

Competition and Strategy

ECON 20005, Semester 2 2017

Instructor: Dr. Jun Xiao, jun.xiao@unimelb.edu.au
Office: FBE Building, room 351

Lectures: Wednesday 17:15pm - 18:15pm, Medical-W312 (ESJ King Theatre)
Thursday 15:15pm - 16:15pm, Chemistry-178 (Cuming Theatre)

Tutors: Cynthia Huang, cynthiah@student.unimelb.edu.au
Jonathan Lim, limjh@student.unimelb.edu.au
Daniel Tiong, d.tiong@student.unimelb.edu.au

Office Hours: Jun: Wednesdays 4:00 - 5:00pm
Tutors: to be announced

Subject Overview

This subject is an introduction to the economic study of game theory and strategic thinking. The main goal of the course is to show how tools and techniques from game theory can be applied to interesting and relevant problems in economics and everyday life.

Prerequisites

ECON 10004: Introductory Microeconomics

Assessment

The assessment for the course is as follows:

Assessment	Weight	Due Date
Assignment 1	10%	25 August
Assignment 2	10%	22 September
Assignment 3	10%	20 October
Final Exam	70%	TBA – Exam Period

The final grade for the course is the **maximum** of your grade on the final exam, or your course grade based on the 3 assignments and final exam as per the above assessment. That is, your course grade is computed as:

$$\text{Course Grade} = \max \left\{ \text{Final Exam Grade}, 0.3 \times \text{Assignment Average} + 0.7 \times \text{Final Exam Grade} \right\}$$

All material covered in lectures, tutorials and listed as related reading may appear in any assessment task. Students should ensure that they have access to each of these resources. The final exam, centrally administered by the university, will be held within the university exam period. The tutorial problems and assignments will provide practice for the final exam.

Hard copies (i.e., paper) of assignments are to be handed to your tutor (there will also be a collection box in room 419, FBE Building). Assignments can be handed in up to two days after their due date at a penalty of 15% per day. If a medical note is provided indicating an assignment cannot be handed in, the weight of the assignment grade will be shifted to the final exam.

The final exam is centrally administered by the university, and will be held within the university exam period. It will cover all material from the lectures and assignments.

Resources

1. *LMS subject site*

LMS subject site (accessible via <http://www.lms.unimelb.edu.au>): This website is the most up-to-date reference for the subject and will include any announcements or amendments. Lecture slides, tutorial problems and assignments will normally be uploaded on Wednesday evenings. Recorded lectures are also regularly uploaded. Students are encouraged to check this site on a regular basis.

2. *Textbook*

A. Dixit and S. Skeath, *Games of Strategy*, 2nd or later editions, W.W. Norton and Company. This textbook is necessary for all students. It contains required reading and tutorial problems. There are copies on reserve in the library.

3. *Tutorials*

Tutorials begin in the second week of semester. Students are encouraged to attend one tutorial per week and have been (centrally) allocated to a tutorial. While tutorial attendance and participation are not assessed, they will consolidate students' understanding of concepts covered in lectures.

Course Outline

The subject is divided into two main sections:

1. Principles and Basic Concepts of Game Theory

- Introduction (≈ 2 lectures)
- Sequential games (≈ 2 lectures)
- Simultaneous games with pure, discrete strategies (≈ 2 lectures)
- Simultaneous games with continuous and mixed strategies (≈ 3 lectures)

2. Advanced Topics and Applications of Game Theory

- Repeated games (≈ 2 lectures)
- Monopoly and Cournot/Stackelberg/Bertrand oligopoly (≈ 2 lectures)
- Product differentiation, R&D races, rent seeking (≈ 2 lectures)
- Moral hazard and adverse selection (≈ 2 lectures)
- Screening and signalling (≈ 2 lectures)
- Collective action and network effects (≈ 2 lectures)
- Auctions (≈ 2 lectures)
- Review (≈ 1 lecture)

Plagiarism

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