

EC308, Fall 2003  
Game Theory in Economics (T,TH 9:00-10:20)  
Campion 303  
Instructor: Hideo Konishi  
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(Office Hours) M 1:00-3:00

## COURSE DESCRIPTION

Game Theory is the social science that analyzes how to think (and act) strategically in interactive situations. This course presents Game Theory with its applications to the real world situations. Although applications of Game Theory are a lot of fun, you also need to study hard to become familiar with techniques used in Game Theory. **They could involve a certain level of mathematics (calculus and logic).** Logical ways of thinking is particularly important. Without understanding the theory properly, you cannot apply insights from it to the real world situations appropriately. We begin with analyzing a few basic games: sequential move games, simultaneous move games, and their mixtures. After that, we proceed to broader classes of games, and discuss more applications. **You are not supposed to take this course if you have not finished Microeconomic Theory (EC201) beforehand.**

## TEXTBOOK

There is one required textbook for this course, *Games of Strategy* by A. Dixit and S. Skeath (Norton). While the lectures will be mainly based on the textbook, some lectures (especially in the latter half of the course) will contain materials which are not presented in the book. The bookstore should carry enough copies of the textbook. There are two more recommended books. One is *Thinking Strategically* by A. Dixit and B. Nalebuff (Norton). This is a book with many interesting stories, but no formal theory is introduced. The other is *Game Theory for Applied Economists* by Robert Gibbons (Princeton). This book is technically advanced (a first year graduate level textbook), yet is still quite readable. These books are nice complements of the textbook. They are popular books, and you can easily purchase them on internet (if you wish).

## GRADE

Your grade will be based on your performance on two midterm exams, a final exam, and homeworks. Homework will count for 10% of your course grade. The remaining 90% will be divided up between two exams: the midterm and final exam scores will count for 30% and 60%, respectively. The final is a cumulative exam. The midterm exam is tentatively scheduled on October 9 (Thursday: in class exam), and the final exam on December 16 (Tuesday, at 9:00am). The Midterm exam is an in-class exam. **No make up exam will be given.** A student will not be allowed to take a make up exam unless he/she asks for it **in advance** for compelling reasons. You may work on homework problems with other students, but you are required to make up the answers independently.

## TENTATIVE SCHEDULE OF THE COURSE

**Note that the course schedule may change**

1. Before Midterm exam (basic theory): Chapters 1, 2, 3, 4, and 5.
2. After the Midterm exam (advanced theory and applications): parts of Chapters 6, 8, 9, 12, 14, 15, 16, and 17.