

Principles of Macroeconomics



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| Marginal Revolution University | Tyler Cowen and Alex Tabarrok | | MRUniversity Videos |

Alta Macroeconomics was developed to meet the scope and sequence of most introductory macroeconomics courses. To develop the course, Knewton used three main sources of content: OpenStax, Marginal Revolution, and a team of Subject Matter Experts (SMEs). The SMEs come from diverse backgrounds and are all accomplished academics in the field of economics.

Alta Macroeconomics has one to two instructional sequences for every learning objective, giving students multiple opportunities to learn new concepts. Among our OpenStax text, Marginal Revolution videos, and Knewton SMEs, we were able to solicit ideas from economics instructors and students at all levels of higher education. Alta Macroeconomics covers the typical breadth of economics topics, and also provides the necessary depth to ensure the course is manageable and engaging for instructors and students alike.

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Chapter 1: Welcome to Economics!

1.1 What is Economics and Why is it Important?

- Evaluate the significance of scarcity
- Explain the relationship between production and division of labor
- Contrast microeconomics and macroeconomics

1.2 Economic Theories, Models, and Systems

- Explain the importance of economic theories and models
- Interpret a circular flow diagram
- Contrast traditional economies, command economies, and market economies
- Assess the importance and effects of globalization

Chapter 2: Choice in a World of Scarcity

2.1 How Individuals Make Choices Based on Their Budget Constraint

- Interpret budget constraints
- Calculate a budget constraint using an equation
- Graph budget constraints
- Explain opportunity cost
- Calculate opportunity cost
- Understand how to use marginal analysis
- Define sunk costs
- Explain the law of diminishing marginal utility

2.2 The Production Possibilities Frontier and Social Choices

- Define production possibilities frontier
- Calculate opportunity cost based on a production possibilities frontier
- Understand the law of diminishing returns and how it relates to the shape of the PPF
- Define productive efficiency and allocative efficiency
- Define comparative advantage

2.3 Confronting Objections to the Economic Approach

- Recall arguments against economic approaches to decision-making
- Classify normative statements and positive statements

Chapter 3: Introduction to Demand and Supply

3.1 Demand, Supply, and Equilibrium in Markets for Goods and Services

- Explain demand, quantity demanded, and the law of demand
 - Interpret demand schedules and demand curves
 - Explain supply, quantity supplied, and the law of supply
 - Interpret supply schedules and supply curves
 - Define equilibrium
 - Identify equilibrium using demand/supply curves
 - Identify equilibrium using demand/supply schedules
 - Explain how a market moves from shortage or surplus to an equilibrium
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3.2 Shifts in Demand and Supply for Goods and Services

- Define the ceteris paribus assumption
- Contrast normal and inferior goods
- Identify the effects of income on shifts in demand
- Explain how changes in price of substitute goods can affect demand
- Explain how changes in price of complement goods can affect demand
- Identify factors that shift demand curves
- Explain how changes in the price of inputs affect supply
- Identify factors that shift supply curves
- Graph shifts in demand
- Graph shifts in supply

3.3 Changes in Equilibrium Price and Quantity: The Four-Step Process

- Use the four-step process to explain how shifts in demand affect equilibrium
- Use the four-step process to explain how shifts in supply affect equilibrium
- Use a supply and demand schedule to explain how shifts in demand or supply affect equilibrium
- Use the four-step process to explain how simultaneous shifts in supply and demand affect equilibrium
- Contrast shifts of demand or supply and movements along a demand or supply curve

3.4 Price Ceilings and Price Floors

- Explain price ceilings
- Explain price floors
- Analyze the effects of price floors on market equilibrium
- Analyze the effects of price ceilings on market equilibrium

3.5 Demand, Supply, and Efficiency

- Define Consumer Surplus
- Define Producer Surplus
- Explain how price ceilings and price floors reduce social surplus
- Explain why taxes on buyers and sellers can be inefficient

Chapter 4: Labor and Financial Markets

4.1 Demand and Supply at Work in Labor Markets

- Identify equilibrium in the labor market using supply and demand schedules or curves
- Explain shifts in the demand curves of the labor market
- Explain how shifts in demand and supply for labor affect labor market equilibrium
- Explain shifts in the supply curves of the labor market
- Explain price floors in the labor market such as minimum wage or a living wage

4.2 Demand and Supply in Financial Markets

- Explain how interest rates can affect supply and demand in financial markets
 - Explain equilibrium in financial markets
 - Explain shifts in the demand and supply of financial capital
 - Analyze how shifts in the demand or supply of financial capital affect equilibrium
 - Explain the impact of price ceilings and usury laws in the financial markets
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4.3 The Market System as an Efficient Mechanism for Information

- Understand the market system as an efficient mechanism for information
- Apply demand and supply models to analyze prices and quantities

Chapter 5: Elasticity

5.1 Price Elasticity of Demand and Price Elasticity of Supply

- Define price elasticity
- Classify price elasticity as elastic, inelastic, or unitary
- Calculate the price elasticity of demand
- Calculate the price elasticity of supply
- Contrast price elasticity with slope

5.2 Polar Cases of Elasticity and Constant Elasticity

- Define and identify polar cases of elasticity
- Distinguish areas on a demand or supply curve that are inelastic, unitary elastic, and elastic

5.3 Elasticity and Pricing

- Explain the relationship between changes in price and total revenue based on the elasticity of demand
- Explain the relationship between shifts in supply and changes in equilibrium price based on the elasticity of demand
- Explain the relationship between elasticity and tax incidence
- Explain the long-run and short-run impacts of elasticity

5.4 Elasticity in Areas Other Than Price

- Define income elasticity of demand
- Calculate income elasticity of demand
- Define cross-price elasticity of demand
- Calculate cross-price elasticity of demand
- Define elasticity in labor and financial capital markets

Chapter 6: The Macroeconomic Perspective

6.1 Measuring the Size of the Economy: Gross Domestic Product

- Identify the goals of macroeconomic policy
- Define Gross Domestic Product and understand its components
- Understand trade balance
- Calculate GDP using the components of demand
- Calculate GDP by what is produced
- Understand national income and distinguish between final and intermediate goods
- Define Gross National Product and Net National Product

6.2 Adjusting Nominal Values to Real Values and Tracking Real GDP Over Time

- Define nominal value, real value, and GDP deflator
 - Calculate Real GDP using the GDP Deflator
 - Calculate percentage change in real GDP
 - Calculate the growth in nominal GDP
 - Define the recessions and depressions
 - Define the business cycle
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6.3 Comparing GDP Among Countries

- Use exchange rates to compare GDPs across countries
- Use GDP and population to calculate GDP per capita
- Explain the limitations of GDP for measuring a country's standard of living
- Understand when GDP overstates and understates changes in standard of living

Chapter 7: Economic Growth

7.1 Labor Productivity and Economic Growth

- Explain modern economic growth, the Industrial Revolution, and growth before the Industrial Revolution
- Explain property right, contractual right, and their importance for economic growth
- Define labor productivity and understand the factors that affect labor productivity
- Define the aggregate production function and identify its components
- Understand growth in labor productivity and the impact of the new economy
- Calculate future GDP using the compound GDP growth rate

7.2 Components of Economic Growth and Economic Convergence

- Discuss the components of economic growth, including physical capital, human capital, and technology
- Understand how capital deepening impacts labor productivity
- Understand which components of economic growth have been found to be most important
- Understand the factors that contribute to a health climate for economic growth
- Explain convergence and understand why low income countries grow faster than high income countries
- Understand why economic convergence may be slow or may not occur at all

Chapter 8: Unemployment

8.1 Defining and Computing Unemployment Rate and Patterns in Unemployment

- Define labor force, employed, and unemployed
- Calculate the unemployment rate
- Calculate the labor force participation rate
- Understand sources of hidden unemployment
- Understand how the BLS calculates unemployment and potential issues with the measurement
- Compare unemployment in the US over time, by race and ethnicity, and by age group
- Understand why people are unemployed, how long unemployment lasts, and how the US compares to other countries

8.2 What Causes Changes in Unemployment Over the Short Run

- Understand cyclical employment and define involuntary unemployment
- Understand sticky wages
- Understand various explanations for sticky wages in the labor market
- Explain sticky wages using a labor supply-labor demand diagram

8.3 What Causes Changes in Unemployment Over the Long Run

- Understand frictional and structural unemployment as components of the natural rate of unemployment
 - Understand how wages adjust to changes in labor productivity growth
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- Understand how government policy affects the natural rate of unemployment
- Understand factors influencing the natural rate of unemployment in the US and in Europe

Chapter 9: Inflation

9.1 Tracking Inflation

- Explain inflation
- Calculate the value of a basket of goods
- Calculate inflation using the change in cost of a basket of goods and services
- Use a base year to calculate index numbers for the cost of a basket of goods and services
- Calculate inflation using index numbers

9.2 How to Measure Changes in the Cost of Living

- Define the Consumer Price Index and understand the substitution and quality/new goods biases
- Understand how CPI is calculated and define the core inflation index
- Explain price indices other than the CPI

9.3 How the U.S. and Other Countries Experience Inflation

- Understand historical patterns of inflation in the US and abroad
- Explain how inflation affects real interest rates and real wages
- Understand how inflation affects savers, like retirees, and borrowers
- Understand some costs of inflation and one potential benefit
- Explain indexing and some key examples of indexing

Chapter 10: The International Trade and Capital Flows

10.1 Measuring Trade Balances

- Define balance of trade, trade surplus, and trade deficit
- Define merchandise trade balance, current account balance, income payments, and unilateral transfers
- Calculate current account balance

10.2 Trade Balances in Historical and International Context and Flows of Financial Capital

- Describe the US trade balance historically and compare the level of globalization across countries
- Understand how trade surpluses and deficits lead to lending money or borrowing money abroad
- Understand balance of payments and the relationship with balance of trade

10.3 The National Saving and Investment Identity

- Use the national saving and investment identity to explain the balance of trade
- Understand how changes to investment, private saving, and public saving impact the balance of trade
- Use the savings and investment identity to determine investment spending, private saving, or public saving
- Understand the relationship between the business cycle and the balance of trade

10.4 The Pros and Cons of Trade Deficits and Surpluses and The Difference Between Level of Trade and the Trade Balance

- Understand the costs and benefits to running trade deficits and surpluses
 - Define level of trade and explain what factors are likely to affect a country's level of trade
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Chapter 11: The Aggregate Demand/Aggregate Supply Model

11.1 Macroeconomic Perspectives on Demand and Supply and Building a Model of Aggregate Demand and Aggregate Supply

- Explain Say's law and Keynes' law and understand when these laws apply
- Explain the shape of the aggregate supply curve and identify aggregate supply and potential GDP it on a graph
- Explain the shape of the aggregate demand curve and identify it on a graph
- Use a table to construct an aggregate supply and aggregate demand curve
- Identify equilibrium price level of Real GDP in the AD-AS model
- Define short run aggregate supply and long run aggregate supply

11.2 Shifts in Aggregate Supply

- Understand how productivity growth affects the AS curve and illustrate this graphically
- Understand how changes in input prices and other supply shocks impact AS
- Illustrate the effect of a change in input prices on the aggregate supply curve and equilibrium

11.3 Shifts in Aggregate Demand

- Explain how business and consumer confidence affect AD
- Illustrate graphically how business and consumer confidence affect AD
- Explain how government policy affects AD and illustrate this graphically

11.4 Growth, Unemployment, and Inflation in the AD/AS Model and Exploring Keynes' Law and Say's Law in the AD/AS model

- Use the AD/AS model to explain growth, recession, and cyclical unemployment
- Use the AD/AS model to show inflationary pressures from a shift in the AS curve or a shift in the AD curve
- Use the AS curve to identify the Keynesian zone, the intermediate zone, and neoclassical zone

Chapter 12: The Keynesian Perspective

12.1 Aggregate Demand in Keynesian Analysis

- Define recessionary gap and inflationary gap
- Understand the three factors that affect consumption
- Understand the two factors that affect investment spending
- Understand the two factors that affect net exports

12.2 The Building Blocks of Keynesian Analysis

- Explain how a lack of demand and slow responding prices cause a recession
- Illustrate how a leftward shift in aggregate demand curve causes a recession
- Define macroeconomic externality and understand the expenditure multiplier

12.3 The Phillips Curve

- Understand the Phillips curve
 - Explain stagflation and understand how stagflation affects the Phillips curve
 - Understand how expansionary fiscal policy can be used to close a recessionary gap
 - Understand how contractionary fiscal policy can be used to close an inflationary gap
-

Chapter 13: The Neoclassical Perspective

13.1 The Building Blocks of Neoclassical Analysis

- Explain the determinants of potential GDP and explain the long run aggregate supply curve
- Understand the role of flexible prices in bringing an economy back to potential GDP from an inflationary gap or recessionary gap
- Illustrate the effects of price flexibility on macroeconomic equilibrium using an AD/AS diagram
- Explain rational and adaptive expectations and how these expectations will impact the speed of economic adjustment

13.2 The Policy Implications of the Neoclassical Perspective and Balancing Keynesian and Neoclassical Models

- Understand the shape of the Phillips curve in neoclassical economics
- Draw the Phillips curve based on data
- Understand the natural rate of unemployment and explain how shifting aggregate demand affects real GDP and the price level
- Explain why neoclassical economists are most interested in expanding potential GDP
- Understand the situations where Keynesian theory is most helpful and situations where Neoclassical theory is most helpful

Chapter 14: Money and Banking

14.1 Defining Money by Its Functions

- Explain barter and the double coincidence of wants
- Define money by its functions
- Explain commodity money and fiat money

14.2 Measuring Money: Currency, M1 and M2

- Explain M1 money
- Explain M2 money
- Calculate M1 and M2
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14.3 The Role of Banks

- Explain financial intermediary and the role of banks in reducing transactions costs
- Define balance sheet, asset, liability, and net worth
- Use a T-account to calculate net worth
- Explain assets and liabilities for a bank
- Explain how a bank can go bankrupt and how it can prevent bankruptcy

14.4 How Banks Create Money

- Calculate the multiplier
 - Calculate the total change in money supply due to the multiplier
 - Explain how the money multiplier may overestimate the change in total money supply and understand costs and benefits of banks
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Chapter 15: Monetary Policy and Bank Regulation

15.1 The Federal Reserve Banking System, Central Banks, and Bank Regulation

- Define central bank and explain the structure of the Federal Reserve system
- Explain bank regulation and bank supervision
- Define bank run and explain the role of banks in preventing bank runs

15.2 How a Central Bank Executes Monetary Policy

- Explain the Federal Open Market Committee, open market operations, and the federal funds rate
- Explain how the Fed selling and buying bonds impacts the money supply
- Explain how the Fed can use reserve requirements and the discount rate to affect the money supply

15.3 Monetary Policy and Economic Outcomes

- Explain how changes in the money supply affect the equilibrium interest rate and use a supply and demand for loanable funds graph to illustrate this
- Explain how monetary policy affects aggregate demand and illustrate this graphically
- Use an AD/AS diagram to illustrate the effects of countercyclical monetary policy
- Understand Fed responses to economic conditions and how quantitative easing was used during the Great Recession

15.4 Pitfalls for Monetary Policy

- Explain how excess reserves and deflation can reduce the effectiveness of monetary policy
- Understand the quantity equation of money and what this equation means for expansionary monetary policy
- Understand the neoclassical view of monetary policy and explain inflation targeting
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Chapter 16: Exchange Rates and International Capital Flow

16.1 How the Foreign Exchange Market Works

- Define the foreign exchange market and identify which currencies are traded most frequently
- Define Foreign Direct Investment and portfolio investment and explain hedging
- Identify demanders and suppliers of U.S. dollars on the foreign exchange market
- Define currency appreciation and depreciation and understand who benefits from appreciation and depreciation of the US dollar

16.2 Demand and Supply Shifts in Foreign Exchange Markets

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- Understand how expectations affect the demand and supply for currency
- Understand how changes in expectations of future exchange rates affect equilibrium in the foreign exchange market
- Understand how differences in relative rates of return across countries affect the foreign exchange market
- Understand how differences in relative inflation affect the foreign exchange market
- Define arbitrage and purchasing power parity

16.3 Macroeconomic Effects of Exchange Rates and Exchange Rate Policies

- Understand how exchange rates impact exports and international borrowers
 - Explain floating exchange rate, soft peg, and hard peg
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- Understand how monetary policy can be used to affect exchange rates and explain Tobin taxes
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Chapter 17: Government Budgets and Fiscal Policy

17.1 Government Spending and Taxation

- Define budget deficit, budget surplus, and balanced budget
- Understand the components of federal, state, and local government spending
- Explain sources of federal tax revenues
- Explain marginal tax rate, progressive tax, proportional tax, and regressive tax
- Explain the components of state and local tax revenues

17.2 Federal Deficits and the National Debt Using Fiscal Policy to Fight Recession, Unemployment, and Inflation

- Understand national debt and identify historical patterns of spendings, tax revenues, and deficits
- Explain the tools of fiscal policy and define expansionary and contractionary fiscal policy
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- Understand how increased government spending impacts interest rates and investment
- Explain lags in fiscal policy
- Explain additional limitations of fiscal policy
- Explain the debate over balancing the budget

Chapter 18: The Impacts of Government Borrowing

18.1 How Government Borrowing Affects Investment and the Trade Balance

- Explain the national savings and investment identity and apply the investment-savings equation
- Understand how a change in the budget deficits impacts price investment, private savings, or trade deficits

18.2 Fiscal Policy and the Trade Balance

- Explain twin deficits and understand the relationship between foreign national investment and budget deficits
- Explain how budgets deficits affect the demand and supply for currency and illustrate this graphically
- Illustrate the effects of budget deficits on the exchange rate using a supply-demand diagram
- Explain how high budgets deficits can lead to recession and how fiscal policy can be used to address trade imbalances

18.3 Ricardian Equivalence, Fiscal Policy, Investment, and Economic Growth

- Explain Ricardian equivalence and identify whether Ricardian equivalence takes place
 - Explain crowding out and identify the historical relationship between budget balance and private investment spending
-

- Use a supply and demand diagram to illustrate the effect of budget deficits on interest rates
- Explain how the government invests in physical capital, human capital, and technological growth

Chapter 19: Macroeconomic Policy Around the World

19.1 The Diversity of Countries and Economies Across the World

- Define low, middle, and high income country and understand how these countries vary in population and share of world income
- Explain how differences in geography, demographics, industry structure, and economic institutions contribute to differences in GDP per capita around the world
- Understand growth policies appropriate for high-income countries
- Understand growth policies appropriate for middle-income countries
- Understand growth policies appropriate for low-income countries
- Explain the causes of unemployment around the world
- Explain causes and solutions to inflation in various parts of the world
- Define NAFTA and explain concerns related to trade

Chapter 20: International Trade

20.1 Absolute and Comparative Advantage

- Explain comparative advantage and determine which country has an absolute advantage in producing a good
- Draw a country's production possibilities frontier
- Calculate a country's opportunity cost of producing one unit of a good and use this to determine comparative advantage
- Explain the relationship between comparative advantage and specialize and calculate world production before and after specialization
- Illustrate how trade can move a country beyond its production possibilities frontier

20.2 Absolute Advantage, Intra-Industry Trade Between Similar Economies, and Reducing the Barriers to International Trade

- Relate absolute advantage and labor productivity and calculate the increase in world output due to specialization even if one country has both absolute advantages
- Illustrate gains from trade when one country has an absolute advantage in both goods
- Explain why comparative advantage increases production for all countries
- Define and explain intra-industry trade
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Chapter 21: Globalization and Protectionism

21.1 Protectionism: An Indirect Subsidy from Consumers to Producers

- Explain protectionism, GATT, and WTO
 - Identify equilibrium prices for a good in two countries with and without trade
 - Calculate exports and imports using supply and demand diagrams
 - Identify gains from trade on a supply and demand diagram
 - Use a supply and demand diagram to illustrate the impact of imports and identify the impact on domestic market price
 - Explain who benefits and who loses from protectionism
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21.2 The Effects of International Trade and Arguments in Favor of Restricting Imports

- Explain how protectionism and trade affect jobs, wages, and working conditions
- Explain the infant industry argument and dumping
- Explain the environmental protection argument, the unsafe consumer products argument, and the national interest argument

21.3 How Governments Enact Trade Policy and The Tradeoffs of Trade Policy

- Explain The main objective of the WTO/GATT and understand regional trade agreements
- Explain the relationship between free trade and domestic interests and how trade policy has evolved over time
- Explain why free trade should be a first priority for policymakers

Appendices

A.1 Indifference Curves

- Draw an indifference curve
- Interpret an indifference curve and explain its slope
- Explain why higher indifference curves are preferred to lower ones and how indifference curves differ across individuals
- Understand how an individual uses indifference curves and a budget line to maximize utility
- Explain how changes in income affect the utility maximizing choice
- Identify the income and substitution effects graphically
- Draw a labor-leisure indifference curve and budget line
- Explain the effect of a change in the wage on a worker's labor-leisure choice
- Draw an intertemporal choice indifference curve and budget line
- Explain the effect of a change in the interest rate on the choice between present and future consumption
- Sketch income and substitution effects

A.2 Present Discounted Value

- Calculate present discounted value of a stock
- Calculate present discounted value of a bond and understand the relationship between present value and interest rates

A.3 The Expenditure-Output Model

- Identify aggregate expenditure, the 45-degree line, and potential output on a graph
 - Define MPC and MPS
 - Draw a pre-tax consumption function
 - Explain the investment function and government spending function
 - Draw a post-tax consumption function
 - Explain the exports function and draw an imports function
 - Use the expenditure-output model to calculate expenditure and analyze how changing components affect expenditure
 - Explain equilibrium in the Keynesian cross model
 - Identify inflationary and recessionary gaps on an aggregate expenditure gap
 - Calculate and explain the spending multiplier
 - Use the spending multiplier to calculate the effect of an increase in spending on Real GDP
-