Instructor: GianCarlo Moschini 583 Heady Hall (294-5761) moschini@iastate.edu
T.A.: Jingbo Cui 280D Heady Hall (294-2177) jbcui@iastate.edu

Classes: Lectures Tuesday and Thursday, 9:00 am - 10:50 am 272 Heady Hall
Lab Friday, 3:10 pm - 5:00 pm 272 Heady Hall

(Note: There will be a few schedule changes in first five weeks—details to follow)

Office hours: Moschini: Tuesday and Thursday, 11:00 am – 12:00 noon
Cui: Tuesday and Wednesday, 1:00 – 2:00 pm; Thursday, 1:30 – 3:30 pm

Web page: http://www.econ.iastate.edu/classes/econ601/moschini

Course description

This is the first of two required Ph.D. core theory courses in microeconomics. The objective is to introduce the students to the standard problems of microeconomics, and to develop concepts and skills useful for advanced analysis in all areas of economics. The course will emphasize single-agent optimization problems, including decisions under uncertainty, but will also provide an introduction to aggregation issues and partial equilibrium analysis.

Prerequisites

This course presumes knowledge of intermediate microeconomics, as well as basic mathematical skills suited for graduate work in economics (in particular, students should be proficient on the topics covered in the “Math Camp” offered in the first two weeks of August). The material covered in the first part of Economics 600 is also particularly useful for this course.

Grades:

10 % homework (problem sets and lab sessions)
40 % midterm exam -- Tuesday, October 21, 5:00 pm - 7:00 pm
50 % final exam -- finals week, date/time TBA

Homework

Problem sets will be assigned each week and posted on the course web page. You are asked to work through all of the problems and to turn in your answers. Answers are due on Fridays, by 12:00 noon, in the T.A.’s mailbox. These problems will be discussed at the Friday lab session. Your assignment work will not be graded—the portion of your grade based on homework will simply depend on your handing in your answers to each question and on your active participation in the Friday lab sessions.
Required textbook


Recommended textbook


Other useful books

Graduate microeconomics:


Mathematical economics:


Note: These books are available in “Reserve” in the main library.

DETAILED OUTLINE AND SUGGESTED READINGS

Part 1: Consumer Theory


Jehle and Reny (2001), pp. 3-60.
Varian (1992), pp. 94-108, p. 113 and pp. 116-123.

**Duality.** Hyperplanes and halfspaces. Separating and supporting hyperplane theorems. Duality results for the expenditure function and the at-least-as-good set. Sufficient conditions for an expenditure function. Recovering the direct utility function from an expenditure function and from an indirect utility function.

Varian (1992), pp. 81-87 and pp. 129-131

Varian (1992), pp. 131-137.


Varian (1992), chapter 3 (pp. 23-35 and 40-47).

**Part 2: Producer Theory**


Varian (1992), chapter 1 (pp. 1-20).

**Profit Maximization and the Profit Function.** The profit maximization problem. Unconstrained optimization applied to \( \Pi \) maximization. FONCs for interior and corner solutions. SOCs and curvature. Input demands and output supply. Properties of demand and supply functions. Comparative statics using FOCs. Definition and properties of the profit function. Hotelling’s Lemma and the Envelope Theorem. Properties of input demands and output supply. Comparative statics with the profit function. Efficiency and profit maximization.

Mas-Colell, Whinston, and Green (1995), chapter 5 (pp. 135-139 and 149-152).
Varian (1992), chapter 3 (pp. 23-35 and 40-47).


Mas-Colell, Whinston, and Green (1995), chapter 5 (pp. 139-147)
Varian (1992), chapter 4 (pp. 49-61, 63-77, pp. 81-93)
Part 3: Partial Equilibrium


Varian (1992), chapter 14.

Part 4: Uncertainty and Risk Aversion


Mas-Colell, Whinston, and Green (1995), chapter 6 (pp. 167-194).


Note: topics labeled with the * symbol will be covered explicitly if time allows.