

College of San Mateo
Official Course Outline

1. **COURSE ID:** MATH 830 **TITLE:** Just-In-Time Support for Analytical Trigonometry
Units: 1.0 units **Hours/Semester:** 16.0-18.0 Lecture hours; and 32.0-36.0 Homework hours
Method of Grading: Pass/No Pass Only
Corequisite: MATH 130

2. **COURSE DESIGNATION:**
Non-Degree Credit
Transfer credit: none

3. **COURSE DESCRIPTIONS:**
Catalog Description:

A review of the core prerequisite skills, competencies, and concepts needed in trigonometry. Intended for students who are concurrently enrolled in MATH 130, Analytical Trigonometry, at College of San Mateo and have a Math placement below transfer-level.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**

Upon successful completion of this course, a student will meet the following outcomes:

1. Simplify or reorganize algebraic expressions.
2. Solve equations and inequalities using multiple representations.
3. Identify and apply basic concepts for a function and its properties (domain, range, intercepts, graphs, and inverses).
4. Identify properties and formulas for geometric objects, especially circles and triangles.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**

Upon successful completion of this course, a student will be able to:

1. Simplify or reorganize algebraic expressions.
2. Solve equations and inequalities using multiple representations.
3. Identify and apply basic concepts for a function and its properties (domain, range, intercepts, graphs, and inverses).
4. Identify properties and formulas for geometric objects, especially circles and triangles.

6. **COURSE CONTENT:**

Lecture Content:

- Solving Equations using a variety of techniques
 - Graphing of linear, absolute value, quadratic functions
 - Writing equations from the graphs of linear and quadratic functions
 - Using graphic, numeric and analytic methods to solve linear, quadratic, and rational equations
 - Fundamental operations with exponents and radicals and solving equations with the same
 - Solving application problems
 - Essential vocabulary, properties, and characteristics of geometric objects
 - Applying formulas to evaluate perimeter, area, surface area and volume of geometric objects
 - Solve Problems about circles using properties
 - Solve problems with triangles involving the Pythagorean Theorem and similarity.
- Topics related to Developing Effective Learning Skills
- Study skills: for example, organization and time management, test preparation and test-taking skills
 - Self-assessment: for example, using performance criteria to judge and improve one's own work, analyzing and correcting errors on one's test
 - Use of resources: for example, strategies for identifying, utilizing, and evaluating the effectiveness of resources in improving one's own learning, e.g. peer study groups, computer resources, lab services

7. **REPRESENTATIVE METHODS OF INSTRUCTION:**

Typical methods of instruction may include:

- A. Lecture
- B. Activity
- C. Discussion

8. REPRESENTATIVE ASSIGNMENTS

Representative assignments in this course may include, but are not limited to the following:

Writing Assignments:

Student will write out 1-3 problem sets per week.

Reading Assignments:

Student will read 1-2 sections of the textbook per week.

9. REPRESENTATIVE METHODS OF EVALUATION

Representative methods of evaluation may include:

- A. Class Participation
- B. Class Work
- C. Exams/Tests
- D. Homework
- E. Quizzes

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

- A. Lippman, D., Rasmussen, M.. *Precalculus 2: An Investigation of Trigonometry*, ed. Open Textbook Store, 2017

Origination Date: November 2018

Curriculum Committee Approval Date: December 2018

Effective Term: Fall 2019

Course Originator: Christopher Walker