Module Title:	Calculus 1
Module ID:	MATH 101
Prerequisite:	None
Level:	1
Credit Hours:	3 (3+0+0)

Module Description:

Real numbers, Inequalities, Functions, injective function and its inverse, Limit of functions , Definition of continuity, properties of a continuous function on an interval, Derivatives, Basic theorems for differentiation, Methods of differentiation, critical points, absolute and local extrema, mean value theorem, Intervals of increase and decrease, first derivative and second derivative tests for local extrema, concavity and reflection points, asymptote, curve sketching, applied extrema problems, related rates, Conic sections.

Module Aims:

- To identify the domain of real functions of various kinds.
- Identification of limit of function.
- Understand the continuity of function and methods of differentiation.
- The use of calculus in analytic geometry.

Learning Outcomes:

- Understanding of the basic concepts of calculus, as well as the basic theory in calculus.
- Discuss issues and applications of Calculus
- Define the basic Rules of derivatives.
- The student should be able to classify critical points.
- Identify the functions common to all
- How to find geometric applications of differentiation.

Textbook:

Calculus, Early Transcendental Functions, Robert Smith, Roland Minton, McGraw-Hill Science Engineering, 2007.