Description:
This course is really a course in applied microeconomic theory. Its primary purpose is to develop a talent for constructing and analyzing microeconomic models that relate to problems of interest. Because most applied micro theory done in the recent past uses game theory, that subject is a major focus of the course.

We will cover a broad array of topics. We will begin with behavior toward risk, not only because many applied theory models examine the impacts of risk aversion, but because expected utility is an important theoretical underpinning for game theory. We will then move on to discuss topics in cooperative (axiomatic) and noncooperative game theory. The next step is to explore some applications, specifically cooperation, information transmission, and incentives. We will end the course with a discussion of learning to play games. In the midst of all of this, we will talk about other theoretical papers to judge their interest and look at what sorts of analysis they perform.

Expectations:
The primary content of the course will be conveyed through lectures and readings. I expect students to attend and participate in the lectures and to do the readings. I will assume that all students come into the class with an understanding of mathematical tools used in economics and an understanding of the game theoretic topics covered in Econ 512.

Grades:
The components of the course grade are to the right. Small homeworks are individual assignments that gauge the student’s ability to solve games and perform comparative statics analysis. Large homeworks are individual or group assignments that will result in presentations in class. There will be two large homeworks. The final exam covers the entire course.

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<th>Component</th>
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<tr>
<td>Class participation</td>
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<td>Small homeworks</td>
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<td>Large homeworks</td>
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<td>Final exam</td>
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Excused absences:
A student who misses an exam or assignment with an excused absence should meet with the professor to schedule a make-up exam at the professor’s convenience.

Texts:
There is no required text. However, there are many good books about game theory, most of them published in the first half of the 1990’s. All of the main game theoretic tools were in place at that time, so the books are not really out of date. They’re just old.
Readings and course outline:

1. Introduction

2. The structure of theoretical papers

3. Risk preferences

4. Nash bargaining and the Shapley value
   - Chapter 15 – The Nash Solution
   - Chapter 14.4 – The Shapley Value

5. Tools of non-cooperative game theory
   - Chapter 12 – Sequential Equilibrium

6. Application: Cooperation
   Fudenberg, D., E. Maskin (1986). *The Folk Theorem in repeated games with discounting or with incomplete information*, Econometrica 54, 533-554.


7. Application: Information aggregation

8. Application: Incentives and motivation

9. Learning

Fine print:

Plagiarism and Academic Honesty:

"An essential feature of The University of Tennessee is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the University, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."

Please see [www.lib.utk.edu/instruction/plagiarism/honor.html](http://www.lib.utk.edu/instruction/plagiarism/honor.html) for more information.

Disabilities:

Students who have a disability that requires accommodation should make an appointment with the Office of Disability Services (974-6087) to discuss their specific needs.