Advanced Intermediate Algebra (TMTH 0214)

INSTRUCTOR CONTACT INFORMATION

Instructor:	James Jean
Email:	jjean@lit.edu (Preferred)
Office Phone:	(409) 880-8321
Office Location:	T5 Rm. 103
Office Hours:	MW: 8:00 – 9:00; 11:00 – 12:30
	TR: 8:00 – 9:30
	F: 8:30 – 9:00; 11:00 – 12:30

CREDIT:
2 Semester Credit Hours (2 hours lecture)

MODE OF INSTRUCTION
Online

Prerequisite/Co-requisite:

- A score of 336-349 on the TSI-Assessment placement test.
- Must be co-enrolled in MATH 1314 College Algebra.

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. ALEKS Access Code
    a. May be obtained through Eagle Learning Essentials (Link is on Blackboard)
2. A basic scientific calculator; *please check with your individual instructor as to the specific type of calculator required.*

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.

Grade Scale

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

Course Evaluation

Final grades will be calculated according to the following criteria:

TMTH 0214 Course Assignments	40%
TMTH 0214 Tests (Tests 1 & 2)	60%

Course Requirements

1. The student must purchase all of the required course materials.
2. The student will be expected to have access to the Internet and a computer.
3. Blackboard and MyMathLab logon and access to course a minimum of four times per week.
4. Additional course requirements as defined by the individual course instructor.

Course Policies

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

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 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

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

Week of	Assignment	Due Date
1/20	Course Introduction and policies. R.1: Operations on Fractions R.2: The Set of Real Numbers R.3: Simplifying Numerical Expressions	2/10
1/26	1.1: Algebraic Expressions and Models 1.2: Linear Equations in One Variable 1.5: Linear and Compound Inequalities 1.6: Absolute Value Equations	2/10
2/2	1.7: Absolute Value Inequalities 2.1: Integer Exponents and Scientific Notation 2.2: Operations on Polynomials 2.3: Greatest Common Factor and Factoring by Grouping	2/10
2/9	2.4: Factoring Trinomials 2.5: Factoring Binomials 3.1: Introduction to Radicals and Their Simplification **Test 1 (TMTH 0214) Sections: R.1 – R.3, 1.1 – 1.7, 2.1 – 2.3**	Homework due on 2/10. **Test 1 due on 2/11.**
2/16	3.2: Multiplying Radicals and Rationalizing the Denominator 3.4: Solving Quadratic Equations by Factoring 3.5: Solving Quadratic Equations by the Square Root Property 4.1: Multiplication and Division of Rational Expressions	3/4
2/23	4.2: Addition and Subtraction of Rational Expressions 4.5: Rational Exponents (End of TMTH 0214 Material) 3.3: Complex Numbers (Beginning of MATH 1314 Material) 3.6: Solving Quadratic Equations by the Quadratic Formula	3/4
3/2	**Test 2 (TMTH 0214) Sections: 2.4, 2.5, 3.1, 3.2, 3.4, 3.5, 4.1, 4.2, 4.5** 4.3: Rational Equations 4.6: Radical Equations and Equations with Rational Exponents	**Test 2 due on 3/5.** Homework due on 4/1.
3/9	Spring Break – Campus Closed.	4/1
3/16	4.7: Equations in Quadratic Form 5.1: The Rectangular Coordinate System and Graphing Utilities 5.3: Functions and Relations	4/1
3/23	5.4: Linear Equations in Two Variables and Linear Functions 6.1: Transformations of Graphs **Test 3 (MATH 1314) Sections: 3.3, 3.6, 4.3, 4.6, 5.1, 5.3**	4/1
3/30	6.2: Symmetry and Piecewise-Defined Functions 6.4: Algebra of Functions and Function Composition 7.1: Quadratic Functions and Applications	4/1
4/6	7.2: Introduction to Polynomial Functions 7.3 Division of Polynomials and the Remainder and Factor Theorems 7.4: Zeros of Polynomials	

4/13	8.1: Introduction to Rational Functions 8.2: Graphs of Rational Functions 9.1: Inverse Functions	5/5
4/20	9.2: Exponential Functions 9.3: Logarithmic Functions **Test 4 (MATH 1314) Sections: 5.4, 6.1, 6.2, 6.4, 7.1 – 7.4, 8.1, 8.2, 9.1**	5/5
4/27	9.4: Properties of Logarithms 9.5: Exponential Equations and Applications 9.6: Logarithmic Equations and Applications	5/5
5/4	11.1: Solving Systems of Linear Equations Using Matricies	Test 4 due on 5/6. Homework due on 5/10.
	Final Exam (Comprehensive)	**05/11**

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.

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.

Instructor Expectations from Students:

- Response to email/remind text within 24 hours (same day if received before 5pm M-Th or before noon Friday)

- Flexible office hours / virtual help when needed.
- Weekly grade updates

Instructor Expectations of Students:

- 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.