

UNIVERSITY OF KENTUCKY
Independent Study Program

Economics 201
Principles of Economics 1

30 Assignments
3 Semester Hours

Introduction

Economics 201 is one of the two courses in the one-year introductory sequence in principles of economics. This course covers microeconomics, the economics of households and firms. Economics 202, covers macroeconomics, the economics of national and international aggregates and money. The course in this self-study guide is essentially the same course that is taught on campus. There are no prerequisites for the course, but the student should be able to use some high-school mathematics - graphs are used extensively in your readings and assignments. If you are unsure about your graphing skills you should look over the Appendix to Chapter 1 in your textbook.

Objectives

The objective of Economics 201 is to give you a basic introduction to microeconomic analysis. This course is designed to provide you with a working understanding of market behavior - when you are finished you should have a good understanding of supply and demand and how they are derived from the behavior of consumers and firms. In addition we will consider various forms of market structure (pure competition, monopoly, and oligopoly) and see how markets allocate the factors of production. We will finish by considering what types of situations prevent markets from working efficiently and the role of government.

This course together with Economics 202 are the prerequisites for upper division courses in economics at the University of Kentucky. When you have finished the two courses you will be able to take more specialized courses in such areas as labor economics, international economics, monetary economics, public finance, and economic history.

Textbook

Gwartney, James D. and Stroup, Richard L., Economics: Private and Public Choice, Ninth Edition, Harcourt Brace Jovanovich, 2000.

Study Guide

Studenmund, A.H. , Coursebook to Accompany Economics: Private and Public Choice, Ninth Edition, Harcourt Brace Jovanovich, 2000.

The Course

This course has been designed as a self-study program. In each of the ten units you are given a reading assignment in the textbook and assigned corresponding work in the study guide. In the absence of classroom instruction the study guide is being used to help explain and clarify the material in the textbook. We feel that it is crucial to your full understanding of the material to do all the work in the study guide (the study guide assignments are not graded).

Of course, you will find your own best method of working through this course, but we recommend something along these lines:

- (1) Read the textbook assignment and get a feel for the material in the unit.
- (2) Go to the study guide and complete the assigned problems.
- (3) Check your answers to the study guide problems to identify your weaknesses.
- (4) Go back and read the assignments more carefully, concentrating on the areas that gave you trouble in the study guide assignments.
- (5) You are now ready to complete the assignments.

Some students will undoubtedly feel that it is unnecessary to read the material twice and do the study guide questions before completing the Assignments. WE DO NOT AGREE. In the absence of classroom instruction your reading is more important than ever. It is my experience that students who simply search out the answers to questions and copy the text in an attempt to simply complete the course regularly fail the final exam and the course (most students, however, do well in the course).

Grading System

Your grade in the course will depend on your scores on the 30 written assignments and the final exam. The written assignments are each worth a maximum of 10 points - thus you may score a maximum of 300 points on your written work. The final exam is also worth 300 points. The final letter grade will be determined as follows:

<u>Total Points</u>	<u>Final Grade</u>
535 or above	A
470 - 534	B
405 - 469	C
340 - 404	D
below 340	E

with the important proviso that you must score at least 150 points on the final exam to pass the course. There is no exception to this rule!!!

In order to encourage you in doing your study guide work, part of the questions on the final exam are modeled on the multiple choice questions and problems. This also helps give you an idea of what to expect on the final exam.

Your written assignments are to be submitted in units. The number of assignments in the different units varies, but you must always submit all the assignments from a given unit together as a single group. It is not necessary to wait until the assignments are graded before proceeding to the next unit. However, my experience suggests that students may benefit from reviewing graded assignments before proceeding to avoid making the same mistakes on future assignments.

IMPORTANT NOTE: The regulation concerning four lessons per week does not pertain to this course. However, no more than two units may be turned in per week.

Your written assignments will be returned to you as quickly as possible. We will try to point out any problems we see with your understanding of the material. If you have any problems feel free to contact us and we will be happy to help you.

OUTLINE OF COURSE

<u>Unit</u>	<u>Unit Description</u>	<u>Chapters</u>	<u>Assignments</u>
I	The Economic Way of Thinking	1,2	1, 2
II	Price Theory	3	3, 4, 5
III	Demand and Consumer Choice	19	6, 7, 8, 9
IV	Indifference Curve Analysis	19, addendum	10, 11
V	Costs and Supply	20	12, 13, 14, 15
VI	Purely Competitive Markets	21	16, 17
VII	Imperfect Competition	22, 23	18, 19, 20, 21
VIII	Factor Markets	24	22, 23, 24
IX	Unions, Income Inequality, and Natural Resources	25, 26, 27, application #8	25, 26, 27
X	Public Choice	5, 6	28, 29, 30

UNIT I.
THE ECONOMIC WAY OF THINKING

The purpose of this unit is to orient you with some of the basic terms and ideas associated with economics. A French professor would not start an introductory French class by jumping into the mechanics of the language; rather, he or she would probably begin with an orientation to the customs and ways of the French, making the transition to the language easier. It is the same with economics. Acquainting yourself with the “customs” of economics will make thinking like an economist easier.

You probably know some economics already, without even realizing it. Now you will be able to express that knowledge.

Textbook Readings: Chapters 1 and 2

Study Guide: Ch. 1: T/F, (all).
Problems: 1, 6
Multiple Choice (all).
Ch. 2: T/F (all).
Problems: 1, 5
Multiple Choice (all).

Assignment #1

1. What is economics?
2. What is scarcity? Give two examples of scarcity in your life.
3. Name and explain the three general categories of resources.
4. Discuss the idea of opportunity cost. What is the economic cost of the following?
 - a. Studying for an exam
 - b. Going to college
 - c. Dining-out
5. Discuss the following.
 - a. Marginal Thinking
 - b. Secondary Effects
 - c. Scientific Thinking
6. Give an example of a normative statement. Give an example of a positive statement. What does economics concentrate on, normative or positive statements?
7. What is microeconomics? How does microeconomics differ from macroeconomics?

Assignment #2

1. Given the following data on production:

<u>Consumer Goods</u>	<u>Capital Goods</u>
0	20
1	19
2	17
3	13
4	8
5	0

- a. Graph the production possibilities curve. (make sure you label both axes)
 - b. Explain how scarcity is illustrated by the graph.
 - c. What is the opportunity cost of producing one more consumer good if society is already producing 2 consumer goods (i.e. explain what is given up if society increases its production of consumer goods from 2 to 3 units)?
- 2.
- a. Explain the relationship between scarcity and opportunity cost.
 - b. Show, on the diagram on which the production possibilities curve is graphed, the area that represents an inefficient use of resources.
 - c. What factors will cause the production possibilities curve to move outward? Show, in different colored ink, an increase in the production possibilities curve.
 - d. What is the difference between invention and innovation? In which activity is the entrepreneur more prominent?
3. Define the following.
- a. The law of comparative advantage
 - b. Division of labor
4. What are the differences between a market mechanism and collective decision-making?

UNIT II.
PRICE THEORY

Of all the things you learn in ECO 201, markets will be the most crucial to your general understanding of microeconomics, although it may just seem like “common sense”. Assignment 3 outlines ideas behind demand, assignment 4 goes over supply and 5 brings the two concepts together. A couple of notes: when graphing the demand curves, please make sure the graphs are large enough to be read. In addition, please make sure, for 2c, that you include not only the new demand curves, but the old curves as well so that they can be compared. Please let me know if you have trouble.

Textbook Reading: Chapters 3 and 4

Study Guide: Ch. 3: T/F (all)
Problems 3, 5
Multiple Choice (all)
Ch. 4: T/F (all)
Problems 2, 3, 4
Multiple Choice (all)

Assignment #3

1. State the law of demand.
- 2.

DEMAND SCHEDULE FOR COMPACT DISCS	
Price of CD's	Quantity Demanded (in millions/month)
\$16.00	4
\$14.50	6
\$13.00	8
\$10.50	10
\$9.00	12
\$7.50	14

- a. Using the schedule above, graph the demand curve for compact discs. What is significant about the height of the demand curve? For a market price of \$10.50, shade in the area of consumer surplus.
- b. What happens to the quantity demanded of CDs if the price of CDs increases from \$9.00 to \$13.00?

- c. Show graphically what happens to the demand for CDs for the following (Use a separate graph for each scenario).
 - i. An increase in the average income of consumers
 - ii. A decrease in the price of CD players
 - iii. A decrease in the price of cassette tapes and cassette players
3. Explain the difference between a change in demand and a change in quantity demanded.
4.
 - a. Give two examples of goods that are considered substitutes.
 - b. Give two examples of goods that are considered complements.
 - c. Assume, goods A and B are considered to be substitutes, what is the effect of an increase in the price of good A on the demand for good B?

Assignment #4

1. Relate the idea of opportunity costs to production.
2. State the law of supply. Is producer surplus the same as profit? Explain.
3. Using the data presented below, construct a supply curve for Compact Discs.

SUPPLY SCHEDULE FOR COMPACT DISCS	
Price of CD's	Quantity Supplied (in millions/month)
\$16.00	12
\$14.50	10
\$13.00	8
\$10.50	6
\$9.00	4
\$7.50	2

4. a. Discuss two factors that will cause a decrease in the supply of CDs; Graphically show a decrease in the supply of CDs.
b. Discuss two factors that will cause an increase in the supply of CDs; Graphically show an increase in the supply of CDs.
5. a. Explain how demand and supply interact to determine a market price.
b. Graphically depict an equilibrium price and quantity using the demand and supply schedules provided in this assignment and assignment three. What is the equilibrium price and quantity? Why is this considered an equilibrium?
6. What will happen to equilibrium price and quantity of CDs given the following (include a graphical depiction)?
 - a. A technological breakthrough in the production of CDs
 - b. The introduction of a new, more advanced, less expensive audio equipment
7. Define: Invisible Hand Theorum.

Assignment #5

1. Draw a demand curve and a supply curve and indicate the equilibrium price and quantity.
 - a. Now draw in a price floor at a price that is higher than the equilibrium price.
 - b. Indicate the quantity demanded and the quantity supplied, given this price floor.
 - c. Does a surplus or shortage exist? Indicate the magnitude of this shortage or surplus on your graph.
2. Repeat #1, this time for a price ceiling.
3. What effect does an excess supply of a commodity have on the price of a commodity?
 - a. Given this change in price, what action does this price signal producers to undertake with respect to quantity supplied?
 - b. How does this change in price affect the quantity demanded by consumers?

UNIT III.
DEMAND AND CONSUMER CHOICE

In this unit, you will learn some of the fundamentals of consumer choice. As we know, our resources are limited and so we must decide how to allocate our limited resources (most people think of this as income, but it can refer to things like time or labor) given our unlimited wants. We primarily allocate our resources according to our preferences—economists assume that we can rank the order in which we like things. Economists refer to the satisfaction we obtain from consumption of goods and services as *utility*. In this unit, you will also be acquainted with the term elasticity, as in *elasticity of demand*. This elasticity refers to changes in the demand for a good resulting from a change in the good's price. Students often have trouble with this concept so if you find yourself struggling with this, please let me know.

Textbook Reading: Chapters 4 (pg 105-114) and 19

Study Guide: Ch 19: T/F (all).
Problems 1, 2, 3, 6
Multiple Choice (all).

Assignment #6

1. True/False/Explain: The money cost of a good completely captures the good's cost to the consumer.
2. Marginal utility is the additional satisfaction attained from consuming an additional unit of a good. Using the following total utility schedule find the marginal utility of each good consumed.

<u>Number of Units</u>	<u>Total Utility</u>	<u>Marginal Utility</u>
0	0	
1	8	?
2	14	?
3	18	?
4	20	?
5	20	?
6	19	?

3. How is the "Law of Diminishing Marginal Utility" related to the slope of the demand curve?

4. a. In your own words, explain what is meant by the statement “consumers maximize their total utility by ensuring that the last dollar spent on each commodity purchased yields an equal degree of marginal utility.”
- b. Given you are currently consuming two goods, where the last unit consumed of good A yields 5 units of utility at a price of \$1; and the last unit consumed of good B yields 3 units of additional utility at a price of \$.50, to maximize total utility would you consume more of good A or good B? Explain.

Assignment #7

1. Define the substitution effect and the income effect and relate them to the slope of the demand curve.
2. Given the following demand schedules for Joe and Dean, derive the market demand curve if Joe and Dean are the only two consumers in this market.

DEMAND SCHEDULES FOR SALAD CROUTONS			
Price	Joe's Quantity Demanded	Dean's Quantity Demanded	Market Quantity Demanded
\$.50	10	9	?
\$1.00	7	6	?
\$1.50	4	3	?
\$2.00	1	0	?

3. In economics there exists what is called the “diamond/water” paradox. This paradox asks: why is water, which is useful and needed for life, so cheap, when diamonds (relatively useless items) are so expensive? See if you can explain this, using the concept of utility.

Assignment #8

1. Use the table below to answer the following questions.

Price	Quantity Demanded
\$2	8
\$4	6
\$6	4
\$8	2

- a. Calculate the price elasticity of demand for the price change from \$2 to \$4; from \$4 to \$6; from \$6 to \$8. Indicate for each price change whether demand is elastic, inelastic or unitary over the relevant range.
 - b. Calculate the total revenue for each price and quantity combination.
 - c. Explain the relationship between changes in total revenue associated with an increase in price over the elastic, unitary, and inelastic portions of the demand curve.
2. What factors have affected the price elasticity of demand for gasoline over the past 25 years? Has the price elasticity of demand for gasoline gotten more or less elastic in the past 25 years? Explain why.
 3. What happens to the price elasticity of demand for a good over time? Explain.

Assignment #9

1. An increase of personal income of 20% causes a 50% increase in the quantity demanded of Sparkling waters, a 15% increase in the quantity demanded of Herbal teas, and a 5% decline in the quantity of Big Red soda.
 - a. Compute the income elasticities for each good.
 - b. Which good/goods are considered inferior goods?
 - c. Which good/goods are considered luxury goods?
2.
 - a. Graphically present the burden on consumers and suppliers of a tax placed on the buyers of a good that has a relatively inelastic demand curve and a relatively elastic supply curve.
 - b. Graphically present the burden on consumers and suppliers of a tax placed on the buyers of a good that has a relatively elastic demand curve and a relatively inelastic supply curve.
 - c. Under what circumstances does the consumer bear a relatively larger burden of a tax?
Under what circumstances does the producer bear a relatively larger burden of a tax?
3. Indicate the deadweight loss of a tax on the above graphs. What is meant by a deadweight loss?

UNIT IV. INDIFFERENCE CURVES

As the textbook reading says, this material comes from the addendum of Chapter 19. Here you will be introduced to indifference curve analysis. Like the text mentions, this is slightly more advanced material—many introductory courses do not include this material and instead save it for intermediate microeconomics courses. However, this shouldn't be too difficult as the text gives a good basic description of the ideas. One thing that needs to be stressed, and please remember this when you are working through the assignments in this unit, is this: indifference curves represent different bundles of goods that give the consumer the *same* level of utility. While the combination of goods will change as you move along an indifference curve, the amount of satisfaction (utility) obtained does not. Hence the term indifference curve. You are just as well off on one point of the curve as you are on any other point.

Textbook Reading: Chapter 19, Addendum

Study Guide: none

Assignment #10

1. Draw an indifference curve for miniature golf (horizontal axis) and movies (vertical axis).
 - a. Indicate two points on the indifference curve.
 - b. What is the difference in total utility between these two points?
 - c. Indicate the area where total utility is greater than that of any point on your indifference curve.
 - d. Indicate the area where total utility is less than that of any point on your indifference curve.
2. What happens to the MU of movies as you move down and to the right along your indifference curve; the marginal rate of substitution?

3. On a separate graph, draw a budget constraint for miniature golf (horizontal axis) and movies (vertical axis).
 - a. What does this budget constraint represent?
 - b. On a separate graph, illustrate the effect of an increase in income.
 - c. On a separate graph, illustrate the effect of an increase in the price of miniature golf.
 - d. On a separate graph illustrate the effect of a decrease in the price of movies.
 - e. On a separate graph, illustrate the effect of an equal increase in the price of both movies and miniature golf.

Assignment #11

1. Is it possible for indifference curves to ever cross? Why or why not?
2. Using indifference curve analysis show the utility maximizing bundle for a consumer. How does this relate to our earlier analysis of utility maximization ($MU_8/P_8 = MU_9/P_9$)?
3. Using indifference curve analysis, illustrate the effect of a decrease in the price of miniature golf on the utility maximizing quantity consumed of miniature golf. How does this information relate to the demand for miniature golf?
4. Using indifference curve analysis illustrate the substitution effect and the income effect. (Be sure to include an explanation and carefully label your graph showing original bundle consumed; final consumption bundle; clearly marked change in quantity demanded due to income effect, and change in quantity demanded due to substitution effect.)

UNIT V. COSTS AND SUPPLY

In this section, you will learn about producers' costs and output—the supply side. Your life has been primarily spent as a consumer, and now you get to think like a producer. This will entail thinking about costs, as mentioned before, which involves learning all the dreaded cost curves. In addition, there will be discussion of the *principal-agent problem* and the idea of *sunk costs*.

Textbook Reading: Chapter 20

Study Guide: Ch. 20: T/F (all)
Problem 1, 4
Multiple Choice (all).

Assignment #12

1.
 - a. List the three major forms of business firms and discuss their major strengths and weaknesses.
 - b. Corporations are legal entities where the majority of the stockholders have little or no say in the day-to-day operations of the firm. Discuss factors that make this an efficient form of business organization.
2.
 - a. Discuss the role of a residual claimant in a business firm and the problems of shirking and principal-agents.
 - b. Give two examples, not found in the text, of principal-agent problems.
3.
 - a. What role do opportunity costs play in the decisions of business firms?
 - b. What is the difference between economic profits and accounting profits?
 - c. An economist reports that a firm had losses equal to \$50,000 yet the accountant shows profits of \$95,000, is this possible, what are the explanations for the apparent discrepancy?
4. What is the difference between the short run and long run?

Assignment #13

1. Complete the following table.

Output	TFC	TVC	TC	AFC	AVC	-ATC	MC
0							
1							10
2		18					
3						26.67	
4			96				
5					13		
6							23
7		116					
8					18.75		
9	50		244				

2. Given the above table and information regarding the relationship between the various elements of costs, answer the following questions.
- At what level of output is ATC at a minimum? What is the relationship between ATC and MC at this level of output?
 - What is the difference between ATC and AVC, at all levels of output?
 - When marginal cost is less than AVC, is AVC increasing or decreasing? Explain.
 - As output increases, what happens to AFC? Explain.
3. Draw a complete set of cost curves for a typical firm (you do not need to use the hypothetical data presented above), use only ATC, AFC, AVC, and MC. (be sure to label minimum ATC and AVC).

Assignment #14

1. Using the following information of a firms total product for the given changes in labor, holding all other factors of production constant, find the average and marginal product of labor.

Units of Labor	Total Product	Marginal Product	Average Product
0	0		
1	3		
2	8		
3	16		
4	24		
5	30		
6	34		
7	35		
8	32		

- a. Does the above data display diminishing returns? Explain.
- b. What unit of labor represents the point of diminishing returns?
2. Fill in the following blanks.
 - a. When MP is greater than AP, AP is (increasing/decreasing).
 - b. When MP is less than AP, AP is (increasing/decreasing).
 - c. When MP is positive, TP is (increasing/decreasing).
 - d. When MP is negative, TP is (increasing/decreasing).
 - e. When MP is positive and decreasing, MC is (increasing/decreasing).
 - f. When MP is positive and increasing, MC is (increasing/decreasing)
 - g. When MP equals AP, AP is (increasing/decreasing/at a maximum/ at a minimum)
 - h. When MP equals zero, TP is (increasing/decreasing/at a maximum/at a minimum)
3. Explain the relationship between the law of diminishing returns and the shape of MC, ATC, and AVC for a typical firm.

Assignment #15

1.
 - a. What additional choices do firms have in the long run as opposed to the short run?
 - b. Graphically represent and explain the relationship between a typical firm's short-run and long-run average total cost curves.
2.
 - a. Draw a firm's typical long-run average total cost curve, labeling the regions that represent economies of scale, constant returns to scale, and decreasing returns to scale.
 - b. Define economies of scale, constant returns to scale, and diseconomies of scale.
 - c. Give two explanations why a firm may experience economies of scale; diseconomies of scale.
3. Graphically display and explain what will happen to a firm's average total cost and marginal cost curves when the price of labor decreases.
4. Dean, on a big night out, patronizes a night club with a band playing. Dean finds the night club distasteful but will not leave because he paid a \$1 cover charge. What is wrong with Dean's line of reasoning?

UNIT VI.
PURELY COMPETITIVE INDUSTRIES

This unit marks the beginning of the discussions on market structure. This section discusses purely competitive industries—these are also referred to as perfectly competitive industries—while the next discusses monopoly and oligopoly and monopolistic competition. Make sure to study the graphs that are presented in this chapter. Understanding the graphs can help ensure understanding of how goods are priced in this market and how much is produced. This can trip up students, so please ask for help if you need it.

Textbook Reading: Chapter 21

Study Guide: Ch. 21: T/F (all).

Problem 1, 2, 5

Multiple Choice (all).

Assignment #16

1. What does it mean for a firm to be a price-taker? What are the four conditions that are met when a firm is a price taker? Provide an example of a firm that is a price taker.
2.
 - a. On one graph draw the demand curve and supply curve for a purely competitive market, be sure to include the market clearing price and quantity.
 - b. On a separate graph draw and explain the shape of the demand curve for an individual firm in a purely competitive market.
 - c. What is the relationship between price and marginal revenue for an individual firm in a purely competitive market? Explain.
3.
 - a. Will a profit-maximizing firm produce more or less when $MR > MC$? Explain.
 - b. Will a profit-maximizing firm produce more or less when $MR < MC$? Explain.
 - c. At what level of output will a firm maximize profits? Explain.

Assignment #17

1. Graph the following for an individual firm in a purely competitive market. Be sure to label all curve, axes, and show equilibrium price, quantities and indicate profits or losses. (Use a separate graph for each scenario)
 - a. Graphically represent a firm that is making an economic profit. What is the effect of positive economic profits on the resources of an economy?
 - b. Graphically represent a firm that is making an economic loss. What is the effect of negative economic profits on the resources of an economy?
 - c. For an individual firm, in a purely competitive market, graphically represent a firm that is making zero economic profits.
 - d. Graphically show the minimum price, relative to average costs, that a firm must receive before shutting down in the short run. Is the firm earning a profit or a loss? Shade in the profit or loss.
2. In the short-run, what is the individual firm's supply curve? Explain.
3. In the long-run, purely competitive firms will earn zero economic profits.
 - a. Why is this the case? Graphically show long-run equilibrium, be sure to show both market demand and supply, and the individual firm's equilibrium.
 - b. Graphically show the effect of a decrease, in the market demand for a purely competitive good.
4. What is allocative efficiency? Why is a purely competitive market considered allocatively efficient?
5. Relate the elasticity of supply to the role of time.

UNIT VII.
IMPERFECT COMPETITION

This unit introduces the idea of imperfect competition. Imperfect competition includes such market structures as monopoly and oligopoly. Chances are, you already know examples of these types of industries. Now you will become familiar with some of the characteristics of imperfect competition as well as the situations where imperfect competition is relatively acceptable (as with a natural monopoly).

Textbook: Chapters 22 and 23

Study Guide: Ch. 22: T/F (all).
 Problems: 1, 2
 Multiple Choice (all).
 Ch. 23: T/F (all).
 Problems: 2, 3
 Multiple Choice (all).

Assignment #18

1. Give four explanations of how a monopoly may come into existence.
2. a. Complete the following table.

MONOPOLIST'S DEMAND SCHEDULE			
Price	Quantity	Total Revenue	Marginal Revenue
\$5	0		
\$4	1		
\$3	2		
\$2	3		
\$1	4		
\$0	5		

- b. What is the price elasticity of demand for a price change from \$0 to \$1, from \$2 to \$3, from \$4 to \$5?
- c. Why is it that the monopolist's marginal revenue curve lies below its demand curve?
3. a. Graphically show a monopolist's profit maximizing price and output?
- b. What is the relationship between price and marginal revenue? Explain.
- c. Will a monopolist ever operate in the inelastic portion of its demand curve? Explain.
4. Graph the following:

- a. A monopolist producing at a quantity where average total cost is at a minimum.
 - b. A monopolist earning zero economic profits.
 - c. A monopolist earning negative economic profits.
5. Is it possible for a monopolist to earn economic profits in the long run? Explain.

Assignment #19

1. a. What is allocative inefficiency?
b. Why is a monopolist allocatively inefficient?
2. a. What is a natural monopoly?
b. In terms of cost, what is necessary for a natural monopoly to exist?
3. a. What is price discrimination?
b. What conditions are necessary for price discrimination to take place?
c. What pricing strategy does a price discriminating monopolist follow?
d. Give at least one example of price discrimination that you have personally encountered.
4. It has been argued that monopolists are allocatively inefficient. What then are the benefits of granting patents that create monopolies?

Assignment #20

1. Discuss the problems associated with the regulation of a natural monopoly. Discuss two alternatives to the regulation of a monopoly.
2. What characteristics do a monopoly and a monopolistically competitive industry have in common? A purely competitive market and a monopolistically competitive industry?
3. Graph the long-run equilibrium positions of individual firms in purely and monopolistically competitive markets. In terms of allocative efficiency compare the two.
4. What differentiates oligopoly from other market structures?

Assignment #21

1. a. What incentives do oligopolist firms have to collude?
b. Why do collusive agreements often break-down?
2. Discuss the “defects” of a market characterized by a single monopolist or a small group of oligopolists.
3. What could cause regulation of a monopoly to be less than ideal?
4. Discuss antitrust policy. Give an example (at least one) in which the government used the Sherman Antitrust Act to break up a monopoly. What other action between firms does antitrust policy help prevent?

UNIT VIII.
FACTOR MARKETS

In this unit, we will continue our look at firms and not individual consumers. Now the focus will be on firms' use of resources: labor, capital and so on. Topics include discrimination, demand for higher-skilled workers and wage differences.

Textbook Readings: Chapters 24, 25 and 26

Study Guide: Ch. 24: T/F (all)
 Problems: 1, 2
 Multiple Choice (all)
 Ch. 25: T/F (all)
 Problems 3, 4
 Multiple Choice (all)

Assignment #22

1. Discuss why the demand for resources is considered to be a derived demand and list three factor that will change the demand for a resource.
2. Given the following information would a cost minimizing firm hire more capital or more labor? Why?
 $MP_{\text{labor}} = 10$ $P_{\text{labor}} = \$8.00$
 $MP_{\text{capital}} = 50$ $P_{\text{capital}} = \$50.00$
3. Under pure competition, it is theorized, resources are paid a wage equal to the value of their marginal product. Discuss why this is the case, how realistic this is in application, and is this equitable?
4. What are demand-side factors that lead to higher wages for workers with specialized skills? Supply-side factors?
5. True/False/Explain: It is always cheaper to hire the lowest wage worker.

Assignment #23

1. It is argued, the discrimination against a single group based on nonproductive reasons (race, sex, creed) creates a profit opportunity for nondiscriminating employers. Why then do wage differentials exist between various groups?
2. What are the effects of mandated benefits on total compensation packages?
3. Graphically depict the effect of employment discrimination on the wages of minorities. Explain the connection between employment discrimination and the cost of those discriminating firms.
4. It is often asserted that the low wages of women relative to men are a result of discrimination. What are some economic factors that can be used to explain the difference?

Assignment #24

1. Define money rate of interest and real interest and discuss the difference between the two.
2. What is the opportunity cost of college? How do these costs determine the schooling choice of an individual?
3. What is the entrepreneur's role in the economy?
4. How are saving and investment connected?

UNIT IX.
UNIONS, INCOME INEQUALITY, AND NATURAL RESOURCES

This unit looks at some special issues in economics. Unions, while having died down some over the last few decades, still wield power in certain industries and are still the subject of some of the research in labor economics. Here we will look at how the presence of unions affects wages for everyone. In addition, we will look at a couple of issues in the field of public economics: income inequality and natural resources. It is sometimes argued that a function of government is to redistribute income among citizens. What have been some of the problems with the “war on poverty”? What changes did the 1996 welfare reform bring? Finally, Application 9 looks at natural resource markets.

Textbook Readings: Chapters 27 and Applications 7, 8 and 9

Study Guide: Ch 25: T/F (all)s
Problems: 1, 4
Multiple Choice (all)
App 8: T/F (all)
Problems: 3
Multiple Choice (all)

Assignment #25

1. Discuss three strategies a union can follow to increase the wage of its members. Do any of these strategies have trade-offs? Explain.
2.
 - a. It is said that, for a union to be strong, the demand for its labor must be inelastic (not very flexible). Explain the determinants of the demand elasticity for a factor of production.
 - b. Some unions are better able to achieve higher wages than others. Why might this be?
3.
 - a. Besides increasing the wage of its members, in what other areas have unions benefited its members?
 - b. Has the presence of unions increased the wage of nonunion workers? Explain.

Assignment #26

1. Give three reasons why income inequality has increased in the last few decades.
2. Explain the side effects of means-tested income transfers that reduce their effectiveness as an antipoverty program.
3. Explain why the implicit marginal tax rate is higher for relatively low income earners than for relatively high income earners.
4.
 - a. What is meant by income mobility?
 - b. Explain why economists could think that differences in household expenditures are a more accurate indicator of economic status than income.

Assignment #27

1. Dissatisfaction with the welfare system resulted in reform in 1996.
 - a. Summarize and explain the central elements of that reform.
 - b. Which of these reforms do you think might be the most effective at reducing the poverty rate? Why?
 - c. If you were in charge of welfare reform, what would you do differently? Would you add reforms? Change existing reforms? How?
2.
 - a. Summarize the case for government action to reduce income inequality.
 - b. Summarize the case against government action.
3. Textbook, page 853, #1.
4. Textbook, page 853, #2.
5. Textbook, page 853, #5.

UNIT X
PUBLIC CHOICE

Here it is: the last unit. You're almost finished. Your study of microeconomic principles will wrap up by exploring more issues in public economics, including public goods and externalities. As always, let me know if you have trouble and good luck in your future studies.

Textbook Readings: Chapters 5, 6

Study Guide: Ch 5: T/F (all).
Problems: 1, 4
Multiple Choice (all)
Ch 6: T/F (all).
Problems: 1
Multiple Choice (all).

Assignment #28

1. Compare and contrast the market and public (government) sectors.
2. What is an externality? Explain how the following are considered to be externalities and give possible remedies.
 - a. A vaccination shot
 - b. Driving on the freeway
3.
 - a. Explain the opportunity costs of government activities.
 - b. Who is responsible for paying the cost of government?
4. It is said that the protective function of government is vital to market sector success. Do you agree with this statement? Explain.

Assignment #29

1. A voter decides not to vote in the upcoming national election because he "just doesn't know enough about the issues". Why might this be a common occurrence and is it rational in a democratic society?
2. What is the free-rider problem? Give two examples, not discussed in the textbook, of free-riding behavior in everyday life.
3. Define the following:
 - a. Public good.
 - b. Rent-seeking behavior.
4. Summarize potential information problems when making market choices.

Assignment #30

1. Define the following:
 - a. Proportional tax.
 - b. Regressive tax.
 - c. Progressive tax.
2. Textbook, page 136, #4.
3. Textbook, page 136, #5.