College Algebra (MATH 1314)

INSTRUCTOR CONTACT INFORMATION

Instructor: Chris Sams

Email: casams@lit.edu

Office Phone: 409-247-5186

Office Location: TC Rm. 240

Office Hours: Summer hrs. by appointment

CREDIT

3 Semester Credit Hours (3 hours lecture)

MODE OF INSTRUCTION

(Face to Face/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
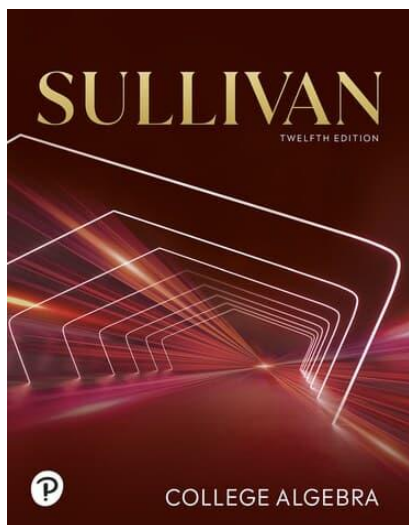
Included in ELE bundle for $15 per SCH.

Up to 18-week access
MyLab Math with Pearson eText (18 Weeks) for College Algebra
ISBN-13: 9780138253684 (2024 update)

Up to 24-month access
MyLab Math with Pearson eText (24 Months) for College Algebra
ISBN-13: 9780138253721 (2024 update)

1.   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
7/9-7/11	Orientation/Review: Basic Concepts of Algebra (Optional) 1.1 Linear Equations 1.2 Quadratic Equations	(all assignments due by 11:59pm)
7/14-7/18	1.3 Complex numbers; Quadratic Equations in the Complex Number System 1.4 Radical Equations; Equations Quadratic in Form; Factorable Equations 1.5 Solving Inequalities 1.6 Equations and Inequalities Involving Absolute Value 2.1 Distance and Midpoint Formulas 2.2 Graphs of Equations in Two Variables; Intercepts; Symmetry **Chapter 1 Test Sunday, July 20th**	All Chapter 1 Assignments due Sunday, July 20th
7/21-7/25	2.3 Lines 3.1 Functions 3.2 Graph of a Functions 3.3 Properties of Functions 3.4 Libraries of Functions; Piecewise-Defined Functions 3.5 Graphing Techniques 4.1 Linear Functions and Their Properties **Chapter 2/3 Test Sunday, July 27th**	All Chapter 2 and 3 Assignments due Sunday, July 27th
7/28-8/1	4.3 Quadratic Functions and Their Properties 5.1 Polynomial Functions and Models 5.5 Real Zeros of Polynomial Functions 5.6 Complex Zeros of; Fundamental Theorem of Algebra 5.7 Complex Zeros 6.1 Composite Functions 6.2 One-to-One Functions; Inverse Functions **Chapter 4/5 Test Sunday, Aug. 3rd**	All Chapter 4 and 5 Assignments due Sunday, August 3rd
8/4-8/8	6.3 Exponential Functions 6.4 Logarithmic Functions 6.5 Properties of Logarithmic Functions 6.6 Logarithmic and Exponential Equations 6.7 Applications 8.2 Systems of Linear Equations; Matrices **Chapter 6/8 Test Sunday, Aug. 10th**	All Chapter 6 and 8 Assignments due Sunday, August 10th
8/11-8/13	**Final Exam** (specified by LIT)	

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Test   60%
- Course Assignments   20%
- Core Assessment   20%

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

. 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

Mr. Sams Additional Information

My Teaching Philosophy
I believe that all students can learn. If you've never been good at math that does not mean you never will be good at math. With proper guidance and practice you can learn anything. The way you practice sports or practice learning a musical instrument is the same practice we must adopt to learn mathematics. No one learned to ride a bike by listening to lectures, you had to practice and endure falls and crashes. I'm here to help you and hopefully explain topics and concepts in such a way that it's easy to digest. However, you must practice if you want to learn.

What To Expect from Instructor Sams:
➢ Response to email within 24 (except Friday after noon and weekends) / Remind text response same day **(Remind preferred)** Please add name course and section to email and text so that I can Identify you

- Flexible office hours/ virtual help when needed. (Schedule an appointment with me if my offered hours do not work for you)
- Grade updates within a week of syllabus due date (Please wait until a week of submission/syllabus due date before inquiring about a grade)
- Extra credit opportunities

Student Behavior Expectations:

- Join remind for text communication. (Directions found on Blackboard start here)
- 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.
- Keep in mind that each student comes from a different cultural background and brings a different set of beliefs and values. As a result, students may disagree on various topics during discussion. Disagreements can lead to critical thinking and deeper understanding, therefore be respectful of other class members and different opinions. Disrespect for others will not be tolerated.
- You are adults, you will be treated as such. If you need to excuse yourself from class for work call, personal family call, or restroom etc. Please do so quietly with minimal disruptions. Please know that you are responsible for any information that you miss during your absence.