

**College Algebra (MATH 1314)
Spring 2025**



INSTRUCTOR CONTACT INFORMATION

Instructor: Mark Jhun Vinluan

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Office Phone: 409-617-6600

Office Location: Beaumont Early College High School - Room 309

Office Hours: Monday to Friday, 7:15 AM - 2:45 PM

Afterclass Tutorials: Tuesday and Wednesday, from 3:00 PM to 4:00 PM

CREDIT: 3 units

MODE OF INSTRUCTION: Face-to-Face class

PREREQUISITE: A score of 350 or above on the TSI-Assessment placement test.

COURSE DESCRIPTION:

This course provides a concise review of fundamental algebraic topics, including real numbers, polynomials, rational expressions, and rational exponents. It then focuses on algebraic equations and inequalities in forms like linear, quadratic, radical, and absolute value.

Additionally, emphasis is placed on functions and their graphs, covering linear, quadratic, polynomial, rational, exponential, and logarithmic functions. The course explores systems of linear equations, with a focus on matrices, and sequences.

COURSE OBJECTIVES:

By the end of the semester, students will:

1. Develop a comprehensive understanding of foundational algebraic concepts, including real numbers, polynomials, rational expressions, and rational exponents.
2. Solve a variety of algebraic equations and inequalities, emphasizing linear, quadratic, radical, and absolute value forms.
3. Accurately interpret, analyze, and graph functions, including linear, quadratic, polynomial, rational, exponential, and logarithmic functions.

4. Apply matrix methods to efficiently solve systems of linear equations and demonstrate proficiency in their use.
5. Explore and analyze advanced algebraic topics, such as arithmetic and geometric sequences, with an emphasis on their patterns and applications.

Core Objectives:

1. **Integration of Algebraic and Graphical Representations:** Strengthen the ability to connect algebraic expressions with their graphical counterparts, facilitating deeper insight into the behavior of linear, polynomial, and transcendental functions.
2. **Real-World Applications:** Employ algebraic methods to solve practical problems, demonstrating the relevance of algebra in everyday contexts and various professional fields.
3. **Interactive and Collaborative Learning:** Enhance understanding of algebraic concepts through active participation in collaborative activities, problem-solving sessions, and the use of technology to visualize mathematical relationships.
4. **Critical Thinking and Analytical Skills:** Foster analytical reasoning by breaking down complex problems into manageable components, developing logical strategies to solve equations and inequalities, and evaluating the properties and transformations of functions.
5. **Effective Communication:** Articulate mathematical ideas clearly and effectively in both verbal and written forms, participate actively in discussions and group work, and present solutions in an organized and logical manner.
6. **Quantitative and Empirical Reasoning:** Demonstrate proficiency in quantitative analysis through problem-solving involving systems of linear equations, sequences, and mathematical models, and apply empirical reasoning to interpret data and validate solutions.

REQUIRED TEXTBOOK AND MATERIALS

1. MyMathLab Standalone Access Code
2. Calculator of your choice, but no phones as calculators.
3. Chromebook
4. Graphing papers

ATTENDANCE POLICY

1. Regular attendance is expected for all scheduled class sessions, including lectures and discussions.
2. Students are expected to arrive on time for each class session.
3. Attendance will be recorded at the beginning of each class session.
4. *Excused absences* may be granted for documented medical reasons, family emergencies, or other extenuating circumstances. It is the responsibility of the student to communicate such circumstances to the instructor as soon as possible.

5. In the event of an anticipated absence, students are encouraged to communicate with the instructor in advance.
6. Students with *excused absences* may be eligible for make-up work, including missed assignments, quizzes, or exams. The nature of make-up work will be determined on a case-by-case basis in consultation with the instructor.
7. Excessive absences may negatively impact your grade and could result in withdrawal from the course.

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 CODE OF CONDUCT STATEMENT

It is your 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*. It 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

The institution employs an early alert system named Starfish. Periodically, you may be notified via email by Starfish concerning your academic standing, grades, and attendance. Faculty employ this tool to record attendance, raise flags or kudos, and facilitate appointments. Accessible through Blackboard or MyLIT, the Starfish link provides comprehensive academic alerts and guidance, aiding in your pursuit of academic success at LIT.

COURSE EXPECTATIONS

Instructor Expectations from Students

- Actively participate in class discussions and activities.
- Attend classes consistently and punctually.
- Submit assignments and activities on or before the specified deadlines.
- Uphold principles of academic honesty and integrity in all coursework.
- Communicate clearly and promptly with the instructor regarding any concerns or questions.
- Demonstrate respectful and professional behavior towards the instructor and peers.
- Follow course guidelines, syllabus instructions, and assessment criteria.

GRADING SYSTEM

Final grades will be calculated according to the following criteria:

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

GRADE SCALE

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

GRADING AND REPORTING PROCEDURE

1. Teachers of record are required to post at least 1 grade in the Blackboard gradebook two days after the deadline submission.
2. Students may turn in late work for a maximum penalty of 10 percent of the total grade for each day late. Teachers can use their discretion to reduce this penalty for the benefit of students. All work assignments must accept late work assignments up to two days. After two days, it is up to the teacher's discretion to accept late work.
3. Students participating in UIL activities may exempt the No Pass, No Play rule in Advanced Placement courses identified in 33.081 of the TEXAS EDUCATION CODE. The district's exemption guidelines are as follows:
 - a. The student's grade cannot be below 70 percent.
 - b. The students must have no zeros recorded in the teacher's gradebook for the corresponding grading period.

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 Catalog and Handbook at <http://catalog.lit.edu/content.php?catoid=4&navoid=111#academic-dishonesty>

DISABILITIES STATEMENT

LIT is dedicated to ensuring that all students have equal access to educational opportunities. If you require accommodations due to a documented disability, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu at the beginning of the semester. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

CELL PHONE (DISTRICT POLICY): If I see or hear a cell phone it will be confiscated, as well as any other electronic device. All electronic devices should be OFF and in your book bag or purse, not in your pockets. This includes, but not limited to, any cords, earbuds, or smart watches. These devices will be turned into the office and a \$15 fine will be required to retrieve them.

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

Week	Topic	Assignment due date
Jan 7 - 10	0. Course Orientation R.1 Real Numbers R.2 Algebraic Essentials	
Jan 13 - 17	1.1 Linear Equation 1.2 Quadratic Equation	1.1 Jan 22 1.2 Jan 24
Jan 21 - 24	1.3 Complex Numbers; Quadratic Equation in the Complex System 1.4 Radical Equation; Equation in Form Factorable Equation	1.3 Jan 28 1.4 Jan 31 Test 1 Jan 31
Jan 27 - 31	1.5 Solving Inequalities 1.6 Equation and Inequalities Involving Absolute Value	1.5 Jan 31 1.6 Feb 4
Feb 3 - Feb 7	2.2 Graphs of Equations in Two Variables; Intercepts and Symmetry	2.2 Feb 7 Test 2 Feb 7
Feb 10 - Feb 13	3.1 Function 3.2 The Graph of the Function	3.1 Feb 13 3.2 Feb 20
Feb 19 - 21	3.3 Properties of the Functions	3.3 Feb 25
Feb 24 - 28	3.4 Library of Functions; Piecewise defined Functions 3.5 Graphing Techniques: Transformation	3.4 Feb 28 3.5 Mar 4 Test 3 Mar 4
Mar 3 - 6	4.1 Properties of Linear Functions and Linear Model 4.3 Quadratic Functions and Their Properties	4.1 Mar 6 4.3 Mar 18
Mar 17 - 21	4.5 Inequalities Involving Quadratic function	4.5 Mar 21 Test 4 Mar 21
Mar 24 - 28	5.1 Polynomial Function	5.1 Mar 18
Mar 31 - Apr 4	5.3 Rational Function 5.5. Polynomial and Rational Inequalities	5.3 Apr 1 5.5 Apr 4

		Test 5 Apr 4
Apr 7 - Apr 11	6.1 Composite Functions 6.2 One-to-one Function; Inverse Function	6.1 Apr 11 6.2 Apr 15
Apr 14 - 17	6.3 Exponential Function 6.4 Logarithmic Function	6.3 Apr 17 6.4 Apr 23
Apr 22 - 25	6.5. Properties of Logarithmic Function 8.2 System of Linear Equations; Matrices	6.5 Apr 25 Test 6 Apr 25 8.2 Apr 29
Apr 28 - May 2	8.5 Partial Fraction (Case 1 and 2) 8.7 System of Inequalities	8.5 May 2 8.7 May 6
May 5 - 9	9.2 Arithmetic Sequences 9.3 Geometric Sequences; Geometric Series	9.2 May 9 9.3 May 13 Test 7 May 13
May 12 - 13	<u>Final Examination</u>	