UNIVERSITY OF COLORADO AT BOULDER
Department of Economics

Course Syllabus

ECON 1088-002 Math Tools for Economists II

Fall 2007

Instructor: Watcharapong Ratisukpimol

Class Meetings: MWF 12:00-12:50 PM

Class Location: HLMS 211 (Hellems Arts and Sciences)

Office: ECON 401 (3rd floor of ECON building)

Office Phone: (303)-492-7116

Office Hours: MWF 11:00 AM - 12:00 PM or by appointment

Webpage:
http://ucsu.colorado.edu/~ratisukp

The webpage is the most important resource for this class. All notes, quizzes, exams and answer keys are going to be posted on this site. It is your responsibility to check any updated information from the class webpage.

http://www.colorado.edu/economics/courses/ECON1088/1088home.html

This is a joint webpage of ECON 1088 instructors. It is provided as a supplement to the course materials for ECON 1088. We, all ECON 1088 instructors, maintain the page to provide questions, quizzes, and handouts so that students can access to the materials of other instructors.) Moreover, you can find homework and exams from previous semesters here.

E-mail: watcharapong.ratisukpimol@colorado.edu (preferred method of contact and please include "ECON 1088" in subject of the e-mail.)

Class Time: August 27th – December 14th, 2007

Course Description:

This course provides an introduction to fundamental mathematics, which are essential to analyze economic problems. It is

k on which econom ic models are based. We will start with a review of ECON 1078, limits and derivative, the rules of differentiation, optimization in the case of single variables and many variables. Economic applications will also be introduced. For the complete list of topics, see the

course outline below. The class consists of lectures, quizzes and in-class discussion that enhance understandings of the materials.

Prerequisite: ECON 1078 or equivalent

Required Textbook:

Essential Mathematics for Economic Analysis, 2nd edition,
Knut Sydsaeter and Peter Hammond

Note that this textbook is the official mathematics reference book for your undergraduate career as Economics major. All of the faculty will assume that you have a copy of the book and know its content. You are expected to keep this book until you graduate.

Grading:

Grades will be determined on the basis of your performance on quizzes, 3 midterms, and a cumulative final exam. Quizzes can be either 15-20-minutes in-class individual quiz or take-home quiz. **Your TWO lowest quiz-grades will be dropped.** The quiz grade is worth 20% of your overall grade. No make-up quiz is given if you miss the class on that day.

The midterms will be administered on September 26th (Wednesday), October 24th (Wednesday) and November 14th (Wednesday) in class. Each test is worth 20% of the course grade. The midterms are not cumulative and will cover only the material since the previous test. **The lowest in-class midterm grade will be nr****BDC BT/TT0 1 Tf0 Tc 0 Tw 2**

Final grade will be assigned based on a following scale but I reserve the right to curve the grades.

100-93%	A	73-76%	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-86%	B	63-66%	D
80-82%	B-	60-62%	D-
77-79%	C+	0-59%	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
11-3 Geometric Representation
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

misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at http://www.colorado.edu/policies/honor.html and at http://www.colorado.edu/academics/honorcode/

Religious Observance Policy:

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please notify me as soon as possible so that the proper arrangements can