GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: MATH 205A DIVISION: 10 ALSO LISTED AS:

TERM EFFECTIVE: Fall 2018 **Inactive Course**

SHORT TITLE: FIRST HALF ALGEBRA

LONG TITLE: First Half of Elementary Algebra

Units	Number of Weeks		Contact Hours/Week		Total Contact Hours
2.5	18	Lecture:	4	Lecture:	72
		Lab:	0	Lab:	0
		Other:	0	Other:	0
		Total:	4	Total:	72

COURSE DESCRIPTION:

This course is the first half of the Elementary Algebra course. It will cover signed numbers, evaluation of expressions, ratios and proportions, solving linear equations, and applications. Graphing of lines, the slope of a line, graphing linear equations, solving systems of equations, basic rules of exponents, and operations on polynomials will be covered. PREREQUISITE: Math 402 with a grade of 'Pass' or with a 'C' or better, or assessment test recommendation. ADVISORY: Concurrent enrollment in Guidance 563A is advised.

PREREQUISITES:

Completion of MATH 402, as UG, with a grade of C or better.
OR
Completion of MATH 402, as UG, with a grade of P or better.
OR
(Completion of MATH 404D, as UG, with a grade of C or better.
AND Completion of MATH 404E, as UG, with a grade of C or better.
AND Completion of MATH 404F, as UG, with a grade of C or better.)
OR
Completion of MATH 411, as UG, with a grade of C or better.
OR
Score of 18 on Algebra Readiness
OR
Score of 12 on Elementary Algebra
OR
Score of 30 on Algebra Readiness - Revised
OR
Score of 2400 on Accuplacer Math

COREQUISITES:

CREDIT STATUS: C - Credit - Degree Non Applicable

GRADING MODES
L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:
02 - Lecture and/or discussion

STUDENT LEARNING OUTCOMES:
1. Identify, describe, and demonstrate ability to work with fractions and signed numbers.
ILO: 2,3,6,1
Measure: Homework; Quiz
2. Apply addition and multiplication properties in solving linear equations
ILO: 2,3,1
Measure: Homework; Quiz;
Exam1
3. Formulate and solve word problems including use of formulas, ratios, and proportions.
ILO: 2,3,1,4
Measure: Homework; Quiz
4. Identify and solve linear inequalities, Demonstrate the ability to graph the interval on the number line.
ILO: 2,1,3
Measure: Homework; Exam
5. Analyze and interpret graphs, plot ordered pairs of numbers,
6. Identify and sketch the graph of the linear equation.
ILO: 3,1,2
Measure: Homework; Quiz
7. Calculate the slope of the line and apply three forms of the linear equation to establishing the equation that fits a data.
ILO: 2,1,3
Measure: Homework; Project
8. Demonstrate the ability to graph linear inequalities in two variables
ILO: 2,1,3
Measure: Homework; Exam
9. Apply the graphing, substitution, and elimination methods in solving systems of linear equations
ILO: 2,3,1,6
Measure: Homework; Quiz
10. Apply acquired skills in solving systems of linear inequalities
ILO: 2,3,1

Measure: Homework; Exam
11. Identify bases and exponents, demonstrate ability to use product rule for exponents.
ILO: 2,1,3
Measure: Homework. Quiz

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS
Inactive Course: 03/26/2018
As of Fall 2009, GAV GE B4 no longer applicable.
WEEK 1 4 HOURS
Content
Fractions
Homework
Complete problems on addition, multiplication, and division of fraction
Performance Objectives
Students will demonstrate ability to work with fractions
WEEK 2 4 HOURS
Content
Order of operations; variables
Homework
Complete order of operations problems
Performance Objectives
Students will apply order of operations correctly
Students will be able to identify variables and apply the concept in equation
WEEK 3 4 HOURS
Content
Operations with signed numbers
Homework
Complete problems on addition, subtraction, and division of signed numbers
Performance Objectives
Students will be able to calculate sums, differences, products, and quotients of real numbers.
WEEK 4 4 HOURS
Content
Properties of Real Numbers; Simplifying Algebraic Expressions
Homework
Complete problems on simplifying algebraic expressions
Performance Objectives
Students will be able to:
Formulate and analyze properties of real numbers;
Perform simplifying of algebraic expressions.
WEEK 5 4 HOURS
Content
Addition and Multiplication Properties of Equality
Homework
Solve assigned equations using multiplication and addition properties.

Performance Objectives:
Apply the concept to solutions of linear equations
WEEK 6 4 HOURS
Content
An Introduction to Applications of Linear Equations
Homework
Complete word problems using linear equations.
Performance Objectives
Students will be able to formulate, analyze, and solve word problems
WEEK 7 4 HOURS
Content
Formulas and Applications from Geometry
Homework
Solve assigned formulas for the specific variables; complete applied problems from Geometry.
Performance Objectives
Students will be able to :
Evaluate formula expressions
Use formulas in solving the application problems from Geometry
Solve a formula for specified variable
WEEK 8 4 HOURS
Content
Ratios and Proportions
Solving Linear Inequalities
Homework
Complete problems utilizing ratios and proportions; solve assigned problems on linear inequalities.
Performance Objectives
Students will be able to:
Use properties of proportions to solve proportions
Solve applied problems using proportions
Graph intervals on the number line
Solve linear inequalities
WEEK 9 4 HOURS
Content
Reading Graphs
Linear Equations in two variables
Homework
Complete problems on analyzing and solving linear equations in two variables.
Performance objectives
Students will be able to:
Analyze and interpret the graphs
Identify and sketch the graph of the linear equation
in two variables
WEEK 10 4 HOURS
Content
Slope of a line

Equations of a line
Homework
Complete assigned problems on finding the slopes of the lines and establishing equations of the lines.
Complete a project investigating the concept of a slope
Performance Objectives
Students will be able to
Evaluate the slope of the line
Find an equation of the line that fits a data set
WEEK 11 4 HOURS
Content
Linear Inequalities in Two Variables
Homework
Complete problems on solving linear inequalities in two variables.
Performance objectives
Identify and Graph Linear Inequalities in two variables
WEEK 12 4 HOURS
Content
Solving Systems of Linear Equations by Graphing
Solving Systems of Linear Equations by Substitution
Homework
Complete problems on solving systems of linear equations by graphing substitution.
Performance Objectives
Students will be able to solve systems of linear equations
employing graphing and substitution methods
WEEK 13 4 HOURS
Content
Solving Systems of Linear Equations by Elimination
Applications of Linear Systems
Homework
Complete problems on solving the systems of linear equations using elimination by addition; solve assigned word problems.
Performance Objectives
Students will be able to:
Solve systems of linear equations by elimination
Solve problems about unknown numbers using the system of equations
WEEK 14 4 HOURS
Content
Applications of Linear Systems
Homework
Complete uniform motion and mixture problems using the system of equations.
Performance Objectives
Students will be able to:
Formulate, analyze, and solve word problems about quantities and their costs;
uniform motion problems, and mixture problems using the system of

equations
WEEK 15 4 HOURS
Solving Systems of Linear Inequalities
Concept of Exponent
Homework
Complete problems on solving systems of linear inequalities.
Performance Objectives
Students will be able to:
Solve systems of linear inequalities by graphing
Identify bases and exponents
WEEK 16 4 HOURS
Content
The Rules for Exponents
Homework
Complete problems on using and applying the rules for exponents.
Performance Objectives
Students will be able to
Evaluate exponential expressions using Product and Power Rules for Exponents
WEEK 17 4 HOURS
Content
Final Review
Homework
Complete review problems on solving the equations, inequalities, systems of equations, and word problems.
Performance Objectives
Students will be able to :
Master the skills necessary to solve the problems
Discuss the weekly content described above.
WEEK 18 2 HOURS
Final Exam
Included in content section.

METHODS OF INSTRUCTION:
Lecture/Discussion format and extensive use of cooperative, group learning.

METHODS OF EVALUATION:
This is a degree-applicable course, but substantial writing assignments are NOT appropriate, because the course primarily:
Is computational
The problem-solving assignments required:
Homework problems
Quizzes
Exams
The types of skill demonstrations required:
None
The types of objective examinations used in the course:
None

Other category:
None
The basis for assigning students grades in the course:
Writing assignments: 0% - 0%
Problem-solving demonstrations: 100% - 100%
Skill demonstrations: 0% - 0%
Objective examinations: 0% - 0%
Other methods of evaluation: 0% - 0%

REPRESENTATIVE TEXTBOOKS:
Required:
Lial, Hornsby, and McGinnis, Elem. Algebra, 10th edition, Pearson, 2008, or other appropriate college level text.
Reading level of text: 12th gradeVerified 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: B
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: E
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000279542
Sports/Physical Education Course: N
Taxonomy of Program: 170100