Econ 340 Mathematical Economics, Spring 2016

Lecturer: Hannah Mead
Contact information: hmead@gmu.edu
Office hours: Wednesdays from 2:00-2:50pm, Mason Hall 151-a
Class: Monday and Wednesday from 3:00-4:15pm, Robinson B222

Course Goals

This course covers fundamental elements of mathematical economics. This course provides an essential foundation for graduate studies in economics as well as business careers, by laying out the mathematical determination of equilibrium and optimal values. Students will develop mathematical and critical thinking skills, and learn how and when to apply them to economic models and practical problems. This course also provides the context of mathematical economics tools, emphasizing both their power and their appropriate boundaries. By the end of this course, students should know how and when to apply mathematical economics tools, and be able to understand economic models used in academic papers.

Important Dates

Drop dates:

Last day to drop with no tuition penalty: January 26, 2016
Last day to drop with a 33% tuition penalty: February 2, 2016
Final Drop Deadline (67% tuition penalty): February 19, 2016

Exam dates:

Midterm exam: TBD
Final exam: Monday, May 9, 2016, from 1:30-4:15 pm in Robinson B222
(The Final Exam date is subject to change based on University procedures; check http://registrar.gmu.edu/topics/final-exam-locator/ for any changes.)

Finals scheduling conflicts: **Inform me by February 2** if you have a university-related scheduling conflict with the final (i.e., three finals on the same day). Past that date, I will not make any accommodations for you to take the exam at a different time. At no point will I accommodate you if you decided to book a conflicting flight or other event.

Prerequisites

ECON 306, ECON 311 (Intermediate Micro and Intermediate Macro), and MATH 113 (Calculus). If you do not have all of these prerequisites, you must get written permission from me by January 25, 2016, in order to continue this course.

Required Materials

1. Required textbook: Fundamental Methods of Mathematical Economics, 4th edition, by Alpha C. Chiang and Kevin Wainwright

2. Required communication channel: GMU email. I will communicate any important information about the class via email, so you must have access to and regularly check your GMU email.

3. (Recommended) We have a class facebook page for you to share relevant issues or ask each other questions about class. Go to https://www.facebook.com/groups/Econ340S16/ to request access.

Assignments and Grading

Quizzes and homework (25% of your grade)

Exams (60% of your grade)

The midterm is worth 25% of your total grade and the final is worth 35% of your total grade.

Classroom participation and interaction (15% of your grade)

Topics

Basics

- Mathematical economics (chapter 1)
- Economics models (chapter 2)

Equilibrium analysis

- Partial and general equilibrium (chapter 3)
- Linear algebra (chapters 4 and 5)

Comparative statics

- Differentiation and its uses in economics (chapters 6-7)
- Analysis of models (chapter 8)

Optimization

- Finding optimal levels of choice variables (chapter 9)
- Constrained optimization (chapters 12-13)
- Dynamic optimization (chapters 14-15)

Honor Code

The honor code is in full effect for this course, and I will bring any violations to the Office of Academic Integrity. The honor code states: “Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.” For information about the honor code and how not to violate it, go to http://oai.gmu.edu/the-mason-honor-code-2/.

Accommodations for Disabilities

If you have a documented learning disability or other condition that may affect academic performance, you should: 1) make sure this documentation is on file with Office for Disability Services (SUB I, Rm. 2500; 993-2474; http://ods.gmu.edu) to determine the accommodations you need; and 2) communicate with me by February 1, 2016, to discuss your accommodation needs.

Potential Syllabus Changes

This syllabus is intended to give the student guidance in what may be covered during the semester. However, I reserve the right to modify, supplement and make changes to the course and grading as needs arise. I will communicate any significant changes to students via email and in class.