ECON635
Strategic Games in Business & Economics

Session 2, 2012

Course Outline and Reading List

Department of Economics
1. Aims and Coverage of the Course.

Game theory is the study of the ways in which strategic interactions among economic agents produce outcomes that are experienced by those agents. The outcomes in question may or may not have been intended by any of the agents. The meaning of this statement will not be clear until each of the italicized words and phrases has been explained and featured in some examples. Doing this will be the main business of this course.

The literature in game theory is enormous, multi-faceted fascinating and evolving. Therefore it is impossible to cover everything in a single course (maybe even in a single lifetime?). Consequently, the lectures will focus on the basic theory. The essay will give you an opportunity to explore important applications and/or new frontiers of thought in game theory. The tutorials act to reinforce and extend your developing knowledge.

I hope you get something substantial and lasting out of the course.

2. Textbook and References.

The textbook for the course is:


Reference will also be made to:


Additional references are provided below so that if you get interested in a particular topic and want to pursue it further, you have a starting point.


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4. **Assessment.** The arithmetic of assessment is as follows: Exam is worth 60 marks, Tutorials are worth 20 marks, Essay is worth 20 marks. Final grade expressed out of 100.

**Assessment Task 1: Tutorials**

There will be a total of twelve (12) Tutorials available, to be handed in weekly. You need to submit any ten (10) Tutorials in the course. These will be marked on the basis $S^+$ (‘Satisfactory plus’) = 2 marks; $S^{1/2+}$ (‘Satisfactory-half plus’) = 1.5 marks; $S$ (‘Satisfactory’) = 1 mark; $S^{1/2-}$ (‘Satisfactory-half minus’) = 0.5 marks; or $S^-$ (‘Satisfactory minus’) = 0 marks. The maximum value of the Tutorials is 20 marks.

**Assessment Task 2: Essay**

Discuss the pro’s and con’s of the following claim: “Newcombe’s Problem and the Prisoner’s Dilemma are essentially the same”.

The total value of the Essay is 20. There is no word limit. The Essay should be submitted on the day of the Final Exam for the course. **No Extensions.**

**Assessment Task 3: Final Examination**

There will be one (1) three hour (3hr) final exam. A sample Paper is on the course page.

**Coarse Diary**

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FIRST WEEK OF EXAMINATIONS | Essay Due somewhere in here
SECOND WEEK OF EXAMINATIONS

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1 “Misspelling” intended because this diary is intended to be a rough guide to the rate at which I think we will progress through the material. However, it will not be adhered to at the expense of your understanding. If something is taking a bit longer to deal with than is envisaged in this diary (or if we get through some topic faster than I imagined we would), then so be it. Your learning is what matters here, not a regimented march through the subject.
LECTURE OUTLINE and READING LIST

Lecture 1: Introduction to Game Theory


Lecture 2: Games of Chance


Lecture 3: The Concept of ‘Nash Strategies’ and ‘Nash Equilibrium’


Lecture 4: The Concept of ‘Nash Strategies’ and ‘Nash Equilibrium’, (Cont’d)


Lecture 5: Mixed Strategies

Lecture 6: n-Person Games

Lecture 7: Non-cooperative Market Games

Lecture 8: Credibility and Sub-Game Perfection

Lecture 9: Repeated Games

Lecture 10: Auctions


**Lecture 11: Bargaining**


**Lecture 12: Beliefs**


**Lecture 13: Revision**