

Department of Economics, Rutgers University
Intermediate Microeconomic Analysis
01:220:320:11 Fall 2017
Syllabus

INSTRUCTOR

Oriol Carbonell
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HOURS

Tuesday-Friday 11:30AM-12:50PM.

BUILDING-ROOM

Frelinghuysen Hall-A5, College Avenue Campus.

OFFICE HOURS

Held in New Jersey Hall 106A **Tuesday** and **Friday 1:00PM-2:00PM**, and by appointment.

PREREQUISITES

Calculus (640:135 or 151) with a grade of C or better.

Introduction to Microeconomics (220:102) with a grade of C or better.

Note: Economics majors must earn grades of C or better.

COURSE WEB SITE

<https://sakai.rutgers.edu>

This link will take you to the Sakai web site. You can log on to Sakai using your net ID and password. The course worksite is entitled "INTERMEDIATE MICROECONOMIC ANALYSIS 11 F17."

TEXTBOOKS

There is no required textbook. The textbooks suggested below may help as a complement—not as a substitute—for the material covered in class. Copies of these references have been placed on reserve at Alexander Library.

Walter Nicholson and Christopher M. Snyder, *Microeconomic Theory: Basic Principles and Extensions*, Eleventh Edition, South-Western/Cengage Learning.

Roberto Serrano and Allan M. Feldman, *A Short Course in Intermediate Microeconomics with Calculus*, November 2012, Cambridge University Press.

Hal R. Varian, *Intermediate Microeconomics with Calculus*, First Edition, W.W. Norton & Company.

Jeffrey M. Perloff, *Microeconomics: Theory and Applications with Calculus*, Third Edition, Pearson.

LEARNING OUTCOMES

This course teaches you the techniques of optimization and equilibrium analysis. You will learn the foundations of consumer and producer behavior and the positive and normative analyses of their interaction in perfectly and imperfectly competitive markets. In this course you will learn and practice skills that are applied in virtually every course in the undergraduate economics curriculum.

GRADING

Six in-class quizzes will determine your grade. There will be no final examination, *nor will any extra credit work be provided. Each quiz will carry the same weight.*

The following is the correspondence between average percentage scores and letter grades that will be used for this class:

<i>Grade</i>	<i>Minimum average percentage score</i>
A	90%
B+	85%
B	75%
C+	65%
C	60%
D	55%

Note: Missed exams are excused only for medical reasons or emergencies, *provided that the instructor is notified within 24 hours after the missed exam*, and only with a note from the Dean's office or a signed form from a physician's office and confirmation of the visit by the instructor.

PROBLEM SOLVING

Practice problems will be distributed via the Sakai site for the course. *These are intended as practice for the quizzes.* You should attempt to solve all practice problems. Simply reading the solutions to the problem sets will not insure your passing the course. Problem solutions will be distributed via the course web site when necessary. However, the solutions to the problems solved in class *will not* be posted.

QUIZ DATES

Quiz 1: *Tuesday, September 19.*

Quiz 2: *Friday, October 6.*

Quiz 3: *Tuesday, October 24.*

Quiz 4: *Tuesday, November 7.*

Quiz 5: *Tuesday, November 28.*

Quiz 6: *Tuesday, December 12.*

ABSENCES

Students are expected to attend all classes. If you expect to miss one or two classes because of illness or a family emergency, please use the University absence reporting website <https://sims.rutgers.edu/ssra> to indicate the date and reason for your absence. An email is automatically sent to the instructor.

IMPORTANT DATES

- **Tuesday, September 12:** Last day for undergraduates to drop a course without a "W."
- **Wednesday, September 13:** Last day for undergraduates to add a course.
- **Monday, October 30:** Last day to drop a course by withdrawal
- **Tuesday, November 21:** Change of designation day - Thursday classes meet.
- **Wednesday, November 22:** Change of designation day - Friday classes meet.
- **Thursday, November 23–Sunday, November 26:** Thanksgiving Recess.
- **Wednesday, December 13:** Last day of classes.

COURSE OUTLINE

1. Utility maximization and choice.

- 1.1. The utility maximization problem.
- 1.2. Applications: The lump sum principle of taxation, income subsidies vs coupons.
2. Income and substitution effects.
 - 2.1. The individual's demand function.
 - 2.2. Normal and inferior goods.
 - 2.3. Income and substitution effects—Graphical analysis.
 - 2.4. Giffen's paradox.
 - 2.5. Income and substitution effects from a small change in price.
 - 2.5.1. Expenditure function.
 - 2.5.2. The Slutsky equation.

Quiz 1 on utility maximization and choice and income and substitution effects on Tuesday, September 19.

3. Production functions.
 - 3.1. Isoquant maps and the marginal rate of technical substitution.
 - 3.2. Returns to scale.
 - 3.3. Application: optimal allocation of inputs across plants.
4. Cost functions.
 - 4.1. The cost minimization problem: short run vs long run.
 - 4.2. Total, marginal and average cost functions: short run vs long run.
 - 4.3. Application: cost-minimizing allocation of output across plants.
5. Profit maximization.
 - 5.1. The profit maximization problem: short run vs long run.
 - 5.2. Short-run supply by price taking firms.

Quiz 2 on production functions, cost functions, and profit maximization on Friday, October 6.

6. The competitive model.
 - 6.1. Partial equilibrium: Short-run and long-run market equilibrium.
 - 6.2. Partial equilibrium: Applications.
 - 6.3. General equilibrium analysis: Many markets.

Quiz 3 on the competitive model on Tuesday, October 24.

7. Monopoly.
 - 7.1. Profit maximization by a monopolist.
 - 7.2. Monopoly and economic efficiency.
 - 7.3. Application: regulation of monopoly.
8. Imperfect competition.
 - 8.1. Bertrand competition.
 - 8.2. Cournot competition.
 - 8.3. Capacity constraints.
 - 8.4. Product differentiation.

Quiz 4 on monopoly and imperfect competition on Tuesday, November 7.

9. Externalities and public goods.

Quiz 5 on externalities and public goods on Tuesday, November 28.

10. Expected utility theory.

11. Information economics.

11.1. The principal-agent model.

11.2. Adverse selection, signaling, and screening.

11.3. Incentives and mechanism design.

Quiz 6 on expected utility theory and information economics on Tuesday, December 12.

Note: Time constraints may cause some topics to be omitted.