Course Objective: Game Theory is precisely what the term implies: a theory and analysis of what games in general represent - a situation whose outcome is a result of not only what one agent decides, but also of the actions her rivals undertake. In other words, in this class, you will learn how to analyze the consequences of conflict, rivalry and competition among a limited number of agents each of whom is affected by the “strategic decisions” of the other. The course aims at developing an understanding of the structure and logical approach to such strategic situations.

Course Prerequisites: College algebra or permission of the instructor.


Class Meetings: Mondays and Wednesdays, 12:40 – 2:05 p.m. at FCB 259.

Instructor: Pinaki Bose Phone: (901) 678-5528

Office: BB 427 E-Mail: psbose@memphis.edu

Office Hours: Tuesdays, 1:30 – 3:00 p.m. or by appointment.

Method of Examination: The grade received in this course will be determined by the performance of the student in two in-class examinations, each of equal importance, and a quiz. The dates and the precise weights/points of each of these are in the course outline. The two exams are non-cumulative with respect to each other. Exam 2, however, will include the material covered by the quiz. Exams and the quiz will be a combination of multiple choice and short answer questions/problems.

Please note that I do not give make up exams, or quizzes, (either before or after the scheduled exam/quiz). If you have missed an exam/quiz, unless you can document that your absence was due to an emergency of a very serious nature that is acceptable to the administration, you will receive an F grade. Travel, travel plans, or transportation difficulties will not be considered sufficient excuses for missing an exam/quiz and meriting a make-up.
The final course grade will be a letter grade awarded according to the following scale:

- 90 % & above A
- 80 - 89% B
- 70 - 79% C
- 60 - 59% D
- 59% & under F

I reserve the right to determine the final letter grade by a curve under extreme circumstances.

Academic dishonesty and plagiarism will be penalized with an F grade for the course. Please visit the website of the Office of Student Judicial and Ethical Affairs (http://www.people.memphis.edu/~jaffairs/) for more information on matters of academic misconduct, and your rights and responsibilities.

You are advised to check your University of Memphis e-mail on a regular basis as I often e-mail class material to you. Additional class material will also be posted in my public folder on the umdrive.

**Method of Instruction:** The course, and the study material for the exams and the quiz, comprise of all class lectures and the corresponding readings in the text, exercises and problem sets. The problem sets and exercises that will be assigned in class, and as homework, are very important, and included as study material for the exams and the quiz. Home work does not count towards the grade, but you must develop the expertise and understanding needed to be able to solve the exercises in your home assignments (and those discussed in class) to be able to do well in the exams.

Given time limitations, the coverage of the text in class must necessarily be selective. The outline that follows states the chapters I shall cover. Please keep in mind that this is a tentative plan, subject to change. Within each chapter, I WILL BE FOCUSING ON SOME TOPICS AT THE EXPENSE OF SOME OTHERS. So, to be aware of what exactly you have to study for each exam or quiz, you need to know what has been covered in each class. Class attendance is very important. If you miss a class, for whatever reason, you are responsible for acquiring the lecture notes and being cognizant of the material that was covered in that class.
Please note that the indication of chapters and topics included in an exam is subject to revision. Depending on the pace at which the material is covered in class, I reserve the right to change the material to be covered in an exam. However, all changes in study material for an exam will be finalized a week before the day of that exam.

There will be two exams of equal weight (100 points each) and a quiz (50 points). Exam II does not include the material of exam I, but does include that covered in the quiz. The quiz will be on select material that follows the first exam; the precise topics will be announced one week in advance. The second exam is at the end of the semester, as per the exam schedule, and will include all material covered after the first exam.

Outline and exam dates

Text: Chapters 1-4

*Introduction, Sequential and Pure Strategy Simultaneous Move Games, and associated exercises*

EXAM I: Monday, March 1, 2010.

Text: Selected topics in chapter 5, 6 – 8, very selected topics in chapters 10 and 15.

*Experiments and exercises in advanced treatment of Nash equilibrium, mixed strategies, exercises*


Exam II: End of the Spring 2010 semester. The precise date will be announced in class.