

## Math 112-Algebraic Concepts for Problem Solving

### 1. Course Description

- This course is designed around applications of mathematics in various contexts, and uses algebra as the foundation for exploring such applications. The course addresses applications that incorporate linear, quadratic, polynomial, rational, exponential, and logarithmic functions. It may include, but is not limited to, applications from business, life science, and physical science.

### 2. Topics Covered

- The topics covered are applications that incorporate linear, quadratic, polynomial, rational, exponential, and logarithmic functions. Examples include business-related models: break even analysis, market equilibrium, and compound interest; life science models: exponential growth and decay and rates of change of growth or decrease.

### 3. What to expect?

- Time: The most common term lengths are listed below; others would be proportionate. Outside of class time is studying, completing homework, reviewing, etc.

Length of term	In-class time	Out-of-class time (typical)	Total hours/wk (typical)	Total Term hours (typical)
17 weeks	3 hrs/wk	6 hrs/wk	9	153

- Students should expect to spend at least 6 hours a week outside of class time on homework assignments and in preparation for exams if they want to be successful. Students should also expect to improve their algebra skills by using the foundational algebraic concepts to solve real world related problems. These assignments could come from course related software packages, pencil and paper, or using online programs. They should also expect to spend some time inside the class working in collaborative learning groups on projects or course material. This course is intended to be a practical application course that uses algebra as the foundation. Therefore, students should expect to use algebra to analyze real world problems.

### 4. Who should enroll?

- This course is an algebra based transferrable/IGETC math course.
- This course is designed for the following audience:
  - students that need to complete a transfer course for their degree or profession that would like to see the algebra that they have learned applied in real world problems
  - students who plan to take Math 126, 126S, 105, or 115 but do not have intermediate algebra recency