

MATH 320: Introduction to Mathematical Computation

Department of Mathematics – Fall 2025

Section #01, Course #18730

Welcome to Math 320!

Class Meetings:	Mondays & Wednesdays 4:00 PM – 5:15 PM in MH-452 (McCarthy Hall, 4th floor) August 25, 2025 to December 10, 2025	
Instructor:	Christine Deeb, cdeeb@fullerton.edu	
Student Office Hours:	<ul style="list-style-type: none"> • Mondays 2:00-2:20pm in-person • Wednesdays 11:20-11:50am in-person • Wednesdays 2:00-2:20pm in-person 	<ul style="list-style-type: none"> • Tuesdays 12:00-1:50pm via Zoom • and by appointment!
Office Location:	MH-063 (McCarthy Hall, basement level)	

Catalog Description

Introduction to problem-solving on the computer using modern interactive software. Numerical and symbolic computation. Variety of problems arising in mathematics, science and engineering. Also serves as preparation for subsequent computer-based courses in mathematical modeling.

Course Prerequisite / Corequisite

- **Prerequisite:** Successful completion of Math 250B with “C” (2.0) or better.
- **Corequisite:** Math 250B

Course Learning Objectives

Upon successful completion of Math 320, you will:

1. **Develop** skills to use personal computers in solving quantitative problems.
2. **Understand** a variety of problems from mathematics, science, and engineering relevant to areas of research in applied mathematics and industry.
3. **Apply** computer algorithms and coding exercises to mathematical concepts, especially various topics from the four-semester calculus and linear algebra sequences.

Course Focus

Math 320 is a course designed to introduce students to MATLAB: a programming and numeric computing platform. We will explore MATLAB in detail, starting with its basic structures and features. You will first learn how to write, save, and execute simple MATLAB programs involving basic arithmetic, variables, arrays, plots, etc. The primary goal of Math 320 is for you to become comfortable utilizing conditional statements and / or loops to create more complex codes and function files in MATLAB.

While Math 320 is heavily centered around the MATLAB computer program, remember that it is a math class. Students will be expected to recall information and processes from previous courses, including Algebra, Precalculus, the Calculus series, etc. Throughout the semester, you may find that you know how to solve many problems by hand (using a pencil and paper). Our goal is to utilize the tools and features of MATLAB to translate our problem-solving abilities into a functional MATLAB code / program.

Course Format (“Flipped”)

This is an **in-person** course, meaning we will meet in-person for every scheduled meeting. We will work on the computer in every class meeting; feel free to bring your laptop for lectures and classwork!

Our Math 320 course will loosely follow a “flipped” course style. On average, we will have two class days to cover each chapter of the textbook. There will be a set of guided notes posted to Canvas per chapter.

Before class: This is your best time to experiment with MATLAB *at your own pace!*

- Prior to the start of a chapter, read through the notes carefully, highlighting important information.
- Attempt the examples and exercises within the notes on your own.
- Use the textbook and/or the [MathWorks website](#) to supplement the notes with more detailed information.
- Take note of any questions, comments, or concerns that you would like to address.

During class: This is the best time to collaborate and ask questions!

- On “day 1” of a chapter, class will start with a 5-minute group discussion of the notes or an assignment.
 - Assignments may be randomly administered and in-class only!
 - You must be present in class when the assignment is completed, and there will be no make-ups!
- Afterwards, you will have 45 – 50 minutes to try a set of exercises with your group members.
- Before class ends, we will go over 1 or 2 exercises as a class (depending on what time permits).
 - At this time, you will be asked to put your laptops / computers away, and I kindly ask that you do not take pictures of any solutions being shared during class.
- On “day 2” of a chapter, you will use class time to complete homework assignments with your group.

After class: This is the best time to solidify your understanding!

- Revisit the notes and check your understanding of the material.
- Complete homework problems that you didn’t have time to complete in class.
- Continue to practice any exercises that you didn’t have time to complete in class.

Class Participation & Attendance Policy

Actively attending class and being open to participation is necessary to the learning process. Although attendance is not “mandatory,” I highly recommend that you attend every class meeting! If you are late, please enter quietly and be respectful of the class environment. **If you miss a class meeting, it is your responsibility to contact a fellow classmate to retrieve any information you may have missed.** I recommend asking at least two classmates for their contact information!

Any absence during the first two weeks of class may result in your being dropped from the course.

Student Office Hours

Student hours are your time to ask questions about anything and everything, such as homework problems, quizzes, exams, class notes, etc. If you are unable to attend my scheduled student hours, you can always email me to set up your own appointment! You can request to meet in-person or via Zoom. ***I do not hold office hours or accept appointments on holidays and no-class days!***

Technical Course Materials & Requirements

Course Textbook

For this course, you will need:

MATLAB: An Introduction with Applications, 6th Edition by Amos Gilat, Wiley 2016.

There are multiple options / formats for purchasing the textbook:

- **E-book (150-day rental OR permanent):** ISBN 978-1-119-29925-7
- **Physical Copy:** ISBN 978-1-119-25683-0 or ISBN 978-1-119-38513-4

Course Materials & Software

1. **A computer with internet access:** Throughout this course we will be using MATLAB and Canvas extensively, as well as email for communication!
2. **MATLAB :** CSUF students can download MATLAB for free through the IT Student Software website – <https://www.fullerton.edu/it/services/software/matlab.html>

Technical Support

The university provides various tools for student technical support, such as

- [Student Technology Services](#)
- [Student IT Help Desk](#) – Phone Number: (657) 278-8888 | Email: StudentITHelpDesk@fullerton.edu
- [Canvas Student Guides](#)
- [Student Software](#)

MATLAB Product Support

Full support is available at mathworks.com (https://www.mathworks.com/support/contact_us.html)

Contact Technical Support:

Days: Monday-Friday

Hours: 08:30am – 8:00pm EST

Telephone: 508-647-7000, press 3

License#: 898604

Institution: California State University, Fullerton

Course Evaluation & Grading

Grade percentages will be determined by a weighted combination of discussions and homework, quizzes, two midterm exams, and one cumulative final exam. Course grades will be posted via Canvas and will be updated as regularly as possible! The grading period will end on the day of the final exam.

The weights for each category are:

Category	Homework	Quizzes	Midterm Exams	Final Exam	Total
Weight	15%	15%	40%	30%	100%

Using your overall weighted percentage, letter grades will be determined as follows.

A+	97 % – 100 %	B+	87 % – 89.9 %	C+	77 % – 79.9 %	D	60 % – 69.9 %
A	90 % – 96.9 %	B	80 % – 86.9 %	C	70 % – 76.9 %	F	0 % – 59.9 %

For any and all assignments submitted for this course, *your full name must be present at the top of the file to receive credit! No name, no grade! You will be given a chance to re-submit!*

Homework

Homework forms an integral part of every math course as it is meant to provide practice to students outside of class. For this class, homework is assigned by chapter via Canvas. Homework problems will be chosen from the textbook problems found at the end of each chapter. Homework will be completed in MATLAB and submitted on Canvas. Please be sure to carefully read, understand, and follow the instructions for each homework assignment. Completing the correct problems in the correct manner will be factored into your homework grade. I will provide a “Homework Template” on Canvas that you can edit and use for all homework assignments!

- Homework due dates will be specified on Canvas!
- Homework will typically be due at 11:59 PM on the due date.
- Each assignment will be worth 5 points:
 - **0 points:** assignment not completed / not submitted / does not include full name in script file.
 - **3 points:** assignment submitted late (within 1 week of original due date) and / or with 3+ errors*.
 - **5 points:** assignment submitted on time and mostly correct (only one or two errors).
- *Errors can include submitting work for the incorrect problems, submitting an assignment in an incorrect format, submitting incomplete / incorrect work, etc.
- Your lowest homework score will be dropped at the end of the semester.
- Please expect at least 3 – 5 business days for homework to be graded.

Quizzes

Quizzes are meant to periodically test your understanding of the course material. Quizzes may contain written questions or coding questions (but not both). There will be a total of 5 quizzes throughout the semester. Quizzes will be administered in-person every other Wednesday (*except for exam weeks*) in the beginning of class. The content covered on each quiz is dependent on the pace of the course and will be announced in class!

- See the course schedule below for quiz dates!
- You will have 15 minutes to complete and submit each quiz.
- Each quiz is worth 15 points.
- Quizzes must be completed on the classroom computers (you may not use your personal laptop for quizzes).
- Written questions will be completed and submitted directly on the quiz.
- Coding questions will be completed on MATLAB and submitted through Canvas!
- **You must complete quiz questions using the methods from our class only!**
- **You must be in class to take a quiz! There will be no “virtual” or make-up quizzes!**
- **If you are late on the day of a quiz, you will not be allowed to make up for lost time.**
- **If you are absent on the day of a quiz, you will receive zero points.**
- To accommodate for an emergency, illness, or other unforeseen circumstance: your lowest quiz score will be dropped at the end of the semester!
- Please expect at least 3 – 5 business days for quizzes to be graded and returned with personal feedback.

Exams

Exams are a formal assessment that will test your understanding of the course. Each exam will cover a certain set of chapters. Exams will only contain coding questions. Exams will not consist solely of problems that closely resemble homework problems. Instead, they may contain problems that combine two or more different concepts or that test your understanding of a definition or theorem. Be prepared!

There will be two midterm exams throughout the semester, and one cumulative final exam during finals week. The exam dates and content are tentatively scheduled as follows.

	Date	Content
Exam 1	Wednesday, September 24, 2025	Chapters 1, 2, 3, 4
Exam 2	Wednesday, November 5, 2025	Chapters 5, 10, 11, 6
Final Exam	Wednesday, December 17, 2025 (at 5:00 PM)	Chapters 1 – 11

- You will have one hour and fifteen minutes (75 minutes) to complete and submit a midterm exam.
- You will have one hour and fifty minutes (110 minutes) to complete and submit the final exam.
- Exams must be completed on the classroom computers (you may not use your personal laptop for exams).
- Exams will be completed on MATLAB and submitted through Canvas!
- **You must complete exam questions using the methods from our class only!**
- **You must be in class to take an exam! There will be no “virtual” or make-up exams!**
- **If you are late on the day of an exam, you will not be allowed to make up for lost time.**
- **If you are absent on the day of an exam, you will receive zero points.**
- Please contact me in a timely manner if you know you will be missing an exam day!
- Please expect at least 7 – 10 business days for exams to be graded and returned. Exams will be given back with personal comments and feedback.

Please visit our Canvas site for more information on homework, quizzes, and exams!

Late Work & Extra Credit Policies

Assignments, quizzes, and exams are designed and assigned with the intention that students will have plenty of time to complete them by the proposed due date. If you feel you are unable to meet a due date, or you believe the due date to be unreasonable, please let me know in a timely manner **before** the assignment is due.

Please do not expect extra credit opportunities throughout the semester.

Teacher-Student Communication & Conduct

I will often use Canvas announcements or email to communicate important messages outside of the classroom. Therefore, please make it a habit to check our Canvas page and your student email daily! **It is highly recommended that your Canvas settings are set to receive notifications for announcements.**

Email / Canvas Messages

The best way to reach me outside of class is to message me via email or Canvas.

- All messages should be respectful and professionally written, meaning no slang, texting language, etc.
- When sending an email, please use a subject line that clearly indicates your name and what class you are in (ex: Math 320-01 Christine Deeb). This will help me to respond to your email as quickly as possible.
- You may expect a response within 2 business days and during regular business hours (M – F, 9 AM – 5 PM). If I fail to respond to your message within 2 days, please let me know in person or by a follow-up message!

Classroom Conduct Expectations

To ensure that you gain the most knowledge and have the best possible experience:

- You will often be asked to participate in class by answering questions during lecture, working with the people around you, engaging in thoughtful discussion, etc.
- Please refrain from being on your cellphone during class as it is a distraction to you and others.
- Please remove earpieces and headphones when class starts.
- Please do not talk among yourselves while others are presenting because it causes distraction from the learning process; be respectful to your classmates and your instructor.
- It is in your best interest to attend and be engaged in every class meeting!
- *Please treat this class as a professional work environment! Act professional and respectful to all!*

Math Department Add / Drop Dates for Spring 2025

- **September 9 (Tuesday):** Last day for students to ADD with a permit. All permits expire at midnight on September 9. Last day for students to DROP without a grade of "W." Students drop using Titan Online.
- **September 19 (Friday):** Last day the Math Department will be flexible on the approval of non-medical withdrawal requests. Beginning Monday, September 22, students must have a serious and compelling reason for non-medical withdrawal requests and must provide supporting documentation for their reason.
- **November 14 (Friday):** Last day to withdraw with a truly serious and compelling non-medical reason that is clearly beyond the student's control. Students must document their reason.
- **December 5 (Friday):** Last day to withdraw for medical reasons. Students must document their reason.

Important Student Resources and Information

You may access the most recent information on university policies by visiting

<https://fdc.fullerton.edu/teaching/student-info-syllabi.html>. It is the student's responsibility to review and understand the information and policies listed below.

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| • University Learning Goals and Student Learning Outcomes | • Library Services |
| • General Education Learning Outcomes | • Student IT Services and Competencies |
| • Netiquette | • Software Privacy and Accessibility |
| • Students' Rights to Accommodations (DSS) | • Accessibility Statement |
| • Campus Student Support Resources | • Diversity Statement |
| • Academic Integrity | • Land Acknowledgement |
| • Emergency Preparedness | • Final Exam Schedule |
| | • Term Calendar |

Syllabus is Subject to Change

The syllabus items and tentative schedule below are subject to change. It is your responsibility to learn about announced changes throughout the semester, even if you are absent from class.

Tentative Schedule for Math 320-01 Fall 2025

Textbook: *Matlab: An Introduction with Applications*, 6th Edition by Amos Gilat

Week	Day	Date	Sections Covered/Exam Dates	Quiz/HW Dates
01	M W	August 25 August 27	Intro to Course Chapter 1: Starting with MATLAB	
02	M W	September 1 September 3	Labor Day – No class Chapter 1: Starting with MATLAB	
03	M W	September 8 September 10	Chapter 2: Creating Arrays Chapter 2: Creating Arrays	Chapter 1 HW Due! Quiz 1
04	M W	September 15 September 17	Chapter 3: Mathematical Operations with Arrays Chapter 3: Mathematical Operations with Arrays	Chapter 2 HW Due!
05	M W	September 22 September 24	Chapter 4: Using Script Files and Managing Data Exam 1 (Chapters 1 – 4)	Chapter 3 HW Due!
06	M W	September 29 October 1	Chapter 5: Two-Dimensional Plots Chapter 5: Two-Dimensional Plots	
07	M W	October 6 October 8	Chapter 10: Three-Dimensional Plots Chapter 10: Three-Dimensional Plots	Chapter 5 HW Due! Quiz 2
08	M W	October 13 October 15	Chapter 11: Symbolic Math Chapter 11: Symbolic Math	Chapter 10 HW Due
09	M W	October 20 October 22	Chapter 6: Programming Chapter 6: Programming	Chapter 11 HW Due Quiz 3
10	M W	October 27 October 29	Chapter 6: Programming Chapter 6: Programming	
11	M W	November 3 November 5	Catch-up + Review Exam 2 (Chapters 5, 10, 11, 6)	Chapter 6 HW Due!
12	M W	November 10 November 12	Chapter 7: Function Files Chapter 7: Function Files	
13	M W	November 17 November 19	Chapter 7: Function Files Chapter 8: Polynomials, Curve-Fitting, & Interpolation	Chapter 7 HW Due! Quiz 4
	M W	November 24 November 26	Fall Recess – No class Fall Recess – No class	
14	M W	December 1 December 3	Chapter 8: Polynomials, Curve-Fitting, & Interpolation Chapter 9: Applications in Numerical Analysis	Chapter 8 HW Due! Quiz 5
15	M W	December 8 December 10	Chapter 9: Applications in Numerical Analysis Final Review	
16	W	December 17	Final Exam (All chapters!) 5:00 PM to 6:50 PM	