

Course Outcome Summary

General Education Satisfier Course

MATH 151 Intermediate Algebra

Course Information

Division	Science/Mathematics
Contact Hours	60
Total Credits	4

Prerequisites

RDG 090 and ENGL 090 and MATH 092 or qualifying scores on accepted placement tests

Course Description

This course covers properties of real numbers, solutions of first- and second-degree polynomial equations and inequalities, systems of equations and their graphs, basic properties of logarithms, complex numbers, basic right triangle trigonometry and laws of sines and cosines. The purpose of this course is to prepare students for the transition to college algebra.

This course is approved as a General Education competency satisfier.

General Education Goal: Critical Thinking

Competency: Use mathematics to effectively model and evaluate quantitative relationship

Learning Outcome: Students will apply mathematical concepts and methods to understand, analyze, and communicate in quantitative terms

General Education Learning Objectives

- Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
- Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
- Organize, analyze, and interpret various representations of data, including functions, graphs, and tables.
- Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

Course Outcomes

In order to evidence success in this course, each student will be expected to:

- Identify/recognize rational exponents
Applies to General Education Objectives
 - Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
- Identify/recognize the quadratic formula
Applies to General Education Objectives
 - Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.

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3. Identify/recognize conic sections
Applies to General Education Outcome
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
4. Identify/recognize exponential and logarithmic functions
Applies to General Education Outcome
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
 - D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.
5. Identify/recognize systems of equations
Applies to General Education Outcomes
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.
6. Identify/recognize trigonometric relationships
Applies to General Education Outcomes
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
7. Demonstrate/practice basic operations with real numbers
Applies to General Education Outcomes
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - C. Organize, analyze, and interpret various representations of data, including functions, graphs, and tables.
8. Demonstrate/practice solving of linear and rational equations
Applies to General Education Outcomes
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
 - C. Organize, analyze, and interpret various representations of data, including functions, graphs, and tables.
 - D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.
9. Demonstrate/practice solving quadratic equations
Applies to General Education Outcomes
 - A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.

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- C. Organize, analyze, and interpret various representations of data, including functions, graphs, and tables.
 - D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.
10. Demonstrate/practice evaluation of exponential and logarithmic expressions
Applies to General Education Outcomes
- A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
11. Demonstrate/practice evaluation of expressions with rational exponents and radicals
Applies to General Education Outcomes
- A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.
12. Demonstrate/practice computation of roots of real numbers
Applies to General Education Outcomes
- A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
13. Demonstrate/practice computation of angles and sides of right triangles
Applies to General Education Outcomes
- A. Use arithmetic and geometric concepts and representations to solve, estimate, calculate, and check answers to problems to determine the reasonableness of results.
 - D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

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By: