall class feedback including average grades, frequently missed questions and overall advise to improve outcomes.
- As **internship and job opportunities** arise, I will be posting them in the announcements as well. (At the very least, I do post about the Nasa Scholars Community College Internship (NCAS) program when the dates are coming up.

Students will have peer-to-peer communication 1-3 times every week by:

- **Mandatory peer reviews** on every week's assignments (as explained in the assignment directions)
- **Mandatory discussion posts** and videos every other week on engineering programming application topics, which require peer responses for most discussions.
- **Optional Peer Q&A Discussion Forum**, where students can post and discuss with each other on whatever topics they choose to
    - I may occasionally pop in and answer a question if I see it pertains to me.

Course Assignments

Important Dates

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The due dates for your assignments can be found in the *Calendar* in the **global navigation links at the top of your screen**. Please review these. In addition, I will post reminders prior to the due dates in the *Announcements*.

Weekly Assignments

Each week you will need to complete the following:

- Read/Watch the weekly lesson. This will be available every **Monday.**
- Complete the **weekly assignments, discussions or quizzes** in each course lesson by **Thursdays and Sundays 11:59 pm**
    - Each week's module for the majority of this course will have lessons and assignments in Engineering Graphics basics. These will be split up into two sets due on Thursdays and Sundays, which feels like the cadence of a regular class that meets twice a week).
    - Once the training part of graphics is complete and we begin going into projects, there may be some weeks that only have one turn in date for that weekly set of assignments or project check points.

Grading

Assignments *	60%	90 – 100	A
*Includes quizlets and discussions		80 – 89	B
Midterm Projects	20%	70 – 79	C
Final Project	20%	60 – 69	D

Grading breakdowns are approximate. Your grade may be rounded up with professor's judgement of level of effort and understanding.

***Doing your own work and asking questions* are valuable.**

Course Grades & Feedback

You can view your grades using the *Grades* button in the **course navigation links.** Please check your grades regularly to make certain that I have received all your assignments. If

you have a question about a grade, email me through the Canvas *Inbox* (left-side of your screen). Please do not post your personal concerns in a discussion forum.

I will be using the Canvas grading tool for your discussions and written assignments. You can see not only your grades, but also comments and feedback as well.

Submission Policy

Plan for success! Submit your work by the requested due date and time. If you have an extenuating circumstance, please contact me by private message **before** the assignment is due to make alternate arrangements.

Attendance/Participation/Refund Policies

- **Attendance:** If a student misses more than the equivalent of two weeks' worth of online assignments (4 assignments as clearly outlined in the assignments module) during the semester, they may lose credit for, or be dropped from, the course. Students are required to complete all course modules as prerequisites to unlocking each assignment. Again, missing 4 assignments may lead the student to being dropped from the course, as this designates that the student did not learn 2 weeks-worth of course materials.
    - **Any student that is added as a 'late add' student has until Thursday 11:59 pm of week 2 during a regular semester to complete the Check-In Assignment Syllabus Quiz or be dropped.**
- **Students:** Please refer to Student Rights in an Online and Hybrid Course (https://www.glendale.edu/class-schedule/distance-education/de-faculty-center/student-rights-in-an-online-and-hybrid-course) if you have further questions regarding the expectations from your course and instructor.

Additional Policies and Resources

Academic Honesty

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It is expected that all work submitted for grading is original, not copied from others and that the work being graded is indeed done by the student who is receiving the grade. Cheating and plagiarism are serious violations of the student conduct code. Cheating or plagiarizing will result in a zero on the assignment or test and may result in other disciplinary action taken by the College. All incidents of cheating or plagiarizing are reported to the Dean of Students. For more information, please refer to the Glendale Community College Academic Honesty Policy.

Late Work

- There are two assignments assigned per week. **Late work is only accepted at a 10% reduction *per day* late rate.** For example, if your assignment is two calendar days late (e.g. due Feb 23rd 11:59 pm and student submits Feb 25th 3:15 pm, student can only earn a maximum of 80%.
- Late assignments will not be accepted on a continuous basis; meaning, if two assignments are submitted late at any time in the semester, the third will not be accepted and be counted as a missed assignment. Keep in mind, more than 4 assignments cannot be missed without being dropped from the course.
- Students are not required to share personal health information with instructors. Do your best to submit all work in a timely manner.
- Verbal conversations do not supersede the contents of the syllabus.

Students with Disabilities

- All students with disabilities seeking accommodations are responsible for making arrangements in a timely manner through the Center for Students with Disabilities. Please let me know right away if you will need accommodations so we can pre-plan together.
- Please let me know if you have adaptive software and hardware to assist you with taking this course or if you have any specific needs of which I should be aware. You can find more information about Disabled Students Programs and Services (DSPS) or call the office at 818-240-1000 x5905.
- Accommodations for DSPS may take up to one week from the start of the request to implement.

Student Technical Support

Go to the Student Tech Support page if you are having Canvas tech issues or check out the resources below:

- Canvas Questions ONLY: 24/7 Assistance at 1-844-600-4951

- Student Support through Live Chat
- Student Support On-Campus (SM 266)
- Student Canvas Guides
- Student Distance Education Success Tips

Student Online Services

There are many additional services to help you during this course. A few of these include:

- Free Online Tutoring, which can be accessed through the website or through Canvas.
- GCC Library(Databases & Online Chat), which can be accessed through the website or through Canvas.

Additional services can be found on the GCC Student Services Webpage.

Tentative Schedule

Week 1: Welcome Week
Week 2: Introduction to Drafting
Week 3: Drafting Projections and Views
Week 4: Drafting Tools and Dimensioning
Week 5: Introduction to Computer Aided Design with Onshape and Sectioning
Week 6: Onshape Continued and Tolerancing
Week 7: Onshape Continued and Fasteners
Week 8: Onshape Project Due (MD Proj #1)
Week 10: Introduction to SOLIDWORKS
Week 11: SOLIDWORKS Continued
Week 12: SOLIDWORKS Assemblies and creating Drawings
Week 13: Projects and Assembly Drawings
Week 14: Project Checkpoints
Week 15: Project Checkpoints
Week 16: Final Project Checkpoints
Finals Week: Final Projects Due