I. GENERAL COURSE INFORMATION

Subject and Number: **Mathematics 100**
Descriptive Title: **Supervised Tutoring: Mathematics**
Course Disciplines: **Mathematics**
Division: **Mathematical Sciences**

Catalog Description:
This course provides students with supervised tutoring related to their assignments in all mathematics courses offered at El Camino College. The tutoring addresses the application of learning skills, the use of learning resources, and the review of course content.

Note: This course is repeatable and open for enrollment at registration and at any time during the semester.

Conditions of Enrollment:
Enrollment Limitation: Referral by instructor, counselor, or student based on assessed academic need

Course Length:	**X Full Term**	**Other (Specify number of weeks):**
Hours Lecture:	**0 hours per week**	**TBA**
Hours Laboratory:	**4.00 hours per week**	**XTBA**
Course Units:	**0**	

Grading Method: **No Grade**
Credit Status: **Non Credit**

Transfer CSU: **No**
Transfer UC: **No**

General Education:

El Camino College:

CSU GE:

IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

SLO #1 Timely Manner
Students receive help from a tutor in timely manner.

SLO #2 Student Satisfaction
Students are satisfied with tutors' explanations

SLO #3 Regularly Using the Math Study Center
Students use the Math Study Center regularly.

SLO #4 Actively Using the Math Study Center
Students from all levels of math courses offered at ECC are actively using the Math Study Center.

B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below)

1. Apply learning strategies appropriate to course content and course skills.
2. Locate learning resources that will provide information related to curricular needs.
3. Employ learning strategies, learning resources, and tutoring assistance to aid in the acquisition of course content and course skills.
4. Demonstrate the use of appropriate methods for solving application problems.
5. Manipulate numbers and/or variables in an expression in order to simplify the expression.
6. Manipulate numbers and/or variables in an equation, in order to solve the equation.
7. Create a chart or graph to represent data or an equation.
8. Explain the method used to solve a problem.

III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or Lab	Approximate Hours	Topic Number	Major Topic
Lab	15	I	SOLVE APPLICATION PROBLEMS A. Reading to Understand the Problem B. Setting up the Problem C. Drawing an appropriate Diagram, Graph, or Chart D. Translating from Words to Mathematical Symbols E. Practice Continuing to Solve Similar Application Problems
Lab	15	II	SOLVING EQUATIONS & MANIPULATING EXPRESSIONS Coverage of Topics will depend on the level of mathematics the student is taking. This may include, but is not limited to, the following: A. Manipulating Expressions 1. Simplifying Arithmetic, Algebraic and Trigonometric Expressions 2. Order of Operations 3. Properties of Real Numbers B. Methods for Solving Linear Equations and Inequalities 1. Symbolically (Balancing equations, clearing fractions, isolating variables) 2. Graphically C. Methods for Solving Quadratic Equations and Inequalities 1. Factoring 2. Completing the Square 3. Quadratic Formula D. Methods for Solving Other Equations and Inequalities including (but not limited to) 1. Trigonometric 2. Polar 3. Parametric 4. Exponential 5. Logarithmic 6. Rational 7. Radical
Lab	15	III	VISUAL & GRAPHICAL METHODS Coverage of Topics will depend upon the level of mathematics the student is taking. It may include, but is not limited to the following: **A.** Creating and Interpreting Graphs including (but not limited to) 1. Bar Charts 2. Pie Charts 3. Functions (lines, polynomials, trigonometric functions, exponential & logarithmic functions, piece-wise functions, polar graph, rational functions)

Lab	15	IV	ARTICULATING MATHEMATICAL REASONING The method used to explain mathematical reasoning will depend upon the level of the student. It will be modified to meet individual student needs and ability level. These strategies (or similar strategies) may be employed. **A.** Practice Identifying & Explaining a Correct Mathematical Approach 1. Work with a study group or partner. 2. Tutor a student in a lower math class. 3. Rewrite the problems in your own words. 4. Create a formula sheet or study guide. 5. Read and outline the textbook. 6. Copy and highlight lecture notes. 7. Create a Mock Exam.
Lab	12	V	LEARNING STRATEGIES A. Methods for Studying Math 1. Review the material after class 2. Preview material before class 3. Repeated practice 4. Ask Questions 5. Explain what you know 6. Flash Cards for Formulas B. Identify learning resources available for students at El Camino College and appropriate to the student's needs, including 1. Tutorial services in the Math Study Center, the Library/Learning Resources Center, and other college locations 2. Computer-assisted instruction 3. Faculty consultation 4. Supplemental Instruction (SI) 5. MESA and ASEM
Total Lecture Hours		0	
Total Laboratory Hours		72	
Total Hours		72	

IV. PRIMARY METHOD OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION:

Skills demonstrations

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION:

Exam Review Plan of Action: Two weeks prior to a class exam, create a plan of action that includes at least two meetings with a supervised tutor before the exam. Create a list of skills and concepts needed in order to do well on the exam and prioritize them based on which are most important or problematic. The plan should also include at least one meeting with a supervised tutor after the exam has been graded and returned, in order to review how well your exam review plan worked.

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:
Student's assignments vary dependent upon the course in which the student is enrolled or the area in which tutoring is being provided.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:
Homework Problems
Other (specify):
Discussions

V. INSTRUCTIONAL METHODS

Demonstration
Discussion
Group Activities
Laboratory
Multimedia presentations
Simulation
Other (please specify)
Computer assisted instruction

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS

Estimated Independent Study Hours per Week: 0

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS

VIII. CONDITIONS OF ENROLLMENT

A. Requisites (Course and Non-Course Prerequisites and Corequisites)

Requisites	Category and Justification

B. Requisite Skills

Requisite Skills

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification

D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact
Referral by instructor, counselor, or the student based on assessed academic need ○ § 58170. Apportionment for Tutoring (e) Students enroll in the Supervised Tutoring course, through registration procedures established pursuant to section 58108, after referral by the student, a counselor or an instructor on the basis of an identified learning need.	

Course created by Paul Wozniak on 02/22/1994.

BOARD APPROVAL DATE: 05/16/1994

LAST BOARD APPROVAL DATE: 12/21/2020

Last Reviewed and/or Revised by: Kathryn Marsh on 10/29/2020

18880