ECO 288

Game Theory

Fall 2010

Instructor: Paulo Barelli, email: paulo.barelli@rochester.edu

TA: Arthur Carbonare de Avila, email: arthurcavila@yahoo.com

Time and Location: TR 9:40 - 10:55, Hark 115

Office Hours: TR 11:00 - 12:00, Hark 214

Recitations: F 3:40 - 4:40, Gavet 208

Office Hours: M 12:00 - 1:00, Hark 207

Textbook: Game Theory for Applied Economists, Robert Gibbons, Princeton University Press, 1992.

Game theory is a systematic study of strategic situations. It is a theory that helps us analyze economic and political strategic issues, such as behavior of individuals in a group, competition among firms in a market, platform choices of political candidates, and so on. We will develop the basic concepts and results of game theory, including simultaneous and sequential move games, repeated games and games with incomplete information. The objective of the course is to enable you to analyze strategic situations on your own. The emphasis of the course is on theoretical aspects of strategic behavior, so familiarity with mathematical formalism is required (at least Calculus I).

Course Organization:

I will provide weekly notes with a summary of the material covered in class so that students will have a concise source to follow the lectures without worrying too much about taking notes. This means that the textbook listed above is not mandatory (you are NOT required to own a copy of it).

Class participation is required. By participation I mean asking and answering questions in class. I will keep track of your participation record, and assign points accordingly.

Homeworks will be assigned weekly and due in class. Arthur's recitations are primarily aimed at providing examples and applications of the material covered in class; solutions to the homework questions will be posted every week, so Arthur will not be solving those questions in recitations.

There is a midterm and a final exam.

Outline:

- Weeks 1-2: Dominance and Iterated Dominance

- Weeks 2-4: Nash Equilibrium and Refinements

- Weeks 4-5: Backward Induction and Subgame Perfect Equilibrium

- Weeks 6-7: Repeated Games and Midterm

- Weeks 8: Imperfect Observability

- Weeks 9-11: Bayesian Games

- Weeks 12-14: Perfect Bayesian Equilibrium and Refinements

Grading:

Class participation	15%
Homework	20%
Midterm	30%
Final	35%.

Exams:

Midterm: October 14, 9:40 - 10:55, Hark 115

Final: December 19, 16:00 - 19:00, Hark 115