

Intermediate Algebra (TMTH 0375)



Credit: 3 semester credit hours (3 hours lecture)

Prerequisite/Co-requisite: A "C" or better in TMTH 0365

Course Description

A study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations.

Required Textbook and Materials

1. MyLabsPlus Standalone Access Code
 - a. May be purchased online at www.lit.mylabsplus.com
 - b. May be purchased at a local bookstore: **ISBN ID: 0558926800**
2. Approved recommended calculators by individual course instructor.

Course Objectives

Upon completion of this course, the student will be able to:

1. Define, represent, and perform operations on real and complex numbers.
2. Recognize, understand, and analyze features of a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
4. Identify and solve absolute value, polynomial, radical, and rational equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret, and justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

Course Outline

A. Module 2- Solving Equations and Inequalities

2. Solving Absolute Value Equations
3. Solving Inequalities
4. Solving Absolute Value Inequalities

B. Module 4- Factoring

1. Factoring and the Greatest Common Factor
2. Factoring by Grouping
3. Factoring Trinomials
4. Factoring Binomials

C. Module 5- Rational Expressions Equations

2. Simplifying Rational Expressions

3. Multiplying Rational Expressions

4. Dividing Rational Expressions
6. Adding Rational Expressions
7. Subtracting Rational Expressions
9. Solving Rational Equations
10. Applications Using Rational Equations (The Work Principle, Motion Formulas & Proportions)

D. Module 6- Radical Expressions & Equations

1. Introduction to Radical Expressions
2. Simplifying Radical Expressions
3. Multiplying Radical Expressions
4. Dividing Square Roots
9. Solving One-Radical Equations

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10. Solving Two-Radical Equations

E. Module 7- Complex Numbers

1. Addition and Subtraction of Complex Numbers
2. Multiplication of Complex Numbers
3. Dividing Complex Numbers

F. Module 8- Quadratic Equations

1. Solving Quadratic Equations by Factoring

2. Solving Quadratic Equations using the Principle of Square Roots
3. Solving Quadratic Equations by Completing the Square
4. Solving Quadratic Equations using the Quadratic Formula

G. Module 9-Functions

1. Introduction to Functions
2. Function Notation

Grade Scale

90 – 100	DA
80 – 89	DB
70 – 79	DC
0 – 69	DF

Course Evaluation

Final grade will be calculated according to the following criteria:

Tests	60%
Comprehensive Final Exam	10%
Course Assignments	20%
Participation	10%

Course Requirements

1. Attendance is mandatory.
2. The student must purchase all of the required course materials.
3. The student will be expected to have access to the Internet and a computer.
4. **Homework:** Problems done on MyLabsPlus. Homework will be completed online in the lab and off-site. Each assignment will have a due date; if an assignment is completed after its due date, **points will be deducted from that assignment. All homework have a prerequisite of 80% or higher in order for students to move forward to the next assignment.**
5. **Quizzes:** Quizzes are Practice Tests done on MyLabsPlus. Try to take them at least once without referring to your text or notebook. **If any of the quizzes are not completed by their due date, the grade for that quiz will be 0.**
6. **Tests and Final Exam:** All tests will be closed book. Every student completing the course MUST take the final exam/TSI. These tests are proctored and will be taken in the class/lab. **Students are permitted to use approved recommended calculators and a standardized formula sheet (if any) when appropriate.** You will need to show all your work on your test paper/loose leaf notebook paper and turn it in when finished. The test questions are to be numbered and completely and neatly worked if taking a test on a computer. It is your responsibility to give the paper to the instructor before submitting the test/leaving class. **Any student with no work on their paper, work that does not match the test taken, or with a submitted exam but no work turned in will be given a 0 for that test question(s).** You must bring approved materials to each test. The instructor must be contacted within 24 hours of a missed test. No makeup exams will be given without a valid, verifiable reason. **If you are not through with ALL your section homework, you CANNOT take the chapter test.**
7. Additional course requirements as defined by the individual course instructor.

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Course Policies

1. Cheating of any kind will not be tolerated.
2. Additional class policies as defined by the individual course instructor.

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

https://help.blackboard.com/en-us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building. You may also visit the online resource at <http://www.lit.edu/depts/stuserv/special/defaults.aspx>

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 or obtained in print upon request at the Student Services Office. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

Course Schedule

- Varies by instructor

Contact Information

- Varies by instructor

Disclaimer

This Master Syllabus is subject to modification by the coordinator.