

# MATH 182 - Calculus II (4 Credits)

## DESCRIPTION:

Topics include further applications and techniques of integration with applications, polynomial approximations, sequences, and series. Prerequisite: Math 181 with a grade of C or better; or a satisfactory ACT/SAT/Placement Test score.

## TEXT:

Calculus of a Single Variable; 9th Edition; Larson, Edwards

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

## OUTLINE:

Ch 06 - All Sections

Ch 07 - Sections 7.1 - 7.4

Ch 08 - All Sections

Ch 09 - All Sections

Ch 10 - Sections 10.1, 10.2, 10.3 - 10.5

## OUTCOMES:

- a. Analyze differential equations.
- b. Evaluate solids of revolution and arc lengths.
- c. Perform integration techniques such as integration by parts, trigonometric integrals, trigonometric substitution, partial fractions, and using tables.
- d. Analyze indeterminate forms and work with L'Hopital's Rule.
- e. Evaluate sequences, series, tests of convergence/divergence, and Taylor Polynomials.
- f. Find the slope of a tangent line to a polar graph and to a curve given by a set of parametric equations.
- g. Find the arc length of a polar graph and of a curve given by a set of parametric equations.
- h. Find the area of a surface of revolution (parametric and polar form).
- i. 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.

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