GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

# Course Outline

**COURSE:** MATH 758B DIVISION: 90 ALSO LISTED AS:

TERM EFFECTIVE: Fall 2014
**Inactive Course**

SHORT TITLE: CAHSEE PREP MATHEMATICS

LONG TITLE: CAHSEE Preparation B Mathematics

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

**COURSE DESCRIPTION:**

This course is designed to prepare non-high school graduates for the successful completion of the CAHSEE (California High School Exit Examination) Mathematics Test by providing them with study skills and test taking strategies for answering multiple choice questions. The course will focus on basic arithmetic, statistics, data analysis, measurement, Geometry, Algebra, and mathematical reasoning.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: N - Non Credit

GRADING MODES
N - Non Credit

REPEATABILITY: R - Course may be repeated
Maximum of 99 times, 100 credit hours

SCHEDULE TYPES:
04 - Laboratory/Studio/Activity

**STUDENT LEARNING OUTCOMES:**
1. Students will demonstrate proficiency in successfully completing the CAHSEE Math exam with passing scores
ILO: 7, 2, 4 & 1

Measure: Class participation, practice exams and worksheets
2. Students will develop an individual study plan that incorporates study tips and test-taking strategies to assist them in successfully completing the CAHSEE Math exam
ILO: 1, 6, 7, & 2
Measure: Written plan
3. Students will operate the computer with basic instruction in order to use math software to complete their lessons and practice exams
ILO: 1, 6, 7 & 2
Measure: Performance
4. Students will recognize, define and recall specific Math vocabulary
ILO: 1
Measure: Written assignments, oral presentation, and reading software assignments
5. Students will perform basic arithmetic calculations with whole numbers, fractions, decimals, percentages
ILO: 2, 7
Measure: Worksheets, quizzes, classroom assignments, and reading software assignments
6. Students will determine ways to collect, analyze, organize and display data
ILO: 7, 2
Measure: Worksheets and classroom assignments
7. Students will select and use appropriate units, estimate and calculate measurements for length, area, and volume
ILO: 2, 7, 1
Measure: Worksheets, quizzes and sample practice questions
8. Students will analyze math problems, use inductive and deductive reasoning, evaluate the reasonable of solutions, generalize results and apply them to new problems
ILO: 2, 7 & 1
Measure: Worksheets, small group work and reading software assignments

**CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS**
Inactive Course: 03/10/2014
6 Hours
Overview of the course
Preparing for the CAHSEE Examination: Students will be informed about the two CAHSEE Exams-English-Language Arts and Mathematics test areas, commonly asked questions, organizing an individual study plan, developing and using test-taking strategies and suggestions for a study schedule.
Student Performance Objectives: Students will take the two timed exams to determine their areas of strength and weakness in order to devise an individual study plan to determine which areas to concentrate their time and resources. Students will then compare and contrast their

results with answer keys and summary reviews.
9 Hours
The following content on number and basic operations will be reviewed with students:
1) Place values, addition, subtraction, multiplication, division, word problems, exponents, square roots, mean and median
2) Math Vocabulary: absolute value, decreased by, equivalent expression, integer, prime, simple interest, scientific notation, square, and square root
3) Why is number sense important?
4) How the CAHSEE will test your knowledge of numbers
5) Using number sense standards in real-life situations
6) Tips for studying: How to start preparing early and the positives of study groups
7) Tips for Multiple-Choice Questions: A) Answer easy questions first, B) Okay not to know all the answers to every question and C) Eliminate choices that you know are wrong.
8) More tips: A) Don't give up without going part way, B) You don't have to read all the answers to start working on a problem, C) Reasoning backwards from the answers, D) Thinking about the basic concept in the right way, E) Checking your work, and F) Learning to guess
Classroom Activities: Number sense worksheets, practice number sense tests and reviewing tips for studying and test-taking
Student Performance Objectives: Students will demonstrate a foundational understanding of numbers and ways they are represented
9 Hours
The following content on statistics, data analysis, and probability will be reviewed with students:
1) Understanding data displays including bar graphs and scatterplots
2) Finding the mean, median, and the mode of a data set
3) Expressing the probability of an event as a ratio, decimal, or a percent
4) Knowing whether events are independent or dependent
5) Vocabulary Words to Know: Bar graph, pie chart, scatterplot, correlation, mean, median, mode, probability, random, independent events and dependent events
Classroom Activities: Vocabulary Worksheets, Anchor problems (real-life math problems and statistics, data analysis, and probability practice tests
Student Performance Objectives: Students will determine ways to collect, analyze, organize, and display data
9 Hours
The following Measurement and Geometry will be reviewed with students:
1) Converting measurements and rates from one measuring system to another and
using the information from scale drawings
2) Knowing the effect of scaling on length, perimeter, area and volume

3) Translating and reflecting a shape drawn on a coordinate system
4) Knowing the Pythagorean theorem and its converse, and how and when to use each
5) Knowing that congruent objects have the same shape and size
6) Using lengths of an object to calculate the object's area, surface area, or volume
7) Vocabulary to Know: circle, radius, circumference, diameter, parallelogram, trapezoid, hypotenuse, parallel, congruent, perimeter, area, and surface area
Classroom Activities: Vocabulary Worksheets, Anchor problems (real-life math problems) and practice tests on measurement and Geometry standards
Student Performance Objectives:
Students will select and use appropriate units, estimate and calculate measurements for length, area, and volume of geometric figures; understand scaling in scale drawings and how changes in linear dimension affect area and volume; and solve problems involving dimensional analysis and conversion from one unit to another
9 Hours
The following Algebra and Functions will be reviewed with students:
1) Generalizing numerical and geometric patterns
2) Using a table, graph, or symbolic rule to represent the generalization of a pattern
3) Comparing different forms of representations
4) Knowing the difference between a relation and a function
5) Solving linear equations
6) Vocabulary to Know: Equation, inequality, expression, y-intercept, slope and parallel
Classroom Activities: Classroom Activities: Vocabulary Worksheets, Anchor problems (real-life math problems) and practice tests on Algebra and its functions
Student Performance Objectives:
Students can formalize patterns, functions, and generalizations; work with algebraic symbols, expressions with variables, and graphical representations; understand different meanings, and uses of variables; develop concepts of proportionality; and recognize and generate equivalent expressions, solve linear equations, and effectively use formulas.
9 Hours
The following Mathematical Reasoning or logical thinking skills will be reviewed with students:
1) Recognition and generalizing patterns
2) Identification and organization of relevant information
3) Validation of conjectures both inductively and deductively
Classroom Activities: Vocabulary worksheets, worksheets and math problems that focus on analyzing problems by identifying relationships, distinguishing relevant from irrelevant information, identifying missing information, sequencing and prioritizing information and

observing patterns. Practice tests on math reasoning skills.
Student Performance Objectives: Students will analyze problems, use inductive and deductive reasoning, evaluate the reasonableness of solutions, generalize results, and apply them to new problems.
9 Hours
The following Algebra I content will be reviewed with students:
1) Recognition of equivalent forms of polynomials and other algebraic expressions
2) Understanding the meaning of opposite, reciprocal, roots, and absolute value
identification of graphs that match a particular linear function to its slope and intercepts
3) Knowing that lines on a graph are parallel if and only if they have the same slope
4) Solving linear inequalities
5) Solving problems involving rate, average speed, distance, and time
6) Identifying the solution to a system of two equations in two unknowns
7) Solving classic Algebra rate, work, and percent mixture problems
8) Vocabulary to Know: Absolute value, y-intercept, parallel, slope of a line, equation, inequality
Classroom Activities: Vocabulary Worksheets, Algebra I worksheets and the Algebra I practice tests.
Student Performance Objectives: Students will calculate with symbols and demonstrate symbolic reasoning
6 Hours
Students will take the practice CAHSEE Mathematics Practice Test and check their answers with the answer key provided. An analysis of the test results will be provided to the students that will determine which kinds of math questions are strengths or weaknesses.
Student Performance Objectives: Passing score

**METHODS OF INSTRUCTION:**
Instructional methods are lecture and discussion on key concepts for both the English-Language Arts and Mathematics components. Students are assessed and an individualized study plan will be developed for the usage. Drill exercises and practice tests are made available in written and electronic formats.

**METHODS OF EVALUATION:**

**REPRESENTATIVE TEXTBOOKS:**
Preparing for the California High School Exit Examination, An English-Language Arts Study Guide and A Mathematics Study Guide or other appropriate college level text.
Reading level of text: 10th Grade. Verified by: California Department of Education

**ARTICULATION and CERTIFICATE INFORMATION**

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

**SUPPLEMENTAL DATA:**

Basic Skills: B
Classification: K
Noncredit Category: A
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: Y
Funding Agency Code: A
In-Service: N
Occupational Course: E
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000435861
Sports/Physical Education Course: N
Taxonomy of Program: 493087