

**Planned Course of Study**

# **AP Macroeconomics**

## **HIGH SCHOOL**



**NORTHWESTERN LEHIGH SCHOOL DISTRICT  
6493 ROUTE 309  
NEW TRIPOLI, PA 18066**

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## **INTRODUCTION**

The AP Macroeconomics curriculum guide contains planned course formats for the Northwestern Lehigh School District. The content of this document describes the objectives, activities, assessments, content, time frame, and standard alignment that serve as a guide to the specific units of study offered in AP Macroeconomics.

The AP Macroeconomics curriculum guide is the product of much diligent work on the part of the following members of the Task Force.

Paul Kleinert

This document reflects their efforts to establish a well-defined and organized approach to teaching AP Macroeconomics in the Northwestern Lehigh School District.

Approved by Northwestern Lehigh School District Board of Education  
May 2019

## **LEVEL OF MASTERY DESCRIPTIONS**

Recognition (R) - Students will be able to recall concepts.

Application (A) - Students will be able to apply ideas/skills to a curricular concept.

Inference (I) - Students will be able to evaluate and synthesize materials or concepts.

## AP Macroeconomics Course Overview:

This is a one-semester course designed for those students planning on taking the Advanced Placement Exam in Macroeconomics. This is a college level course and requires a major commitment of time and intellectual energy from the student. Successful completion of the Advanced Placement Examination may earn college credit, advanced placement or “opt-out” options at the university level. This course is highly recommended for those students planning on taking the AP Economics Examination in the spring and a firm commitment to take the Exam is expected.

## Course Textbook and Curricular Resources:

- **Primary Curricular Resource:** Morton, John S. and Rae Jean B. Goodman. *Advanced Placement Economics: Teacher Resource Manual and Student Workbooks*. New York: NCEE, 2003
  - Notes: This is the resource used for the scope and sequence of the course. All student performance objectives are taken from this resource. Most activities from this series are assigned as either homework or in-class activities. While this resource serves as the primary source for curricular development, other resources cited in the following sections are used to adapt and enhance the NCEE recommendations.
- **Primary Curricular Resource:** (The “Acorn” Book) *Economics: Microeconomics, Macroeconomics. Course Description*. The College Board, 2012
  - All “Acorn” topic outline content is identified at the beginning of each unit.
- **Primary Textbook:**
  - Mankiw, N. Gregory. *Principles of Economics AP. 8th ed.* Fort Worth: South-Western Cengage Learning Publishers, 2018
    - Notes: This is the main student text used for the course. The accompanying Study Guides, CD-ROM, website, and test bank are all used heavily.
- **Resource Textbook:**
  - McConnell, Campbell R. and Stanley L. Brue. *Economics: Principles, Problems and Policies 16<sup>th</sup> ed.* New York: McGraw Hill, 2005
    - Notes: This text is mainly used as an instructor’s resource but is used to supplement material on the Factor Market Unit.
- **Resource Textbook:**
  - Krugman, Paul and Robin Wells. *Economics*. New York: Worth Publishers, 2006
  - Krugman, Paul, Margaret Ray and David Anderson *Krugman’s Economics for AP 2nd Edition*. New York: Worth Publishers 2015
    - Notes: These texts are mainly used as an instructor’s resource.
- **Frequently used news media:**
  - The Economist
  - Wall Street Journal
  - Business Week...emphasis on the weekly Business Outlook.

Please note: The activities, assessments, materials and time frame are meant to be used as a guide for educators, and are not meant to be all-inclusive.

- Notes: Current articles from these magazines are frequently used for in-class discussion purposes or for Message Board discussion on the class website.

- **Frequently used websites:**

- <http://www.aplia.com/>
    - Aplia is a web-based program that provides text specific practice sets and graded homework for each chapter assigned. Assigned problem sets test reading comprehension and require students to apply concepts. All assigned problem sets include interactive Java based graphs that require students to generate, manipulate, interpret and analyze graphs, charts and data to explain various concepts. Real time experiments and simulations allow students to apply concepts in an interactive and practical setting.
  - <http://www.swlearning.com/economics/mankiw/principles2e/student/completeindex.html>
    - Student site for the Mankiw textbook...includes practice quizzes for each chapter that require graphing and chart analysis.
  - <http://econblog.aplia.com/>
    - Aplia blog. Topical entries that require students to analyze and apply content to current issues.
  - <http://gregmankiw.blogspot.com/>
    - Professor Mankiw's blog
  - <http://finance.yahoo.com/expert/bio/economist/char>
    - Charles Wheelan provides analysis on a variety of topics that focuses on application on basic concepts.
  - <http://www.reffonomics.com/textbook/microeconomics>
    - Online textbook and lessons by AP guru Steven Reff.
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## Unit 1: The Basic Economic Problem

### *Pennsylvania State Standards:*

**6.1.12.A:** Predict the long-term consequences of decisions made because of **scarcity**.

**6.1.12.B:** Evaluate the economic reasoning behind a choice.

Evaluate effective allocation of **resources** for the production of **goods** and **services**.

**6.1.12.C:** Analyze the **opportunity cost** of decisions made by individuals, businesses, communities, and nations.

**6.1.12.D:** Predict how changes in **incentives** may affect the choices made by individuals, businesses, communities, and nations.

**6.2.12.A:** Evaluate the flow of **goods** and **services** in an international economy.

**6.2.12.G:** Evaluate various **economic systems**.

**6.3.12.A:** Evaluate the **costs** and benefits of government decisions to provide **public goods** and **services**.

**6.4.12.A:** Evaluate the **comparative advantage** of nations in the **production** of **goods** and **services**

**6.4.12.B:** Assess the growth and impact of international **trade** around the world.

**6.4.12.C:** Evaluate the impact of **multinational corporations** and other non-government organizations.

**6.4.12.D:** Analyze how changes in transportation, communication networks, and technology affect economic **interdependence** around the world in the 21st century.

**6.5.12.F:** Assess the impact of **entrepreneurs** on the economy.

1. **Scarcity, choice and opportunity costs**
2. **Production possibilities frontier**
3. **Comparative advantage, absolute advantage, specialization and exchange**

### Assignments, Assessments and Activities:

- Chapters 1-3 from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 1-3
- Aplia Problem Sets for Chapter 1-3
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Activities 1-8 from NCEE’s *Advanced Placement Economics Workbook*
- Previous FRQ’s are used for homework, review and assessments.
  - 2003B #2, 2003 #3, 2004B #3 (all absolute/comparative advantage problems)
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.
  - Unit Exam includes 2-3 released FRQ’s from past years.

Please note: The activities, assessments, materials and time frame are meant to be used as a guide for educators, and are not meant to be all-inclusive.

## **Student learning objectives:**

### The Economic Way of Thinking

1. Define scarcity and opportunity cost.
2. Define the “economic way of thinking”.
3. Apply scarcity concepts to a variety of economic and non-economic situations.

### Scarcity, Opportunity Cost, and Production Possibilities Curves

1. Review the definition of opportunity cost.
2. Graph and interpret data.
3. Graph and distinguish among inverse, direct, and independent relationships.
4. Graph and distinguish between constant and variable relationships.
5. Identify the conditions that give rise to the economic problem of scarcity.
6. Identify the opportunity costs of various courses of action involving a hypothetical problem.
7. Construct production possibilities curves from sets of hypothetical data.
8. Apply the concept of opportunity cost to a production possibilities curve.
9. Analyze the significance of different locations on, above, and below a production possibilities curve.
10. Compare and contrast the effects of societal priorities on the slope, outer limits, and operating points of the production possibilities curve.
11. Apply scarcity concepts to a variety of economic and non-economic situations.

### Different Means of Organizing an Economy

1. Identify the conditions that give rise to the economic problem of scarcity.
2. Identify the opportunity costs of various courses of action involving a hypothetical problem.
3. Identify the three questions that every economic system must answer.
4. Analyze the advantages and disadvantages of each of the three economic systems (market, command, tradition).
5. Describe and analyze the different economic goals of different economies.
6. Determine the mix of tradition, command, and market in different economies.
7. Analyze why communism failed.

### Absolute and Comparative Advantage, Specialization, and Trade

1. Define comparative advantage and absolute advantage.
2. Describe and give examples of the law of comparative advantage.
3. Explain how both parties in a trade gain from voluntary exchange.
4. Define specialization and exchange.

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### Practice in Applying Economic Reasoning

1. Describe and give examples of the law of comparative advantage.
  2. Explain how both parties in a trade gain from voluntary exchange.
  3. Describe and analyze the “economic way of thinking”.
  4. Graph and distinguish between inverse, direct, and zero relationships.
  5. Identify the opportunity costs of various courses of action involving a hypothetical problem.
  6. Apply scarcity concepts to a variety of economic and non-economic situations.
  7. Define specialization and exchange.
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## **Unit 2: The Nature and Functions of Markets**

### *Pennsylvania State Standards:*

- 6.1.12.D:** Predict how changes in **incentives** may affect the choices made by individuals, businesses, communities, and nations.
- 6.2.12.B:** Analyze the effect of changes in the level of **competition** in different **markets**.
- 6.2.12.C:** Predict and evaluate how media affects **markets**.
- 6.2.12.D:** Predict how changes in **supply** and **demand** affect **equilibrium price** and **quantity** sold.
- 6.5.12.A:** Analyze the factors influencing wages.
- 6.5.12.D:** Analyze the role of profits and losses in the allocation of resources in a market economy.

### **1. Demand, supply and market equilibrium**

#### **Assignments, Assessments and Activities:**

- Chapters 4-6 from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 4-6
- Aplia Problem Sets for Chapters 4-6
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Activities 9-23 from NCEE’s *Advanced Placement Economics Workbook*
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.

#### **Student learning objectives:**

##### A Market Economy

1. Describe and analyze The Circular Flow of Resources, Goods, Services, and Money Payments.
2. Describe and analyze the behavior of buyers and sellers in a competitive marketplace.
3. Provide an overview of supply, demand, and equilibrium.

##### The Law of Demand

1. Describe and analyze what demand is and why consumers buy more of a good or service when the price is lower.
2. Differentiate between a change in demand and a change in quantity demanded.
3. List and explain the determinants of demand.
4. Under specific conditions, determine in which direction a demand curve should shift.
5. Define and distinguish between the income and substitution effects.

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6. Define consumer surplus, and analyze why markets maximize consumer surplus.
7. Define diminishing marginal utility, and explain how the law of diminishing marginal utility affects the behavior of consumers in a market economy.

#### Understanding Supply

1. Describe the behavior of sellers in a competitive market.
2. Differentiate between a change in supply and a change in quantity supplied.
3. List and explain the determinants of supply.
4. Under specific conditions, determine in which direction a supply curve should shift.

#### Equilibrium Price, Equilibrium Quantity, and the Interrelation of Markets

1. Define equilibrium price and quantity.
2. Determine the equilibrium price and quantity when given the demand for and supply of a good or service.
3. Explain why the price of a good or service and the amount bought and sold in a competitive market will be the equilibrium price and quantity.
4. Predict the effects of changes in supply and demand on equilibrium price and quantity and on the price of substitute and complementary goods.
5. Given changes in supply and demand, explain which curve has shifted and why.
6. Analyze how buyers and sellers respond to incentives provided by changing market conditions.
7. Explain how markets provide information that enables consumers and producers to allocate resources more efficiently.
8. Analyze how markets act as rationing devices and how markets allocate resources.

#### Elasticity of Demand and Supply

1. Define price elasticity of demand.
2. Define price elasticity of supply.
3. Distinguish among elastic, inelastic, and unit elastic demand.
4. Explain the characteristics that tend to make demand more elastic or more inelastic.
5. Determine the prices at which a product has elastic or inelastic demand by observing how total revenue changes in response to changes in price.
6. Apply price elasticity of demand to economic problems.
7. Define and distinguish between a normal good and an inferior good using income elasticity of demand.
8. Explain the characteristics that make supply elastic or inelastic.
9. Analyze momentary, short-run, and long run elasticity of supply.

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### Price Ceilings and Floors

1. Define and describe price ceilings and price floors.
2. Illustrate price ceilings and floors on graphs.
3. Analyze the effects of price ceilings and floors in terms of surpluses and shortages.
4. Analyze how prices act as incentives that influence human behavior.

### Complex Application Questions in Supply and Demand

1. Apply price theory concepts to analyze market behavior.
2. Analyze how prices act as rationing devices, allocate resources, and determine income distribution.

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## **Unit 3: Measuring Economic Performance**

### *Pennsylvania State Standards:*

**6.1.12.B:** Evaluate the economic reasoning behind a choice.

Evaluate effective allocation of **resources** for the production of **goods** and **services**.

**6.1.12.D:** Predict how changes in **incentives** may affect the choices made by individuals, businesses, communities, and nations.

**6.2.12.E:** Evaluate the health of an economy (local, regional, national, global) using economic indicators.

**6.5.12.E:** Compare distribution of wealth across nations.

**6.5.12.F:** Assess the impact of **entrepreneurs** on the economy.

### **1. National income accounts**

- a. Circular flow
- b. Gross domestic product
- c. Components of GDP
- d. Real vs. nominal gross domestic product

### **2. Inflation measurement and adjustment**

- a. Prices indices
- b. Nominal and real values
- c. Costs of inflation

### **3. Unemployment**

- a. Definition and measurement
- b. Types of unemployment
- c. Natural rate of unemployment

### **4. Macroeconomic Issues**

- a. Business cycle, unemployment, inflation and growth

### **Assignments, Assessments and Activities:**

- Chapters Chapter 22, 23, 26 and 28 (pp. 637-651) from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 22, 23, 26 and 28
- Aplia Problem Sets for Chapters 22, 23, 26 and parts of 28
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Activities 9-18 from NCEE’s *Advanced Placement Economics Workbook*
- Previous FRQ’s used for homework, review and assessments:
  - 1999 #2, 2006 #3 (Phillips Curve needed), 2007 #3
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.

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## **Student learning objectives:**

### What is Macroeconomics?

1. Define macroeconomics and understand why it is important to study macroeconomics.
2. Explain important economic issues.
3. Differentiate between microeconomics and macroeconomics.
4. Describe and analyze the components of the circular flow chart.
5. Use the circular-flow diagram to explain the connection between changes in level of goods and services produced, incomes earned, and employment.
6. Describe the main sectors of the macro economy.

### Measuring Broad Economic and Social Goals

1. Describe and discuss the broad economic and social goals of American society.
2. Define full employment, inflation and economic growth.
3. Explain the methods of measuring macroeconomic goals.
4. Become familiar with the most important statistics that measure the U.S. economy.
5. Explain the importance of GDP as a measurement of economic production and growth.
6. Distinguish between real GDP and nominal GDP.
7. Discuss the importance of real GDP per capita.
8. Describe the purpose of a price index and describe how to construct a price index.
9. Explain how a price index is calculated.
10. Explain how unemployment is measured in the United States.

### GDP and Its Uses

1. Define Gross Domestic Product (GDP), Gross National Product (GNP), Net National Product (NNP), National Income (NI), Personal Income (PI), and Disposable Income (DI).
2. Identify and describe the relative magnitude of the components of GDP.
3. Distinguish those goods and services that are counted from those goods that are not counted as part of GDP.
4. Compute GDP using both the income and expenditure approaches.
5. Evaluate the strengths and weaknesses of GDP as a measure of economic well-being.

### Measuring and Understanding Inflation

1. Construct a price index from raw data.
2. Use a price index to calculate the rate of inflation.

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3. Understand that changing the base year changes the numerical value of index numbers but does not change the relative (percentage) differences between index numbers.
4. Understand the limitations of the Consumer Price Index as a measure of inflation.
5. Distinguish between demand-pull and cost-push inflation.
6. Describe and analyze the reasons some groups are hurt while other groups benefit from unanticipated inflation.
7. Define anticipated versus unanticipated inflation.
8. Explain the impact of unanticipated inflation.

#### Unemployment and the Business Cycle

1. Explain how unemployment is measured in the United States.
2. Define unemployment rate, employment rate, labor force and labor force participation rate.
3. Calculate unemployment and employment rates from appropriate data.
4. Explain strengths and weaknesses of the methodology in measuring unemployment.
5. Describe the four types of unemployment and explain how they differ.
6. Analyze some of the causes of frictional, cyclical, structural, and seasonal unemployment.
7. Describe and evaluate some of the economic and non-economic consequences of unemployment.
8. Define and describe the phases of the business cycle.
9. Define recession.
10. When given data, identify the phases of the business cycle.
11. Recognize the trade-offs between goals.

#### Analyzing Economic Indicators

1. Analyze current economic data to determine overall health of the economy.
2. Analyze current economic data from other nations to determine relative economic conditions of nations.

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## **Unit 4: Aggregate Demand and Aggregate Supply: Fluctuations of Outputs and Prices**

### ***Pennsylvania State Standards:***

**6.1.12.B:** Evaluate the economic reasoning behind a choice.

Evaluate effective allocation of **resources** for the production of **goods** and **services**.

**6.1.12.D:** Predict how changes in **incentives** may affect the choices made by individuals, businesses, communities, and nations.

**6.2.12.E:** Evaluate the health of an economy (local, regional, national, global) using economic indicators.

**6.3.12.B:** Assess the government's role in regulating and stabilizing the state and national economy.

**6.3.12.C:** Evaluate the social, political, and **economic costs/benefits** of potential changes to taxation policies.

**6.5.12.A:** Analyze the factors influencing wages.

**6.5.12.E:** Compare distribution of wealth across nations.

**6.5.12.F:** Assess the impact of **entrepreneurs** on the economy.

### **1. National Income and Price Determination**

- a. Aggregate demand
  - i. Determinants of aggregate demand
  - ii. Multiplier and crowding-out effects
- b. Aggregate supply
  - i. Short-run and long-run analyses
  - ii. Sticky vs. flexible wages and prices
  - iii. Determinants of aggregate supply
- c. Macroeconomic equilibrium
  - i. Real output and price level
  - ii. Short and long run
  - iii. Actual vs. full-employment output
  - iv. Economic fluctuations

### **Assignments, Assessments and Activities:**

- Chapters Chapter 31, 32 (pp. 744-757) from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 31 and 32
- Aplia Problem Sets for Chapters 31 and 32
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Additional readings: Chapter 28 from *Economics* by Paul Krugman and Robin Wells
- Activities 19-33 from NCEE’s *Advanced Placement Economics Workbook*
- Previous FRQ’s used for homework, review and assessments:
  - 1999 #2, 2006 #3 (Phillips Curve needed), 2007 #3
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.

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## **Student learning objectives:**

### Equilibrium Domestic Output in the Keynesian Income-Expenditure Model

1. Develop the Keynesian model.
2. Explain the four sectors of the Keynesian model.
3. Explain how consumption and saving are related to disposable income in the Keynesian model.
4. Explain the consumption function.
5. Using given data, describe and calculate the marginal propensity to consume and the marginal propensity to save.
6. Describe the relationship between average and marginal propensities to consume and save.
7. Distinguish between autonomous consumption and induced consumption.
8. Describe the simplified multiplier.
9. Given values for the marginal propensity to consume, calculate the values for the simplified multiplier.
10. Calculate the total spending that occurs from a given change in business or government spending when the MPC is known.
11. Given values of the simplified multiplier, calculate the change in spending that would occur from a given change in business or government spending.
12. Describe the aggregate expenditure function and explain each component of it.
13. Describe Keynesian equilibrium in words and diagrams.
14. Explain the economy's response if income is not at the equilibrium level.
15. Explain the difference between equilibrium output and full-employment output.
16. Analyze how various events affect the consumption schedule, the investment schedule, and total aggregate expenditure.
17. Given data, identify recessionary and inflationary gaps.
18. Compare, contrast, and reconcile the Keynesian income-expenditure model with the aggregate supply and demand model.

### Introduction to Aggregate Demand and Aggregate Supply

1. Define aggregate demand, aggregate supply, and equilibrium.
2. Explain the relationship between the simple Keynesian model and the AD/AS model.
3. Explain why and aggregate demand curve is downward sloping.
4. Describe the factors that affect aggregate demand.
5. Describe the factors that affect aggregate supply.
6. Describe the reasons for the horizontal, vertical, and upward sloping segments of the aggregate supply curve.
7. List, explain, and analyze the basic causes of shifts in aggregate demand and aggregate supply and the effects of these shifts on real national output and the price level.
8. Distinguish between short-run aggregate supply (SRAS) and long-run aggregate supply (LRAS).
9. Explain the effects on price and output as the economy moves from the short-run to the long run.
10. Explain the effects on nominal wage, real wage and employment of the movement from the short run to the long run.

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11. Distinguish among equilibrium below, above and at full employment.
12. Review the process of moving from the short run to the long run.
13. Review the factors that shift the long run aggregate supply curve.
14. Relate the long run aggregate supply curve to the production possibilities frontier.
15. Use aggregate supply and demand curves to analyze the effects of macroeconomic events on real national output and the price level.
16. Analyze macroeconomic policy issues using aggregate supply and demand curves.

#### Keynesian and Classical Views of the Capitalist Economy

1. Describe ideas about what determines the amount of goods and services produced and the level of employment according to the classical theory.
2. Describe ideas about what determines the amount of goods and services produced and the level of employment according to the Keynesian theory.
3. Through inductive analysis, conclude that economists in the past and present hold differing viewpoints on the ability of a capitalist economy to achieve and sustain full-employment levels of output.
4. Distinguish between classical and Keynesian theories of employment and the proper role of government in the economy.

#### Fiscal Policy

1. Explain the impact of government spending on the economy.
2. Explain the effect of changes in taxes on the economy.
3. Describe how fiscal policy can be used to try to stabilize the economy.
4. Distinguish between automatic (built-in) and discretionary stabilizers.
5. Distinguish between a contractionary fiscal policy and an expansionary fiscal policy.
6. Evaluate macroeconomic conditions and determine appropriate fiscal policy that could improve those conditions.
7. List and explain the complications encountered in employing fiscal policy.
8. Illustrate an expansionary fiscal policy using both the AD/AS model and the Keynesian model.
9. Illustrate a contractionary fiscal policy using both the AD/AS model and the Keynesian model.
10. Explain and show graphically how fiscal policy can be used to reduce any inflationary or recessionary gap.

#### Analyzing the Macro economy

1. Analyze current and past macroeconomic policy actions using the AD/AS and Keynesian models.
2. Use graphs to illustrate macroeconomic problems (domestically and foreign) as well as appropriate fiscal policy designed to correct these problems.

## **Unit 5: Money, Monetary Policy, and Economic Stability (The Financial Sector)**

### *Pennsylvania State Standards:*

**6.3.12.B:** Assess the government's role in regulating and stabilizing the state and national economy.

**6.5.12.G:** Analyze the risks and returns of various investments.

**6.5.12.H:** Evaluate benefits and costs of changes in interest rates for individuals and society.

### **1. Money, banking and financial markets**

- a. Definition of financial assets: money, stocks and bonds
- b. Time value of money (present vs. future value)
- c. Measures of money supply
- d. Banks and creation of money
- e. Money demand
- f. Money market
- g. Loanable funds

### **2. Central bank and control of money supply**

- a. Tools of central bank policy
- b. Quantity theory of money
- c. Real vs. nominal interest rates

### **Assignments, Assessments and Activities:**

- Chapters 25, 27, 28, 32 (pp. 733-744) from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 25, 27, 28 and 32
- Aplia Problem Sets for Chapters 25, 27, 28 and 32
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Activities 34-42 from NCEE’s *Advanced Placement Economics Workbook*
- Additional readings: Chapters 30 and 31 from *Economics* by Paul Krugman and Robin Wells
- Previous FRQ’s used for homework, review and assessments:
  - 2000 #3 (must show impact on AD/AS), 2001 #3, 2004 #3, 2006B #2, 2007 #2
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.

Please note: The activities, assessments, materials and time frame are meant to be used as a guide for educators, and are not meant to be all-inclusive.

## **Student learning objectives:**

### Money: What It Is and What It Does

1. Define and explain the function of money.
2. Describe the characteristics that are needed to enable money to carry out these functions effectively.
3. Define, compare, and contrast the various definitions of money supply (M1, M2, and M3).
4. Explain the concept of near-monies.

### Money: Its Effects on the Economy and How It Is Created

1. Write, explain, and analyze the equation of exchange ( $MV=PQ$ ).
2. Explain how changes in the money supply are translated into changes in nominal GDP (PQ), prices (P) and output (Q).
3. Explain the economic function of financial intermediaries.
4. Explain the fractional reserve system.
5. Define required reserve ratio, required reserves, excess reserves and deposit expansion multiplier.
6. Calculate required and excess reserves when provided financial data.
7. Define and compare required reserves and excess reserves.
8. Describe what happens to the money supply when a financial institution makes a loan. (Creating money)
9. Describe what happens to the money supply when a loan is repaid. (Destroying money)
10. When given the reserve requirement, calculate the money multiplier.
11. When given the reserve requirement and level of excess reserves, calculate potential money growth.
12. List, explain, and analyze leakages that reduce the money-creating potential of the banking system.

### The Federal Reserve System and Monetary Policy

1. Describe the structure and the functions of the Federal Reserve System.
2. Define and explain open market operations.
3. Define and explain discount window operations and the federal funds market.
4. Define and explain the purpose of the reserve requirements.
5. Explain how open market operations, the discount rate, and the reserve requirement are used to expand or contract the money supply.
6. Evaluate the effectiveness of the three main tools of monetary policy.
7. Recognize the impact of each monetary policy tool on the level of demand deposits in the banking system. (Explain basic balance sheets)
8. Differentiate between the impact of the controls on a single bank and on the banking system as a whole.
9. Calculate the reserve requirement and/or the dollar volume of required reserves.
10. Determine the value of excess reserves or reserve deficiencies.
11. Recognize the impact of the inclusion of currency on the money multiplier.

Please note: The activities, assessments, materials and time frame are meant to be used as a guide for educators, and are not meant to be all-inclusive.

### The Money Market and Monetary Policy

1. Define transactions demand for money, precautionary (liquidity) demand for money and the speculative demand for money and explain how each affects the total demand for money.
2. Discuss the motives for holding assets as money.
3. Identify the factors that cause the demand for money to shift and explain why the shift occurs.
4. Use graphs to explain how interest rates are determined in the money market.
5. Describe Federal Reserve Policy and the interest rate.
6. Explain how interest rates affect monetary policy.

### Interest Rates and Monetary Policy in the Short Run and the Long Run

1. Define the real interest rate and the nominal interest rate.
2. Explain the relationship among the real interest rate, the nominal interest rate and inflation.
3. Explain the Fisher Effect, or how changes in the money supply are transmitted to the nominal interest rate in the long run.
4. Explain the effects of monetary policy in the short run and the subsequent changes in the model as the economy moves to the long run.
5. Define neutrality of money.

### How Effective is Monetary Policy?

1. Graphically illustrate how changes in the money supply affect interest rates, investment, real GDP, employment, and the price level.
2. Compare and contrast the Keynesian and monetarist views of monetary policy.
3. Explain and contrast the effectiveness of controlling interest rates with controlling the monetary base as an effective monetary policy.
4. Given a series of data, identify the economic problem and prescribe the proper monetary policy to correct that problem.

## **Unit 6: Monetary and Fiscal Combinations: Economic Policy in the Real World**

### ***Pennsylvania State Standards:***

**6.1.12.B:** Evaluate the economic reasoning behind a choice.

Evaluate effective allocation of **resources** for the production of **goods** and **services**.

**6.1.12.D:** Predict how changes in **incentives** may affect the choices made by individuals, businesses, communities, and nations.

**6.2.12.E:** Evaluate the health of an economy (local, regional, national, global) using economic indicators.

**6.3.12.B:** Assess the government's role in regulating and stabilizing the state and national economy.

**6.3.12.C:** Evaluate the social, political, and **economic costs/benefits** of potential changes to taxation policies.

**6.5.12.A:** Analyze the factors influencing wages.

**6.5.12.E:** Compare distribution of wealth across nations.

**6.5.12.F:** Assess the impact of **entrepreneurs** on the economy.

**6.5.12.G:** Analyze the risks and returns of various investments.

**6.5.12.H:** Evaluate benefits and costs of changes in interest rates for individuals and society.

### **1. Inflation, Unemployment and Stabilization Policies**

- a. Fiscal and monetary policies
  - i. Demand-side effects
  - ii. Supply-side effects
  - iii. Policy mix
  - iv. Government deficits and debts
- b. Inflation and unemployment
  - i. Types of inflation
    1. Demand pull inflation
    2. Cost-push inflation
  - ii. The Phillips curve: short run vs. long run
  - iii. Role of expectations

### **2. Economic Growth and Productivity**

- a. Investment in human capital
- b. Investment in physical capital
- c. Research and development and technological progress
- d. Growth policy

### **Assignments, Assessments and Activities:**

- Chapters 24, 32, 33, 35 from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 24, 32, 33 and 35

Please note: The activities, assessments, materials and time frame are meant to be used as a guide for educators, and are not meant to be all-inclusive.

- Aplia Problem Sets for Chapters 24, 32, 33 and 35
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Activities 43-48 from NCEE’s *Advanced Placement Economics Workbook*
- Previous FRQ’s used for homework, review and assessments:
  - 1999 #1 (international trade basics needed), 1999 #3 (growth and PPF), 2000 #1, 2000 #3, 2001 #1 (PPF), 2002 #1 (international concepts needed), 2002B #2 (PPF/growth), 2002 #1, 2002 #2 (LRAS), 2003B #3 (Phillips curve), 2003 #1 (international/foreign exchange), 2003 #2 (foreign exchange), 2004B #1, 2005B #1, 2005B #2 (growth, PPF, LRAS), 2005 #1 (international concepts needed), 2005 #2 (loanable funds), 2005 #3 (unemployment and the Phillips curve), 2006B #1 (self-correcting), 2006 #1 (foreign exchange needed), 2006 #2 (nominal vs. real), 2007B #1, 2007B #2, 2007 #1 (international basics/exchange rates)
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.

### **Student learning objectives:**

#### Policy Lags and Crowding-Out Effect

1. Explain the inside and outside lags for monetary and fiscal policy.
2. Define the crowding-out effect.
3. Define the Barro-Ricardo effect.
4. Use an AD/AS model to explain the effects of crowding-out.
5. Explain how the Barro-Ricardo effect can reduce the crowding-out effect while simultaneously reducing the effects of the fiscal policy.
6. Demonstrate the use of monetary policy to counteract or reinforce the crowding-out effect.

#### Monetary and Fiscal Policy Interactions

1. Identify economic problems and recommend monetary and fiscal policies to improve economic performance.
2. Illustrate with appropriate diagrams (AD/AS, Money Market, Loanable Funds, Investment Demand) the effects of monetary and fiscal policies on real GDP, employment, and the price level.
3. Analyze the tradeoffs involved in various economic policy decisions.
4. Define the Phillips Curve.
5. Use a Phillips curve to illustrate the tradeoffs between inflation and unemployment in the short run and in the long run.
6. Show how monetary and fiscal policy moves the economy along the short run Phillips Curve.
7. Differentiate between the SRPC and the LRPC.
8. Understand the relationship between LRPC, LRAS and PPF.
9. Evaluate the effectiveness of various monetary and fiscal policies.

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10. Analyze how crowding out affects economic expansion and the multiplier.

#### Economic Growth

1. Describe long-term growth trends in the United States.
2. Explain growth accounting.
3. Explain how increasing growth rate of capital stock or increasing technological development, leads to economic growth.
4. Explain how policy can help achieve increases in the growth rate of the capital stock and increases in technological development.
5. Relate economic growth to the LRAS, LRPC and PPF.
6. Describe how economic growth affects a nations standard of living.
7. Describe how economic growth is measured.

#### Case Studies on Monetary and Fiscal Policy Interactions

1. Analyze the effects of various monetary and fiscal policies including lags in making and implementing policy.
2. Describe how the degree of crowding-out can depends on elasticities of interest rates, consumption spending and business investment.
3. Explain the reasons why prices and wages do not adjust instantaneously.
4. Use aggregate demand and aggregate supply diagrams to analyze economic problems and propose solutions to them.
5. Use a Keynesian total expenditure/45 diagram to analyze economic problems and propose solutions to them.
6. Analyze tradeoffs involved in various macroeconomic policy prescriptions.

#### New Directions in Macroeconomic Analysis

1. Explain why economists sometimes disagree on policy recommendations.
2. Analyze the assumptions, values, theoretical support, and applicable time periods underlying recommendations concerning monetary and fiscal policies that are in conflict.
3. Describe, compare, and contrast the Keynesian, monetarist, and rational expectations theories.
4. Illustrate with aggregate supply and demand diagrams the Keynesian, monetarist, and rational expectations theories.

## **Unit 7: The United States in a Global Economy**

### ***Pennsylvania State Standards:***

**6.4.12.A:** Evaluate the **comparative advantage** of nations in the **production** of **goods** and **services**.

**6.4.12.B:** Assess the growth and impact of international **trade** around the world.

**6.4.12.C:** Evaluate the impact of **multinational corporations** and other non-government organizations.

**6.4.12.D:** Analyze how changes in transportation, communication networks, and technology affect economic **interdependence** around the world in the 21st century.

**6.5.12.E:** Compare distribution of wealth across nations.

### **1. Open Economy: International trade and Finance**

- a. Balance of payment accounts
  - i. Balance of trade
  - ii. Current account
  - iii. Capital account
- b. Foreign exchange market
  - i. Demand for and supply of foreign exchange
  - ii. Exchange rate determination
  - iii. Currency appreciation and depreciation
- c. Net exports and capital flows
- d. Links to financial goods

### **Assignments, Assessments and Activities:**

- Chapters 9, 29 and 30 from *Principles of Economics* by N. Gregory Mankiw
- Mankiw Study Guides for Chapters 9, 29 and 30
- Aplia Problem Sets for Chapters 9, 29 and 30
- Select “end of chapter” questions from *Principles of Economics* by N. Gregory Mankiw
- Additional readings: Chapter 35 from *Economics* by Paul Krugman and Robin Wells
- Activities 49-55 from NCEE’s *Advanced Placement Economics Workbook*
- Previous FRQ’s used for homework, review and assessments:
  - 1999 #1, 2000 #1, 2000 #2, 2001 #2, 2002B #1, 2002B #3, 2002 #3, 2003B #1, 2003 #1, 2003 #2, 2004B #2 (foreign exchange), 2004 #2, 2005B #3 (exchange rates), 2006B #3, 2006 #1 (foreign exchange), 2007B #1, 2007B #3, 2007 #1
- Chapter quizzes and Unit Exam upon completion of all assigned chapters.

Please note: The activities, assessments, materials and time frame are meant to be used as a guide for educators, and are not meant to be all-inclusive.



## **Student learning objectives:**

### Why People and Nations Trade

1. Define comparative advantage, terms of trade and gains from trade.
2. Describe reasons people and nations gain when they trade.
3. Distinguish between absolute advantage and comparative advantage.
4. When given data, determine absolute advantage and comparative advantage and terms of trade.
5. Analyze comparative advantage in terms of opportunity costs.
6. Describe and give examples of the law of comparative advantage.
7. Illustrate comparative advantage by using inputs, outputs, and production possibilities curve.
8. Describe, analyze, and evaluate the case for free trade.

### Evaluating the Arguments for Protectionism

1. Define tariffs, quotas and regulations to limit trade.
2. Describe policies that are intended to protect the domestic economy from the effects of international trade.
3. Analyze and evaluate the case for protectionism.
4. Use supply and demand curves to analyze the economic effects of tariffs and quotas and subsidies on domestic production and the prices domestic consumers pay.
5. Explain the arguments for and against protectionist policies.

### What is a Favorable Balance of Trade?

1. Define current account, capital account, balance of trade, balance of payments, debit and credit.
2. Explain how international trade is financed.
3. Distinguish among the balance of trade, the current account balance, the capital account balance, and the balance of payments.
4. Analyze ways international transactions affect the current account and capital account.
5. Analyze how international transactions affect the balance of trade and the balance of payments.
6. Explain how the international value of the dollar is determined.
7. Use Graphs of the foreign exchange market to analyze how economic events affect the international value of the dollar.

### Exchange Rates and Their Effects on International Trade

1. Describe how exchange rates work, and convert currency values when given exchange rates.
2. Use supply and demand curves to analyze how events affect exchange rates.
3. Identify factors that influence the international exchange value of a nation's currency.

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4. Understand the effects of currency appreciation and depreciation on international trade.
5. Analyze ways that monetary and fiscal policies affect exchange rates and ways that exchange rates affect imports, exports, inflation, and employment.

#### Monetary and Fiscal Policy in a Global Economy

1. Explain the effects of monetary and fiscal policy on foreign exchange markets.
2. Explain the effects of changes in the international value of the dollar on foreign trade.
3. Explain the effects of changes in net exports on domestic aggregate demand.

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