

MATH 126 - Precalculus I (3 Credits)

DESCRIPTION:

A rigorous discussion of algebra concepts necessary for calculus is the focal point of this course. Topics include an in-depth investigation of algebraic functions and their graphs and solutions of systems of equations.

Prerequisite: Math 096 or Math 097 both with a grade of C or better; or a satisfactory ACT/SAT/Placement Test score.

NOTE: This course serves as a prerequisite course for Math 127 and is essential for students planning to take calculus.

TEXT:

Precalculus (A Right Triangle Approach), Sullivan and Sullivan

NOTE: Full-time instructors have the right to use no text or a different text.

OUTLINE:

Ch F - Sections F.1, F.2 (quick review), and F.4

Ch 01 - Sections 1.1 - 1.6

Ch 02 - Sections 2.1 - 2.6

Note 1: Variation problems in Section 2.2 may be omitted.

Note 2: Regression problems in Sections 2.2 and 2.6 may be omitted.

AP.11 - Complex Numbers

Ch 02 - Sections 2.7 and 2.8

Ch 03 - Sections 3.1 - 3.4

Note: Variation Problems in Section 3.3 may be omitted.

AP.03 - Polynomial Division Only.

AP.05 - Synthetic Division Only.

Ch 03 - Sections 3.5 and 3.6

Ch 04 - Sections 4.1 - 4.6, and 4.8

Ch 10 - Sections 10.1 (quick review) and 10.6.

Note: Only the two-variable problems need to be covered in both sections.

OUTCOMES:

- Solve polynomial, exponential, and logarithmic equations.
- Work with Cartesian coordinate system, being able to graph linear, exponential, polynomial, absolute value, square root, piecewise-defined, rational, and logarithmic functions.
- Understand function concepts, including operations on functions, and inverse functions.
- Solve systems of linear and nonlinear equations.
- Apply and extend all concepts.

EVALUATION:

Grades will be determined by student performance in one or more of the following areas: in-class tests, take-home tests, homework assignments, quizzes, special projects, papers, attendance, and class participation.

Degree of importance and types of assessment used will depend on the instructor. However, at least 50% of the course grade used is to be determined by proctored individual exams/assessments.

This course satisfies or partially satisfies the Math component of a degree or certificate program at CSN.