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 Math 105, or qualifying scores on acceptable placement tests within the last three years highly recommended.

Course Description
This course covers linear equations, systems of equations, variation, radicals, quadratic functions, complex numbers, conics, exponential and logarithmic equations, basic right triangle trigonometry, and laws of sines and cosines. Students will be expected to work with mathematics numerically, graphically, analytically, and verbally. 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 relationships.
Learning Outcome: Students will apply mathematical concepts and methods to understand, analyze, and communicate in quantitative terms.

General Education Learning Objectives

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.

Course Outcomes

In order to evidence success in this course, the students will be able to:

1. Solve linear equations and systems of linear 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.

2. Solve application problems involving variation..
    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.

3. Perform operations with radicals including rational exponents.
    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.
    B. Utilize linear, exponential, and other nonlinear models to evaluate the nature of relationships in real world problems.

4. Solve quadratic equations and related applications including the use of the quadratic formula.
    Applies to General Education Outcomes
    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. Graph conic sections and find their principal values.
    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.
    D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

6. Solve exponential and logarithmic equations and related applications.
    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.

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7. Apply the concepts of right triangle trigonometry.
   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.
   D. Utilize a variety of problem solving strategies to solve problems and communicate findings using appropriate mathematical language and symbolism.

8. Apply the Laws of Sines and Cosines.
   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.

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