Econ 2301
Mathematical Economics
Spring 2017

Instructor: Xin Liang
Lectures: Monday and Wednesday **1**2:20pm - 13:10pm, BCH302
Office Hours: Thursday 13:30pm - 15:30pm, Oak 307
Email: xin.liang@uconn.edu

TEXTBOOK

Fundamental Methods of Mathematical Economics, 4th edition (2005) by **Chiang, A. and Wainwright, K.** (required)

PREREQUISITES

Course prerequisites are: Econ 1200, 1201 and 1202; Math 1071Q,1110Q ,1121Q and 1131. For those who have already been familiar with the contents covered in the course, you could benefit from learning the application in economic problems.

COURSE DESCRIPTION

The purpose of this course is to introduce the fundamental mathematical methods used for economic analyses such as matrix algebra, comparative statics, optimization. After completing this course, you are expected to be able to understand the basic math methods in economics.

GRADING

1) Weekly Homework (30%). There will be a **4 in class quizzes** during the semester and **only the best 3 will count.**

2) 2 Midterm Exams (20% each)

3) Final Exam (30%)

• Midterm exams are pre-scheduled to be hold on **September 27th (week 5) and November 1st (week 10)**
• No make-up midterm exams are allowed unless official documentation from athletic center or hospital can be presented.
• Final exam will be **cumulative**. If you have a conflict with your final exam time you must obtain official permission to schedule a make-up exam with the Office of Student Support and Advocacy (OSSA), see http://cetl.uconn.edu/syllabus-design/ for more information.

QUESTIONS AND APPOINTMENTS

If you have any questions, contact me by email or stop by during my office hours.

Meeting in person is encouraged but please come with specific questions.

Course Outline

Week 1-Week 5

• Matrix Properties

• Matrix Algebra

• Linear models and application

• Derivative, differentiation and comparative static analysis

Midterm 1 (Sep 27th)

Week 6- Week 10

• Multivariate calculus

• Comparative static analysis of general function

• Derivative test and optimization

• Exponential and logarithmic functions

Midterm 2 (Nov 1st)

Week 11- Week 15

• Multivariate unconstrained optimization

• Constraint in optimization

• Multivariate optimization with constraint

• Further topics in optimization

• First-order differential equation and Solow model (if time allows)

(Schedule is subject to change according to class progress)