

VALENCIA COLLEGE

Viewing: **MAT 1033C : Intermediate Algebra**

Last approved: 03/06/17 8:18 am

Last edit: 02/09/17 1:58 pm by kbrissett1

History

1. Jun 19, 2014 by gricci2
2. Mar 6, 2017 by lcohen5

Course Outline

MAT 1033C

Intermediate Algebra

Dean EAST - Mathematics Dean

Review Phase length, in 3
number of days

General Course Information

Common Course Number: MAT 1033C

Course Title: Intermediate Algebra

Contact Hour Breakdown: Cr: 3 Contact: 3 Lab: 1

Discipline: Mathematics

Prerequisites: Minimum grade of C in MAT 0022C or MAT 0028C or MAT0055 or MAT0056 or appropriate score on an approved assessment

Corequisites: None

Catalog Description: This course presents algebraic skills for MAC 1105. Topics include linear equations and inequalities in two variables and their graphs, systems of linear equations and inequalities, introductions to functions, factoring, algebraic functions, rational equations, radical and rational exponents, complex numbers, quadratic equations, scientific notation, applications of the above topics and the communication of mathematics. Applications emphasizing connections with disciplines and the real world will be included. This course carries general elective credit but does not satisfy either Gordon Rule or general education requirements.

Major Topics/ Concepts/ Skills/ Issues

- Applications of the Above Topics
- Factoring
- Algebraic Fractions
- Radicals and Rational Exponents
- Complex Numbers
- Quadratic Equations
- Rational Equations
- Linear Equations and Inequalities in Two Variables and Their Graphs
- Systems of Linear Equations and Inequalities
- Introduction to Functions
- Graphing Utilities

Major Learning Outcomes with Evidence, Core Competencies and Indicators

The student will be able to use algebraic properties to write expressions in equivalent forms.

Corresponding Evidence of Learning

- Distributive properties and factoring.
- Rational exponents and radicals
- Arithmetic operations with rational expressions.
- Division of polynomials.
- Arithmetic operations with radical expressions.
- Complex numbers.
- Quadratic forms.

Core Competency: Think

Indicators	Assessments
<ul style="list-style-type: none"> • Think - analyze data, ideas, patterns, principles, perspectives • Think - employ the facts, formulas, procedures of the discipline • Think - revise conclusions consistent with new observations, interpretations, or reasons 	<ul style="list-style-type: none"> • Classroom assessment technique • Knowledge recall quiz • Portfolio • Problem-solving quiz • Performance or Demonstration

The student will be able to solve algebraic statements.

Corresponding Evidence of Learning

- Linear equations.
- Linear inequalities-simple and compound.
- 2x2 systems of linear equations-numerically, graphically, and algebraically.
- 2x2 systems of linear inequalities-numerically, graphically, and algebraically.
- Quadratic equations.
- Radical equations.
- Rational equations.

Core Competency: Think

Indicators	Assessments
<ul style="list-style-type: none"> • Think - analyze data, ideas, patterns, principles, perspectives • Think - draw well-supported conclusions • Think - employ the facts, formulas, procedures of the discipline • Think - integrate ideas and values from different disciplines • Think - revise conclusions consistent with new observations, interpretations, or reasons 	<ul style="list-style-type: none"> • Classroom assessment technique • Knowledge recall quiz • Performance or Demonstration • Portfolio • Problem-solving quiz

The student will have a developing understanding of relations and functions.

Corresponding Evidence of Learning

- Evaluating.
- Solving equations involving function notation.
- Domain and range.
- Graphing functions.
- Modeling linear functions.
- Apply these concepts to application problems.

Core Competency: Think

Indicators	Assessments
<ul style="list-style-type: none"> • Think - analyze data, ideas, patterns, principles, perspectives • Think - employ the facts, formulas, procedures of the discipline 	<ul style="list-style-type: none"> • Classroom assessment technique • Knowledge recall quiz • Locally developed exam/objective • Performance or Demonstration

Indicators	Assessments
<ul style="list-style-type: none"> • Think - integrate ideas and values from different disciplines • Think - revise conclusions consistent with new observations, interpretations, or reasons 	<ul style="list-style-type: none"> • Problem-solving quiz

The student will be able to read in a mathematical context.

Corresponding Evidence of Learning

- Extract critical mathematical information from a body of text, table, graph, or equation.
- Define variables to represent unknown quantities.
- Interpret the problem information.
- Translate verbal statements into mathematical statements.

Core Competency: Think

Indicators	Assessments
<ul style="list-style-type: none"> • Think - analyze data, ideas, patterns, principles, perspectives • Think - draw well-supported conclusions • Think - employ the facts, formulas, procedures of the discipline • Think - integrate ideas and values from different disciplines • Think - revise conclusions consistent with new observations, interpretations, or reasons 	<ul style="list-style-type: none"> • Classroom assessment technique • Knowledge recall quiz • Locally developed exam/objective • Performance or Demonstration • Problem-solving quiz

Demonstrate appropriate college readiness skills.

Corresponding Evidence of Learning

- Assess personal strengths and weaknesses as it relates to the behaviors of successful students.
- Implement plans for improving select academic behaviors (i.e. how to study, take notes, take tests and manage time).
- Collaborate and work in a team.
- Manage the challenges of college level courses (i.e. persist when presented with difficult tasks, accept constructive criticism and reflect on what works and how to improve).

Core Competency: Think

Indicators	Assessments
<ul style="list-style-type: none"> • Think - analyze data, ideas, patterns, principles, perspectives • Think - draw well-supported conclusions • Think - revise conclusions consistent with new observations, interpretations, or reasons 	<ul style="list-style-type: none"> • Classroom assessment technique • Journal • Portfolio

Core Competency: Value

Indicators	Assessments
<ul style="list-style-type: none"> • Value - articulate a considered and self-determined set of values • Value- recognize values as expressed in attitudes, choices, and commitments 	<ul style="list-style-type: none"> • Classroom assessment technique • Journal • Portfolio • Performance or Demonstration

Core Competency: Act

Indicators	Assessments
<ul style="list-style-type: none"> • Act - implement effective problem-solving, decision-making, and goal-setting strategies 	<ul style="list-style-type: none"> • Classroom assessment technique • Journal

Indicators	Assessments
<ul style="list-style-type: none">• Act - act effectively and appropriately in various personal and professional settings• Act - assess the effectiveness of personal behavior and choices• Act - apply disciplinary knowledge, skills, and values to educational and career goals• Act - respond appropriately to changing circumstances	<ul style="list-style-type: none">• Portfolio• Performance or Demonstration

Shared Assessment(s) in this Course

- Common Questions on Final Exams.

[College Curriculum Committee Website](#)

Office of the Vice President for Academic Affairs & Chief Learning Officer
Valencia College
Orlando, Florida
Copyright © 2005 - 2014 Valencia College