Syllabus
Econ 1088 - 001 Math Tools for Economists II
Summer 2007

Instructor: Tianle Zhang
Class Hours: MTWRF   11:00 - 12:35pm
Class location: ECON 205
Office: Econ 307
Office Hours: MTWR: 12:35-1:05pm or by appointment
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1088 Common Website: http://www.colorado.edu/economics/courses/ECON1088/1088home.html

Course Description: This class is a continuation of ECON 1078. The purpose is to help students to acquire the mathematical tools they need in advanced economic courses (e.g. Intermediate Microeconomics and Macroeconomics). By the end of the semester, students know what a derivative is and how to take derivatives as well as their economic applications. We will start with single-variable functions and move on functions of many variables. The class time will be mainly spent on lecturing and problem solving.

Prerequisite:
Econ 1078 or equivalent

Textbooks Required: Knut Sydsaeter and Peter Hammond, "Essential Mathematics for Economic Analysis", Second edition (You will be expected to have, and know, this book throughout your undergraduate career as an economics major.)

Homework:
Homework will be assigned daily so that you can practice with the new material. This homework will not be graded.

Exams:
Three midterms and one comprehensive final will be given. All exams are given in the classroom. Exact exam time will be announced at the first class.

Grading:
Midterms will make up 60% of your grade (20% each)
Cumulative Final will make up 40% of your grade

Letter Grading:
90-100 A
80-89 B
70-79 C
60-69 D
Below 60 F

Tentative Course Outline
Chapter 6 Differentiation:
6-1 Slopes of Curves
6-2 The derivative. Tangents
6-3 Increasing and Decreasing Functions
6-4 Rates of Change
6-5 A Dash of Limits
6-6 Simple Rules for Differentiation
6-7 Sums, Products, and Quotients
6-8 Chain Rule
6-9 Higher Order Derivatives
6-10 Exponential Functions
6-11 Logarithmic Functions

Chapter 7 Derivatives in Use:
7-1 Implicit Differentiation
7-2 Economic Examples
7-7 Why Economists Use Elasticities

Chapter 8 Single-Variable Optimization:
8-1 Introduction
8-2 Simple Tests for Extreme Points
8-3 Economic Examples
8-4 The Extreme-Value Theorem
8-5 Further Economic Examples

Chapter 11 Functions of Many Variables:
11-1 Functions of Two Variables
11-2 Partial Derivatives with Two Variables
11-5 Functions of More Variables
11-6 Partial Derivatives with More Variables
11-7 Economic Application
11-8 Partial Elasticities

Chapter 13 Multivariable Optimization:
We will cover this in detail commensurate with available time

General policies:
1) It is the students' responsibility to take control of their own education. If you are having problems, I am more than willing to help you. You just need to approach me at some point.
2) No make-ups will be given unless there is a proven emergency that prevents you from attending class on the scheduled exam date. You are required to submit proof of the emergency. If you miss an exam or a quiz, you will be given a zero. Moreover, if you need to tak4(7nW879.1314 4Paa)0.1(dwill botrt)4[tak4(7nW870.5[tak4(7nW879.ill b)4.h)-1.8dul)-5.7(d(e)5.)4.9((s)2o)4.