Course Notes MAT 1214.007 Spring 2004

Course Syllabus

Course: MAT 1214.007 meets TR 930-1045 in HSS 3.03.16, W 1300-1350 in MS 2.02.35
Instructor: Dr. Walter Richardson
Office Hours: W 1200-1300, R 1230-1330 in SB 3.01.10
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Textbook: We will not use a textbook, rather you will be given a sequence of definitions, exercises, and theorems as lecture notes, based in part on H. S. Wall’s Creative Mathematics.

Course Scope: This course will cover the concepts of limit, continuity, derivative, mean value theorem, applications of derivatives such as velocity and acceleration, maximum and minimum of functions, curve sketching, introduction to Riemann integration, and the Fundamental Theorem of Calculus.

Course Objective: To develop mathematical and logical skills which are needed in more advanced mathematical, science, engineering, and business courses. Students are expected to prove theorems and understand the proofs of theorems presented by others. A sequence of definitions and theorems will be presented during each class period. Students are expected to work on these and remaining open problems from earlier classes, and to be ready to present their results at the board during the next class meeting. Work is to be done individually, without recourse to outside resources - including textbooks, classmates, friends, or former instructors. I will be available during posted office hours and by appointment, to meet with students who want to “run an argument by me” or have questions over theorems already proven in class. The examinations will cover definitions and theorems previously proven in class. It is important that you make every effort to attend each class, so that you have a current list of definitions, theorems, and proofs. One goal of the course is to develop the ability to present one’s results to a mathematical audience. I will keep a list of who has proofs for which theorems and who presents the proofs at the board; the list will be used at the end of the semester to determine the fraction of your overall grade (50%) which depends upon class participation. By the middle of the semester there will also be ample opportunity for extra credit, i.e., I will from time to time state extra theorems over and above the main sequence covered class. Students who wish to do so can work on these problems on their own and present them individually during my office hours.

Grading: Class presentations 50%, 1 in-class examination 25%, final examination 25%.