12002 Analytic Geometry and Calculus I (5)   MATH 12002
Learning Outcomes for Analytic Geometry & Calculus I, MATH-12002

Knowledge

The students should be able to understand the concepts of limits, continuity, derivatives, rates of change, linear approximation and differentials, definite and indefinite integrals, inverse functions. They should to formulate the Mean Value Theorem
and the Fundamental Theorem of Calculus.

Comprehension

Should be able to compute the derivatives and integrals using basic differentiation
and integration formulas.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to relate the derivatives and shapes of graphs.
 Should use this information for the curve sketching.

Synthesis

Should get use to combine their skills from elementary mathematical courses to solve the problems in Calculus.

Evaluation

Should be able to find the derivative and indefinite integral
of a constant, power function, trigonometric functions like
sine and cosine, logarithmic and
exponential functions. Should be able to evaluate areas between curves.

Class Activities

To solve problems and prove Theorems in class.

Out of class Activities

To submit every week home assignments.