Economics 109 – Game Theory, Spring 2013

T/Th, 2-3:20 pm, Peterson Hall 110

Instructor: Cecile AUBERT
Email: caubert@ucsd.edu
Office Hours: Thursday, 10:30-12 am
Class Web Page: TED
Prerequisites: Econ 100C or Math 31CH or Math 109

Discussion section: W, 5-5:50 pm

COURSE DESCRIPTION:

This course examines strategic situations, in which each agent's behavior generally affects the well-being of the other agents. Game theory is a technical framework for rigorously analyzing decision-making in such settings.
We focus on human interaction, and we shall assume that people behave in a rational, deliberate manner.
Theoretical tools and analyses will be followed, for each topic, by applications from various fields.

REQUIRED READING:

WATSON, Joel, *Strategy: An Introduction to Game Theory* (W.W. Norton), SECOND EDITION

HOMEWORK:

Homework will not be graded. Doing it consistently is however strongly advised if you wish to succeed in the class. Plus it will count towards the final grade.

COURSE MATERIAL:

Materials will be posted at https://ted.ucsd.edu/ on the page for Economics 109.
Students should log in regularly and check for announcements.

T.A. CONTACTS AND OFFICE HOURS

Andrew Brownback   (abrownback@ucsd.edu, Econ 128), office hours: TBA;
Patrick "Mitch" Downey   (pmdowney@ucsd.edu, Econ 119), office hours: TBA;
Naveen Basavanhally   (nbasavan@ucsd.edu,   ), office hours: TBA

EXAMS: There will be one midterms and one final. Dates are **not** negotiable.

Midterm : date and location TBA
Final Exam: 06/11/2013, location TBA

GRADES: Homework (10%, not marked), Midterm (40%), Final (50%). Grades will be curved.

ADMINISTRATIVE ISSUES:

1. If you have a documented disability, please come to talk to me as soon as possible so that I can make suitable accommodations for you. If you believe that you have a disability and desire accommodation, please register with the Office for Students with Disabilities.

2. Students found guilty of academic dishonesty will earn a failing grade for the course. In addition, the Council of Deans of Student Affairs will impose a disciplinary penalty.

3. If you need to miss a midterm for a verifiable medical/legal/sports reason, your midterm grade will be your grade on the final. Failure to notify me promptly that you must miss a midterm will result in a zero grade for that midterm. Unexcused absences will also result in a zero.

4. If you arrive late to an exam, I will allow you to take the exam in the time that remains *as long as no one has turned in his/ her exam and left the room*. Once a classmate has turned in his/her exam, you will earn a zero on the test if you arrive late.

5. After the University add deadline, students with extraordinary circumstances or with documentation of a university error may petition the Department of Economics to add courses. Extraordinary circumstances do not include: not being added to the course from the waitlist, forgetting to add a course, etc. Students with an extraordinary circumstance may submit a completed petition, with a written explanation (and documentation, if applicable) to Sequoyah Hall room 245.

6. Students have one week from the day in which the midterm examinations are returned to report errors in grading and/or to request that problems be re-graded. If a student submits his/her exam for re-grading, then the student's entire exam will be re-graded (with no guarantee of a higher total score).

7. Students should attend and participate in class; their mobile phones and other devices should not. Students are expected to act in a considerate way to their fellow students, who are entitled to good listening conditions.

TIPS TO DOING WELL:

1. *Attend the lectures*. All will not be on the slides nor on the posted material. Some material will only be presented in class, on the board.

2. *Practice*, practice, practice. Do the homework and practice solving the games seen during the class, without your notes.

3. *Always try to do the exercises alone before looking for the answer*. Once you see the answer, or get it from a TA, you may find it obvious. But you need to practice to identify which tool and method to use, and how to do it on your own.

PRELIMINARY COURSE OUTLINE

Not all topics will be covered.

Unless otherwise stated during the class, students are not required to know topics that have not been discussed in class or during the discussion section or presented in homeworks.

Topic	Chapters in the textbook
A. Representing Games	
Extensive form, strategies	1 – 3
Normal form, beliefs/mixed strategies	4 – 5
B. Static Settings	
Best response, rationalizability, applications	6 – 8
Equilibrium, applications	9 – 10
Other equilibrium topics	11 – 12
Contract and law	13
C. Dynamic Settings	
Extensive form, backward induction, SPE	14 – 15
Examples and applications	16 – 17
Bargaining	18 – 19
Negotiation equilibrium, examples	20 – 21
Repeated games, applications	22 – 23
E. Information and contracts	
Random events and incomplete information	24
Risk and contracting	25
Bayesian equilibrium, applications	26 – 27
Perfect Bayesian Equilibrium, applications	28 – 29