

LEHIGH UNIVERSITY  
Department of Economics

Applied Microeconomics  
Economics 146

Rahmi Erdem Aktug  
Fall 2008

**COURSE OUTLINE**

**Class Meetings:** MWF - 11:10 am to 12:00 pm RBC 041  
**Office Hours:** MW - 9:00 am to 11:00 am RBC 220 or by appointment  
**Contact:** rea204@lehigh.edu

**Required Text:** Jeffrey M. Perloff, *Microeconomics, Theory and Applications with Calculus*, 1<sup>st</sup> ed., Addison-Wesley-Longman

*The Wall Street Journal*

**Course Objectives:** The goal of this course is to provide a thorough analysis of applied microeconomics. The first step in achieving this goal is to learn how to model economic behavior; e.g., how people choose what to consume based on preferences, prices, income, and various other economic variables. Learning to model is the most difficult part of this course because it involves both the understanding of basic algebra to solve problems and the art of choosing assumptions to set up meaningful problems. The second step is to build an understanding of various economic problems in different markets. During the semester we will examine the following concepts.

- A- Consumer Theory: Demand Side
- B- Theory of the Firms: Supply Side; Technology, Costs and Profit
- C- Market Equilibrium in Competitive Markets: Demand & Supply
- D- Oligopolistic Markets: Market Interactions, Game Theory, Pricing and Competitive Strategies.
- E- Uncertainty and Asymmetric Information

By the end of the semester, you will be able to do the following.

1. Apply marginal analysis to the determination of efficient choices.
2. Use constrained optimization to analyze consumer and firm decision making.
3. Use the supply and demand model to analyze competitive market outcomes.
4. Show the basic relationships between technology, production decisions, and costs.
5. Use demand functions, cost functions, market structures, and when appropriate game-theoretic concepts, in the analysis of a firm's decisions.
6. Analyze decisions that involve risk.

**Prerequisites:** Calculus, Eco 145 or equivalent

**Grading:**

Homeworks, Quizzes, Class Participation:	20 %
Midterm 1:	25 %
Midterm 2:	25 %
Final Exam:	30 %

Grades will be based on the midterm exams, the final exam, and the solutions to analytical problem sets, class participation, as well as enthusiasm, attitude, and manners during class. For the problem sets only, you may discuss questions and answers with other students in the class, however, you must write up your own answers. Of course, no collusion is permitted when taking exams and quizzes.

***You must bring a simple calculator, one that can calculate exponents, to quizzes and exams. Makeups only in exceptional circumstances, and during the final exam three-hour period.***

**Analytical Problem Sets:**

ACTIVE STUDY or LEARNING-BY-DOING is an important part of applied microeconomics. Moreover, it is the consensus of many practitioners of the art that numerical problems are a highly effective educational tool. Some of the problems are relatively easy, while others will require considerable thought. The more difficult problems are well worth the effort since they insure your mastery of microeconomics. Warning: Do not start the homeworks on the last minute! Some of these problems may take a few hours to solve and you might need assistance in some cases.

The format for submission and instructions for the application problem sets is as follows. Work each problem carefully and check where possible that you have arrived at the correct solution. *Be sure to give a complete description of the problem and include a discussion of the economic content of the problem.* All details for solving the problem must be given with your answer (be sure to work logically through each problem and identify the basic steps associated with arriving at the solution). Finally, please ask for assistance at any time if you are having trouble with the assignment. A good idea is to review the assignment and begin working solutions to the problem set when it is assigned.

**I do not accept late homework.**

*The Wall Street Journal*

We will discuss microeconomics articles from *The Wall Street Journal* at least once a week. You should scan the journal each day for microeconomics articles, read these articles, and be prepared to talk about them in class.

### Academic Integrity

On the homework, you can work with others to derive the solutions. However, you cannot work with others when writing your assignment. That is, write your homework answers on your own.

Lehigh University Student Senate Statement of Academic Integrity. “We, the Lehigh University Student Senate, as the standing representative body of all undergraduates, reaffirm the duty and obligation of the students to meet and uphold the highest principles and values of personal, moral and ethical conduct. As partners in our educational community, both students and faculty share the responsibility for promoting and helping to ensure an environment of academic integrity. As such, each student is expected to complete all academic course work in accordance to the standards set forth by the faculty and in compliance with the university’s Code of Conduct.”

### Disabilities

Accommodations for Students with Disabilities: If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center 212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.

## COURSE SCHEDULE

Week	Classes and Dates	Topics	Chapters	*PS-Due
1	(1-3) Mon., Aug. 25 to Fri., Aug. 29	Introduction to Microeconomic Analysis, Models Supply & Demand, Elasticity, Taxation, Calculus Review	<b>1, 2</b> <b>Appendix</b>	
2	(4-6) Mon., Sept. 1 to Fri., Sept. 5	Consumer Choice, Budget Line, Preferences Deriving the Demand Function, Applications	<b>3, 4</b>	
3	(7-9) Mon., Sept. 8 to Fri., Sept. 12	Consumer Welfare and Policy Analysis	<b>5</b>	PS1
4	(10-12) Mon., Sept. 15 to Fri., Sept. 19	Production Functions, Technology, and Input Choice The Short Run and the Long Run	<b>6</b>	
5	(13-15) Mon. Sept. 22 to Fri., Sept. 26	Cost Analysis, Opportunity Cost, Economic Profit Fixed and Sunk Costs, Technological Change	<b>7</b>	PS2

### First Hourly Exam (Week of September 29, TBA)

6	(16-18) Mon., Sept. 29 to Fri., Oct. 3	Perfect Competition, Profit Maximization	<b>8, 9</b>	
7	(19-21) Mon., Oct. 6 to Fri., Oct. 10	Market Equilibrium, Economic Welfare	<b>10</b>	PS3
<b>Pacing Break (October 13-14)</b>				
8	(22-23) Wed., Oct. 15 to Fri., Oct. 17	Monopoly Pricing and Output Decisions Monopoly vs. Perfect Competition, Cartels	<b>11</b>	
9	(24-26) Mon., Oct. 20 to Fri., Oct. 24	Pricing, Price discrimination, Bundling and Tying Pricing a Product Line and Dynamic Pricing	<b>12</b>	PS4
10	(27-29) Mon., Oct. 27 to Fri., Oct. 31	Public Goods and Externalities	<b>17</b>	

### Second Hourly Exam (Week of November 3, TBA)

11	(30-32) Mon., Nov. 3 to Fri., Nov. 7	Game Theory, Strategic Interaction Oligopoly and Strategic Behavior	<b>13, 14</b>	PS5
12	(33-35) Mon., Nov. 10 to Fri., Nov. 14	Decision Making Under Uncertainty, Decision trees, Expected Value and Expected utility	<b>16</b>	
13	(36-38) Mon., Nov. 17 to Fri., Nov. 21	Asymmetric Information	<b>18</b>	PS6
14	(39) Mon., Nov. 24	Contracts and Moral Hazards	<b>19</b>	
<b>Thanksgiving Vacation (November 26-28)</b>				
15	(40-42) Mon., Dec. 1 to Fri., Dec. 5	Final Review - Case Studies		

**Final Examination Date to be Announced Later in Semester**