

MATH 183 : Calculus II

A second course in a 2-Term sequence of university level calculus. This course includes the study of integration techniques for single variable functions, infinite series including Taylor series and their applications, improper integrals, polar coordinates, and possibly conic sections. Many applications will be covered including certain ones involving areas between plane regions, moments and centers of mass, average value, surface area, average value and the arch length.

Credits 3

Prerequisite Courses

MATH 182

Course Outcomes

After successfully completing the course, the learner will be able to:

- Effectively write mathematical solutions in a clear and concise manner.
- write clear explanations of the techniques of calculus including the proper use of standard mathematical notation.
- Solve problems involving integrals, exponential and logarithmic functions, inverses of common functions, parametric curves and polar coordinate systems, sequences and series, and vectors.
- Demonstrate ability to think critically by demonstrating an understanding for infinite series and their use for approximation.
- Demonstrate knowledge and skills in stating problems carefully, articulate assumptions, understand the importance of precise definition, and reason logically to conclusions.
- Demonstrate ability to think critically by recognizing patterns and determining and using appropriate techniques for solving a variety of integration problems.