

West Hills College Coalinga
Course Outline of Record Report
 09/14/2018

MATH063 : Intermediate Algebra

General Information

Author(s):	• Arkady Hanjiev
Subject (CB01):	MATH
Number (CB01):	063
Course Title (CB02):	Intermediate Algebra
Department:	Mathematics
Proposal Start:	Fall 2018
TOP Code (CB03):	(1701.00) Mathematics, General
CIP Code:	27.0101
CIP Name:	Mathematics, General
SAM Priority Code (CB09):	Non-occupational
Distance Education Approved:	Yes
Course Control Number (CB00):	CCC000309870
Curriculum Committee Approval Date:	Pending
Board of Trustees Approval Date:	Pending
External Review Approval Date:	09/27/2010
Course Description:	MATH 063 is the second course in a two semester sequential elementary and intermediate algebra sequence. Topics for intermediate algebra include factoring, solving quadratic, rational and radical equations, inequalities, integer and rational exponents, graphing conics, functions, scientific notation, and applications.
Submission Rationale:	An input of zero for course number standardization. No value

Faculty Requirements

Master Discipline Preferred:	• Mathematics
Alternate Master Discipline Preferred:	No value
Bachelors or Associates Discipline Preferred:	No value
Additional Bachelors or Associates Discipline:	No value

Course Development Options

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Rationale For Credit By Exam/Challenge

No value

Course Special Class Status (CB13)

Course is not a special class.

Allowed Number of Retakes

0

Retake Policy Description

No value

Grade Options

- Letter Grade methods

Course Prior to College Level (CB21)

One level below transfer.

Allow Students To Audit Course

Associated Programs

Course is part of a program (CB24)

Associated Program

Award Type

Liberal Arts: Math & Science AA

A.A. Degree Major

Transferability & Gen. Ed. Options

Request for Transferability (CB05)

Not transferable

Transferability Status

Not transferable

Units and Hours

Summary

Minimum Credit Units (CB07)	5	Total Course In-Class (Contact) Hours	90	Total Student Learning Hours	270
Maximum Credit Units (CB06)	5	Total Course Out-of-Class Hours	180	Faculty Load	-

Credit / Non-Credit Options

Course Credit Status (CB04)

Course Non-Credit Category (CB22)

Non-Credit Characteristics

Credit - Degree Applicable

Credit Course.

No value

Course Classification Code (CB11)

Funding Agency Category (CB23)

Cooperative Work Experience Education Status (CB10)

Credit Course.

Not Applicable.

Variable Credit Course

Weekly Student Hours

Course Student Hours

	In Class	Out of Class
Lecture Hours	5	10
Lab Hours	-	-
Activity Hours	-	-

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	90
Lab	-
Activity	-
Total	90

Course Out-Of-Class Hours	
Lecture	180
Lab	-
Activity	-
Total	180

Time Commitment Notes for Students

No value

Faculty Load

Extra Duty: -

Faculty Load: -

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No value	No value	No value	No value

Requisites

Prerequisite

MATH061 - Elementary Algebra

Objectives

- A. simplify linear expressions.
- B. solve linear equations and inequalities in one variable.
- C. solve linear equations and inequalities in two variables.
- D. solve linear systems in two variables.
- E. add, subtract, multiply, and divide polynomials.
- F. factor expressions and solve equations by factoring.
- G. reduce, add, subtract, multiply, and divide rational expressions.
- H. add and subtract radical expressions.
- I. solve a variety of application problems.

Entrance Skills

Skill	Content Review
No value	No value

Limitations on Enrollment

Limitation	Provide Rationale
No value	No value

Specifications

Methods of Instruction	Methods of Instruction Rationale
Lecture	A. Lecture with the appropriate utilization of technology
Class Discussions	B. Cooperative learning and discussion

Assignments

Writing Assignments/Proficiency Demonstration - Students are required to clearly state solutions in writing when called for, and to translate words into mathematical symbols and expressions and vice-versa. Critical Thinking Assignments - A. comprehend the problem. B. determine appropriate problem solving strategies. C. clearly interpret results. D. communicate the problem solving strategy and solution in writing as well as verbally. Cultural Pluralism Assignment and Methodology - When appropriate, the instructor will initiate a discussion/explanation with regard to the origin and history of various mathematical topics. The relevant mathematical contributions of different cultures (Greeks, Muslims, etc) may be explored, where appropriate.

Methods of Evaluation

Homework
Tests
Final Exam

Methods of Evaluation Rationale

A. Homework
B. Quizzes
C. Midterms and comprehensive final exam

Equipment

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Charles P. McKeague	Intermediate Algebra	XYZ Textbooks	2014	978-1-936368-95-2

Other Instructional Materials

Description	Author	Citation
No Value	No Value	No Value

Materials Fee

0

Learning Outcomes and Objectives**Course Objectives**

A. solve quadratic equations and inequalities by factoring and using the quadratic formula.

B. graph linear and quadric functions in 2 variables.

C. solve radical equations.

D. solve rational equations.

E. add, subtract, multiply and divide rational expressions.

F. simplify complex fractions.

G. factor algebraic expressions.

H. perform operations involving complex numbers.

I. solve systems of linear equations in two and three variables.

J. perform operations on functions including addition, subtraction, multiplication, division and composition.

CSLOs

MATH-063-CSLO-01: Given a linear equation in two variables, the student will graph it.

Expected SLO Performance: 70.0

MATH-063-CSLO-02: Given a trinomial, the student will factor it completely.

Expected SLO Performance: 70.0

MATH-063-CSLO-03: Given a rational equation in one variable, the student will solve it.

Expected SLO Performance: 70.0

MATH-063-CSLO-04: Given a radical equation in one variable, the student will solve it.

Expected SLO Performance: 70.0

Outline

Course Outline

- A. Operations with functions.
- B. Linear functions
- C. Equation of a line
- D. Systems of linear equations in two and three variables and applications
- E. Linear and compound inequalities, including those involving absolute value
- F. Factoring polynomials
- G. Simplification, addition, subtraction, multiplication and division of rational expressions
- H. Rational equations and applications
- I. Rational exponents
- J. Radical expressions and equations
- K. Complex numbers
- L. Quadratic formula
- M. Quadratic functions and applications
- N. Properties of logarithmic and exponential functions
- O. Logarithmic and exponential equations
- P. Conic sections (circles, ellipses and hyperbolas)