

ECON7030 MICROECONOMIC ANALYSIS  
University of Queensland

Time: Wednesdays, 10-11.50 am  
Venue: Colin Clark Building 114

Lecturer: Christian Roessler

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Consultation: Wednesdays, 1-3 pm

Description:

This course covers current approaches to the core topics in microeconomic theory. It develops the standard framework of consumer choice and competitive general equilibrium, in which agents take market-clearing prices as given. The role of strategic behavior, arising out of market power, continuing interaction and imperfect information, is then examined through the tools of game theory. Background in basic to intermediate microeconomics, as well as elementary calculus and optimization, is expected of students.

Readings:

No one textbook is required. Lecture notes will be made available via Blackboard. The following books could be read in parallel.

**JR** = Jehle, Geoffrey A.; Reny, Philip J. Advanced Microeconomic Theory (2e).  
Addison Wesley, 2001.

**K** = Kreps, David M. A Course in Microeconomic Theory. Prentice Hall (soft cover) /  
Princeton University Press (hard cover), 1990.

If you wish to buy an accompanying textbook, I would suggest the one by Jehle and Reny.

Lectures:

Lecture 1	Individual Preferences and the Allocation Problem
Lecture 2	Budget-Constrained Choices and Demand
Lecture 3	Price Bargaining
Lecture 4	Production and Competitive Equilibrium
Lecture 5	The Welfare Theorems
Lecture 6	Monopoly, Mergers and Regulation
Lecture 7	Introduction to Game Theory and Oligopoly Models
Lecture 8	Limited Competition: Branding and Reputation
Lecture 9	Choice among Risky Prospects
Lecture 10	Moral Hazard in Principal-Agent Problems
Lecture 11	Adverse Selection and Insurance Theory
Lecture 12	Auctions

Comments on some relevant microeconomics books:

Hermalin, “Lecture Notes for Economics”

*These notes cover topics in the second half of the course at a slightly more advanced level. They're downloadable for free, see [www.econphd.net/notes.htm](http://www.econphd.net/notes.htm).*

Jehle / Reny, “Advanced Microeconomic Theory”

*Despite the title, this book is less advanced than MWG. It comes close to being an appropriate text for the course, as it is rigorous but gives thorough explanations. If you're going to buy one of the books, this should be it.*

Kreps, “A Course in Microeconomic Theory”

*Makes a real effort to explain advanced topics intuitively. An excellent companion reader, especially if you find yourself interested in the course, but also challenged by it.*

Mas-Colell / Whinston / Green, “Microeconomic Theory”

*The standard text for graduate economics courses, used all over the world at the best departments. A fantastic book, but mathematically more demanding than what is required in this class and only recommended for those with active knowledge of some real analysis.*

Rubinstein, “Lecture Notes in Microeconomic Theory: The Economic Agent”

*From a famous economic theorist, an innovative and up-to-date treatment of core microeconomics (first half of the course). It's downloadable for free, see [www.econphd.net/notes.htm](http://www.econphd.net/notes.htm) (also available in print).*

You can find downloadable (free) books and lecture notes in economics and mathematics at [www.econphd.net/notes.htm](http://www.econphd.net/notes.htm).

## Mathematics:

You are expected to know basic calculus: what derivatives and integrals are, how to differentiate functions, determine concavity / convexity, find maxima. I will explain, and expect you to learn, a few more advanced techniques, such as constrained (Lagrangean) optimization and solving a first-order differential equation.

Any shortfall in the elementary skills you should remedy by the second week of the course. Try Chiang's "Fundamentals of Mathematical Economics," a very sympathetic introduction. Or buy the Schaum Outline "Introduction to Mathematical Economics" (by Dowling) to see a lot of solved sample problems.

## Assessment:

### 45% Problem Sets

I will assign three problem sets that count for 15% each. You have two weeks to work on them. While you are encouraged (but not required) to find solutions collaboratively, you must write them up independently. I prefer typed submissions, but legible hand-writing is acceptable. You are primarily rewarded for careful derivations and clear explanations, and only to a lesser degree for the correct result.

### 55% Final Exam

The exam is comprehensive and tests conceptual understanding (interpretation of theorems that were covered) as well as the ability to work through some standard examples. There should be no real surprises and no analytical "catches." The best preparation is to stay on top of the lecture material throughout the term and review the core models before the exam. You will not be asked to reproduce proofs of theorems, but trying to understand these proofs can be very instructive.