

Course Code: MAT 107 (IAI M1 904)

Course Title: General Education Mathematics

Department: Mathematics

Effective Date: Summer 2026

PCS Code: 1.1 - Baccalaureate/Transfer

CIP Code: 27.0301

Repeatability: 0

Credit Hours

Catalog Notation: 3-0-3

Credit Hour Distribution:

Lecture: 3

Lab: 0

Clinical: 0

Total: 3

General Course Information

Catalog Description

For non-mathematics, non-science, and non-business majors, mathematical reasoning and solving real-life problems using logic and set theory, mathematics of finance, probability, and statistics.

General Course Objectives

Provide mathematical background in logic and set theory, mathematics of finance, probability, and statistics for the liberal arts student who is a non-mathematics, non-science, and non-business major.

Minimum Placement Levels

English

None

Reading

None

Math

None

Prerequisites

Credit in MAT 072 with a grade of C or higher, or placement

Methods of Evaluation

3 unit exams, 5-15 quizzes, 10-30 assignments, 1-3 projects, and a cumulative final.

Instructional Materials and Additional Supplies

Thinking Mathematically, 7th Edition; Blitzer; Pearson. 978-1-323-87686-2

Required: TI-83 Plus/TI-84 Plus graphing calculator; \$85-\$120.

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Mathematics of Finance	<ol style="list-style-type: none"> Solve simple interest problems. Solve compound interest problems. Calculate the future value of an annuity. Calculate the present value of an annuity. Calculate the payment needed to reach a future savings goal. Calculate loan balances. Determine the time to pay off a loan or to accumulate a future value. 	8	0	0
Logic and Set Theory	<ol style="list-style-type: none"> Use notation and symbols associated with sets. Determine subsets of a set. Find the complement of a set. Use Venn diagrams to represent complements, unions, and intersections of sets. Use Venn diagrams to solve problems. Translate statements into logical parts and construct truth tables. Find equivalent statements. Determine the validity of logical arguments. 	12	0	0
Probability	<ol style="list-style-type: none"> Use basic probability laws to compute simple probabilities. Calculate odds. Calculate probabilities of complements. Calculate probabilities involving unions and intersections. Use the fundamental principles of counting, permutations, and combinations to count the number of ways a process can be done. Calculate probabilities using combinations and permutations. 	11	0	0
Further Applications	<ol style="list-style-type: none"> Apply knowledge gained in the course to further topics of the instructor's choice such as mathematics in the arts, mathematics in politics, numerical patterns in nature, non-Euclidean geometry, or graph theory. 	7	0	0
Review and Tests	<ol style="list-style-type: none"> Earn at least a 70 percent on each exam, including the cumulative final exam. 	7	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	0	0