THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

BUSINESS SCHOOL

# Course Outline 2016

## ECON 701: MICROECONOMIC THEORY (15 POINTS)

**Semester 1** (1163)

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## Course Prescription

Advanced treatment of traditional topics from "core" microeconomics, including consumer theory and duality, expected utility theory, general equilibrium, game theory and the economics of information.

## Programme and Course Advice

It is assumed that students taking this course have obtained a good grade in ECON 381 Foundations of Economic Analysis. It is especially important that students have a thorough grasp of the mathematics of constrained optimisation (Lagrange's method). In addition to the lecture notes from ECON 381, the *Recommended Text by Dixit* is an excellent place to review these ideas prior to the start of ECON 701.

## Goals of the Course

This course is designed to introduce students to some central themes and results in graduate microeconomic theory. The chosen topics are also important for understanding many applied fields, such as labour economics, industrial organisation, international trade and public economics.

## Learning Outcomes

By the end of this course it is expected that the student will have a thorough grasp of the theory of consumer behaviour. In particular, students will:

1. be able to apply the mathematics of constrained optimisation (especially Lagrange's method) to solve microeconomic problems; and
2. be familiar with the basics of duality theory.

Decision-making under uncertainty is especially important to many applications of microeconomic theory, so students will:

3. develop a thorough understanding of the expected utility model, and become familiar with its uses in economic analysis.

Students will learn how to:

4. work with the general equilibrium framework;
5. identify Pareto optimal allocations; and
6. compute equilibrium prices.

It is also important that students:

7. become familiar with the basic Welfare Theorems.

## Learning Outcomes *continued*

The rest of the course will cover more recent ideas. Students will:

8. acquire a basic toolkit from game theory;
9. develop skills in the translation of economic problems into game-theoretic notation;
10. be able to select an appropriate solution concept; and
11. be able to compute equilibrium strategies.

Students will develop a thorough understanding of:

12. the basic moral hazard problem, its extensions and applications; and
13. the basic adverse selection problem, its extensions and applications.

## Content Outline

The following is an approximate guide only:

Weeks 1-3: Decision-making by consumers and firms
Week 4: Choices under uncertainty
Weeks 5-6: Markets, welfare and equilibrium
Weeks 7-9: Game theory: solution concepts for normal and extensive forms
Weeks 10-12: Contract Theory and Information Economics

## Learning and Teaching

This course will be taught in the first semester. Expected class size is around 35 students. There will be 3 hours of lectures per week. There will also be one tutorial session offered each week (Thursday, 10.00am to 11.00am) to review lecture material.

## Teaching Staff

**Associate Professor John Hillas**
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## Learning Resources

*Prescribed Text:*

G.A. Jehle and P.J. Reny, *Advanced Microeconomic Theory*, 3rd edition, Addison-Wesley, 2011. [AVAILABLE ON SHORT LOAN: 338.5 J47 2011]

*Recommended Text:*

A. Dixit, *Optimization in Economic Theory*, 2nd edition, Oxford University Press, 1990. [AVAILABLE ON SHORT LOAN: 330.015193 D61]

*Other Useful References:*

A. Mas-Colell, M.D. Whinston and J.R. Green, *Microeconomic Theory*, Oxford University Press, 1995. [AVAILABLE ON SHORT LOAN: 338.5 M39]

D.M. Kreps, *A Course in Microeconomic Theory*, Princeton University Press, 1990. [AVAILABLE ON SHORT LOAN: 338.5 K92]

R. Garnier and J. Taylor, *100% Mathematical Proof*, John Wiley & Sons, 1996. [AVAILABLE AT THE GENERAL LIBRARY: 511.3 G23]

## Assessment

Final Examination: 60% of final grade;
Coursework: 40% of final grade (4 Assignments worth 5% each, Test worth 20%).

More details will be provided at lectures and on CANVAS.

**Plussage** does ***not*** apply.

Assignments are primarily tools with which to develop problem-solving skills. Assignment problems will require students to apply techniques studied in lectures or from the textbook. Students may work together on assignment problems, though each student is expected to write up his or her own final draft. The Test and Final Examination will assess general understanding and knowledge of the material, plus facility with the basic tools of microeconomic analysis.

| Learning Outcome | Assignments 1-2 | Assignments 3-4 | Test | Final Examination |
|---|---|---|---|---|
| 1 | X | | X | X |
| 2 | X | | X | X |
| 3 | X | | X | X |
| 4 | X | | X | X |
| 5 | X | | X | X |
| 6 | X | | X | X |
| 7 | | X | | X |
| 8 | | X | | X |
| 9 | | X | | X |
| 10 | | X | | X |
| 11 | | X | | X |
| 12 | | X | | X |
| 13 | | X | | X |