Syllabus
Behavioral Game Theory
01:185:412:03

Logistics

- **Lecture**: Tuesdays, 1:40-4:40pm, Busch Campus, Psychology Building, Room A139

- **Professor**: Dr. Mary L. Rigdon
  - Email: mrigdon@rutgers.edu
  - Office: A103 Psychology Building, Busch Campus
  - Office Hours: TBA; by appointment

Course Description

The course presents advanced topics in behavioral / experimental game theory and designed to develop theoretical and experimental tools. Owing to the limitation of time, the topics covered will necessarily be only a small fraction of what one could (and ideally, should) cover in this course, and thus, the course cannot provide a complete coverage of the vast and growing body of work on behavioral / experimental game theory. Experimental economics has become a major area of research in economics. Its basic premise is that all good economic theories can be testable in a controlled laboratory setting. In fact, one may argue that some economic theories can only be tested experimentally. The course will also survey some classics of experimental game theory and discuss some of its recent developments. The course will not about experimental methods per se. We will analyze choices that decision makers make in the lab and in the field and try to explain these choices with economic models. We will enrich the standard game theoretic models by incorporating psychological mechanisms, including limited rationality, limited selfishness, and limited self-control. The
pre-requisite is 185:201 ‘Introduction to Cognitive Science’. This course counts for 3 credits.

Course Objectives

Upon successful completion of the course, students will:

- Understand different types of games and their uses in strategic thinking.
- Use a variety of tools to find equilibria.
- Understand expected utility theory and the role of probabilities in explaining behavior.
- Learn how and why behavior differs from game-theoretic predictions.
- Understand how behavioral game theoretic models differ from standard accounts.
- Understand the way in which game theoretic models can be applied to a variety of real-world scenarios.

Textbook

There is no textbook for this course. Readings consist of articles written on topics in Cognitive Science and chapters from edited books and textbooks on Behavioral Game Theory. The required readings will be available on Sakai for you to download. There are also optional readings that may be helpful or interesting if you find yourself wanting to read more about that topic. Do not skip or skim the required readings. Be sure to read them ahead of the lecture/discussion.

Experimental Software: MobLab

We will be conducting in-class experiments using online experimental software, MobLab. Important: TODAY you will receive an email requesting you sign up for a student account, directing you to [https://game.moblab.com/server/register.jsp](https://game.moblab.com/server/register.jsp). The email will also include our class code. You need this code to join our class. Please do this before the next class session as we will have
our first experiment! There is a small license fee to be paid by you: $18 per student.

**Evaluation**

There will be a total of 1000 points possible in this course.

- **Quizzes (10%) (100 points):** We will have 6-10 quizzes in class this term. The quiz will be short and on a topic recently covered in lecture/discussion.

- **Short Analytic Assignments (40%) (400 points):** You will complete four critical/analytic take-home assignments related to the in class laboratory experiments, worth 100 points each. Please submit these via Sakai under Assignments in .pdf form. The schedule lists the due dates for each assignment. Every day that an assignment is late will result in an automatic one-grade reduction. NOTE: You may work in groups of up to 4 people and submit one set of answers with names of all contributors listed; everyone in the group will receive the same grade.

- **Exams (50%) (500 points):** There will be two equally-weighted exams: a midterm in class on October 23 and a take home final exam due via Sakai in .pdf on December 17 by 8am. **NOTE: The take home exam is to be your own work.** You will sign an honor’s pledge upon submitting your work.

- **Extra Credit Option:** A number of researchers in Linguistics conduct experiments that are relevant to the material covered in this class. You have the opportunity to participate in up to 3 experiments in Linguistics for 3 points for each experiment, added onto your final grade. Information for accessing the subject pool is available on Sakai under Resources. You must select one course to designate as the one for which you will receive the credit. Note: you can only select one course and that will be the one in which you receive the extra credit points. I will be notified about your participation automatically. If you sign up for, but fail to show up for two or more experiments, you may be barred from further participation; so please note the time and location of your experiments, and take your schedule and transportation time into account.
Rutgers Policy on Academic Integrity

Rutgers has a very detailed policy on Academic Integrity and Code of Student Conduct: [http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers](http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers). Violations include cheating, fabrication, plagiarism, denying information to or misleading others, or facilitating these violations.

No Computers or Phones

Please turn off all computers and cell phones in the classroom. If you wish to record the lectures, approval of the individual speaker is required. Please see the following article in the Chronicle “Why I am asking you to not use laptops” [http://chronicle.com/blogs/linguafranca/author/acurzan](http://chronicle.com/blogs/linguafranca/author/acurzan).

Students with Disabilities

The University is committed to providing students with documented disabilities equal access to all University programs and facilities. If you think you have a disability requiring accommodations, you must register with Office of Disability Services (ODS): [https://ods.rutgers.edu](https://ods.rutgers.edu). If you have received an Accommodation Letter for this course from ODS, please provide me with that information privately so that we can review those accommodations.

Rutgers’ Learning Centers

Rutgers’ Learning Centers “provide centralized academic support services to cultivate students’ skills, strategies, and behaviors that lead to academic persistence and lasting success.” Services available include peer tutoring, academic coaching, writing coaching, and study groups. [https://rlc.rutgers.edu](https://rlc.rutgers.edu)

Get Involved with Cognitive Science Club!

Find information on the exciting events being organized by the Cognitive Science Club: [http://ruccs.rutgers.edu/academics/cogsci-club](http://ruccs.rutgers.edu/academics/cogsci-club).
Email Etiquette

The following webpage “Email Etiquette: Guidelines for Writing to Your Professors” created by Dr. Mark Tomforde is required reading for the course: https://www.math.uh.edu/~tomforde/Email-Etiquette.html

Student-Wellness Services

Just In Case Web App http://codu.co/cee05e
Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS) (848) 932-7884
17 Senior Street, New Brunswick http://www.rhscaps.rutgers.edu
CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students’ efforts to succeed at Rutgers.

Violence Prevention & Victim Assistance (VPVA) (848) 932-1181
3 Bartlett Street, New Brunswick http://www.vpva.rutgers.edu
The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty.

Disability Services (848) 445-6800 https://ods.rutgers.edu
Rutgers welcomes students with disabilities into all of the educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the office, participate in an intake interview, and provide documentation: https://ods.rutgers.edu/students/documentation-guidelines

Scarlet Listeners (732) 247-5555 http://www.scarletlisteners.com
Free and confidential peer counseling and referral hotline, providing a comforting
and supportive safe space.

Name & Contact Info of at least 2 Students

Use the space below to exchange names and contact information of at least 2 students to contact and that can contact you with questions about the course.

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<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<td><strong>Tentative Schedule</strong>**</td>
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<td><strong>September</strong></td>
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<td>4</td>
<td>Introduction</td>
<td>C, Appendix 1.1; Gibbons (1997) thru Nash Eq</td>
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<td>11</td>
<td>Background on game theory</td>
<td>C, Appendix 1.1; Gibbons (1997) thru Nash Eq</td>
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<td>18</td>
<td>Overview BGT</td>
<td>C, Ch 1</td>
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<td>Rationality and Utility</td>
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<td><strong>October</strong></td>
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<td>2</td>
<td>Coordination Games</td>
<td>Gächter (2004)</td>
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<td>Coordination Games II</td>
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<td>Extensive Form Games</td>
<td>TBA</td>
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<td><strong>Exam #1 &amp; Experimental Econ</strong></td>
<td>C, Appendix 1.2</td>
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<td>Experimental Economics II</td>
<td>Friedman &amp; Cassar (2004)</td>
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<td><strong>November</strong></td>
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<td>NO CLASS</td>
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<td>THURSDAY CLASSES MEET</td>
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<td><strong>December</strong></td>
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<td>11</td>
<td>Neuro &amp; Power of BE</td>
<td>Camerer, <em>et al.</em> (2015); Thaler and Sunstein (2009), Ch. 12</td>
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<td>17</td>
<td><strong>Take home Final Exam due</strong></td>
<td>8am via Sakai as .pdf</td>
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** This syllabus represents my current plans and objectives. As we go through the semester, these plans (including exact assignment due dates) may need to change to enhance learning opportunities for the class. (e.g. due to an extension of our discussion of specific topics that arise during lectures). Such changes, communicated clearly, are not unusual and should be expected.
Bibliography


