Advanced Microeconomics II Syllabus

WISE, Xiamen University

Spring 2014

Course Information

Time	:	Monday, Wednesday 10:10-11:50,
Location	:	Monday - 南二405, Wednesday - 南二305

Instructor's Information

Name	:	Brett Graham
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Office	:	Rm A301 Economics Building
Phone	:	592 218 8237
Office Hours	:	Friday 08:30–10:30

Teaching Assistant's Information

Name	:	高小奕 (Gāo Xiǎoyì)
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Office Hours	:	TBA
Weekly Review	:	TBA

Course Content

This is a core course designed to teach students the current tools of microeconomic analysis, and is a natural continuation of Advanced Microeconomics I. While the focus of learning in Advanced Microeconomics I was the classical theory of choice and perfectly competitive markets, the core concept of Advanced Microeconomics II is Nash equilibrium. This concept and its subsequent refinements will be applied to the analysis of strategic interaction, problems involving information and incentives and the functioning of imperfectly competitive markets.

At the end of the course students should be able to understand and critique the literature in a wide number of fields that heavily use the concepts, including labor economics, industrial organization, public finance, development, and even macroeconomics. What students learn here will form much of their basic repertoire as a professional economist in the future!

The class time will be divided into lecture and discussion. Students are encouraged to raise questions in the class. It is a good practice to think actively as an economist. The problem sets consist of applications of concepts learnt in class. The purpose of the problem sets is to test the student's understanding of these fundamental concepts. Students need to be able to confidently answer questions in the problem sets if they want to do well in the exams.

Prerequisites

The prerequisite for this course is Advanced Microeconomics I. Students are presumed to be familiar with multivariate calculus, probability theory and basic optimization theory.

Grading

To determine your grade for the course, the assessable material will be weighted as follows:

Final Exam 50%; Mid-term Exam 30%; In-class Quizzes 20%

Exam Dates

The mid-term exam will be held on Wednesday April 9 (tentative). The final exam will be held on Wednesday June 11 (tentative).

Problem Sets and In-class Quizzes

There will be an in-class quiz every third Thursday at the start of class. The question(s) asked will be based on one of the questions from the problem set that will be handed out the previous Thursday. Answers to the problem sets will be provided after the quiz.

Textbook

Required : Osborne, Martin J. and Rubinstein, Ariel, *A Course in Game Theory*, MIT Press, 1994.
Gibbons, Robert, *Game Theory For Applied Economists*, Princeton University Press, 1992

Optional : Mas-Colell, Andreu, Whinston, Michael D. and Green, Jerry. R, *Microeconomic Theory*, Oxford University Press, 1995.
Osborne, Martin J., *An Introduction to Game Theory*, Oxford University Press, 2003
Fudenberg, Drew and Tirole, Jean, *Game Theory*, MIT Press, 1991.

University Rules

The following is a brief translation of the university's rules regarding class participation and exams. (《厦门大学研究生选课与成绩管理办法》- part 5 (五、成绩管理) - items 3 and 4 (关于旷课、缺考、缓考)):

Class participation:

"If a student is absent from a course for 1/3 of the classes, this will result in a direct 'failure' in the course; the same applies if a student is absent from the exam without making an application in advance for a later make-up exam with good reason."

Make-up exams:

"In the case of application for a later make-up exam, the application needs to be made in advance using a specific form obtained from the course secretary. The form needs to be approved first by me, then by the WISE dean or vice dean. Once this is permitted, a make-up exam can be given once the course is offered again. No early or individual exam can be organized."

Letters of Reference

For those students who want to use me as a reference in the future, you must satisfy one of the following criteria

- You must be applying for an economics or finance graduate program.
- You must have ranked in the top 10% of a class that I teach/taught.
- I have been/am your adviser for your thesis.
- You have been/are my research assistant.

If I am your referee I will comment on the following things

1. Your enthusiasm for the subject as shown by your willingness to ask questions both during and outside of class or by your research efforts.
2. Your academic performance.
3. Your motivation for graduate school study.
4. Your level of English.

If I am unable to comment on any one of these matters it will reflect badly on you in my report. For those students who qualify, you should make a request at least one week before the due date and provide the relevant details for the forms (fill out the student particulars on any paper-based forms), provide me with your CV and academic transcript, and waive your right of access to the recommendation letter (i.e., any letter written will be sent directly to the institution and *not* given to you). You may also provide a written summary of examples that help me comment on items 1-4.

Course Calendar

The following course calendar is a tentative schedule of when various topics will be covered. Please understand that this schedule is intended to give an overview of the semester but will probably not be useful in knowing what material will be covered on a given day.

Week	Topic	O&R Ch. #	Gib Ch. #
1	Introduction to games		
2	Normal Form Games	1,2.1-2.5	1.1-1.2
3	Pure Strategy Nash Equilibrium	1,2.1-2.5	1.1-1.2
4	Mixed and Correlated Equilibrium	3.1-3.3	1.3
5	Rationalizability	4	
6	Applications	4	
7	**Mid-term Exam, Wendnesday, April 9**		
8	Extensive Form Games of Complete Information	6.1	2.1
9	Sub-game Perfect Equilibrium	6.2-6.5	2.2
10	Bargaining games	7	2.1
11	Repeated Games	8	2.3
12	Static Bayesian Games and Bayesian Nash Equilibrium	2.6	3.1
13	Signaling Games and Perfect Bayesian Equilibrium	12.3	4.2
14	Job-Market Signaling	12.3	4.2
15	Sequential Equilibrium	12.2	
16	No class		
17	**Final Exam Wednesday, June 11**		