

Econ 221 - Summer 2011

Introduction to Strategic Thinking

Instructor: Marcos Agurto-Adrianzen

Email: magurto@interchange.ubc.ca

Office: TBA

Office Hours: TBA

Course Website:

<http://grad.econ.ubc.ca/agurto/Econ221.html>

T.A. Dana Galizia

Office Hours: TBA

Tue-Thu: 9.00 a.m. – 12.00 p.m.

Room: Chemistry C124

- **Subject Matter**

This course will introduce students to the basic principles of game theory, which analyzes human behavior in strategic interactions. In such situations, the wellbeing of a given participant depends not only on her own actions but also on actions taken by others, and all the agents involved in the interaction are aware of this interdependence of actions.

Game Theory will help you understand, and possibly predict, human interaction in a wide range of settings. It can be applied to economics, biology, political science, sociology, anthropology and other social science disciplines.

- **Level of Mathematics Required**

This course is designed to be conceptual, not mathematically technical. High school mathematics will be sufficient.

- **Course Structure**

Course work will rely on lectures, readings from the text, some additional references, and assignments. There will be several assignments handed out during the term, requiring students to think through simple strategic situations. Students have to sign up for and attend a weekly discussion section. Assignment problems will be solved in these sections and lecture material clarified further.

- **Assessment**

The grade for this course will be based on assignments (10%) class participation (5%), and exams (85%). Assignments must be handed at the beginning of the lecture to receive any credit.

There will be a midterm exam in class, (date TBA), and a final exam. Writing the midterm is entirely optional. If you miss the midterm for any reason, 85% of your grade will be determined by the final exam alone, which will cover the material of the entire course. You do not need to tell me whether you will be writing the midterm, and you do not need to justify your absence if you do not write it.

If you do write the midterm and then get a higher grade in the final, 85% of your grade will also be determined by the final alone. If your midterm grade is higher than your final exam grade, then the midterm will count for 35% and the final for 50%. In other words, writing the midterm is a free insurance policy – if you do well in it, you have 35% of your grade in the bank. If you do poorly, it doesn't count against you and all the weight is shifted to the final exam. I strongly recommend you study for the midterm and write it.

- **Textbook**

“Games of Strategy” by Avinash Dixit, Susan Skeath and David Reiley (hereafter D,S&R), Norton, New York, 2009, 3rd edition. Lectures notes and additional reference articles (with web links whenever possible) will be posted on the course web page periodically.

- **Tentative Schedule**

The following schedule is subject to change (and could change quite significantly), but this should give you some idea of what to expect during the term. The first half of the course is somewhat technical as you learn the methodology of game theory with some examples. In the second half the topics become more flexible as we consider specific examples drawn from various subjects and use the methodology learned in the first half of the course to discuss how game theory is used to analyze human behavior.

1 Course Introduction

D,S&R 1 and 2

2 Sequential Move Games

D,S&R 3

3 Simultaneous Move Games with Pure Strategies - Nash Equilibrium

D,S&R 4, 5

4. Simultaneous Move Games with Mixed Strategies

D,S&R 7, 8

5. Strategic Moves: Commitment, Threats and Promises

D,S&R 6, 10

6. Collective Action Games

D,S&R 12

7. Repeated Games

D,S&R 11

8. Uncertainty and Information

D,S&R 9

9. Bargaining

D,S&R 18

10. Strategy and Voting

D,S&R 16

11 Bidding Strategy and Auctions Design

D,S&R 17