

# Mathematics

## General Education Skill Competency and Knowledge Objectives

### Definition:

Coursework in this area is intended to develop an understanding of mathematical reasoning processes and the ability to utilize these processes to solve college-level mathematical problems.

### Competency and Knowledge Objectives:

To meet the mathematics requirement of the general education core, courses must cover the competency/knowledge objectives below.

1. Read, interpret, and communicate mathematical concepts.
2. Represent and interpret information/data.
3. Select, execute and explain appropriate strategies/procedures when solving mathematical problems.
4. Apply quantitative reasoning to draw appropriate conclusions and support them.

	<b>Exceeds End-of-Course Expectations</b>	<b>Meets End-of-Course Expectations</b>	<b>Entry-Level Expectations</b>
<b>Read, interpret, and communicate mathematical concepts.</b>	Demonstrates ability to extend course concepts to new contexts. Demonstrates the ability to interpret and apply abstractions. Understands and correctly utilizes appropriate mathematical language in new contexts.	Demonstrates ability to read, interpret, and communicate the course concepts. Understands the use of abstractions related to course material. Understands and correctly utilizes appropriate mathematical language.	Demonstrates understanding of concepts relating to appropriate pre-requisite material.
<b>Represent and interpret information/data.</b>	Appropriately represents data or information graphically and/or functionally. Draw valid conclusions from analysis. Predict consequences, trends, or	Appropriately represents data or information graphically and/or functionally. Draw valid conclusions from analysis.	Demonstrates a general understanding of graphs and/or tables.

	<b>Exceeds End-of-Course Expectations</b>	<b>Meets End-of-Course Expectations</b>	<b>Entry-Level Expectations</b>
	patterns.		
<b>Select, execute and explain appropriate strategies/procedures when solving mathematical problems.</b>	<p>Student can select the appropriate strategy in a generalized problem.            Process is internalized.            Student can justify why the process is used.</p>	<p>Student can select appropriate strategy.            Process is performed correctly without assistance.            Student can write down steps.</p>	<p>Student can follow an argument as to which strategy is chosen.            Process is performed correctly with assistance.            Student can follow steps.</p>
<b>Apply quantitative reasoning to draw appropriate conclusions and support them.</b>	<p>Uses appropriate methods to check the solution and recognize that it is reasonable.            Demonstrates that the conclusion correctly addresses the initial problem.            Explains the problem, process and conclusions to others.            Recognize the limitations of the methods and the conclusions.            Recognize patterns within a problem that can be applied to other situations.</p>	<p>Uses appropriate methods to check the solution and recognize that it is reasonable.            Demonstrates that the conclusion correctly addresses the initial problem.            Explains the problem, process and conclusions to others.</p>	<p>Uses appropriate methods to check the solution and recognize that it is reasonable.</p>