

COMPETENCY: MATHEMATICS

General Education

(Defines criteria for mathematics competency across the curriculum. See mathematics content for course-specific criteria.)

Definition:

Ability to use mathematical methods, reasoning and strategies to investigate and solve problems.

Criteria

1. Information Acquisition:

- Select data that are relevant to solving a problem.

2. Application

- Use several methods, such as algebraic, geometric and statistical reasoning to solve problems.

3. Analysis

- Interpret and draw inferences from mathematical models such as formulas, graphs, and tables.

4. Synthesis

- Generalize from specific patterns and phenomena to more abstract principles and to proceed from abstract principles to specific applications.

5. Communication

- Represent mathematical information symbolically, graphically, numerically and verbally.

6. Evaluation

- Estimate and verify answers to mathematical problems to determine reasonableness, compare alternatives, and select optimal results.
- Recognize that mathematical and statistical methods have limitations.

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The above bullets represent the full spectrum of criteria that may define this competency. For the purposes of qualifying a state-guaranteed general education course that requires this competency, the institution must demonstrate that the course substantively addresses most, not necessarily all, of the stated criteria.