

**SOUTHEAST COMMUNITY COLLEGE
DIVISION OF ARTS AND SCIENCES**

Mathematics

Revision Date: 07-01-23

I. CATALOG DESCRIPTION

Course Number: MATH1300

Course Title: Precalculus

Prerequisite(s): A grade of "C" or higher in MATH1100 or a grade of "B" or higher in MATH1103 or appropriate score on math placement test.

Catalog Description: Intensive review of college algebra and trigonometry. Study of the concept of a function and its graph. Study of certain specific functions: polynomial, rational, exponential, logarithmic and trigonometric functions. Covers analytic trigonometry, some applications of trigonometry, conic sections, and systems of equations. A graphing calculator will be used in the course.

Credit Hours: 5.0

Class Hours: 75

Lab Hours: 0

Total Contact Hours: 75

II. COURSE OBJECTIVES: *Course will:*

- A. Provide an intensive review of college algebra and trigonometry.
- B. Make students familiar with the concept of a function and its graph.
- C. Provide detail understanding of polynomial, rational, exponential, logarithmic and trigonometric functions.
- D. Provide detail understanding of analytic trigonometry.
- E. Show students how to apply skills to solve word problems.
- F. Show three points of view: Algebraic, Graphical, and Numerical.
- G. Show students how to use technology to do mathematics.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. Student Learning Outcomes: *Student will be able to:*

- 1. Develop good understanding of functions.
- 2. Apply understanding of functions to solve real word problems.
- 3. Learn to view the problems from different points of view (Algebraic, Graphical and Numerical).
- 4. Learn to use technology to study mathematics.

B. General Education Learning Outcomes

- 1. GELO #5: Analytical, Quantitative, and Scientific Reasoning

Outcome: Apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.

Outcome: Effectively develop strategies, algorithms, or experiments (or performing experiments) to better describe the systems or to solve the problems.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Functions and their graphs
- B. Linear and Quadratic functions
- C. Polynomial and Rational Functions
- D. Exponential and Logarithmic Functions
- E. Trigonometric Functions
- F. Analytic Trigonometry
- G. Applications of Trigonometric functions
- H. Polar Coordinates

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s):
 - 1. Sullivan, *PreCalculus*, 11th Edition, Pearson (Prentice Hall), 2020.
(Note that your book will be available to you through MyMathLab Inclusive Access.
Your instructor will provide you with the instructions on how this will work.)
- B. Multimedia PC with Internet access.

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. MyMathLab resources (lecture videos, powerpoint presentations)
 - 2. Instructor notes
 - 3. Discussion forums

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination of the following:
 - 1. Homework
 - 2. Chapter Exams
 - 3. Projects
 - 4. Class participation
 - 5. Final Exam

B. SCC GRADING SCALE

A+	95-100	C+	75-79	F	59 or less
A	90-94	C	70-74		
B+	85-89	D+	65-69		
B	80-84	D	60-64		

VIII. SPECIFIC COURSE REQUIREMENTS

- A. Since this course is an intense review of College Algebra and Trigonometry, students should be prepared to dedicate significant time in order to succeed in this course.