

# College Algebra (MATH 1314) w/ Co-req Support

## INSTRUCTOR CONTACT INFORMATION

Instructor:	James Jean
Email:	jjean@lit.edu
Office Phone:	409-880-8321
Office Location:	T5 Rm. 103
Office Hours:	MW: 8:00 – 9:00; 11:00 – 12:30 TR: 8:30 – 9:30 F: 8:30 – 9:00; 11:00 – 12:30



**LAMAR INSTITUTE  
OF TECHNOLOGY**

## CREDIT

3 Semester Credit Hours (3 hours lecture)

## MODE OF INSTRUCTION

Online

## PREREQUISITE/CO-REQUISITE:

A score of 350 or above on the TSI-Assessment placement test or a "C" or better in TMT 0375. This class is paired with TMT 0214.

## 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.

## 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. **ALEKS** Access Code
  - a. May be obtained through Eagle Learning Essentials (Link is on Blackboard)
2. Calculator of your choice (TI 84 preferred). Calculators with a Computer Algebra System (such as the TI-89) are prohibited. Ask your instructor if you are unsure.

## ATTENDANCE POLICY

Online classes do not attend class but are expected to login to Blackboard/MyMathLab at least twice a week and complete assignments prior to due date. Failure to complete assignments prior to due date may result in loss of credit. Late work may not be accepted. If a week goes by with no activity, inactivity flags can be submitted via Starfish.

## 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 EVALUATION

Final grades will be calculated according to the following criteria:

• Tests* (Tests 3, 4, and Final Exam)	60%
• Core Assessment	20%
• Course Assignments	20%

\* Note: Tests 1 and 2 are used when calculating the TMTH 0214 grade.

## **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.

**COURSE CALENDAR (Dates and assignments subject to change with or without notice)**

<b>Week of</b>	<b>Assignment</b>	<b>Due Date</b>
1/20	Course Introduction and policies. R.1: Operations on Fractions R.2: The Set of Real Numbers R.3: Simplifying Numerical Expressions	2/10
1/26	1.1: Algebraic Expressions and Models 1.2: Linear Equations in One Variable 1.5: Linear and Compound Inequalities 1.6: Absolute Value Equations	2/10
2/2	1.7: Absolute Value Inequalities 2.1: Integer Exponents and Scientific Notation 2.2: Operations on Polynomials 2.3: Greatest Common Factor and Factoring by Grouping	2/10
2/9	2.4: Factoring Trinomials 2.5: Factoring Binomials 3.1: Introduction to Radicals and Their Simplification <b>Test 1 (TMTH 0214) Sections: R.1 – R.3, 1.1 – 1.7, 2.1 – 2.3</b>	Homework due on 2/10. <b>Test 1 due on 2/11.</b>
2/16	3.2: Multiplying Radicals and Rationalizing the Denominator 3.4: Solving Quadratic Equations by Factoring 3.5: Solving Quadratic Equations by the Square Root Property 4.1: Multiplication and Division of Rational Expressions	3/4
2/23	4.2: Addition and Subtraction of Rational Expressions 4.5: Rational Exponents (End of TMTH 0214 Material) 3.3: Complex Numbers (Beginning of MATH 1314 Material) 3.6: Solving Quadratic Equations by the Quadratic Formula	3/4
3/2	<b>Test 2 (TMTH 0214) Sections: 2.4, 2.5, 3.1, 3.2, 3.4, 3.5, 4.1, 4.2, 4.5</b> 4.3: Rational Equations 4.6: Radical Equations and Equations with Rational Exponents	<b>Test 2 due on 3/5.</b> Homework due on 4/1.
3/9	Spring Break. Campus Closed.	4/1
3/16	4.7: Equations in Quadratic Form 5.1: The Rectangular Coordinate System and Graphing Utilities 5.3: Functions and Relations	4/1
3/23	5.4: Linear Equations in Two Variables and Linear Functions 6.1: Transformations of Graphs <b>Test 3 (MATH 1314) Sections: 3.3, 3.6, 4.3, 4.6, 5.1, 5.3</b>	4/1
3/30	6.2: Symmetry and Piecewise-Defined Functions 6.4: Algebra of Functions and Function Composition 7.1: Quadratic Functions and Applications	<b>Test 3 due on 4/2.</b> Homework due on 5/5.

4/6	7.2: Introduction to Polynomial Functions 7.3 Division of Polynomials and the Remainder and Factor Theorems 7.4: Zeros of Polynomials	5/5
4/13	8.1: Introduction to Rational Functions 8.2: Graphs of Rational Functions 9.1: Inverse Functions	5/5
4/20	9.2: Exponential Functions 9.3: Logarithmic Functions <b>Test 4 (MATH 1314) Sections: 5.4, 6.1, 6.2, 6.4, 7.1 – 7.4, 8.1, 8.2, 9.1</b>	5/5
4/27	9.4: Properties of Logarithms 9.5: Exponential Equations and Applications 9.6: Logarithmic Equations and Applications	5/5
5/4	11.1: Solving Systems of Linear Equations Using Matrices	<b>Test 4 due on 5/6.</b> Homework due on 5/10.
	<b><u>Final Exam (Comprehensive)</u></b>	<b>05/11</b>

### Artificial Intelligence Statement

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses

### 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.

**Instructor Expectations from Students:**

- Response to email/remind text within 24 hours (same day if received before 5pm M-Th or before noon Friday)
- Flexible office hours / virtual help when needed.
- Weekly grade updates

**Professor Expectations of Students:**

- Seek help from instructor early and often, do not wait until the last minute!
- Plan ahead; if you will miss an exam, make prior arrangements to take it early or schedule a make-up date at instructors' convenience
- When sending emails identify yourself with class and section
- Participate in class lecture/discussions.