GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: MATH 233A DIVISION: 10 ALSO LISTED AS:

TERM EFFECTIVE: Fall 2018 **Inactive Course**

SHORT TITLE: FIRST HALF INT ALG

LONG TITLE: First Half of Intermediate 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:

The course will start with a review of basic concepts and then cover the following topics with an emphasis on applications and problem solving strategies: solving linear and absolute value equations; solving linear and compound inequalities; equations and graphs of lines; functions and function notation including composition of functions; solving systems of linear equations and inequalities; operations with polynomials; factoring polynomials; and solving polynomial equations. PREREQUISITE: Completion of Mathematics 205 or the equivalent with a grade of 'C' or better.

PREREQUISITES:

Completion of MATH 205, as UG, with a grade of C or better.
OR
(Completion of MATH 205A, as UG, with a grade of C or better.
AND Completion of MATH 205B, as UG, with a grade of C or better.)
OR
Completion of MATH 206, as UG, with a grade of C or better.
OR
Completion of MATH 430, as UG, with a grade of C or better.
OR
Score of 17 on Elementary Algebra
OR
Score of 15 on Intermediate Algebra
OR
Score of 2500 on Accuplacer Math

COREQUISITES:

CREDIT STATUS: D - Credit - Degree 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. Analyze a variety of problems involving contemporary applications of linear and quadratic functions and determine and implement an appropriate method of solution for these problems.

Measure: Quizzes, exams, projects, group work, and/or homework

assignments

ILO: 2, 7

2. Graph linear equations and inequalities and utilize the graphs in problem solving.

Measure: Quizzes, exams, projects, group work, and/or homework

assignments

ILO: 7, 2

3. Set up and solve linear and compound inequalities using algebra and graphs. Determine appropriate use of the algebra and graphs to solve applied problems.

Measure: Quizzes, exams, projects, group work, and/or homework

assignments

ILO: 7, 2, 4

4. Analyze problems to determine the most appropriate method to use when solving a given system.

Measure: Quizzes, exams, projects, group work, and/or homework

assignments

ILO: 2, 7, 4

5. Demonstrate proficiency with a scientific calculator and use the calculator in solving various problems.

Measure: Quizzes, exams, projects, group work, and/or homework

assignments

ILO: 2,3

6. Use function operations and function notation to add, subtract, multiply, divide, and compose polynomials.

Measure: Quizzes, exams, projects, group work, and/or homework

assignments

ILO: 2

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

Inactive Course: 03/26/2018

8 Hours

Content: Review basic concepts including the properties and operations of real numbers. Use of a scientific calculator will be required here and throughout the course. Extensive homework will be assigned for these topics and all the succeeding ones.

Student Performance Objectives: The student will be able to evaluate a numerical expression using The Order of Operations, and evaluate an algebraic expression given value(s) of the variable(s).

8 Hours

Content: Solve linear and absolute value equations. Solve applications involving word problems.

Student Performance Objectives: The student will be able to solve a wide variety of linear and absolute value equations, and solve applications problems involving linear equations.

2 Hours

Content: Solve linear and compound inequalities using both algebraic and graphing methods.

Student Performance Objectives: The student will be able to solve a linear and compound inequality, graph the solution on the number line and give the solution in interval notation.

6 Hours

Content: Solve linear equations and graph the solutions. Use the slope-intercept and point-slope forms of the equation of a line.

Student Performance Objectives: The student will be able to graph a line given the equation of a line, determine the equation of a line given the graph, find the equation of the line given a) slope and y-intercept, b) slope and a point c) two points. Student will be able to determine whether two lines are parallel, perpendicular or neither, and find the equation of a line given a point and a line to which it is parallel and/or perpendicular.

4 Hours

Content: Work with function notation and the algebra of functions, including composition.

Student Performance Objectives: The student will be able to find the four basic function (f+g, f-g, fg and f/g and the composite functions given f(x) and g(x) either algebraically or graphically.

2 Hours

Content: Solve and graph linear inequalities.

Student Performance Objectives: The student will be able to graph the solution of a linear inequality involving two variables.

6 Hours

Content: Solve systems of linear equations in two variables and employ various methods to solve applied problems.

Student Performance Objectives: The student will be able to solve 2x2 systems of equations using substitution, elimination and the graphical method (for 2x2 only), and solve applied problems such as investment, solution mixture and distance problems.

4 Hours

Content: Solve systems of linear equations in three variables and employ various methods to solve applied problems.

Student Performance Objectives: The student will be able to solve a 3x3 system of equations and set up and solve a system that will address an application thereof.

2 Hours

Content: Solve systems of linear inequalities.

Student Performance Objectives: The student will be able to graph the solution to a system of linear inequalities in two variables.

4 Hours

Content: Add, subtract, multiply, and divide polynomials.

Student Performance Objectives: The student will be able to add, subtract, multiply and divide polynomials.

6 Hours

Content: Factor polynomials including the difference of two squares and the sum and difference of two cubes.

Student Performance Objectives: The student will be able to factor a polynomial, including the difference of squares, and the difference and sum of cubes. Student will also be able to identify when a polynomial is prime.

8 Hours

Content: Solve polynomial equations and briefly introduce the quadratic formula. review for the final exam.

Student Performance Objectives: The student will be able to solve a polynomial equation by factoring and by using the quadratic formula.

2 Hours

Comprehensive final exam.

METHODS OF INSTRUCTION:

Lecture, demonstration, group work, discussion.

METHODS OF EVALUATION:

CATEGORY 1 - The types of writing assignments required:

Percent range of total grade: 0 % to 10 %

If this is a degree applicable course, but substantial writing assignments are not appropriate, indicate reason:

Course is primarily computational

CATEGORY 2 -The problem-solving assignments required:

Percent range of total grade: 75 % to 95 %

Homework Problems

Quizzes

Exams

CATEGORY 3 -The types of skill demonstrations required:

Percent range of total grade: 0 % to 0 %

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

Percent range of total grade: 0 % to 15 %

Multiple Choice

True/False

Completion

REPRESENTATIVE TEXTBOOKS:
Required;
Angel, Allen, Intermediate Algebra for College Students, Pearson/Prentice Hall, 2008

ISBN: (if available) 0-13-238357-8
Reading level of text: 11th gradeVerified by: Ken Wagman

or other appropriate college level text.
Other textbooks or materials to be purchased by the student: Scientific calculator

ARTICULATION and CERTIFICATE INFORMATION

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

SUPPLEMENTAL DATA:
Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education:
Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level: A
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: E
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000435860
Sports/Physical Education Course: N
Taxonomy of Program: 170100