

## College Algebra (MATH 1314-3C1)

### INSTRUCTOR CONTACT INFORMATION

Instructor: Alfred de la Rosa, Jr.

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Office Phone: (409) 247-4757

Office Location: Building TA5, Room 103

Office Hours: Monday: 9:00 am-12:00 pm; 1:45 pm-2:45 pm  
Tuesday: 12:30 pm-3:00 pm  
Wednesday: 9:00 am-12:00 pm; 1:45 pm-2:45 pm  
Thursday: 12:30 pm-3:00 pm  
Friday: 9:00 am-11:00 am



**LAMAR INSTITUTE  
OF TECHNOLOGY**

### CREDIT

3 Semester Credit Hours (3 hours lecture, 0 hours lab)

### MODE OF INSTRUCTION

Face to Face

### PREREQUISITE/CO-REQUISITE:

A score of 950 or above on the TSI Assessment placement test or a "C" or better in TMTH 0375.

### COURSE DESCRIPTION

In-depth study and applications of polynomial, rational, radical, exponential, and logarithmic functions and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

### COURSE OBJECTIVES

Upon completion of this course, the student will be able to

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential, and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve, and apply systems of linear equations using matrices.

Approved: **Initials/date**

## CORE OBJECTIVES

1. Critical Thinking Skills: To include creative thinking, innovation, inquiry, and analysis, evaluation, and synthesis of information.
2. Communication Skills: To include effective development, interpretation and expression of ideas through written, oral, and visual communication.
3. Empirical and Quantitative Skills: To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

## REQUIRED TEXTBOOK AND MATERIALS

1. *MyMathLab* standalone access code
  - a. May be purchased online at [www.mymathlab.com](http://www.mymathlab.com)
  - b. May be purchased at a local bookstore:  
ISBN 9780136483151 (18-week access) or  
ISBN 9780135189849 (24-month access)
2. A basic scientific calculator. No graphing calculators or cell phone calculators are permitted.
3. Graph paper and a ruler.

## ATTENDANCE POLICY

You will be required to sign a sign-in sheet at the beginning of each class period. **If you do not sign in, you will be marked absent.** If you are more than 15 minutes late for class, you will be marked absent and will not be allowed to sign in. **A roll call may be given at the end of the class period to ensure accuracy of the sign-in sheet.**

**In this class, attendance will count as part of your grade.** Your attendance grade will be based on the percentage of days you attend. If you arrive on time, remain in class until the class is dismissed by the instructor, and actively participate during the class period (e.g., taking notes, taking tests, or completing any other activity assigned by the instructor), you will earn 100 points for that day. Students who miss class, sleep in class, social network or text in class, or do not take notes or exams will receive a grade of 0 for the day. Absences due to a valid reason such as an illness or emergency will be excused only if the student provides written documentation. *Exception: Medical or dental appointments that coincide with the class period will not be excused.*

## DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

## STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

## COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
1-17-24	Introduction and Classroom Policies; College Algebra Review; MyMathLab Registration; Section 1.1: Linear Equations	College Algebra Review Section 1.1 Notes Wednesday, January 17, 2024	College Algebra Review Assignment MyMathLab, Section 1.1 Tuesday, January 23, 2024
1-22-24	Section 1.2: Quadratic Equations Section 1.3: Complex Numbers; Quadratic Equations in the Complex Number System	Section 1.2 Notes Section 1.3 Notes Monday, January 22, 2024	MyMathLab, Section 1.2 MyMathLab, Section 1.3 Tuesday, January 30, 2024
1-29-24	Section 1.4: Radical Equations; Equations Quadratic in Form; Factorable Equations Section 1.5: Solving Inequalities	Section 1.4 Notes Section 1.5 Notes Monday, January 29, 2024	MyMathLab, Section 1.4 MyMathLab, Section 1.5 Tuesday, February 6, 2024
2-5-24	Section 1.6: Equations and Inequalities Involving Absolute Value Section 1.7: Problem Solving: Interest, Mixture, Uniform Motion, Constant Rate Job Applications	Section 1.6 Notes Section 1.7 Notes Monday, February 5, 2024	MyMathLab, Section 1.6 MyMathLab, Section 1.7 Tuesday, February 13, 2024
2-12-24	Section 2.1: The Distance and Midpoint Formulas Section 2.2: Graphs of Equations in Two Variables; Intercepts; Symmetry	Section 2.1 Notes Section 2.2 Notes Monday, February 12, 2024	MyMathLab, Section 2.1 MyMathLab, Section 2.2 Sunday, February 18, 2024
2-19-24	Section 2.3: Lines Section 2.4: Circles	Section 2.3 Notes Section 2.4 Notes Monday, February 19, 2024	MyMathLab, Section 2.3 MyMathLab, Section 2.4 Sunday, February 25, 2024

2-26-24	Section 3.1: Functions Section 3.2: The Graph of a Function	Section 3.1 Notes Section 3.2 Notes Monday, February 26, 2024	MyMathLab, Section 3.1 MyMathLab, Section 3.2 Sunday, March 3, 2024
3-4-24	Section 3.3: Properties of Functions Section 3.4: Library of Functions	Section 3.3 Notes Section 3.4 Notes Monday, March 4, 2024	MyMathLab, Section 3.3 MyMathLab, Section 3.4 Sunday, March 10, 2024
3-18-24	Section 3.5: Graphing Techniques; Transformations	Section 3.5 Notes Monday, March 18, 2024	MyMathLab, Section 3.5 Sunday, March 24, 2024
3-25-24	Section 4.1: Linear Functions and Their Properties Section 4.2: Linear Models: Building Linear Functions from Data Section 4.3: Quadratic Functions and Their Properties Section 4.4: Building Quadratic Models from Verbal Descriptions and from Data	Sections 4.1-4.2 Notes Sections 4.3-4.4 Notes Monday, March 25, 2024	MyMathLab, Sections 4.1-4.2 MyMathLab, Sections 4.3-4.4 Sunday, March 31, 2024
4-1-24	Section 5.1: Polynomial Functions Section 5.2: Graphing Polynomial Functions; Models	Sections 5.1-5.2 Notes Monday, April 1, 2024	MyMathLab, Sections 5.1-5.2 Sunday, April 7, 2024
4-8-24	Section 5.5: Polynomial and Rational Inequalities Section 5.6: The Real Zeros of a Polynomial Function Section 5.7: Complex Zeros; Fundamental Theorem of Algebra	Section 5.5 Notes Sections 5.6-5.7 Notes Monday, April 8, 2024	MyMathLab, Section 5.5 MyMathLab, Sections 5.6-5.7 Sunday, April 14, 2024

4-15-24	Section 6.1: Composite Functions Section 6.2: One-to-One Functions; Inverse Functions	Section 6.1 Notes Section 6.2 Notes Monday, April 15, 2024	MyMathLab, Section 6.1 MyMathLab, Section 6.2 Sunday, April 21, 2024
4-22-24	Section 6.3: Exponential Functions Section 6.4: Logarithmic Functions Section 6.5: Properties of Logarithms	Section 6.3 Notes Section 6.4 Notes Section 6.5 Notes Monday, April 22, 2024	MyMathLab, Section 6.3 MyMathLab, Section 6.4 MyMathLab, Section 6.5 Sunday, April 28, 2024
4-29-24	Section 6.6: Logarithmic and Exponential Equations Chapter 6 Applications Section 8.2: Systems of Linear Equations; Matrices	Section 6.6 Notes Chapter 6 Applications Section 8.2 Notes Sunday, April 29, 2024	MyMathLab, Section 6.6 MyMathLab, Chapter 6 Applications MyMathLab, Section 8.2 Sunday, May 5, 2024 <i>Comprehensive Final Exam on Date Specified by the Official LIT Schedule</i>

### **COURSE EVALUATION**

Final grades will be calculated according to the following criteria:

- Unit exams 60%
- Course Assignments 20%
- Attendance 10%
- Comprehensive Final Exam 10%

### **GRADE SCALE**

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

LIT does not use +/- grading scales

## **ACADEMIC DISHONESTY**

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at <http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty>.

## **TECHNICAL REQUIREMENTS**

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

## **DISABILITIES STATEMENT**

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

## **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

## **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

**ADDITIONAL COURSE POLICIES/INFORMATION**

1. The student will be expected to have access to the internet and a computer.
2. No food, drinks, or use of tobacco products in class.
3. Laptops, telephones, and any other electronic devices must be turned off during class.
4. A final grade of Incomplete will only be given if a student is passing the course and is missing only one major assignment. Such an arrangement must be made with the instructor. An incomplete assignment must be finished during the next long semester or a grade of "I" will become an "F."