

Course Outline

COURSE: MATH 416 **DIVISION:** 10 **ALSO LISTED AS:**

TERM EFFECTIVE: Summer 2016 **CURRICULUM APPROVAL DATE:** 02/22/2016

SHORT TITLE: MATH FOR SUMMER BRIDGE

LONG TITLE: Math for Summer Bridge

| <u>Units</u> | <u>Number of Weeks</u> | <u>Type</u> | <u>Contact Hours/Week</u> | <u>Total Contact Hours</u> |
|--------------|------------------------|-------------|---------------------------|----------------------------|
| 1 TO 3 | 18 | Lecture: | 1 TO 3 | 18 TO 54 |
| | | Lab: | 0 | 0 |
| | | Other: | 0 | 0 |
| | | Total: | 1 TO 3 | 18 TO 54 |

COURSE DESCRIPTION:

This class is a remedial mathematics course for students new to Gavilan College who are participating in the Summer Bridge Program or other special cohorts. Students enrolled in this class must have taken the math placement exam prior to the first day of class. The purpose of the class is to review and hone basic math skills, acclimate the student to the rigors of college level work, and improve other student skills needed for learning and academic achievement. Upon completion of the course, students will be allowed to retake the placement exam. The primary mathematical focus is on prealgebra topics such as operations with whole numbers, fractions, decimals, percentage and real life problems. Students can also get practice with other topics in Algebra I such as solving linear equations, graphing linear functions, and factoring. This is a pass/no pass course. Units earned in this course do not count toward the associate degree and/or certain certificate requirements.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: C - Credit - Degree Non Applicable

GRADING MODES

P - Pass/No Pass

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:

1. Perform basic operations with whole numbers, fractions, decimals, percentages and signed numbers without the use of a calculator

Measure:

Quiz, HW, exam

PLO:

ILO:

GE-LO:

Anticipated Year of Assessment: 2017

2. Develop and utilize math specific and more general study skills and test taking strategies.

Measure:

Measure: HW, oral report

PLO:

ILO:

GE-LO:

Anticipated Year of Assessment: 2017

3. Formulate and solve real life problems with fractions, decimals, and percentage.

Measure:

Measure: Quiz, HW, exam

PLO:

ILO:

GE-LO:

Anticipated Year of Assessment: 2017

4.

Identify an equation as linear or quadratic and use an appropriate method to solve.

Measure: Quiz, HW, exam

PLO:

ILO:

GE-LO:

Anticipated Year of Assessment: 2017

5. Analyze a linear equation in two variables, graph the equation and use the equation to solve real live applications.

Measure: Quiz, HW, exam

PLO:

ILO:

GE-LO:

Anticipated Year of Assessment: 2017

6. Add, subtract, multiply, divide and factor polynomials.

Measure: Quiz, HW, exam

PLO:

ILO:

GE-LO:

Anticipated Year of Assessment: 2017

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Curriculum Approval Date: 02/22/2016

1 Unit Class:

1 Hours

Content: Assessment Exam

Student Performance Objectives (SPO): Students will take an online assessment exam to determine their strengths and weaknesses.

Out-of-Class Assignments: n/a

5 Hours

Content: Whole Numbers, Divisibility Rules and Prime factorization

Student Performance Objectives (SPO): Complete problems on addition, subtraction, multiplication, division and exponents with whole numbers without a calculator. Students will evaluate numerical expressions using the Order of Operations without a calculator. Students will be able to identify factors of a number using divisibility rules. Students will be able to identify prime numbers and prime factor 3- 5 digit numbers

Out-of-Class Assignments: homework

7 Hours

Content: Fractions

Student Performance Objectives (SPO): Students will demonstrate the ability to simplify fractions, find the LCD of fractions, add, subtract, divide, and multiply fractions w/o calculator and solve related application problems

Out-of-Class Assignments: homework

6 Hours

Content: Decimals

Student Performance Objectives (SPO): Students will be able to identify place value in decimal numbers, convert decimals to fractions and vice-versa, perform all the operations with decimals and solve the application problems.

Out-of-Class Assignments: homework

2 Unit Class: 1 unit +

5 Hours

Content: Percentage

Student Performance Objectives (SPO): Student will be able to convert between percent, fraction, and decimal and solve percentage problems. Students will be able to set up and solve a problems involving percentages and their applications

Out-of-Class Assignments: homework

7 Hours

Content: Formulas and Linear Equations

Student Performance Objectives (SPO): Students will be able to evaluate formulas, solve a wide variety of linear equations.

Out-of-Class Assignments: homework

7 Hours

Content: Linear Functions

Student Performance Objectives (SPO): Students will be able to find the equation of a line, graph the line, identify slope, intercepts and other points on the line, and solve application problems.

Out-of-Class Assignments: homework

3 units: 2 units plus

7 Hours

Content: Polynomials

Student Performance Objectives (SPO): Students will be able to add, subtract, divide, and multiply polynomials.

Out-of-Class Assignments: homework

7 Hours

Content: Factoring

Student Performance Objectives (SPO): Students will be able to factor any polynomial using grouping, special products, factoring out the common factor.

Out-of-Class Assignments: homework

5 Hours

Content: Solving polynomial equations plus applications

Student Performance Objectives (SPO): Students will be able to solve polynomial equations by factoring and applications involving polynomials

Out-of-Class Assignments: homework

METHODS OF INSTRUCTION:

Lecture, group work

METHODS OF EVALUATION:

Category 1 - The types of writing assignments required:

Percent range of total grade: 0 % to %

Category 2 - The problem-solving assignments required:

Percent range of total grade: 90 % to 100 %

Homework Problems

Quizzes

Exams

Other: In class group work

Category 3 - The types of skill demonstrations required:

Percent range of total grade: 0 % to %

Category 4 - The types of objective examinations used in the course:

Percent range of total grade: 0 % to 10 %

Other: group projects, learning skills assignments

REPRESENTATIVE TEXTBOOKS:

K. Elayn Martin-Gay. Prealgebra and Introductory Algebra. New Jersey: Pearson/Prentice Hall, 2011. Or other appropriate college level text.

ISBN: 10: 0321644905

Reading level of text, Grade: 12th Verified by: Ken Wagman

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:
IGETC:
CSU TRANSFER:
 Not Transferable
UC TRANSFER:
 Not Transferable

SUPPLEMENTAL DATA:

Basic Skills: B
Classification: Y
Noncredit Category: Y
Cooperative Education:
Program Status: 2 Stand-alone
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level: C
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: E
Maximum Hours: 3
Minimum Hours: 1
Course Control Number:
Sports/Physical Education Course: N
Taxonomy of Program: 170100