

Contemporary Math (MATH 1332-3A1)

INSTRUCTOR CONTACT INFORMATION

Instructor:	Daniel Dove
Email:	dadove@lit.edu
Office Phone:	409-247-5017
Office Location:	TC 112A
Office Hours	30 minutes before and after class. Also, by appointment in office or virtually.



**LAMAR INSTITUTE
OF TECHNOLOGY**

CREDIT

3 Semester Credit Hours (3 hours lecture)

MODE OF INSTRUCTION

Face-to-face

Prerequisite/Co-requisite:

A score of 350 or above on the TSI-Assessment placement test (effective Fall 2013) 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.

COURSE OBJECTIVES (Student Learning Outcomes SLO)

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.

Approved: **Initials/date**

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.

REQUIRED TEXTBOOK AND MATERIALS

1. **Use Blackboard to acquire My Math Lab** access for our course. If you have access from a previous class with this textbook and have issues, let the instructor know.
2. At minimum a basic six-function calculator (+, −, ÷, ×, √, %) with a ± key, but any physical calculator is allowed. No phones, tables, or computer calculators!

ATTENDANCE POLICY

Attendance is mandatory and will count as a homework assignment grade. The grade will be determined by number of days attended divided by total class days times 100%. If you must miss class, you are still responsible for any covered missed material. It is suggested that if you must miss class that you get a copy of a classmate's notes and/or visit with you instructor during office hours.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session.

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

1. Statements and Quantifiers
2. Truth Tables and Equivalent

B. Introduction to Logic

Statements

3. The Conditional and Circuits
4. The Conditional and Related Statements

C. Number Theory

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

D. Real Numbers and Their Representation (Optional)

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
3. Using Permutations and Combinations

G. Probability

1. Basic Concepts
2. Events Involving “Not” and “Or”
3. Conditional Probability; 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

J. Voting and Apportionment

1. The Possibilities of Apportionment

COURSE CALENDAR (Dates and assignments subject to change with notice)

Date	Topic	Readings (Due on this Date)	Assignments (Due on this Date)
June 3	→	Syllabus / Introduction to My Math Lab	
June 7		Set Notation	2.1
June 7		Subsets and Venn Diagrams	2.2
June 7		Operations with Sets	2.3
June 7		Problem Solving with Venn Diagrams	2.4
June 7		Logic Statements and Quantifiers	3.1
June 7		Truth Tables	3.2
June 7		The Conditional	3.3
June 7		Conditional and Related Statements	3.4
June 9			Test I Chapters 2 & 3
June 14		Prime and Composite Numbers	5.1
June 14		GCF and LCM	5.4
June 14		Real Numbers, Order, and Absolute Value	6.1
June 14		Operations and Properties	6.2
June 14		Rational Numbers and Decimals	6.3
June 14		Irrational Numbers	6.4
June 14		Applications of Decimals and Percent's	6.5
June 16			Test II Chapters 5 & 6
June 21		Ratio, Proportions, and Variation	7.3
June 21		Fundamental Counting Principal	10.2
June 21		Permutations and Combinations	10.3
June 23			Test III Chapters 7 & 10
June 28		Basic Concepts	11.1
June 28		Probability Involving (or)	11.2
June 28		Probability Involving (and)	11.3
June 30			Test IV Chapter 11
July 8		Frequency Distributions	12.1
July 8		Mean Median and Mode	12.2
July 8		Simple Interest	13.1
July 8		The Possibilities of Apportionment	15.3
July 9			Core Assessment
July 9			Final exam

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- **Tests** **60%**
- **Course Assignments (including Core Assessment)** **40%**

GRADE SCALE

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

LIT does not use +/- grading scales

ACADEMIC DISHONESTY

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at <http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty>.

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.

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

Course Expectations

Instructor Expectations from Students:

- Weekly email communication regarding assignment and upcoming test due dates.
- Response to email within 24 business hours. (No email responses over weekends or holidays.)
- Flexible office hour/ virtual help when needed.
- Weekly grade updates. All correct course grades will be displayed in Blackboard, NOT in My Math Lab!

Professor Expectations of Students:

- **Seek help from instructor early and often, do not wait until the last minute!**
- **I will apply a 15% penalty on any homework assignments turned in after the due date!**
- **If you will miss an exam, make prior arrangements to take it early or schedule a make-up date at instructors' convenience (must be within a day of due date unless you provide documentation of emergency like a doctor's note, hospital release, etc.) Otherwise, you will earn a zero on the missed exam!**