Contemporary Mathematics (MATH 1332 – 3E1)

CREDIT : 3 Semester Credit Hours (3 hours lecture)

MODE OF INSTRUCTION
Face to Face

PREREQUISITE/CO-REQUISITE:
TSI Complete in Mathematics or have passed TMTH 374 with a "C"
or better.

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

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.

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 Classroom Policies; Chapter 2 <u>Set Theory</u> symbols and terminology of set theory, the Cardinal number, understanding subsets and complement of a set, find unions and intersections of sets, use Venn diagrams to analyze data		

Week 2	Introduce and construct Venn diagrams. Use Venn diagrams to analyze date.	Sections 2.1 – 2.4 notes and practice homework worksheets completed by Sunday, Sept 22, 2024	
Week 3	Chapter 3 Logic identify and use statements, use symbols to express compound statements, discuss negations find truth values of simple statements		MyMathLab Sections 2.1 - 2.4 Sunday, Sept 22, 2024
Week 4	Find truth values of compound statements and construct truth tables. Review for Test 1.	Sections 3.1 – 3.3 notes and practice homework worksheets completed by Sunday, Sept 22, 2024	MyMathLab Sections 3.1 - 3.3 Sunday, Sept 22, 2024 Test 1 chapters 2 and 3 Monday, Sept 23, 2024
Week 5	Chapter 5 Number Theory Introduce divisibility rules, and prime numbers. Use prime numbers to find greatest common factor and least common multiple	Sections 5.1 – 5.4 notes and practice homework worksheets completed by Sunday, Oct 13, 2024	MyMathLab Sections 5.1 , 5.4 Sunday, Oct 13, 2024
Week 6	Chapter 6 Real Numbers basic operations with integers, rounding, order of operations, operations with fractions and mixed numbers.		
Week 7	Convert between fractions and decimals, understand percentages. Use proportions to solve real world problems.	Sections 6.1 – 6.5 and 7.1 notes and practice homework worksheets completed by Sunday, Oct 13, 2024	MyMathLab Sections 6.1 – 6.5 and section 7.1 Sunday, Oct 13, 2024
Week 8	Review for Test 2. Review for all re-tests.		Test 2 Chapters 5, 6, and 7.1 Monday, Oct 14, 2024

Week 9	Chapter 7 Basics of Algebra understand ratios and proportions, solve one-step algebraic equations	Section 7.3 notes and practice homework worksheets completed by Sunday, Nov 10, 2024	MyMathLab Sections 7.3 Sunday, Nov 10, 2024
Week 10	Ch. 10 Counting Methods Introduce the fundamental counting principle, factorials, permutations and combinations	Sections 10.2 - 10.3 notes and practice homework worksheets completed by Sunday, Nov 10, 2024	MyMathLab Sections 10.2 - 10.3 Sunday, Nov 10, 2024
Week 11	Chapter 11 Probability the basics of probabilities and odds, conditional probability, probability of more than one event		
Week 12	Using probability to predict outcomes in real-world problems. Review for Test 3	Section 11.1 – 11.3 notes and practice homework worksheets completed by Sunday, Nov 10, 2024	MyMathLab Sections 11.1 - 11.3 Sunday, Nov 10, 2024 Test 3 Chapters 7.3, 10, and 11 Monday, Nov 11, 2024
Week 13	Chapter 12 Statistics visual displays of data, bar graphs, line graphs, circle graphs, find measures of central tendancy (mean, median, and mode)	Sections 12.1 - 12.2 notes and practice homework worksheets completed by Sunday, Dec 1, 2024	MyMathLab Sections 12.1, 12.2 Sunday, Dec 1, 2024
Week 14	Ch 13 Personal Financial Management the time value of money, simple interest, calculate future value of money using simple interest, consumer credit	Sections 13.1 - 13.2 notes and practice homework worksheets completed by Sunday, Dec 1, 2024	MyMathLab Sections 13.1, 13.2 Sunday, Dec 1, 2024 Test 4 chapters 12 and 13 Monday, Dec 2, 2024
Week 15	review for Final Exam		

Week 16	Final Exam	in class	Final Exam 5:30 – 7:00 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%
- Core Assessment: 20%

GRADE SCALE

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

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.