Intermediate Mathematics (TMTH 375 – 3B1)

CREDIT : 3 Semester Credit Hours (3 hours lecture)

MODE OF INSTRUCTION
Face to Face

PREREQUISITE/CO-REQUISITE:
Must be co-enrolled in TMTH 0165 BASE NCBO (Algebra).
TMTH 0165 is the co-requisite to TMTH 375.
All students enrolled in TMTH 375-3B1 must be enrolled in TMTH 165-3B1.

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

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 discipline

INSTRUCTOR CONTACT INFORMATION

Instructor: Bradd Henry

Email: brhenry@lit.edu

Office Phone: (409) 247-4924

Office Location: Technology Center building, room 236

Approved: Initials/date

Office Hours: Monday: 10:00-11:00 am, 3:00-3:30 pm, 4:30-5:30 pm
Tuesday: 10:00-11:00 am, 1:30-2:00 pm, 5:00-5:30 pm
Wednesday: 10:00-11:00 am, 12:45-1:30 pm, 5:00-5:30 pm
Thursday: 10:00-11:00 am, 12:30-1:00 pm, 5:00-5:30 pm
Friday: 10:00-12:00 pm

REQUIRED TEXTBOOK AND MATERIALS
1. MyMathLab access code.
2. Basic 6 function calculator recommended. No graphing calculators.
   Phone calculators are **not** allowed during tests.

ATTENDANCE POLICY
You will be required to sign a sign-in sheet at the beginning of each class period. **If you do not sign in, you will be marked absent.** If you are more than 15 minutes late for class, you will be marked absent and will not be allowed to sign in. A roll call may be given at the end of the class period to ensure accuracy of the sign-in sheet.

In this class, attendance will count as part of your grade. Your attendance grade will be based on the percentage of days you attend. If you arrive on time, remain in class until the class is dismissed by the instructor, and actively participate during the class period (e.g., taking notes, taking tests, or completing any other activity assigned by the instructor), you will earn 100 points for that day. Students who miss class, sleep in class, social network or text in class, or do not take notes or exams will receive a grade of 0 for the day. Absences due to a valid reason such as an illness or emergency will be excused only if the student provides written documentation. *Exception: Medical or dental appointments that coincide with the class period will not be excused*.

DROP POLICY
If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Week 1	Introduction and policies; <u>Module 1</u> parts 1-4 Review operations with the Real numbers, basics of absolute value and inequalities.		
Week 2	<u>Module 1</u> parts 1-8 Solve equations and simplify expressions. Operations with polynomials. Evaluating polynomials. .	Module 1 parts 1-8 notes and practice homework worksheets completed by Sunday, Sept 29, 2024	

Week 3	<u>Module 2</u> parts 1-9 Solving linear equations and inequalities. Using interval notation. Solving equations involving absolute value. Solve and graph inequalities involving absolute value.	Module 2 parts 1-9 notes and practice homework worksheets completed by Sunday, Sept 29, 2024	MyMathLab Module 2 parts 1-9 Sunday, Sept 29, 2024
Week 4	<u>Module 3</u> parts 1-8 Discuss rules of exponents, evaluating polynomials, operations with polynomials.	Module 3 parts 1-8 notes and practice homework worksheets completed by Sunday, Sept 29, 2024	MyMathLab Module 3 parts 1-8 Sunday, Sept 29, 2024
Week 5	<u>Module 3</u> parts 9-11 Division of polynomials by monomials, division by binomials (synthetic division) review for Test 1	Module 3 parts 9-11 notes and practice homework worksheets completed by Sunday, Sept 29, 2024	MyMathLab Module 3 parts 9-11 Sunday, Sept 29, 2024
Week 6	<u>Module 4</u> parts 1-5 Factor out the GCF, factor by grouping, factoring trinomials and binomials, factoring using the A-C method.	Module 4 parts 1–5 notes and practice homework worksheets completed by Sunday, Oct 20, 2024	Test 1 Modules 2 and 3 Mon, Sept 30, 2024
Week 7	<u>Module 5</u> parts 1–4 Simplify rational expressions. Multiply and divide rational expressions.	Module 5 parts 1–4 notes and practice homework worksheets completed by Sunday, Oct 20, 2024	MyMathLab Module 4 parts 1-4 Sunday, Oct 20, 2024
Week 8	<u>Module 5</u> parts 3–4 review for Test 2		MyMathLab Module 5 parts 3-4 Sunday, Oct 20, 2024
Week 9	<u>Module 5</u> parts 5–10 Add and subtract rational expressions. Solve rational equations with real-world applications.	Module 5 parts 5-10 notes and practice homework worksheets completed by Sunday, Nov 10, 2024	Test 2 Modules 4 & 5 Mon, Oct 21, 2024

Week 10	Module 6 parts 1–4 Introduction to radical expressions, simplifying radical expressions, and operations with radical expressions.	Module 6 parts 1-4 notes and practice homework worksheets completed by Sunday, Nov 10, 2024	MyMathLab Module 5 parts 5-9 Module 6 parts 1-4 Sunday, Oct 20, 2024
Week 11	Module 6 parts 5–9 Multiply radical expressions. Rationalize fractions with radicals in the denominator. Solve one-radical equations. review for Test 3	Module 6 parts 5-9 notes and practice homework worksheets completed by Sunday, Nov 10, 2024	
Week 12	Module 7 parts 1–3 Operations with complex numbers. Rationalize fractions with complex numbers in the denominator.	Module 7 parts 1-3 notes and practice homework worksheets completed by Sunday, Dec 1, 2024	Test 3 Modules 5 & 6 Mon, Nov 11, 2024
Week 13	Module 8 parts 1–3 Solve quadratic equations by various methods including factoring and the principle of square roots.	Module 8 parts 1-3 notes and practice homework worksheets completed by Sunday, Dec 1, 2024	MyMathLab Module 7 part 1-3 Module 8 parts 1-3 Tuesday, Nov 26, 2024
Week 14	Module 8 part 4 Using the Quadratic Formula. review for Test 4	Module 8 part 4 notes and practice homework worksheets completed by Sunday, Dec 1, 2024	MyMathLab Module 8 part 4 Sunday, Dec 1, 2024
Week 15	review for Final Exam		Test 4 Modules 7 & 8 Mon, Dec 2, 2024
Week 16	Final Exam	in class	Final Exam 11:00 – 12:30 pm Monday, Dec 9

COURSE EVALUATION
Final grades will be calculated according to the following criteria:
- Average of 4 tests: 60%
- Course Assignments (MyMathLab): 20%
- Final Exam: 10%
- Attendance: 10%

GRADE SCALE
- 90-100   DA
- 80-89   DB
- 70-79   DC
- 0-69   DF

LIT does not use +/- grading scales

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

1. Insert additional course policies/information specific to your section here. Example: Instructor Response Time, Participation Requirement, Late Work A final grade of Incomplete will only be given if a student is passing the course and is missing only one major assignment such as the final exam. Such an arrangement must be made with the instructor. An incomplete assignment must be finished during the next long semester or a grade of "I" will become an "F."
2. No food, drinks, or use of tobacco products in class.
3. Laptops, telephones, and any other electronic devices must be turned off during class.