

Proposed Contemporary Math (MATH 1332) Fall 2014



Credit: 3 semester credit hours (3 hours lecture)

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

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 and apply symbols, terminology, set operations, and Cartesian products to solve problems.
2. Define and apply logic symbols and terminology.
3. Understand and apply historical numeration systems.
4. Apply the operations of real numbers to solve numerical and applied problems.
5. Given a relation, define its domain, range, and whether it is a function.
6. Solve simple and compound probability problems.
7. 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

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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. No food, drinks, or use of tobacco products in class.

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3. beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
4. 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.
5. Additional class policies as defined by the individual course instructor.

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.

Course Schedule (subject to change)

(Tests and the assessment of core objectives activity will be assigned by each individual instructor)

Week	Topic	Reference
1	Course introduction and policies Math 1332 Pre-Test Section 2.1: Sets, Symbols, and Terminology Section 2.2: Subsets and Venn Diagrams	The Basic Concepts of Set Theory; MyMathLab
2	Section 2.3: Set Operations and Cartesian Products Section 2.4 : Problem Solving with Venn Diagrams	The Basic Concepts of Set Theory; MyMathLab
3	Section 3.1: Logic, Statements, and Quantifiers Section 3.2: Constructing Truth Tables	Introduction to Logic; MyMathLab
4	Section 4.1: Historical Numeration Systems	Numeration Systems; MyMathLab
5	Section 4.3: Arithmetic in the Hindu-Arabic System Section 4.4: Converting between Number Bases	Numeration Systems; MyMathLab
6	Section 5.1: Prime and Composite Numbers Section 5.4: Greatest Common Factor and Least Common Multiple	Number Theory; MyMathLab
7	Section 6.1: The Real Number System, Order, and Absolute Value	Real Numbers and Their Representations; MyMathLab
8	Section 6.2: Real Number Operations, Properties,	Real Numbers and

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Week	Topic	Reference
	and Applications	Their Representations; MyMathLab
	Section 6.3: Rational Numbers and Decimal Representation	
9	Section 6.4: Irrational Numbers and Decimal Representation	Real Numbers and Their Representations; MyMathLab
	Section 6.5: Decimals, Percents, and Applications	
10	Section 8.4: Functions, Applications, and Models	Functions and Systems of Equations; MyMathLab
11	Section 8.7: Systems of Equations	Functions and Systems of Equations; MyMathLab
	Section 8.8: Applications of Systems	
	Section 11.1: Basic Concepts of Probability	Probability; MyMathLab
12	Section 11.2: Events Involving “Not” and “Or” Section 11.3: Conditional Probability and Events Involving “And”	Probability; MyMathLab
13	Section 12.2: Measures of Central Tendency	Statistics; MyMathLab
14	Additional Topics (<i>teacher discretion</i>)	
15	Additional Topics (<i>teacher discretion</i>)	
16	Additional Topics (<i>teacher discretion</i>)	
Final Exam	Final Exam and Math 1332 Post-Test: <i>Given on the date and time specified by the official exam schedule.</i>	

Contact information varies by instructor.