

Syllabus
MTH G101 Analysis I
Fall 2003

Instructor: Chuu-Lian Terng

Office: Lake 519

Class hours: Monday, Wednesday 5:50pm- 7:20pm, Room: Lake 509

Office hours: to be announced

Text : Introduction to analysis, by Maxwell Rosenlicht, publisher: Dover

Reference: Principles of mathematical analysis, by Walter Rudin, publisher: McGraw-Hill

Course outline

This course will cover Chapter 3 to Chapter 10 of the text by Rosenlicht. The emphasis will be on the basic concepts of analysis, including the topology of the metric spaces, convergence, continuity and differentiability of functions, and the elementary theorems of calculus. The Riemann integral will be constructed and its basic properties derived. We will also explain the method of successive approximations, and its applications to ordinary differential equations. This course prepares students for the application of analysis in differential equations, geometry, probability and other area of mathematics. Although the first part covers familiar topics, the ideas and methods introduced here are fundamental, and are used in all area of analysis.

There will be homework assignments and projects. Since projects will involve computations, students with no programming experience are encouraged to take the 2 QH Computer Techniques course.