12003 Analytic Geometry and Calculus II (5)

Knowledge
The students should be able to develop their deeper understanding of the concepts they learned in Calculus I: limits, continuity, derivatives, rates of change, linear approximation and differentials, definite and indefinite integrals, inverse functions. They should also study the techniques and applications of integration; trigonometric, logarithmic and exponential functions; polar coordinates; vectors; parametric equations; sequences and series.

Comprehension
Should be able to decide whether the given series is divergent or convergent. Should understand the notions of tangent vectors, equations of lines and planes.

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

Analysis
Should be able to use the analytic techniques to attack geometric problems.

Synthesis
Should get used to combine their skills from elementary mathematical courses to solve the more advanced problems in Calculus.

Evaluation
Should be able to decompose the function into power series.

Class Activities
To solve problems and prove Theorems in class.

Out of class Activities
To submit every week home assignments.