

COURSE NUMBER: 605
COURSE TITLE: Math Analysis
COURSE LENGTH: Year, Two Credits
PREREQUISITE: Semester 1- Achieving a grade of C- or better in second semester Algebra II or instructor's approval
Semester 2- Achieving a grade of C- or better in first semester or instructor's approval

GRADE LEVEL: 11, or 12

COURSE DESCRIPTION:

Math Analysis is a course that will benefit any student who plans to enter a field involving mathematics. It is also needed for some trade, technical, and military fields. Topics studied include linear relations and functions, systems, graph theory, trigonometric functions, trigonometric graphs and inverses, trigonometric identities and equations, vectors, parametric equations, polar coordinates, and complex numbers.

COURSE RATIONALE:

If you study further in any area in which mathematics is encountered, it is likely that you will need the mathematics presented in this course. A thorough knowledge of functions and trigonometry is needed for calculus, an area of mathematics that is fundamental in engineering and the physical sciences.

METHOD OF INSTRUCTION:

The class is a lecture-discussion type of course with student participation encouraged. Homework assignments will be given daily.

ASSESSMENT:

Grades will be based upon student performance on tests, quizzes, and daily assignments.

CRITICAL OBJECTIVES:

1. Understand and appreciate analysis as a unification of their previous mathematics studies and their importance to other areas of mathematics
2. Acquire knowledge of the fundamental concepts of trigonometry and analytic geometry
3. Be able to apply with facility ideas of trigonometry and analytic geometry to proofs and problem solving
4. Learn to use a graphing calculator as a tool for problem solving
5. Improve and maintain previous mathematical skills
6. Be prepared for future studies in mathematics

