

**Course Code:** MAT 072

**Course Title:** Mathematical Literacy

**Department:** Mathematics

**Effective Date:** Summer 2026

**PCS Code:** 1.4 - Remedial Education

**CIP Code:** 32.0104

**Repeatability:** 0

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## Credit Hours

**Catalog Notation:** 5-0-5

**Credit Hour Distribution:**

Lecture: 5

Lab: 0

Clinical: 0

**Total: 5**

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## General Course Information

### Catalog Description

Numerical reasoning, unit conversions, linear equations/inequalities, models of growth, and data representation. Algebraic reasoning and graphical analysis using linear and non-linear functions. Emphasis on modeling, interpretation, and problem solving.

### General Course Objectives

- Students will use numeracy, algebraic reasoning, and concepts of functions and modeling, and apply these skills to problem solving and mathematical analysis.
- Students will develop the background and mathematical maturity necessary for general education mathematics courses.

### Minimum Placement Levels

**English**

None

**Reading**

None

**Math**

None

### Prerequisites

Credit in MAT 059 or MAT 060 with a grade of C or higher, or placement

### Methods of Evaluation

Homework, 2-4 projects, quizzes, 4 exams, and a cumulative final exam.

### Instructional Materials and Additional Supplies

Pathways to Math Literacy, by Sobecki and Mercer, 3rd Edition; McGraw-Hill. 978-1-264-14270-5

Required: TI-83/84 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
Numerical Skills and Reasoning	<ol style="list-style-type: none"> <li>1. Perform arithmetic operations with real numbers and interpret the results.</li> <li>2. Perform unit conversion.</li> <li>3. Develop and carry out a plan to solve multi-step problems.</li> <li>4. Identify linear and exponential numerical patterns.</li> <li>5. Estimate equation solutions using graphs and technology.</li> <li>6. Create and interpret visual representations of data.</li> <li>7. Calculate mean, median, and mode.</li> <li>8. Calculate basic probabilities and interpret the results.</li> <li>9. Calculate products and quotients in contexts that use scientific notation.</li> <li>10. Use measures of center and variation to interpret data.</li> </ol>	20	0	0
Algebraic Skills and Reasoning	<ol style="list-style-type: none"> <li>1. Evaluate algebraic expressions given values for variables.</li> <li>2. Simplify algebraic expressions by collecting like terms.</li> <li>3. Translate word phrases into mathematical expressions.</li> <li>4. Simplify algebraic expressions using distribution and exponent laws.</li> <li>5. Solve linear equations and inequalities by hand.</li> <li>6. Explain the difference between simplifying and solving.</li> <li>7. Use the zeros of a polynomial to factor.</li> <li>8. Solve systems of linear equations by hand, graphically, and using technology.</li> <li>9. Explain the difference between direct and inverse variation.</li> </ol>	13	0	0
Functions and Modeling	<ol style="list-style-type: none"> <li>1. Use function notation to evaluate a function.</li> <li>2. Represent linear, polynomial, rational, and exponential functions graphically.</li> <li>3. Identify properties of a function using its graph: increase/decrease, max/min, and zeros.</li> <li>4. Explain the difference between linear and exponential growth.</li> <li>5. Analyze a situation to determine the appropriate function for modeling.</li> <li>6. Write a linear, quadratic, or exponential function to model an application.</li> <li>7. Interpret slope of a line as a constant rate of change.</li> <li>8. Use curve fitting to model and analyze a situation or relationship.</li> </ol>	21	0	0
Modeling with Equations	<ol style="list-style-type: none"> <li>1. Use systems of equations to model a situation or relationship to solve problems.</li> <li>2. Use geometry to model a situation or relationship.</li> <li>3. Use proportional reasoning to model and analyze a situation or relationship.</li> <li>4. Use direct and inverse variation to model and analyze a situation or relationship.</li> </ol>	13	0	0
Reviews and Tests	<ol style="list-style-type: none"> <li>1. Earn at least 70 percent on each of four hour exams and the final exam.</li> </ol>	8	0	0

#### Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
75	0	0