

Microeconomics: Theory &

Applications

ECON-GB.3335: Microeconomics: Theory & Applications

Fall 2025

Class sessions: Mondays, 9:00am – 12:00noon Room: KMC 7-191 (Backus Conference Room)

Office hours: Tuesdays 3:00-5:00pm

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SYLLABUS

Course description and learning goals:

This course satisfies the core requirement in microeconomics theory and is especially designed for Stern doctoral students whose programs do not include advanced courses in economic theory. It emphasizes concepts and techniques of microeconomics analysis that are likely to be useful in the students' further Ph.D. studies and doctoral dissertation research.

Content:

The topics that are developed in this course include: supply & demand; consumer & producer theory; competitive markets; monopoly & price discrimination; game theory; oligopoly; asymmetric information; externalities; public goods; auctions; networks & platforms.

A more detailed course outline is provided below.

Materials:

The readings are drawn from 2 textbooks.¹ There is some overlap between them; for most of the specific class sessions you should read one of them and skim the other one for additional (non-duplicative) material:

- Hal R. Varian & Marc J. Melitz (V&M), *Intermediate Microeconomics with Calculus*, 2nd edn. (W.W. Norton).²
- R. Preston McAfee, Tracy Lewis, & Donald J. Dale (ML&D), *Introduction to Economic Analysis*., version 2.1. This is an "open access" publication, which is available in pdf form and can be downloaded here; there is a slightly updated version (but with longer pagination, and less well formatted) that is available here.

¹ Other potential intermediate micro texts include: Walter Nicholson & Christopher Snyder, *Microeconomic Theory: Basic Principles and Extensions* (Cengage); Robert Cerrano & Allan M. Feldman, *A Short Course in Intermediate Microeconomics with Calculus* (Cambridge University Press).

² A very similar version is provided in V&M's *Intermediate Microeconomics: A Modern Approach*, 10th edn.; also, used copies of earlier editions of both books -- in which the content is very similar to the content of the current editions -- can be found online.

A more advanced treatment of the course material can be found in Mas-Colell, Whinston, & Green, *Microeconomic Theory* (Oxford University Press).

Grading:

The course grade will be based on a mid-term exam (40%) and a final exam (60%). The mid-term exam will be a take-at-home exam. The scheduling for the final exam will be determined midway through the course. (Examples of previous exams and answers are posted on NYU Brightspace.)

Students are strongly urged – but not required – to do the problem sets that are provided at the end of the chapters in the texts. If you have difficulties seeing the connection between a question/problem and the answer that is provided at the end of the text, bring it to class – and let's work it through together.

Class slides:

Class slides will be sent by e-mail to all students the night before each class and will be posted on NYU Brightspace at that time as well. The class slides will also be available in hard copy at the beginning of each class.

Help:

If you need help: Please come by my office during office hours or send me an e-mail to arrange for another time. I am usually at Stern for a large fraction of any week.

Detailed course outline:

Sept 8: Introduction; key concepts; basic supply & demand; elasticities; market equilibrium

ML&D: Chs. 1-3, 5 V&M: Chs. 1, 16

Sept 15: Consumer theory; demand

ML&D: Chs. 12-13 V&M: Chs. 2-10, 14-15

Sept 22: Production theory; cost curves; input demand & supply

ML&D: Ch. 9

V&M: Chs. 19, 20-22, 33

Sept 29: Competition; supply & demand again

ML&D: Chs. 2-3, 5, 10, 14 V&M: Chs. 16, 23-24, 32, 34

Oct 6: Monopoly

ML&D: Ch. 15

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V&M: Ch. 25, 27

Oct 13: NO CLASS (Columbus Day)

Oct 20: Price discrimination

ML&D: Ch. 15 V&M: Ch. 26

Mid-term take-at-home exam: Assigned on Tues Oct 21 at 5:00pm; due by 5:00pm on Fri Oct 24

Oct 27: Game theory: basic concepts; zero-sum games

ML&D: Ch. 16 V&M: Chs. 29-30

Nov 3: Game theory: non-zero-sum games

ML&D: Ch. 16 V&M: Chs. 29-30

Nov 10: Oligopoly

ML&D: Ch. 17 V&M: Ch. 28

Nov 17: Asymmetric information

ML&D: Chs. 18-19

V&M: Ch. 37 (ch. 38 in earlier editions)

Nov 24: Externalities & public goods

ML&D: Chs. 7 & 8

V&M: Chs. 35, 36 (ch. 37 in earlier editions)

Dec 1: Applications: Auctions; Networks/Platforms

ML&D: Ch. 20

V&M: Chs. 18, 38 (ch. 36 in earlier editions)

Dec 8: Potential in-class final exam; otherwise, assignment of take-at-home final exam