

## **Course Syllabus**

### **Course Information**

ECON 4351.001  
Mathematical Economics  
Spring 2013  
Meets TR 1:00-2:15 p.m. in GR 3.606

### **Instructor Contact Information**

Malcolm Kass  
[malcolmkass@utdallas.edu](mailto:malcolmkass@utdallas.edu)  
Office Location GR 2.816  
Office Hours Thursday 2:30-3:30 p.m. and by appointment

*I will be available after each class to answer questions. I will make every effort to respond to emails and voice mail messages within 24 hours during the week. During weekends, I may take longer.*

### **Course Pre-requisites, Co-requisites, and/or Other Restrictions**

Prerequisites: ([ECON 3304](#) or [STAT 1342](#) or [EPPS 3405](#)) and ([MATH 2419](#) or [MATH 2414](#) or [MATH 1326](#)).

### **Course Description**

This course is an introduction to mathematics used in economics. The main focus is on multivariate calculus and linear algebra.

### **Required Textbook**

Chiang, Alpha C., and Kevin Wainwright, *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill/Irwin, 2005. ISBN: 0-07-010910-9

### **Student Learning Objectives/Outcomes**

By the conclusion of the course, the student should be familiar with a wide range of mathematical techniques used in undergraduate level economics programs abroad and graduate level economics programs in the US.

Specifically, the student should learn to:

- Solve for equilibrium in a variety of economic models
- Solve economic optimization problems
- Perform comparative static analysis
- Work with matrices and understand their properties
- Think critically about the formal structure of economic models

## Readings & Academic Calendar

### Exam Dates

Exam 1	January 29 <sup>th</sup>
Exam 2	February 26 <sup>th</sup>
Exam 3	April 2 <sup>nd</sup>
Exam 4	May 9 <sup>th</sup>

### Course Outline and Readings (Tentative)

January 15th	Introduction; Chapters 1-2
January 17th	Chapter 3
January 22 <sup>nd</sup> , 24 <sup>th</sup>	Chapter 4

#### **January 29<sup>th</sup>**

#### **Exam 1**

January 31 <sup>st</sup> , February 5 <sup>th</sup> , 7 <sup>th</sup> , 12 <sup>th</sup>	Chapter 5
February 14 <sup>th</sup>	Chapter 6 *I may not take class time for this chapter, may just give handout
February 19 <sup>th</sup> , 21 <sup>st</sup>	Chapter 7

#### **February 26<sup>th</sup>**

#### **Exam 2**

February 28 <sup>th</sup> , March 5 <sup>th</sup> , 7 <sup>th</sup> , 19 <sup>th</sup>	Chapter 8
March 21 <sup>st</sup> , 26 <sup>th</sup>	Chapter 9
March 28 <sup>th</sup>	Chapter 10 *I may not take class time for this chapter, may just give handout

#### **April 2<sup>nd</sup>**

#### **Exam 3**

April 4 <sup>th</sup> , 9 <sup>th</sup> , 11 <sup>th</sup>	Chapter 11
April 16 <sup>th</sup> , 18 <sup>th</sup> , 23 <sup>rd</sup>	Chapter 12
April 25 <sup>th</sup> , 30 <sup>th</sup> , May 2 <sup>nd</sup>	Chapter 13
	Chapters 14 and Chapters 15 (if have time)

#### **May 9<sup>th</sup>**

#### **Exam 4, 11:00 a.m. to 1:45 p.m., GR 3.606 \*this will not be a comprehensive final**

### Grading Policy

15% Exam 1
20% Exam 2
30% Exam 3
35% Exam 4

### *Homework/Class Participation*

Class participation, Attendance, and Homework are important components of this class. While neither will be graded formally, both will help in understanding the material. I will provide answer keys from the book's authors, and at times, I will provide more extensive answer keys when necessary.

## Exams

Exam questions will be derived from the Homework problems. (note that this does not mean “exactly”, for the exam questions will share some of the same mathematical structure as the Homework) Each exam will be graded on a 100 point scale (% correct). These will be combined using the weights above and then translated into final letter grades (A+ through F) as follows:

98 – 100	A+
93 – 97	A
90 – 92	A-
88 – 89	B+
83 – 87	B
80 – 82	B-
78 – 79	C+
73 – 77	C
70 – 72	C-
68 – 69	D+
63 – 67	D
60 – 62	D-
Below 60	F

## Course & Instructor Policies

There are no make-up exams. If you miss an exam, you will need to see me. Your consistency in completing the Homework problems in preparation for class will determine your success in the course. You should attend class and complete the Homework problems in a manner consistent with the flow of the class. If you do not complete the Homework problems in a timely manner and instead let the work accumulate until a day or two before the exam, you will likely falter. There will be no extra credit opportunities. It has been said that “learning math is like playing a sport or a musical instrument; the more you practice, the better you get.” That is still true for this class.

## Economics Lab

The Economics Program maintains an Economics Lab to assist students with coursework. The lab is staffed by Ph.D. students in Economics and exists primarily to serve undergraduate students who want extra help on analytics, problem sets, reviews, etc.

Students from all UTD undergraduate Economics classes are eligible to receive help. If the T.A. on duty does not know the answer to a specific question, he/she will seek guidance from the Instructor.

The Economics Lab is located in GR 3.416 (Galveston Room) and is open on MTWR from 3:00 p.m. to 7:00 p.m. (at least this was true last year) The room has PCs for econometric work and a large whiteboard for group discussions.

## UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

***The preceding descriptions and timelines are subject to change at the discretion of the Instructor.***