



Course No.	Course Title	No. of Units			Pre-requisites
		Th.	Pr.	Credit	
MATH 102	Calculus II	4	-	4	MATH 101

Course Objectives:

On completion of the course, the students should be able to

- Comprehend the connection between differential and integral calculus, and use of integrals to find the area bounded by curves.
- Calculate the volume of solids, lengths of plane curves, work done by a varying force, etc. By means a definite integral.
- Use exponential and logarithmic functions to describe exponential growth and decay in problems of applied nature.
- Evaluate the integrals using different techniques and integral formula.
- Distinguish between proper and improper integrals.
- Perform numerical integration.

Course Description:

Applications of the definite integral to area, volume, arc length and surface of revolution. Improper integrals. Sequences, series. Integral, comparison, ratio, and root tests. Alternating series. Absolute and conditional convergence, power series. Taylor and Maclaurin series. Parametric curves, polar curves, area in polar coordinates. Vectors, lines, planes and surfaces.

Main Text Book:

- Calculus: Early Transcendentals, by James Stewart, 8th Ed., Cengage Learning, 2016.

Subsidiary Books:

- Calculus: Early Transcendentals, by Jon Rogawski and Colin Adams, 3rd Ed., Macmillan Education, 2015.