COURSE OUTLINE OF RECORD

Number: MATH G091  TITLE: Support for College Algebra

ORIGINATOR: Gita Alemanour  EFF TERM: Fall 2019
FORMERLY KNOWN AS:  DATE OF OUTLINE/REVIEW: 11-20-2018
CROSS LISTED COURSE:  TOP NO: 1702.00

SEMESTER UNITS: 2.0
HRS LEC: 36.0  HRS LAB: 0.0  HRS OTHER: 0.0
CONTACT HRS TOTAL: 36.0
STUDY NON-CONTACT HRS RECOMMENDED: 72.0

CATALOG DESCRIPTION:
This co-requisite course is intended for students that enroll into College Algebra, Math G115. It provides supplemental instruction in basic algebra skills and concepts needed for success in College Algebra computations and applications. Success in this course will be based on attendance and satisfactory completion of in-class assignments. Requires concurrent enrollment in specified sections of College Algebra, Math G115.

JUSTIFICATION FOR COURSE:
To comply with AB705

PREREQUISITES:

COREQUISITES:
• MATH G115: College Algebra

ADVISORIES:

ASSIGNED DISCIPLINES:
Mathematics

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [ ] Credit - Not Degree Applicable [X]

GRADING POLICY: Pass/No Pass [X]  Standard Letter [ ]  Not Graded [ ]  Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[ ]  UC/CSU Transferable[ ]  Not Transferable[X]

BASIC SKILLS STATUS: Yes [X] No [ ]

LEVELS BELOW TRANSFER: 1 level below transfer level

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: E

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X]  Yes [ ] NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [X] Yes [ ]

GE AND TRANSFER REQUIREMENTS MET:

COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:
1. Perform operations on real numbers and algebraic expressions
2. Factor a polynomial
3. Graph a function from the library of functions

COURSE OBJECTIVES:
1. Address the affective side of learning to provide students with the necessary skills to succeed in transfer level mathematics.
2. Perform basic operations of real numbers
3. Solve linear, quadratic, and rational equations.
4. Solve polynomial and rational inequalities.
5. Solve a system of equations of two variables.
6. Identify relations and transformations for a function and its graph.
7. Determine the domain and range of a function.
8. Interpret the concept of a function and its properties
9. Use the calculator in conjunction with the above objectives.

COURSE CONTENT:

LECTURE CONTENT:

A. Learning skills
   1. study skills
   2. time management
   3. math anxiety
   4. test taking skills

B. Operations of real and complex numbers
   1. arithmetic
   2. simplifying
   3. rationalizing the denominator
   4. conjugation
   5. sets

C. Graphs, relations, and functions
   1. find the domain and range
   2. function notation
   3. arithmetic
   4. inverse functions

D. Polynomials
   1. factoring
   2. arithmetic
   3. finding roots of polynomials
   4. graphing
   5. solving polynomial inequalities

E. Rational Expressions
   1. simplifying
   2. arithmetic
   3. finding roots of rational functions
   4. solving rational inequalities

F. Conics
   1. equations and graphs of basic parabolas, circles, ellipses

G. Geometry
   1. coordinate plane

H. Systems of equations
1. solving a system of two variables
   2. substitution method
   3. addition/elimination method

I. Matrices
   1. arithmetic

J. Exponential and logarithmic functions
   1. graphing
   2. solving equations
   3. properties

METHODS OF INSTRUCTION:

A. Lecture:
B. Tutoring – noncredit:
C. Dist. Ed – Delayed Interaction:
D. Online:
E. Independent Study:
F. Hybrid:

INSTRUCTIONAL TECHNIQUES:

1) Lecture and discussion
2) Teamwork
3) Computer-facilitated instruction

COURSE ASSIGNMENTS:

Reading Assignments

1) Problem sets
2) Reading and/or writing assignments
3) Exploratory activities and/or projects

Out-of-class Assignments

1) Problem sets
2) Reading and/or writing assignments
3) Exploratory activities and/or projects

Writing Assignments

1) Problem sets
2) Reading and/or writing assignments
3) Exploratory activities and/or projects

METHODS OF STUDENT EVALUATION:

Short Quizzes
Projects (ind/group)
Problem Solving Exercises
Skills Demonstration

Demonstration of Critical Thinking:

Through independent work or group discussions students will demonstrate critical thinking and problem solving by completing and applying the applications of algebra, numbers, and graphing in the required assignments/assessments.
Required Writing, Problem Solving, Skills Demonstration:

Students will demonstrate written skills, problem-solving, and skill demonstration through turned in class activities, projects, and/or quizzes of topics presented.

TEXTS, READINGS, AND RESOURCES:

TextBooks:
1. Margaret L. Lial; John Hornsby; David I. Schneider; Callie Daniels. College Algebra, 12th ed. Pearson, 2017

Other:
1. Scientific calculator

LIBRARY:

Adequate library resources include: Print Materials
Non-Print Materials
Online Materials
Services

Comments:

Scientific or graphing calculators

Attachments:

Attached Files