# Course Number and Section MATH-1314-222H2 (2494)
# Name of Course College Algebra
# Course Semester Spring 2025
# 0730PM-08:50PM, LAB 08:51PM-09:20PM MW STEM Building Room 119

**Instructor Information:** Abbas J. Masum, amasum@com.edu

**Communicating with your instructor:**
ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. I will make every effort to respond to your email within 24 hours of receiving it. Please specify which course you are contacting me about and follow the proper way to write your email. If your email is not clear/proper, no reply will be sent.

**Student hours and location: Student Hours:** MML and practicing the required.
**Office Hours**: By appointment or times listed below:

| MW |
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| 5:00PM-5:30PM Room 119 |

**Required Textbook/Materials:** The textbook used in this course is: College Algebra, by Beecher, Penna, Bittinger, fifth edition, published by Pearson. A scientific or a graphing calculator is necessary. I recommend any scientific calculator or a TI-83 or TI-84 Graphing calculator. Any other brand or type of calculator may not be allowed. Please check with me before purchasing one or using one during in class examination.

**Course Description:** College Algebra is an in-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices.

**Course requirements: Homework Assignments**
There is an assigned homework for each section to be completed online using MyMathLab.

**Quizzes and Exams**
There are four quizzes, four chapters exams and a comprehensive final exam. All of the quizzes and exams are to be done online using MyMathlab. You can retake each quiz just once to improve your score; the higher score will be the one that counts. **There are no retakes on any of the exams. There will be no extra credit. Please do not ask me to help you to pass the course. If you plan on applying yourself and devoting your time, you will pass.**

**Determination of Course Grade/Detailed Grading Formula:** The course grade will be determined by the following formula:

**Final Average = 64%Chapter Exam Average + 16%Final Exam**
**+ 10%Homework Average + 10%Quiz Average**
**The Final Exam score will replace the lowest Chapter Exam Score when it is larger.**

**Grading Scale:**
Grade A: Final Average in [89.5, 100]
Grade B: Final Average in [79.5, 89.5)
Grade C: Final Average in [69.5, 79.5)
Grade D: Final Average in [59.5, 69.5)
Grade F: Final Average in [0, 59.5)

**Late Work, Make-Up, and Extra-Credit Policy:** There will be no makeup test for any missed test. However, if a test is missed and you notify me ahead of time, I might arrange for an alternative. No makeup will be granted to be taken during the regular class time. This policy is only good for **ONE MISSED EXAM**. Missing more than one exam will count as ZERO

**Attendance Policy:**
**You must log in and be active in MyMathLab at least four times a week.** In addition to time spent doing homework, taking quizzes and exams, it will be necessary to study, using the course materials, at least 4 hours per week to be successful in the class.

**Communicating with your instructor:** ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. (Faculty may add additional statement requiring monitoring and communication expectations via D2L or other LMS)

| Student Learner Outcomes | Maps to Core Objective | Assessed via this assignment |
|---|---|---|
| 1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses. | Critical Thinking Skills (CT) | Exam |
| 2. Recognize and apply polynomial, rational, exponential and logarithmic functions and solve related equations. | Critical Thinking Skills (CT) | Exam |
| 3. Apply graphing techniques. | Visual Communication Skills (CS) | Quiz |
| 4. Evaluate all roots (zeros) of higher degree polynomials and rational functions. | Critical Thinking Skills (CT) | Quiz |
| 5. Recognize, solve and apply systems of linear equations using matrices. | Empirical and quantitative Skills (EQS) | Exam |

**Academic Dishonesty:** The College of the Mainland is committed to a high standard of academic integrity. All students are responsible for honesty and independent effort. Incidents of academic and scholastic dishonesty (including cheating, plagiarism, and collusion) will be dealt with in a manner that is consistent with College Policy and the Student Handbook. Any student found to have been academically dishonest on an assignment, quiz or exam will receive a zero for that assignment, quiz or exam and he or she will be referred to the Office of Student Conduct for further disciplinary action. Please read the sections on Standards of Student Conduct and Discipline and Penalties in the on-line Student Handbook.

**Student Concerns:** If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact:

Leslie Richardson, Department Chair, Math & Computer Science
lrichardson@com.edu , (409) 933-8329

**Course outline:** we will follow the following calendar and if any changes happen, I will notify the class via D2L/email. This calendar and the syllabus are subject to change.

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| 3/10/2025 | Course Introduction, Routines, Q/A |
| | Graphs, Functions, and Models |
| | 1.1 Introduction to Graphing |
| | 1.2 Functions and Graphs |
| 3/12/2025 | 1.3 Linear Functions, Slope, and Applications |
| | 1.4 Equations of Lines and Modeling |
| | 1.5 Linear Equations, Functions, Zeros, and Applications |
| | 1.6 Solving Linear Inequalities |
| 3/17/2025 | Spring Break |
| 3/19/2025 | Spring Break |
| 3/24/2025 | More on Functions |
| | 2.1 Increasing, Decreasing, and Piecewise Functions; Applications |
| | 2.2 The Algebra of Functions |
| | 2.3 The Composition of Functions |
| 3/26/2025 | 2.4 Symmetry |
| | 2.5 Transformations |
| | 2.6 Variation and Applications |

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| 3/31/2025 | **Test 1-In Class** |
| | **Quadratic Functions and Equations; Inequalities** |
| 4/2/2025 | 3.1 The Complex Numbers |
| | 3.2 Quadratic Equations, Functions, Zeros, and Models |
| | 3.3 Analyzing Graphs of Quadratic Functions |
| | 3.4 Solving Rational Equations and Radical Equations |
| | 3.5 Solving Equations and Inequalities with Absolute Value |
| | **Polynomial Functions and Rational Functions** |
| 4/7/2025 | 4.1 Polynomial Functions and Models |
| | 4.2 Graphing Polynomial Functions |
| | 4.3 Polynomial Division; The Remainder Theorem and the Factor Theorem |
| | 4.4 Theorems about Zeros of Polynomial Functions |
| | 4.5 Rational Functions |
| | 4.6 Polynomial Inequalities and Rational Inequalities |
| 4/9/2025 | **Test 2** |
| | **Exponential Functions and Logarithmic Functions** |
| 4/14/2025 | 5.1 Inverse Functions |
| | 5.2 Exponential Functions and Graphs |
| | 5.3 Logarithmic Functions and Graphs |
| 4/16/2025 | 5.4 Properties of Logarithmic Functions |
| | 5.5 Solving Exponential Equations and Logarithmic Equations |
| | 5.6 Applications and Models: Growth and Decay; Compound Interest |
| | **Test 3** |
| | **Systems of Equations and Matrices** |
| 4/21/2025 | 6.1 Systems of Equations in Two Variables |
| | 6.2 Systems of Equations in Three Variables |
| | 6.3 Matrices and Systems of Equations |
| | 6.4 Matrix Operations |
| 4/23/2025 | 6.5 Inverses of Matrices |
| | 6.6 Determinants and Cramer's Rule |
| | 6.7 Systems of Inequalities and Linear Programming |
| | 6.8 Partial Fractions-**Optional Topic** |

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| 4/28/2025 | Geometry & Basic Trigonometry I |
| | Geometry & Basic Trigonometry II |
| 4/30/2025 | **Final Exam Review** |
| 5/5/2025 | **Final Exam, Comprehensive** |

## Institutional Policies and Guidelines

**Grade Appeal Process:** Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook **https://www.com.edu/student-services/docs/Student_Handbook_2024-2025_v2.pdf.** *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

**Academic Success & Support Services: College** of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

**ADA Statement:** Any student with a documented disability needing academic accommodations is requested to contact:
Kimberly Lachney, Student Accessibility Services Coordinator
Phone: 409-933-8919
Email: AccessibilityServices@com.edu
Location: COM Doyle Family Administration Building, Student Success Center

**Textbook Purchasing Statement:** A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Withdrawal Policy:** Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is February 26. 2025. The last date to withdraw from the 16-week session is April 21, 2025. The last date to withdraw for the 2nd
8-week session is April 30, 2025.

**FN Grading:** The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

**Early Alert Program:** The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

**Resources to Help with Stress:**
If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here https://www.com.edu/community-resource-center/. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

**Nondiscrimination Statement:**
The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.