

College Algebra (MATH 1314)

INSTRUCTOR CONTACT INFORMATION

Instructor: Chris Sams

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Office Phone: 409-247-5186

Office Location: T5 Rm. 103

Office Hours: MW: 11:00am-12:30pm; 3:00pm-3:30
TR: 8:00am-10:00am; 2:00pm-3:30pm
F: 11:00am-1:00pm



**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 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**
 - b. May be purchased at a local bookstore: **ISBN 032119991X**
2. Calculator of your choice (TI 84 preferred)

ATTENDANCE POLICY

Face to face classes: you are expected to attend every class. Failure to attend may result in being dropped or loss of credit (failing the course), with or without warning.

Online classes; do not attend class but are expected to login to blackboard 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.

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

Week	Assignment	Due Date
Jan 17-Jan 20	Orientation/Review: Basic Concepts of Algebra (Optional) 1.1 Linear Equations 1.2 Quadratic Equations	(all assignments due by 11:59pm)
Jan 23-Jan 27	1.3 Complex numbers; Quadratic Equations in the Complex Number System 1.4 Radical Equations; Equations Quadratic in Form; Factorable Equations	
Jan 30-Feb 3	1.5 Solving Inequalities 1.6 Equations and Inequalities Involving Absolute Value	
Feb 6-Feb 10	2.1 Distance and Midpoint Formulas 2.2 Graphs of Equations in Two Variables; Intercepts; Symmetry <u>Chapter 1 Test Wednesday, February 8</u>	All Chapter 1 Assignments due Monday, February 6
Feb 13-Feb 17	2.3 Lines 3.1 Functions	
Feb 20-Feb 24	3.2 Graph of a Functions 3.3 Properties of Functions	
Feb 27-Mar 3	3.4 Libraries of Functions; Piecewise-Defined Functions 3.5 Graphing Techniques	
Mar 6-Mar 10	4.1 Linear Functions and Their Properties 4.2 Linear Models <u>Chapter 2/3 Test Wednesday, March 8</u>	All Chapter 2 and 3 Assignments due Monday, March 6
Mar 13-17	Spring Break (Campus Closed)	
Mar 20-Mar 24	4.3 Quadratic Functions and Their Properties 4.4 Quadratic Models 5.1 Polynomial Functions and Models	
Mar 27-Mar 31	5.5 Real Zeros of Polynomial Functions 5.6 Complex Zeros of; Fundamental Theorem of Algebra 5.2 Properties of Rational Functions	
Apr 3-Apr 7	5.3 Graph of Rational Functions 5.4 Polynomial and Rational Inequalities 6.1 Composite Functions	
Apr 10-Apr 14	6.2 One-to-One Functions; Inverse Functions <u>Chapter 4/5 Test Wednesday, April 12</u>	All Chapter 4 and 5 Assignments due Monday, April 10
Apr 17-Apr 21	6.3 Exponential Functions 6.4 Logarithmic Functions 6.5 Properties of Logarithmic Functions	
Apr 24-Apr 28	6.6 Logarithmic and Exponential Equations 6.7 Applications 8.2 Systems of Linear Equations; Matrices	
May 1- May 5	Review <u>Chapter 6/8 Test Wednesday, April 15</u> Core Assignment Due.	All Chapter 6 and 8 Assignments due Wednesday, May 3
May 8	<u>Final Exam</u> (specified by LIT)	

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Test 60%
- Comprehensive Final Exam 10%
- Course Assignments (including Core Assignment) 30%

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. 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. 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

Course Expectations

Instructor Expectations from Students:

- Weekly email communication regarding assignment and upcoming test due dates
- Response to email/remind text within 24 (same day if received before 5pm M-Th or before noon Friday)
- Flexible office hour/ virtual help when needed.
- Weekly grade updates
- Extra credit opportunities

Professor Expectations of Students:

- **Join remind for text communication. (Directions found on Blackboard)**
- **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.**