

College Algebra – Math 1314 – 3E1

CRN: 90761

CREDIT

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

MODE OF INSTRUCTION

Face to Face Lecture class; with all daily assignments online in MyMathLab through Blackboard.

PREREQUISITE/CO-REQUISITE:

A score of 350 or above on the TSI-Assessment placement test or a “C” or better in TMTH 0374.

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 successful completion of this course, students will:

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.

INSTRUCTOR CONTACT INFORMATION

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| Instructor: | Irma Moulton |
| Email: | ilmoulton@lit.edu |
| Office Phone: | N/A |
| Office Location: | Technology Center, room 200 |
| Office Hours: | Tuesdays 5:00pm – 5:30pm |



**LAMAR INSTITUTE
OF TECHNOLOGY**

REQUIRED TEXTBOOK AND MATERIALS

1. MyMathLab (MML) access code – Access Code will be located in **LIT Eagle Learning Essentials** link or if you opted out of Textbook Rentals, then you must Purchase directly from the MyMathLab course online linked with Blackboard.
2. You will also need a scientific calculator for my course (I recommend TI-30X IIS Scientific Calculator). * *Cell phones and graphing calculators are NOT allowed in this class. **



ATTENDANCE POLICY

1. Attendance is mandatory.
2. Attendance is 10% of your grade.
2. The student must purchase all of the required course materials (MyMathLab and calculator).
3. The student will be expected to have access to the Internet and a computer.

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.

COURSE CALENDAR

Tentative Instructional Outline: Instructor reserves the right to modify this syllabus addendum as needed during the course.

| Week | Date | ASSIGNMENTS | Due date |
|------|------|--|----------|
| 1 | 8/26 | Introduction, Blackboard, Syllabus, MyMathLab and class procedures. | 9/2 |
| | | 1.1 Linear Equations | 9/16 |
| 2 | 9/2 | 1.2 Quadratic Equations | 9/16 |
| | | 1.3 Complex Numbers; Quadratic Equations in the Complex Number System | |
| | | 1.4 Radical Equations; Equations Quadratic in Form; Factorable Equations | |
| 3 | 9/9 | 1.5 Solving Inequalities | 9/16 |
| | | 1.6 Equations and Inequalities Involving Absolute Value | |

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|----|-------|--|-------|
| | | 1.7 Problem Solving: Interest, Mixture, Uniform Motion, Constant Rate Job Applications | |
| | | Review / Quiz over Chapter 1 in MyMathLab | |
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| 4 | 9/16 | Exam #1 over Chapter 1 | 9/16 |
| | | | |
| 5 | 9/23 | 2.1 The Distance and Midpoint Formulas | 10/14 |
| | | 2.2 Graphs of Equations in Two Variables; Intercepts; Symmetry | |
| | | 2.3 Lines | |
| | | 2.4 Circles | |
| | | | |
| 6 | 9/30 | 8.1 Systems of Linear Equations: Substitution and Elimination | 10/14 |
| | | 8.2 Systems of Linear Equations: Matrices | |
| | | 8.3 Systems of Linear Equations: Determinants | |
| | | | 10/14 |
| 7 | 10/7 | 3.1 Functions | |
| | | 3.2 The Graphs of a Function | |
| | | 3.3 Properties of Functions | |
| | | | |
| 8 | 10/14 | 3.4 Library of Functions; Piecewise-defined Functions | 10/20 |
| | | 3.5 Graphing Techniques: Transformations | |
| | | Exam #2 over Chapters 2, 3 and 8. ONLINE | 10/21 |
| | | | |
| 9 | 10/21 | 4.1 Properties of Linear Functions and Linear Models | 11/04 |
| | | 4.2 Building Linear Models from Data | |
| | | 4.3 Quadratic Functions and Their Properties | |
| | | 4.4 Build Quadratic Models from Verbal Descriptions and from Data | |
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| 10 | 10/28 | 5.1 Polynomial Functions | 11/04 |
| | | 5.2 Graphing Polynomial Functions; Models | |
| | | 5.3 Properties of Rational Functions | |
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| 11 | 11/4 | 5.4 The Graph of a Rational Function | 11/10 |
| | | 5.5 Polynomial and Rational Inequalities | |
| | | 5.6 The Real Zeros of a Polynomial Function | |
| | | Exam #3 over Chapters 4 and 5 Online | 11/11 |
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| 12 | 11/11 | 6.1 Composite Functions | 11/25 |
| | | 6.2 One-to-One Functions; Inverse Functions | |
| | | 6.3 Exponential Functions | |

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| | | 6.4 Logarithmic Functions | |
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| 13 | 11/18 | 6.5 Properties of Logarithms | 11/25 |
| | | 6.6 Logarithmic and Exponential Equations | |
| | | 6.7 Financial Models | |
| | | Review / Quiz over chapter 6 in MyMathLab | |
| | | | |
| 14 | 11/25 | Exam #4 over Chapter 6 | 12/1 |
| | | Happy Thanksgiving! | |
| | | | |
| 15 | 12/2 | Final Exam Review in class (there is another review in MyMathLab) | 12/2 |
| | | Common Core Assessment is due a day before Final Exam | 12/8 |
| | | | |
| 16 | 12/9 | Comprehensive Final Exam from 5:30 pm to 7:30 pm | 12/9 |
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COURSE EVALUATION

Final grades will be calculated according to the following criteria:

| Your grade will be determined by the following | Details | Percent of Final Average |
|--|-------------------|--------------------------|
| ASSIGNMENTS | Online -MyMathLab | 20% |
| Quizzes (Reviews) | Online -MyMathLab | (Included in 20% above) |
| Attendance / Participation | In class | (included in 20% above) |
| 4 Chapter TESTS | In class | 60% |
| Final Exam | In class | (included in 60% above) |
| CORE ASSESSMENT | Online- MyMathLab | 20% |
| TOTAL: | | 100% |

GRADE SCALE

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

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.

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.

ADDITIONAL COURSE POLICIES/INFORMATION

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.

ASSIGNMENTS will be assigned at each class meeting. These assignments will be completed online in MyMathLab. In order to succeed in any math class, you must do the math. Mathematics is just like any sport; you learn through practice and repetition. It typically does not matter how good your notes are or how much effort you have put into getting help with the class work, you have to practice it yourself. You will have access to the e-book, video clips, “See an example”, “Help me solve this” all in MyMathLab. I will give you more insight into this in class. You will have one week to work on each set of homework assignments. Pace yourself and do some each night. There is a deadline for each assignment including quizzes. It does not matter if the internet goes out or some unforeseen circumstance pops up, the assignments will NOT be extended past the due date. Once the due date and time is past due, you will be deducted 50% for doing any assignment late. You will no longer have access to late assignments in MyMathLab a week before the end of the semester. I will not allow any late exams.

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>.