

Department of Economics
UC Berkeley

Prof. Cristian Santesteban
Office: Evans 697
Office Hours: Tuesdays, 2:30-4:30pm
csantesteban@berkeley.edu

Econ 104 – Spring 2012

Advanced Microeconomic Theory - SYLLABUS

180 TAN, T-Th, 12:30-2

Welcome to Econ 104!

This is an advanced undergraduate microeconomic theory course. It will cover topics that were not covered in Econ 101A or were covered only in limited fashion. The level of rigor will resemble and exceed that of Econ 101A. This class will help you prepare for graduate school in economics, but it is not a graduate course. As such, the mathematical treatment will not be as formal as a graduate micro course. The course will focus on the analytical tools of modern microeconomics – especially game theory and information economics – and will apply these tools mostly to problems related to industrial organization, e.g., imperfect competition, auctions, contracts, price discrimination, etc. I hope it will be a fun and exciting journey through some of the most interesting topics in modern economics.

Prerequisites: The prerequisite is a solid foundation in microeconomics (Econ 101A). To enroll in the course you must be familiar with the basic concepts of game theory at the 101A level. There is probably variance in the extent of exposure to the materials in the course, and there may be gaps that one should catch up on. Please come to see me as soon as possible if you do not feel confident that you have the necessary background.

Textbook: Osborne, Martin J., *An Introduction to Game Theory*, Oxford University Press, 2004 and Wolfstetter, Elmar, *Topics in Microeconomics: Industrial Organization, Auctions, and Incentives*, Cambridge University Press, 2002. I will also supplement these books and the lectures with additional handouts from other sources.

b-space: I will use bspace extensively. Lecture outlines will be uploaded the day before the lecture to the extent possible. I will also use bspace to post announcements, problem sets, and additional reading materials.

Communication with me: You can see me during office hours at my office 697 Evans on Tuesdays 2:30-4:30 pm or by appointment. You can also email me at csantesteban@berkeley.edu.

Grading:

	% of Total Grade	Date
Midterm	30	Tuesday, March 20
Final Exam	45	Thursday, May 10
Homework	25	Throughout Semester

I curve the grades at the end of the course. I will rely on the following rough distribution of grades: 30-35% As, 40-45% Bs, 15-20% Cs.

Problem Sets: Problem Sets will be posted on b-space one or two weeks before they are due. They must be turned in at the **beginning** of lecture the day they are due. If you cannot be in lecture or have a friend bring it, your GSI must have your problem set *in hand before class*. You can scan it as a pdf and email it via email if necessary. Turning it in during section prior to lecture is a suggested alternative; your GSI is not responsible for coordinating his/her schedule to receive your problem set. Due to departmental policy you may not leave your problem set in your GSI's mailbox. Homeworks will be graded on a check-plus, check, check-minus basis.

Problem sets more than 2 minutes late will drop you one grade category down, e.g. from a check + to a check. Problem sets turned in more than 24 hours late receive no credit. I will drop your worst score in calculating your overall homework score. Thus, you can miss up to one problem set without any penalty. ***You are encouraged to work in groups but every student must hand in their own version of the answers.***

Exams: Exams will have ample space for your responses; you are not required to bring exam booklets. I will also provide scratch paper. Graphing calculators, laptops, phones, or other electronic devices are not allowed during the exams. You may bring a small, basic calculator with no memory function.

Special accommodations: If you require special accommodations for exams or lecture due to learning or other disability, please speak with me as early as possible. You will eventually need to obtain an evaluation form from Disabled Students' Program (dsp.berkeley.edu, 260 Cesar Chavez Student Center), which they will send electronically to me.

There will be no make-up midterms or final exams. If you cannot take the final exam at the scheduled time, you cannot take this course. It is the student's responsibility to notify the instructor in writing by the second week of the semester of any potential conflicts with the midterm due to sports, religious holidays, etc.

Regrades: There will be no regrades on homeworks. For exams, you have one week after receiving your exam to write a written request to me or to your GSI to have your exam entirely regraded. Your grade can increase or decrease afterward. Of course, if there are obvious computation errors in adding up the score, then you can bring that up directly with me and I will correct it.

Cheating: Incidents of academic dishonesty will be reported to the Center for Student Conduct and Community Standards. See campuslife.berkeley.edu/conduct for University policy and procedures.

GSI:

Your GSI for this class is Tarso Madeira, tmadeira@econ.berkeley.edu. He will post his office hours on bspace.

Learning Goals:

As part of Berkeley's Undergraduate Student Learning Initiative, the Economics Department has developed learning goals for the Economics major.

See http://emlab.berkeley.edu/econ/ugrad/ugrad_goals.shtml.

The specific learning goals which this course aims to achieve are:

CT1: Understand everyday economics problems

CT2: Use economic theory to understand and evaluate policy proposals

CT3: Compare arguments

CT4: Role of assumptions

PS1: Solve problems with clear solution

CS1: Communicate effectively about economic issues

LL2: Primary data sources

LL3: Understand economic news

Schedule:

Lecture	Date	Topic	Osborne	Wolfstetter	PS Due
1	17-Jan	Intro to Game Theory & Nash Equilibrium	1, 2		
2	19-Jan	Nash Equilibrium Theory	2		
3	24-Jan	Nash Equilibrium Applications	3, 4		
4	26-Jan	Uncertainty and Risk	Ch. 7 (Nicholson)		1
5	31-Jan	Mixed Strategies	4		
6	2-Feb	Extensive Games with Perfect Information	5		2
7	7-Feb	Extensive Games with Perfect Information - Applications	6		
8	9-Feb	Bayesian Games	9		
9	14-Feb	Bayesian Games & Extensive Games w/ Imperfect Info	9, 10		
10	16-Feb	Extensive Games with Imperfect Information	10		3
11	21-Feb	Repeated Games - Prisoner's Dilemma	14		

12	23-Feb	Repeated Games - General Results	15		4
13	28-Feb	Optimization Theory and Monopoly		Appendix B & 1.1, 1.2	
14	1-Mar	Monopoly and Price Discrimination		1.2, 1.3	
15	6-Mar	Second Degree Price Discrimination		1.4	
16	8-Mar	Intertemporal Price Discrimination		1.6	5
17	13-Mar	Oligopoly		3.1-3.3	
18	15-Mar	Oligopoly		3.5, 3.6	6
19	20-Mar	Midterm			
20	22-Mar	Auctions		8.1, 8.2	
Spring Break March 26-30					
21	3-Apr	Auctions		8.5	
22	5-Apr	Auctions		8.6	7
23	10-Apr	Hidden Information and Adverse Selection		9.1-9.3	
24	12-Apr	Hidden Information and Adverse Selection		9.4-9.5	8
25	17-Apr	Hidden Information and Signaling		10.1-10.3	
26	19-Apr	Hidden Information and Signaling		10.5	
27	24-Apr	Hidden Action and Moral Hazard		11.1, 11.2	
28	26-Apr	Hidden Action and Moral Hazard		11.3, 11.4	9

RRR Week April 30-May 4					
Final Exam	10-May	3-6pm			