Contemporary Math (Quantitative Reasoning)
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
Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered.

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 (+, −, ÷, x, √, %) with a ± key

Objectives (Learning Outcomes)
Upon successful completion of this course, students will:
1. Apply the language and notation of sets.
2. Determine the validity of an argument or statement and provide mathematical evidence.
3. Solve problems in mathematics of finance.
4. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
5. Interpret and analyze various representations of data.
6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

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
   4. Surveys and Cardinal Numbers

B. Introduction to Logic
   1. Statements and Quantifiers
   2. Truth Tables and Equivalent Statements
   3. The Conditional and Circuits
   4. The Conditional and Related Statements
   5. Analyzing Arguments with Truth Tables

C. Number Theory
   1. Prime and Composite Numbers
   2. Greatest Common Factor and Least Common Multiple

D. The 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

E. The Basic Concepts of Algebra
   1. Ratio, Proportion, and Variation

F. Counting Methods
   1. Using the Fundamental Counting Principle
   2. Using Permuations and Combinations

G. Probability
   1. Basic Concepts
   2. Events Involving "Not" and "Or"
   3. Conditional Probability and Events Involving "And"

H. Statistics
   1. Visual Displays of Data
   2. Measures of Central Tendency

I. Personal Financial Management
   1. The Time Value of Money
   2. Consumer Credit
   3. Additional Topics *(if time available; teacher discretion)*

J. Voting and Apportionment
   1. The Possibilities of Apportionment
   2. 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-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