

Econ 2301  
Mathematical Economics  
Fall 2016

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**Instructor:** WANG, Xiupeng  
**Office:** Oak Hall 320  
**Lectures:** TuTh 3:30pm - 4:45pm Oak 104  
**Office Hours:** TuTh 1:30pm - 2:30pm  
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TEXTBOOK

*Fundamental Methods of Mathematical Economics*, 4th edition (2005)

**Chiang, A. and Wainwright, K.**  
**Publisher:** McGraw-Hill  
**ISBN-10:** 0070109109  
**ISBN-13:** 978-0070109100

COURSE DESCRIPTION

Economics today has developed to a level that is highly depend on sophisticated mathematical tools in order to disentangle the complex phenomena, to describe the theories and to verify the explanations. The purpose of this course is to introduce the fundamental mathematical methods used for economic analyses such as matrix algebra, equilibrium analyses, and optimization theory etc. In this class, we intend to cover major types of economic analysis: statics (equilibrium analysis), comparative statics, optimization problems, dynamics, and dynamic optimization.

## ACADEMIC MISCONDUCT

Academic Misconduct in any form is in violation of the University of Connecticut Student Code and will not be tolerated. This includes, but is not limited to: copying or sharing answers on tests, plagiarism, and having someone else do your academic work. Depending on the act, a student could receive an F grade on the test/assignment, F grade for the course, and could be suspended or expelled from the University. Please see the Student Code at <http://www.dosa.uconn.edu/code2.html> for more details and a full explanation of the Academic Misconduct policies. With respect to problem sets and reviewing for exams, working in a small group can be very helpful in terms of the learning process. However, each person is still responsible for handing in their own (unique) work.

## OTHER UNIVERSITY POLICIES

- <http://provost.uconn.edu/syllabi-references/>
- Policy Against Discrimination, Harassment and Related Interpersonal Violence
- Statement on Absences from Class Due to Religious Observances and Extra-Curricular Activities
- Suggested Language from the Center for Students with Disabilities

## REQUIREMENTS

- (i) **Two Midterm Exams (30% each)**
- (ii) **Final Exam (40%)**

## EXAM POLICIES

- If you miss **either one** of the midterm exams *for whatever reason*, then the final exam will make up **70% of the final grade**.
- If you miss **both** midterm exams *for whatever reason*, then the final exam will make up **100% of the final grade**.
- The above rule only applies to those who do not participate in the midterm exams. **Once you took a midterm exam, it will make up 30% of the final grade.**
- **There will NOT be any make-up midterm exam nor make-up quiz.**

- The first midterm exam is scheduled on **Tuesday, Sept. 27th, 2016**, during class time.
- The second midterm exam is scheduled on **Thursday, Oct. 27th, 2016**, during class time.
- Make-up final exam will **only** be granted through dean of students office.

## COURSE OUTLINE

1. Matrix Algebra
2. Matrix Properties
3. Linear models and application
4. Derivative, differentiation and comparative static analysis
5. Multivariate calculus
6. Comparative static analysis of general function forms
7. Derivative test and optimization
8. Exponential and logarithmic functions
9. Multivariate unconstrained optimization
10. Constraint in optimization
11. Multivariate optimization with constraint
12. Economic applications
13. Further topics in optimization