Economics 487 – Economics of Strategy (Section 1)
Fall 2013 (Schedule #21040)

**Professor:** Quazi Shahriar  
**Office:** Adam Humanities 4177  
**Office Phone:** (619) 594-4491  
**E-mail:** qshahria@mail.sdsu.edu

| Class | TTH 2:00pm-3:15pm, AH-3177  
| Office Hours | TTH, 3:30pm – 4:30pm (on an exam day, I'll be in office 30 minutes before the exam.)

**Required Text & Course Reader:**
2. The Course Reader is available at the bookstore; the reader will be very useful for your preparation.

**Course Description:**
Game theory is the study of decision-making in situations where the choices of different individuals interact. The course will discuss game theory and teach the analysis of strategic decision-making. Strategic games are appropriate models in many economic situations, such as price competition, product design, firm entry into a new market, bargaining, and bidding in auctions. They are also appropriate in non-economic situations such as political decision making and voting. The course will develop a general framework for optimal strategic decision making in all such situations. In order to better understand the mathematical solutions we will look at many examples and in order to test the theories we will sometime participate in classroom experiments.

**Student Learning Outcomes:**
1. Understand the central role of game theory in strategic situations.
2. Learn to model and analyze strategic situations.
3. Draw conclusions about optimal actions and outcomes in strategic situations.
4. Develop an intellectual appreciation for the elegant mathematics of game theory.
5. Appreciate some of the current limitations of game theory in predicting real economic behavior, and directions where game theory will likely develop in the future.

**Student Expectations:**
Math 120 or 121 or 150 and *Econ 102* are prerequisites. Having taken *Econ 321* will be useful. You should be prepared to devote roughly 1-2 hours of your time for every hour of in-class time to studying, practicing techniques, solving problems. Any kind of behavior which is disruptive to the class will not be allowed. The course materials are all inter-related, so it is essential that you do not let yourself get behind. I strongly encourage you to see me whenever you encounter problems; please do not hesitate nor wait until after you get a bad exam grade. You are also encouraged to form a study group. It helps in understanding the material when you are able to explain your thought to your fellow classmates.

**Class Attendance:**
I’ll be collecting attendance occasionally only to see who is (is not) attending class regularly. I might use attendance frequencies for extra credit purposes in the event that such credits are needed for the whole class. Class attendances will also be important because many things will be done in class which you’ll not find in the textbook.

**Course Materials:**
1. Lecture notes.
2. Textbook. (I might occasionally assign additional readings.)
3. Practice problems. (They will not be graded.) They will help you prepare for the quizzes and exams.

**Quizzes:**
There will be in total 3 quizzes. All the quizzes together will be worth 25% of your course grade (with each quiz carrying the same weight). Each quiz will be given at the beginning of the class on the scheduled date. The quizzes will be important also for your preparation for the exams. So you are strongly advised not to miss a quiz. There will
no make up quizzes under any circumstance. (The purpose of the quizzes, however, is not to suggest which questions are important for the exams.)

Practice problems and problems solved in class will be your guide for preparing for quizzes. Each quiz will be 20-25 minutes long and be given at the beginning of the class on the scheduled date (see below).

Exams:
There will be **two midterm exams** and a **cumulative/comprehensive final exam**. You must take your exams at the scheduled time and place. All the exams together will be worth 75% of your course grade (with each exam carrying the same weight). There will be **no make-ups**. A student may **miss at most one exam** and this can happen only when a verifiable medical excuse for him/herself is documented (such as a doctor’s note). In that case, his or her quiz scores and the other two exam scores will be used to replace the missed exam.

Practice problems and problems solved in class will be your guide for preparing for exams. Each exam will be 75 minutes long and be given at the beginning of the class on the scheduled date (see below).

Grading:

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<tbody>
<tr>
<td>Quizzes</td>
<td>25%</td>
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<tr>
<td>Exams</td>
<td>75%</td>
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There are **no fixed cutoffs** for grades. Individual exams will not be curved. Final grades, however, will be curved around class average at the end of the semester if necessary (i.e. if class average falls below C+).

Tentative Course Outline:

Chap 1: Basic Ideas and Examples
Chap 2: How to Think About Strategic Games
Chap 3: Games with Sequential Moves
Chap 4: Simultaneous Moves Games
Chap 5: Simultaneous-Move Games: Continuous Strategy
Chap 6: Combining Simultaneous and Sequential Moves
Chap 7: Simultaneous-Move Games with Mixed Strategies
Chap 9: Uncertainty and Information
Chap 10: Strategic Moves
Chap 11: The Prisoners’ Dilemma and Repeated Games
Chap 14: Mechanism Design
Chap 17: Bidding Strategy and Auction Design

Course Calendar:

<table>
<thead>
<tr>
<th>Class meetings: (30 meetings)</th>
<th>Quizzes:</th>
<th>Exams:</th>
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<tbody>
<tr>
<td>Aug: 27 29</td>
<td>Quiz 1: Thursday 12 Sept</td>
<td>Midterm 1: Tuesday 1 Oct (class time)</td>
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<tr>
<td>Sept: 3 5 10 12 17 19 24 26</td>
<td>Quiz 2: Thursday 17 Oct</td>
<td>Midterm 2: Tuesday 5 Nov (class time)</td>
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<tr>
<td>Oct: 1 3 8 10 15 17 22 24 29 31</td>
<td>Quiz 3: Thursday 21 Nov</td>
<td>Final: Tuesday, 17 Dec (1:00-3:00pm)</td>
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<tr>
<td>Nov: 5 7 12 14 19 21 26</td>
<td>Location: classroom</td>
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<td>Dec: 3 5 10</td>
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Honor Policy:
Cheating of any form (which includes plagiarism) will not be tolerated. Evidence of cheating by a student will result in an automatic “F” as that student’s grade. Any evidence will also be promptly reported to the Judicial Procedures Office.

Class Policies:
- Please turn off cell phones before coming to the class. If your cell phone rings during the class, you’ll be required to leave the class.
- Include “Econ 496” in all of your emails to me.
- Please don’t email me to learn about a class you miss or to discuss the solution to a problem.
- I will be communicating with the class via emails regarding important issues/announcements. Please make sure that your current email address is on your Blackboard account.
- It will be your responsibility to check your emails regularly.
- No recording or taping of any kind without explicit permission.
- No cell phone use at all during exams/quizzes.
- If you arrive late for an exam, you’ll be allowed to take the exam if no one has already finished the exam and left the room.
Students with Disabilities:
Students who need accommodation of their disabilities should contact me privately to discuss specific accommodations for which they have received authorization. If you have a disability, but have not contacted Student Disability Services at 619-594-6473 (Calpulli Center, Suite 3101), please do so before making an appointment to see me.