Prerequisites: 220:102 (or equivalent) and Calculus 640:135 (or equivalent)

Texts:
Current edition:
Walter Nicholson and Christopher Snyder, Microeconomic Theory: Basic Principles and Extensions, 11th edition, Thomson/South-Western

Previous edition:
Walter Nicholson and Christopher Snyder, Microeconomic Theory: Basic Principles and Extensions, 10th edition

Assignments are given below for the 11th edition and in brackets for the 10th edition. The 11th edition may have slight differences with the 10th edition.

Basis of Evaluation: Announced and unannounced quizzes and research assignments will determine your grade. There will be no hourly or final examinations, nor will any extra credit work be provided. An absence at a quiz, for whatever reason, counts as a 0. However, you may drop your two lowest grades—except the last quiz. Under no circumstances will a make-up be given for a quiz. Dropping the two lowest grades—quizzes and research assignments—substitutes for make-ups. Economics majors must earn a grade of at least C to receive credit toward their major. An average grade between 85 and 100 is an “A,” between 80 and 84, a “B+,” between 75-79, a “B,” between 70-75, a “C+,” between 65 and 69, a “C,” between 55-64, a “D,” and less than 55, an “F.”

Time Required for Class Preparation: You are responsible for preparing the assignment before class. The average time required to complete an assignment properly is 3 to 4 hours—less time and you are less likely to do well—less than 2 hours and you are unlikely to pass. Simply reading the assignment will not insure your passing the course. Additional time is required to master microeconomic analysis. Remember Ann Landers’ observation, “Opportunities are usually disguised as hard work, so most people don’t recognize them.”

Learning Goals: This course focuses on learning goals adopted by the Department of Economics.

Economic Literacy – Students who complete the major in economics should understand and be able to articulate, both orally and in writing, the core economic principles, concepts and theories that form the foundation for modern microeconomic analysis and economic research. Using differential calculus and solving linear and nonlinear systems of equations, we apply the techniques of constrained optimization and equilibrium analysis to consumer and producer behavior and to perfectly and imperfectly competitive markets. We use collaborative group learning to master the essential tools of microeconomic analysis and problem solving. Groups present and discuss their solutions with the class.

Economic Numeracy – Students who complete the economics major should be familiar with the tools, techniques and methods of empirical economics. In this course we show how the basic tools of microeconomic analysis can be applied to data on US consumer expenditures to estimate a demand function for gasoline and to data on US banking production to estimate a banking cost function and banking scale economies.

Economic Citizenship – Upon completion of the major students should be able to apply their understanding of core concepts and quantitative tools to analyze and research real world problems and evaluate alternative economic policy proposals on microeconomic and macroeconomic issues.
In this course, we use the estimated US consumer demand for gasoline to explore the effectiveness of a tax on gasoline in promoting energy conservation, and we use the estimated cost function for US banks to consider whether the largest banks experience scale economies which might offset the systemic risk their size poses to the economy and to evaluate proposals to break up the biggest banks.

SCHEDULE OF ASSIGNMENTS

Introduction
A. Concept of an Economy
B. Application of the Scientific Method to Economics
C. Nature of Scientific Explanation
   1. Inductive Models
   2. Deductive Models

I. The Theory of Consumer Choice
A. Deriving Utility Theory from Preference Theory
B. Deriving Demand Theory from Utility Theory
C. Restrictions on Demand: Testable Hypotheses

1. __________________
   Hughes, Curbing the Demand for Gasoline by Increasing and Rebating the Federal Gasoline Tax, Exercise 1 – prepare in advance, answer questions A through E and G through L. Download the monograph from the Sakai website for the course under “Resources.”

2. __________________
   Nicholson, pp. 26-33 [23-32]
   Nicholson, ch. 3
   Nicholson, 3.1a,b,d; 3.3, 3.8 [3.1a,b,d; 3.3, 3.8]

3. __________________
   Nicholson, pp. 39-45 [36-42]
   Nicholson, ch. 4, pp. 117-129 [113-125]
   Nicholson, 4.1, 4.2 [4.1, 4.2]

4. __________________
   Nicholson, ch. 4, pp. 129-136 [125-132]
   Nicholson, 4.5, 4.7 [4.5, 4.7]

5. __________________
   Nicholson, ch. 5, pp. 145-159 [141-154]
   Deriving the Uncompensated Linear Demand Function for Gasoline from the Indirect Utility Function (available on Sakai under “Resources”)
D. Slutsky’s Decomposition

E. Consumer’s Surplus: Money-Metric Utility
   Nicholson, 5.4, 5.5 [5.4, 5.5]

F. More on Slutsky’s Decomposition
   1. Gross and Net Substitutes
      Nicholson, ch. 6, pp. 187-196 [182-191]
   2. Gross and Net Complements
      Nicholson, 6.1 [6.1]

G. Estimating US Gasoline Demand
   1. Well-Behaved Demand Function
   Hughes, Curbing the Demand for Gasoline by Increasing and Rebating the Federal Gasoline Tax, Exercise 2 – prepare in advance and answer questions A through K.
   2. Estimating Substitution and Income Effects
   3. Estimating Indirect Utility and Compensation for a Tax Increase
   Hughes, Curbing the Demand for Gasoline by Increasing and Rebating the Federal Gasoline Tax, Exercise 3 – prepare in advance and answer questions The section, “A Review of Your Investigation” will be discussed in class. Do you include it in your written assignment. This assignment requires time spent using online econometric software. Leave enough time to complete the assignment.

H. Consumers’ Supply of Labor
   Nicholson, ch. 16, pp. 581-588 [573-580]
   Nicholson, 16.1, 16.3 [16.1, 16.3]

I. Consumers’ Supply of Savings
   Nicholson, ch. 17, pp. 607-613 [595-601]
   Nicholson, 17.1 [17.1]

J. Choice in Uncertain Situations, Portfolio Theory, and the Pricing of Risk
   Nicholson, ch. 7
   Nicholson, 7.1, 7.2, 7.4, 7.5, 7.7 [7.1, 7.2, 7.4, 7.5, 7.7]

II. Cost, Production, Profit, and Market Value
A. Technology and the Production (Transformation) Function
   1. Cobb Douglas Production F’n
   2. Generalized Leontief Production F’n
   3. Translog Production F’n
   Nicholson, ch. 9, pp. 301-313 [295-305]
   Nicholson, 9.2, 9.3, 9.5(a, b, c), 9.7(a, b) [9.2, 9.3, 9.5(a, b, c), 9.7(a, b)] Extensions, pp. 329-331 [320-322]
B. Deriving Cost from Production

Nicholson, ch. 10, pp. 333-355 [323-344]
Nicholson, 10.2, 10.3, 10.4 [10.1, 10.2, 10.3]

C. Deriving Production from Cost: Duality

1. Cobb-Douglas Cost Function
   Nicholson, ch. 10, pp. 355-363 [344-350]
2. CES Cost Function
   Nicholson, 10.8, 10.4 [10.1, 10.5]
3. Translog Cost Function
   Extensions, pp. 367-368 [355-356]

D. Estimating Cost Functions

An Exercise in Estimating Bank Cost Functions and Scale Economies: US Banks in 2009 (available on Sakai under “Resources”)

Turn in a report that answers the questions 7 through 11. Label each answer with the corresponding number of the question. Do not use appendices.

E. Profit Maximization

Nicholson, ch. 11, pp. 371-389 [358-374]
Nicholson, 11.1, 11.6, 11.7a, 11.2 [11.1, 11.2, 11.3a, 11.4]

2. Input Demand

Nicholson, ch. 11, pp. 389-396 [374-380]
Nicholson, 11.8 [11.8]
Nicholson, ch. 18, pp. 641-650 [627-637]

F. Value Maximization

1. Market Value of Debt and Equity
2. Effect of Production Decisions on Cash Flow and on the Discount Rate
3. Agency Problems

III. Theory of Markets

A. Competition

1. Partial Equilibrium

Nicholson, ch. 12, pp. 409-438 [391-419]
Nicholson, 12.1, 12.4 [12.1, 12.4]

2. Economic Efficiency and Welfare Analysis

Nicholson, ch. 12, pp. 438-447 [419-431]
Nicholson, 12.6, 12.8 [12.6, 12.8]
3. General Equilibrium of Exchange


4. Production Efficiency, General Competitive Equilibrium


B. Monopoly and Monopsony

Nicholson, ch. 14
Nicholson, 14.1, 14.6, 14.7 [14.1, 14.6, 14.7]
Nicholson, ch. 16, pp. 595-597 [584-586]
Nicholson, 16.5 [16.5]

C. Imperfect Competition

Nicholson, 15.1, 15.2 [15.1, 15.2]
Dominant Firm Problem (Sakai)

D. Markets with Information Problems

1. Moral Hazard
2. Adverse Selection
3. Separating Equilibria
4. Signaling

E. Applications to Financial Markets and Banking

1. Agency Problems in the Lender-Borrower Relationship: Debt vs. Equity Contracts
2. Lemons Discounts and Adverse Selection in Lending Markets
3. Credit Rationing
4. Internal Finance and Signaling
5. Role of Financial Intermediaries
6. Commercial Banks as Delegated Monitors: Informational and Incentive Advantages Obtained from Demand Deposits

F. Market Failures to Achieve Efficiency

Nicholson, ch. 19, pp. 670-687 [685-703]