Glendale Community College
Engineering Department

Course Syllabus

ENGR 156: Programming and Problem Solving with MATLAB, 3-Units (2 Lect, 1 Lab)

Winter 2024 (C-ID ENGR 220)

Learn the skills of the most commonly used Programming Software in the Engineering Industry.

Instructor Contact Information

Professor Manooki

- MS Product Development Engineering
- BS Aerospace Engineering
- Propulsion Engineer at the Boeing Co.

- **GCC Email: nmanooki@glendale.edu**
- **Online Office Hours: Tuesdays and Thursdays 4:45-5:30 pm in Canvas "Chat".**

    - I will be holding online Synchronous Office Hours **through Canvas "Chat". This means,** I will be online providing instant feedback during this time.
    - If students cannot make these hours and would like to talk at another time, they may request an appointment to chat by sending me a message through CANVAS or email nmanooki@glendale.edu.
    - Students may also message me any questions and allow 24 hours for a response.

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: **Mondays and Wednesdays 10 am to 11:00 am via Zoom ID 7044608855**

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Course Description

ENGR 156 is the required programming course for civil and mechanical engineering majors. Electrical and computer engineering majors sometimes take this course in order to learn MATLAB for use in industry and a number of GCC students have gotten internships that use MATLAB. The course teaches how to use MATLAB as an engineering calculation and simulation tool but also basic programming.

Any exposure to Calculus can be used to meet the prerequisite for this class.

UC and CSU Transferable

About This Class

- This course is 100% online: We will not meet on-campus for any reason.
- This 6-week, **asynchronous** course officially starts ***Monday Jan 8th***
- ENGR 156 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, for a 6-week session, students should expect to spend about 28 hours per week studying, exercising computing codes in assignments and interacting with students in discussion.***
- Students must log into CANVAS during the first week of this online class and complete **Complete the *Check-In Syllabus Quiz and Icebreaker Discussion* by *Thursday Jan 11th* 11:59 pm to not get dropped from the class.**
- Students who **do not** log in and complete both the introduction and 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 PolicyLinks to an external site.

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

    - It's okay to drop a class, really!

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- Should I Drop a Class?
- To Drop or Not to Drop?

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. use MATLAB to analyze and visualize data;
2. apply a top-down design methodology to write pseudocode and transform it into a functioning program for a science or engineering application;
3. create code to solve tasks or problems and evaluate their viability using defined testing methods

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Textbook(s) and Required Materials

Fifth Edition "MATLAB for Engineers" by Holly Moore ISBN-13: 9780134588261

Available through RedshelfLinks to an external site. or GCC bookstore.

MUST BE 5TH EDITION, previous editions have errors and different problems. You will not receive credit for doing the incorrect problems.

Not Global Edition (problems are different and there are errors in the chapters)

- Glendale Community College Bookstore Website

Software: MATLAB software is available free for GCC students

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Course Communication

Course Assignments

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Important Dates

This class: 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 lessons. This will be available and should be started every **Monday**.
    - **Please do not procrastinate or skip any lessons. Especially in the short semesters, the content and assignments are quite dense.**
- Post in the **weekly *Discussion*** by **Thursdays** **at 11:59 pm starting in Week 1.**
- Take the **weekly *quiz*** available on **Tuesdays** **by 11:59 pm starting in Week 2.**
- Complete the **weekly *assignments*** in each course lesson by **Sundays** **11:59 pm starting in Week 1.**
    - **Start assignments early! Work practice problems alongside lessons by sections. They are time consuming as this is where students practice and learn how to work with MATLAB, and where you will spend the most time of the course.**
    - Students will be turning in their **saved code officially as ".m" files, and will also turn in a word document** alongside with the same content pasted within that will be used with the plagiarism checker. **Failure to turn in the word doc alongside the .m file will result in a 0 in that assignment.**

Grading

Assigned Problems	25%	90 – 100	A
Quizzes	30%	80 – 89	B
Discussions	15%	70 – 79	C
Final Exam*	30%	60 – 69	D

*Students must take the Final Exam to pass the class. Students MUST complete and pass the Final Exam to not lose one full letter grade.

Late Quizzes or Exam submissions will NOT be accepted.

Grading breakdowns are approximate. Your grade may be rounded up with professor's judgement of level of effort and understanding. If you have questions while working on an assignment, email the SI or instructor right away!

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

SI's and Professor are here to help. Effort will be rewarded!

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 during a 16-week ***(or one week's worth in a 6-week course)***, discussions and/or quizzes 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 (such as 2 Discussion posts and 2 Homework 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 Sunday of Week 1 11:59 pm to complete the Check-In Assignment or be dropped.**

- **Students:** Please refer to Student Rights in an Online and Hybrid CourseLinks to an external site. if you have further questions regarding the expectations from your course and instructor.

Additional Policies and Resources

Academic Honesty

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.
- Verbal discussion 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.

- Students should allow up to one week for DSPS approvals to be implemented by the instructors.

Non-discrimination and Equal Opportunity Policy

Glendale Community College District is a multicultural community of people from diverse racial, ethnic, linguistic and class backgrounds, national origins, religious and political beliefs, physical and mental abilities, gender identities, and sexual orientations. The activities, programs, classes, workshops/lectures, and everyday interactions of this district are enriched by our acceptance of one another, and we strive to learn from each other in an atmosphere of positive engagement and mutual respect." Please see the Glendale College Catalog, page 19.

Harassment Policy

All forms of harassment are contrary to basic standards of conduct between individuals and are prohibited by state and federal law, as well as this policy, and will not be tolerated. The district is committed to providing an academic and work environment that respects the dignity of individuals and groups. The District shall be free of sexual harassment and all forms of sexual intimidation and exploitation including acts of sexual violence. It shall also be free of other unlawful harassment, including that which is based on any of the following statuses: race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, or sexual orientation of any person, or because he or she is perceived to have one or more of the forgoing characteristics." Please refer to the Glendale College Catalog, page 19.

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.

Schedule of Assignments

Week #	Date	Subject (Chapter)
1	1/8/2024	Introduction to MATLAB (1) MATLAB Environment (2) Built-in Matlab Functions (3)
2	1/15/2024	Manipulating Matrices (4) Plotting (5)
3	1/22/2024	User-Defined Functions, User (6) Controlled Input/Output (7)
4	1/29/2024	Logical Selection (5) Repetition (9) Matrix Algebra (10)
5	2/5/2024	Arrays (11) Symbolic Math (12) Curve Fitting (13- one section)
6	2/12/2024	Finals Review and Exam Week