Intermediate Microeconomic Theory: A Mathematical Approach, ECON 2103.10, MW 4:45-6:00 pm, Monroe 451

Professor: Arun Malik (Office Hours: Mon 12:30-1:30 pm and Tu 4:00-5:30 pm, and by appointment, Gov 305; amalik@gwu.edu)

**COURSE DESCRIPTION**

Microeconomic theory is the foundation of economics. This course delves deeper into models of economic behavior introduced in Principles of Microeconomics (Econ 2101). It provides a more sophisticated understanding of neoclassical models of consumer and producer behavior, and the interaction of consumers and producers in markets—both competitive and noncompetitive.

This course satisfies the same requirements as Econ 2101 (Intermediate Microeconomic Theory). Like Econ 2101, the course is required for students majoring or minoring in economics. It is also a prerequisite for several upper-level economics courses; see the FAQ for undergraduates on the Department’s website for more information.

Compared to Econ 2101, this course makes greater use of calculus, specifically unconstrained and constrained optimization, to develop and analyze the models of consumer and producer behavior. This course is strongly recommended for students contemplating getting a B.S. in Economics or pursuing graduate study in economics or finance.

A companion to this course covering macroeconomic theory will be offered starting in Spring 2012, Econ 2104, Intermediate Macroeconomic Theory: A Mathematical Approach.

**PREREQUISITES**

The prerequisites for this course are: (1) freshmen-level Principles of Microeconomics (Econ 11, or Econ 2011 in the new course numbering system), (2) Calculus I (Math 1221, 1252, or 1231), and (3) concurrent registration in Calculus II (Math 1232). In addition to a grounding in calculus, students are expected to be comfortable with algebra, in particular solving systems of one or two equations.

**COURSE GOALS**

Upon completion of this course, students should be able to: (1) analyze and explain economic decision-making by consumers and producers; (2) characterize equilibria in perfectly and imperfectly competitive markets, and (3) analyze and explain the effects of government policies on consumer/producer behavior and welfare, and on market equilibria.
COURSE MATERIALS


The website for the textbook

http://bcs.wiley.com/he-bcs/Books?action=index&itemId=0470049243&bcsId=4031

has a number of useful resources, including self-tests, spreadsheet exercises, and applications. You are strongly encouraged to make use of it.

Non-Textbook Materials. In addition to material from the textbook, you will be assigned a few outside readings and videos. These will be described, and linked to, in the “Files” section of Blackboard.

REQUIREMENTS AND GRADING

Let there be no doubt that this is a difficult course. **Students are expected to put in at least 5-7 hours each week outside the classroom.**

Approximately five homework sets will be assigned over the course of the semester. Homework will not be collected, however, detailed answer sheets will be provided. If you have trouble with homework problems, don't hesitate to ask me for help. Depending on circumstances, I will go over the problems during office hours or in class.

Four quizzes based on the homeworks, readings, and lecture notes will be given during the course of the semester. The quizzes will be announced one week before they are given. **There will be no make-up quizzes, however, the lowest quiz grade will be dropped.**

In addition to the quizzes, there will be a midterm exam and a final exam. The midterm exam is tentatively scheduled for **Wednesday, October 12th**. The date of the final exam has not yet been set.

The course grade will be calculated using the following weights:

 quizzes — 30%
 midterm and final exams — 35% each

ACADEMIC INTEGRITY

The George Washington University is guided by the standards of academic integrity. Students are reminded to honor the Code of Academic Integrity, which can be viewed at

http://www.gwu.edu/~ntegrity/code.html

Section 1 of the Code is especially relevant for students.
STUDENTS WITH DISABILITIES

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss specific needs. Please contact the Office of Disability Support Services at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to http://gwired.gwu.edu/dss.

COURSE OUTLINE

A tentative list of topics, the number of classes devoted to each, and readings from the textbook, are specified below. Unless specified otherwise, any appendices to a chapter are also required reading. Some additional readings and materials will be posted on Blackboard.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td><strong>Introduction and Optimization</strong> (4 classes)</td>
<td>Chap. 1, Mathematical Appendices A.1-A.8 (at end of textbook), and posted lecture notes</td>
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<tr>
<td><strong>Theory of the Consumer</strong> (5 classes)</td>
<td>Chaps. 3, 4, and 5</td>
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<tr>
<td><strong>Theory of the Producer</strong> (4 classes)</td>
<td>Chaps. 6 (skip Appendix), 7, and 8 (skip Appendix)</td>
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<tr>
<td><strong>Perfectly Competitive Markets</strong> (4 classes)</td>
<td>Chaps. 9 and 10</td>
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<td><strong>Monopoly</strong> (1 class)</td>
<td>Chap. 11 (skip 11.7)</td>
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<tr>
<td><strong>Capturing Surplus</strong> (2 classes)</td>
<td>Chap. 12</td>
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<tr>
<td><strong>Game Theory and Strategic Behavior</strong> (2 classes)</td>
<td>Chap. 14 and handout</td>
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<tr>
<td><strong>Oligopoly</strong> (2 classes)</td>
<td>Chap. 13 and handout</td>
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