

Contemporary Math (MATH 1332)



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

Topics may include introductory treatment of sets, logic, number systems, number theory, relations, functions, probability, and statistics. Appropriate applications are included.

Required Textbook and Materials

1. MyMathLab Standalone Access Code
 - a. May be purchased online at www.mymathlab.com
 - b. May be purchased at a local bookstore: **ISBN 032119991X**
2. A basic six-function calculator (+, −, ÷, ×, √, %) with a ± key

Objectives

Course Objectives

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

1. Define sets and apply symbols, terminology and set operations to solve problems.
2. Define and apply logic symbols and terminology.
3. Understand the development of numeration systems and how to convert from one system to another.
4. Understand and apply the basic topics of number theory.
5. Apply the operations of real numbers to solve numerical and applied problems.
6. Given a relation, define its domain, range, and whether it is a function.
7. Solve simple and compound probability problems.
8. Define and apply mean, median, and mode to solve problems.

Core Objectives

1. **Critical Thinking Skills:** To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
2. **Communication Skills:** To include effective development, interpretation and expression of ideas through written, oral, and visual communication.
3. **Empirical and Quantitative Skills:** To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Course Outline

- A. The Basic Concepts of Set Theory
 - 1. Symbols and Terminology
 - 2. Venn Diagrams and Subsets
 - 3. Set Operations and Cartesian Products
 - 4. Surveys and Cardinal Numbers
- B. Introduction to Logic
 - 1. Statements and Quantifiers
 - 2. Truth Tables and Equivalent Statements
- C. Numeration Systems
 - 1. Historical Numeration Systems
 - 2. Arithmetic in the Hindu-Arabic System
 - 3. Conversion between Number Bases
- D. Number Theory
 - 1. Prime and Composite Numbers
 - 2. Greatest Common Factor of a Set of Numbers
 - 3. Least Common Multiple of a Set of Numbers
- E. Real Numbers and Their Representations
 - 1. Real Numbers, Order, and Absolute Value
 - 2. Operations, Properties, and Applications of Real Numbers
 - 3. Rational Numbers and Decimal Representation
 - 4. Irrational Numbers and Decimal Representation
 - 5. Applications of Decimals and Percents
- F. Functions and Systems of Equations
 - 1. Functions and Applications
 - 2. Systems of Equations
 - 3. Applications of Systems
- G. Probability
 - 1. Basic Concepts
 - 2. Events Involving “Not” and “Or”
 - 3. Conditional Probability; Events Involving “And”
- H. Statistics
 - 1. Measures of Central Tendency
- I. Additional Topics (*if time available; teacher discretion*)

Grade Scale

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

Course Evaluation

Final grades 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. Additional course requirements as defined by the individual course instructor.

Course Policies

1. Cheating of any kind will not be tolerated.
2. The students are responsible for initiating and completing the drop process. Students who stop coming to class and fail to drop the course will earn an “F” in the course.
3. 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-](https://help.blackboard.com/en-us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy)

[us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy](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