

# ECONOMICS

## *An Introduction to Economics and the Economics of the Water*

- I. FUNDAMENTAL ECONOMIC CONCEPTS 10%
  - A. Basic Assumptions of Economics
    - 1. Scarcity
    - 2. Trade-offs
    - 3. Opportunity Cost
    - 4. Rationality
    - 5. Gains from Trade
  - B. Models and Economic Theory
  - C. Positive and Normative Economics
  - D. Efficiency as a Goal
  - E. Microeconomics and Macroeconomics
  
- II. MICROECONOMICS 40%
  - A. Perfectly Competitive Markets
    - 1. Markets
    - 2. Demand
    - 3. Shifts in the Demand Curve
      - a. Income
      - b. The Prices of Related Goods
      - c. Tastes
      - d. Expectations
      - e. Number of Buyers
    - 4. Supply
    - 5. Shifts in the Supply Curve
      - a. Input Prices
      - b. Technology
      - c. Expectations
      - d. Number of Sellers
    - 6. Equilibrium
    - 7. The Characteristics of Competitive Market Equilibrium
  - B. Applications of the Competitive Market Model
    - 1. Changes in Market Equilibrium
    - 2. Elasticity
    - 3. Using Elasticity
  - C. Evaluating Government Policy: The Impact of Price Controls and Taxes
    - 1. Price Controls
    - 2. Taxes
  - D. International Trade
    - 1. An Isolated Economy
    - 2. Adding the Opportunity to Trade
    - 3. Comparative Advantage and the Gains from Trade
    - 4. The Political Economy of Trade

- E. The Profit Motive and the Behavior of Firms
  - 1. Economic Profits and Accounting Profits
  - 2. Finding the Firm's Supply Curve
  - 3. Entry, Exit, and the Market Supply Curve
- F. Imperfect Competition
  - 1. Monopoly
  - 2. Monopoly Supply
  - 3. Welfare Consequences of Monopoly
  - 4. Dealing with Monopolies
  - 5. Price Discrimination
  - 6. Oligopoly
  - 7. Monopolistic Competition
- G. Creative Destruction: The Profit Motive and the Sources of Economic Change
- H. Market Failures
  - 1. Externalities
  - 2. The Effect of Externalities on Resource Allocation
  - 3. Private Responses to Externalities
  - 4. Government Regulation of Externalities
  - 5. Property Rights
  - 6. The Effects of Private Ownership
  - 7. Public and Private Goods
    - a. Private Goods
    - b. Common Resources
    - c. Collective Goods
    - d. Public Goods
- I. Institutions, Organizations, and Government
  - 1. Pork Barrel Politics
  - 2. Rent-Seeking
  - 3. What Is the Proper Role for Government?

### III. MACROECONOMICS

30%

- A. Macroeconomic Issues
  - 1. Economic Growth and Living Standards
  - 2. Recessions and Expansions
  - 3. Unemployment
  - 4. Inflation
  - 5. International Trade
- B. Macroeconomic Measurement
  - 1. Measuring Total Output: Gross Domestic Product
    - a. Market Value
    - b. Final Goods and Services
    - c. Within a Country
    - d. During a Specified Period
  - 2. Understanding What GDP Measures
  - 3. Other Ways to Measure GDP: Expenditures Equal Production
  - 4. Yet Another Way to Measure GDP: Income Equals Production Equals

- Expenditures
- 5. Real GDP
- 6. Measuring Inflation
- 7. Unemployment
  - a. Frictional Unemployment
  - b. Structural Unemployment
  - c. Cyclical Unemployment
- C. Economic Growth, Productivity, and Living Standards
  - 1. The Circular Flow Model of the Economy
  - 2. What Determines How Much an Economy Produces?
- D. Savings, Investment, and the Financial System
  - 1. Financial Markets
    - a. The Bond Market
    - b. The Stock Market
  - 2. Financial Intermediaries
    - a. Banks
    - b. Mutual Funds
  - 3. Saving and Investment in Aggregate
  - 4. International Capital Flows in an Open Economy
  - 5. How Financial Markets Coordinate Saving and Investment Decisions
- E. Money and Prices in the Long Run
  - 1. What Is Money?
  - 2. Measuring Money
  - 3. The Federal Reserve System, Banks, and the Supply of Money
  - 4. Bank Runs
  - 5. Money and Inflation in the Long Run
  - 6. Why Worry about Inflation?
- F. Short-Run Economic Fluctuations
  - 1. Characteristics of Short-Run Fluctuations
  - 2. Potential Output, the Output Gap, and the Natural Rate of Unemployment
  - 3. Explaining Short-Run Fluctuations in Output
  - 4. The Aggregate Demand Curve
    - a. Wealth Effects
    - b. Interest Rate Effects
    - c. Foreign Exchange Effects
  - 5. The Aggregate Supply Curve
  - 6. The Keynesian Model of Short-Run Fluctuations
  - 7. Inflation in the Keynesian Model
  - 8. Using Fiscal and Monetary Policy to Stabilize the Economy

#### IV. THE ECONOMICS OF WATER

20%

- A. The Basics
  - 1. Users
  - 2. Water Sources
  - 3. Water Quantity
  - 4. Water Quality

5. Case Study: China's South-North Water Transfer Project
- B. Supply and Demand
  1. Water Supply
  2. Water Pricing
  3. Consumer Water Demand
  4. Case Study: Pumping and Subsidies in India
- C. Water and Agriculture
  1. The History of Irrigation
  2. Irrigation Organizations
  3. Case Study: The Value of Irrigation in the United States
  4. Water Conservation
- D. Water Property Rights
  1. Water Law
  2. Riparian Doctrine
  3. Prior Appropriation
  4. Case Study: Saline Lake Depletion
  5. Groundwater Rights
- E. Water Quantity Markets
  1. Basics
  2. Water Transfers
  3. Environmental Transfers
  4. Case Study: Extreme Water Scarcity in Chile
- F. Water Pollution
  1. Externalities and Water Quality
  2. Case Study: Cleaning Up Coal Ash
  3. Water Quality Regulation
  4. The Clean Water Act
  5. Case Study: Invasive Species in the Great Lakes
- G. Drinking Water
  1. Access to Drinking Water
  2. Case Study: The Flint Water Crisis
- H. Water Quality Markets
  1. Market Instruments
  2. Water Quality Trading in Practice
  3. Case Study: North Carolina