Economics

Principles, Problems, and Policies

AP* Edition

Nineteenth Edition

Reinforced Binding

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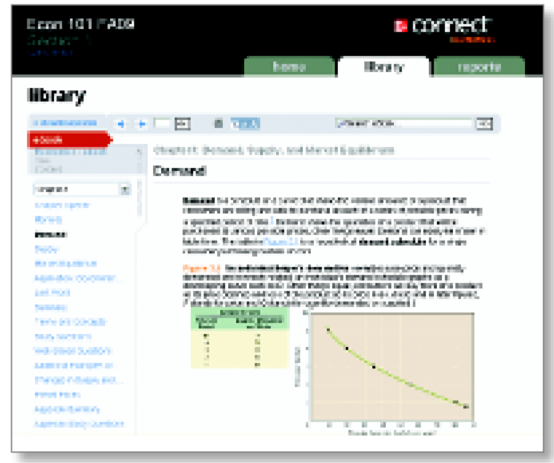

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About the Authors

CAMPBELL R. MCCONNELL earned his Ph.D. from the University of Iowa after receiving degrees from Cornell College and the University of Illinois. He taught at the University of Nebraska–Lincoln from 1953 until his retirement in 1990. He is also coauthor of *Contemporary Labor Economics*, ninth edition; *Essentials of Economics*, second edition; *Macroeconomics: Brief Edition;* and *Microeconomics: Brief Edition* (all The McGraw-Hill Companies), and has edited readers for the principles and labor economics courses. He is a recipient of both the University of Nebraska Distinguished Teaching Award and the James A. Lake Academic Freedom Award and is past president of the Midwest Economics Association. Professor McConnell was awarded an honorary Doctor of Laws degree from Cornell College in 1973 and received its Distinguished Achievement Award in 1994. His primary areas of interest are labor economics and economic education. He has an extensive collection of jazz recordings and enjoys reading jazz history.

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SEAN M. FLYNN did his undergraduate work at the University of Southern California before completing his Ph.D. at U.C. Berkeley, where he served as the Head Graduate Student Instructor for the Department of Economics after receiving the Outstanding Graduate Student Instructor Award. He teaches at Scripps College (of the Claremont Colleges) and is the author of *Economics for Dummies* (Wiley) and coauthor of *Essentials of Economics*, second edition; *Macroeconomics: Brief Edition;* and *Microeconomics: Brief Edition* (all The McGraw-Hill Companies). His research interests include finance and behavioral economics. An accomplished martial artist, he has represented the United States in international aikido tournaments and is the author of *Understanding Shodokan Aikido* (Shodokan Press). Other hobbies include running, traveling, and enjoying ethnic food.

To **Mem** and to **Terri** and **Craig**, and to
past instructors

List of Key Graphics

Preface

Welcome to the 19th edition of *Economics*, the best-selling economics textbook in the world. An estimated 14 million students have used *Economics* or its companion editions, *Macroeconomics* and *Microeconomics*. *Economics* has been adapted into Australian and Canadian editions and translated into Italian, Russian, Chinese, French, Spanish, Portuguese, and other languages. We are pleased that *Economics* continues to meet the market test: nearly one out of four U.S. students in principles courses used the 18th edition.

Fundamental Objectives

We have three main goals for *Economics:*

- Help the beginning student master the principles essential for understanding the economizing problem, specific economic issues, and policy alternatives.
- Help the student understand and apply the economic perspective and reason accurately and objectively about economic matters.
- Promote a lasting student interest in economics and the economy.

What's New and Improved?

One of the benefits of writing a successful text is the opportunity to revise—to delete the outdated and install the new, to rewrite misleading or ambiguous statements, to introduce more relevant illustrations, to improve the organizational structure, and to enhance the learning aids.

We trust that you will agree that we have used this opportunity wisely and fully. Some of the more significant changes include the following.

Restructured Introductory Chapters

We have divided the five-chapter grouping of introductory chapters common to *Economics*, *Microeconomics*, and *Macroeconomics* into two parts. Part 1 contains Chapter 1 (Limits, Alternatives, and Choices) and Chapter 2 (The Market System and the Circular Flow). The content in Part 2 has changed and now consists of three chapters: Chapter 3 (Demand, Supply, and Market Equilibrium), Chapter 4 (Elasticity), and Chapter 5 (Market Failures: Public Goods and Externalities).

The chapters in Part 2 are much more concept-oriented and analytical and much less general and descriptive than in the previous edition. Our new approach responds to suggestions by reviewers made over the years to:

- Locate the elasticity chapter immediately after the supply and demand chapter.
- Put the elasticity chapter into *Macroeconomics* for those who cover elasticity in their macro course.
- Eliminate the mainly descriptive Chapter 4 on the private and public sectors and move the relevant content to where it fits more closely with related micro and macro materials.
- Provide a single chapter on international trade, rather than two separate chapters that have overlapping coverage (Chapters 5 and 37 in the 18th edition).
- Boost the analysis of market failures (public goods and externalities) in the introductory sections to complement and balance the strong but highly stylized introduction to the market system discussed in Chapter 2.

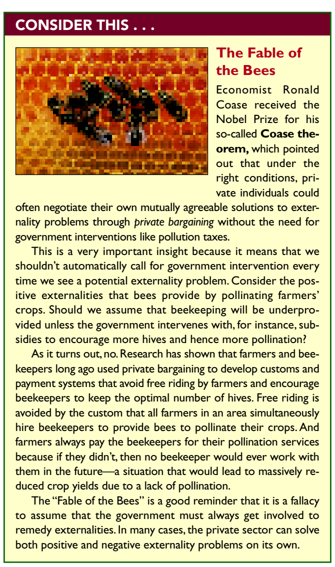
Our new approach embraces these suggestions. For micro teachers, the new ordering provides a clear supply-and-demand path to the subsequent chapters on consumer and producer behavior. For macro teachers, the new ordering provides the option of assigning elasticity or market failures or both. And because this content is both optional and modular, macro teachers can also skip it and move directly to the macroeconomic analysis.

The content on the United States in the global economy that appeared in Chapter 5 of the 18th edition is now integrated into Chapter 37 (International Trade). Because Chapter 37 draws only on production possibilities analysis and supply and demand analysis, it can be assigned at any point after Chapter 3 (Demand, Supply, and Market Equilibrium). Therefore, teachers who want to introduce international economics early in their courses can assign Chapter 37 within the introductory chapters found in Parts 1 and 2.

For teachers who prefer Chapter 5 of the prior edition to Chapter 37 of the new edition, we have fully updated the previous Chapter 5 content and made it freely available for viewing and printing at both the teacher and student portions of our Web site, **www.glencoe.com/mcconnellAP19**. Look for it under the new category called Content Options for Instructors (COI). This substitute for Chapter 37 is fully supported by both the teacher supplement package and the student supplement package.

New "Consider This" and "Last Word" Pieces

Our "Consider This" boxes are used to provide analogies, examples, or stories that help drive home central economic ideas in a student-oriented, real-world manner. For instance, a "Consider This" box titled "McHits and McMisses" illustrates consumer sovereignty through a listing of successful and unsuccessful products. How businesses exploit price discrimination is driven home in a "Consider This" box that explains why ballparks charge different admission prices for adults and children but only one set of prices at their concession stands. These brief vignettes, each accompanied by a photo, illustrate key points in a lively, colorful, and easy-to-remember way. We have added 16 new "Consider This" boxes in this edition.



CONSIDER THIS . . .

The Fable of the Bees

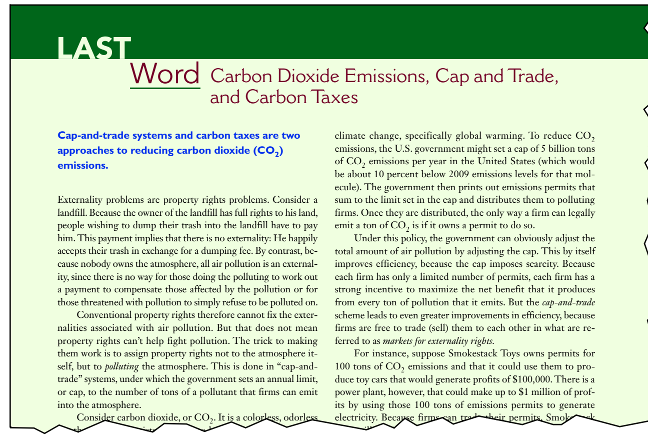
Economist Ronald Coase received the Nobel Prize for his so-called **Coase theorem,** which pointed out that under the right conditions, private individuals could often negotiate their own mutually agreeable solutions to externality problems through *private bargaining* without the need for government interventions like pollution taxes.

This is a very important insight because it means that we shouldn't automatically call for government intervention every time we see a potential externality problem. Consider the positive externalities that bees provide by pollinating farmers' crops. Should we assume that beekeeping will be underprovided unless the government intervenes with, for instance, subsidies to encourage more hives and hence more pollination?

As it turns out, no. Research has shown that farmers and beekeepers long ago used private bargaining to develop customs and payment systems that avoid free riding by farmers and encourage beekeepers to keep the optimal number of hives. Free riding is avoided by the custom that all farmers in an area simultaneously hire beekeepers to provide bees to pollinate their crops. And farmers always pay the beekeepers for their pollination services because if they didn't, then no beekeeper would ever work with them in the future—a situation that would lead to massively reduced crop yields due to a lack of pollination.

The "Fable of the Bees" is a good reminder that it is a fallacy to assume that the government must always get involved to remedy externalities. In many cases, the private sector can solve both positive and negative externality problems on its own.

Our "Last Word" pieces are lengthier applications or case studies that are placed near the end of each chapter. For example, the "Last Word" section for Chapter 1 (Limits, Alternatives, and Choices) examines pitfalls to sound economic reasoning, while the "Last Word" section for



LAST Word Carbon Dioxide Emissions, Cap and Trade, and Carbon Taxes

Cap-and-trade systems and carbon taxes are two approaches to reducing carbon dioxide (CO_2) emissions.

Externality problems are property rights problems. Consider a landfill. Because the owner of the landfill has full rights to his land, people wishing to dump their trash into the landfill have to pay him. This payment implies that there is no externality: He happily accepts their trash in exchange for a dumping fee. By contrast, because nobody owns the atmosphere, all air pollution is an externality, since there is no way for those doing the polluting to work out a payment to compensate those affected by the pollution or for those threatened with pollution to simply refuse to be polluted on.

Conventional property rights therefore cannot fix the externalities associated with air pollution. But that does not mean property rights can't help fight pollution. The trick to making them work is to assign property rights not to the atmosphere itself, but to *polluting* the atmosphere. This is done in "cap-and-trade" systems, under which the government sets an annual limit, or cap, to the number of tons of a pollutant that firms can emit into the atmosphere.

Consider carbon dioxide, or CO_2. It is a colorless, odorless

climate change, specifically global warming. To reduce CO_2 emissions, the U.S. government might set a cap of 5 billion tons of CO_2 emissions per year in the United States (which would be about 10 percent below 2009 emissions levels for that molecule). The government then prints out emissions permits that sum to the limit set in the cap and distributes them to polluting firms. Once they are distributed, the only way a firm can legally emit a ton of CO_2 is if it owns a permit to do so.

Under this policy, the government can obviously adjust the total amount of air pollution by adjusting the cap. This by itself improves efficiency, because the cap imposes scarcity. Because each firm has only a limited number of permits, each firm has a strong incentive to maximize the net benefit that it produces from every ton of pollution that it emits. But the *cap-and-trade* scheme leads to even greater improvements in efficiency, because firms are free to trade (sell) them to each other in what are referred to as *markets for externality rights.*

For instance, suppose Smokestack Toys owns permits for 100 tons of CO_2 emissions and that it could use them to produce toy cars that would generate profits of $100,000. There is a power plant, however, that could make up to $1 million of profits by using those 100 tons of emissions permits to generate electricity.

Chapter 5 (Market Failures: Public Goods and Externalities) examines cap-and-trade versus carbon taxes as policy responses to excessive carbon dioxide emissions. There are 10 new "Last Word" sections in this edition.

If you are unfamiliar with *Economics*, we encourage you to thumb through the chapters to take a quick look at these highly visible features.

New Content on Behavioral Economics

We have added new material covering the consumer-choice aspects of behavioral economics to the end of our chapter on Consumer Behavior (Chapter 6 of *Economics* and *Microeconomics*). The new material on behavioral economics covers prospect theory, framing effects, loss aversion, anchoring effects, mental accounting, and the endowment effect. The behavioral economics theory and examples are tightly focused on consumer-choice applications so as to flow smoothly from, and build upon, the standard utility-maximization theory and applications developed earlier in the chapter. The new material is intentionally at the end of the chapter, not only to show that behavioral economics extends standard theory (rather than replacing or refuting it) but also so that the new material is modular and thus can be skipped by teachers without loss of continuity. A new "Consider This" box on the "hedonic treadmill" and a new "Last Word" section on "nudges" bolster our overall coverage of behavioral economics.

Divided Pure Competition Chapter

We have divided the very long pure competition chapter (Chapter 9 of the 18th edition) into two logically distinct chapters, one on pure competition in the short run (Chapter 8) and the other on pure competition in the long run (Chapter 9). These more "bite-sized" chapters should improve student retention of the material. Students will first master the logic behind the MC = MR rule for setting output as well as the short-run shutdown condition. Students will then be able to pause to test their understanding of this content through end-of-chapter questions and problems and other supporting materials before moving on to the next chapter's coverage of pure competition in the long run.

We have also combined several table/figure pairs to improve pedagogy in the short-run chapter. In previous editions, the material for this chapter featured three figures that corresponded with the data in three separate tables. We have now combined all three such table/figure pairs, placing each data table directly above its accompanying figure to increase student comprehension. We have also used background highlights on equilibrium numbers in the tables to enable students to more easily move back and forth from references in the body to equilibrium numbers in the tables.

New Public Finance Chapter

By moving the discussion of market failure from Chapter 16 of the 18th edition to Chapter 5 of the 19th edition, we have made room for a new Chapter 16 (Public Finance: Taxation and Expenditures). This traditional public finance chapter adds considerable new content to existing material that previously appeared in Chapter 4 (The U.S. Economy: Private and Public Sectors) and Chapter 17 (Public Choice Theory and the Economics of Taxation). The material adopted from Chapter 4 of the 18th edition includes a circular flow diagram with government; an overview of Federal, state, and local tax revenues and expenditures; and explanations of marginal and average tax rates. The material adopted from Chapter 17 of the 18th edition includes discussions of the benefits-received and ability-to-pay principles of taxation; an explanation of progressive, regressive, and proportional taxes; tax incidence and efficiency losses due to taxation; and the redistributive incidence of the overall tax-spending system in the United States.

This chapter's new material includes a short section on government employment that is built around two pie charts. The first gives a breakdown of what fractions of state and local government employees are dedicated to certain tasks. The second gives a similar accounting for Federal government employees.

Also new to this chapter are "Consider This" boxes on state lotteries and value-added taxes and a "Last Word" section reviewing recent research on the redistributive effects of the *combined* taxation and spending system in the United States.

The new public finance chapter is followed by a restructured chapter covering asymmetric information, voting, and public choice. Reviewers agreed with us that this new two-chapter set covering the microeconomics of government is a major improvement over the prior edition.

New Discussions of the Financial Crisis and the Recession

Our modernization of the macroeconomics in the previous edition has met with great success, measured by reviews, teacher feedback, and market response. We recast the entire macro analysis in terms of the modern, dominant paradigm of macroeconomics, using economic growth as the central backdrop and viewing business fluctuations as significant and costly variations in the rate of growth. In this paradigm, business cycles result from demand shocks (or, less often, supply shocks) in conjunction with inflexible short-run product prices and wages. The degree of price and wage stickiness decreases with time. In our models, the *immediate short run* is a period in which both the price level and wages are not only sticky, but stuck; the *short run* is a period in which product prices are flexible but wages are not; and the *long run* is a period in which both product prices and wages are fully flexible. Each of these three periods—and thus each of the models based on them—is relevant to understanding the actual macro economy and its occasional difficulties.

In this edition, we have mainly focused on incorporating into our new macroeconomic schema an analysis of the financial crisis, the recession, and the hesitant recovery. We first introduce the recession in Chapter 23 (An Introduction to Macroeconomics) via a new "Consider This" box that ties to the chapter's discussion of Buzzer Auto, demand shocks, and short-run sticky prices. In Chapter 24 (Measuring Domestic Output and National Income) we point out that the main flows in the National Income and Product Accounts usually expand over time, but not always, as demonstrated by the recession. In Chapter 25 (Economic Growth) we discuss how the recession relates to the growth/production possibilities dynamics of Figure 25.2. In Chapter 26 (Business Cycles, Unemployment, and Inflation) we provide a telling comparison of unemployment rates for various demographic groups for the prerecession year 2007 and the recession year 2009.

In Chapter 27 (Basic Macroeconomic Relationships) we have added two "Consider This" boxes, one on how the paradox of thrift applied to consumer behavior during the recession and the other on the riddle of plunging investment spending at the same time the interest rate dropped to near zero during the recession. In Chapter 28 (The Aggregate Expenditures Model) we use the recession as a timely application of how a decline in aggregate expenditures can produce a recessionary expenditure gap and a highly negative GDP gap. In Chapter 29 (Aggregate Demand and Aggregate Supply) we use the recession as a good application of how negative demand shocks can produce large declines in real output with no or very little deflation. Chapter 30 (Fiscal Policy, Deficits, and Debt) provided a terrific opportunity to bring each of these timely and relevant subjects up-to-date, and we took full advantage of that opportunity.

In Chapter 31 (Money, Banking, and Financial Institutions) we added a major new section on the financial crisis, with emphasis on the mortgage debt crisis, mortgage-backed securities, failures and near-failures of financial firms, the Treasury's TARP rescue, the Fed's extraordinary use of lender-of-last-resort facilities, and the Wall Street Reform and Consumer Protection Act of 2010. In Chapter 32 (Money Creation), we stress that the Fed now pays interest on required reserves, and we also use the "Last Word" on the bank panics of 1930–1933 to explain how the Fed handled things very differently during the recent financial crisis.

Chapter 33 (Interest Rates and Monetary Policy) features several new discussions relating to Fed policies during the recession, including a new discussion on the liquidity trap. Along with giving the Fed high marks for dealing with the crisis, we also say that some economists think the Fed contributed to the financial crisis by keeping interest rates too low for too long during the recovery from the 2001 recession. We also replaced a dated "Consider This" piece with a new one on the ballooning Fed balance sheet and the problems it could pose for monetary policy during the eventual postrecession expansion. Chapter 34 (Financial Economics) presented a new opportunity for us to demonstrate how a sharp decline of the "appetite for risk" alters the slope of the Securities Market Line (SML) and changes investment patterns between stocks and bonds.

Other mentions of the recession are spread throughout the remainder of the macro chapters, including in the discussions of macro debates, trade protectionism, and trade deficits.

Although we found these various ways to work the recession into our macro chapters, we are confident that our basic macroeconomic models will serve equally well in explaining economic recovery and expansion back to the economy's historical growth path. The new inclusions relating to the recession simply help students see the relevance of the models to what they are seeing in the news and perhaps experiencing in their own lives. The overall tone of the book, including the macro, continues to be optimistic with respect to the long-term growth prospects of market economies.

Reworked End-of-Chapter Questions and Problems

We have extensively reworked the end-of-chapter Study Questions, splitting them into questions and problems and adding many new problems. The questions are analytic and often ask for free responses, whereas the problems are mainly quantitative. We have aligned the questions and problems with the learning objectives presented at the beginning of the chapters. All of the questions and problems are assignable through McGraw-Hill's *Connect Economics;* all of the problems also contain additional algorithmic variations and can be automatically graded within the system. The new lists of questions and problems were well-received by reviewers, many of them long-time users of the book.

Current Discussions and Examples

The 19th edition of *Economics* refers to and discusses many current topics. Examples include the cost of the war in Iraq; surpluses and shortages of tickets at the Olympics; the myriad impacts of ethanol subsidies; creative destruction; aspects of behavioral economics; applications of game theory; the most rapidly expanding and disappearing U.S. jobs; oil and gasoline prices; cap-and-trade systems and carbon taxes; the value-added tax; state lotteries; the Food, Conservation, and Energy Act of 2008; consumption versus income inequality; the Patient Protection and Affordable Care Act (PPACA) of 2010; immigration issues; core inflation; China's continued rapid growth; the severe recession of 2007–2009; the paradox of thrift; the stimulus package of 2008; ballooning Federal budget deficits and public debt; the long-run funding shortfalls in Social Security and Medicare; securitization and the mortgage debt crisis; the Wall Street Reform and Consumer Protection Act of 2010; recent Fed monetary policy; the liquidity trap; the Fed's new term auction facility; the Fed's payment of interest on required reserves; the Taylor rule in relation to Fed policy; the jump in the size of the Fed's balance sheet; U.S. trade deficits; offshoring of American jobs; trade adjustment assistance; the European Union and the Euro Zone; changes in exchange rates; and many other current topics.

Chapter-by-Chapter Changes

Each chapter of *Economics*, 19th edition, contains updated data reflecting the current economy, streamlined Learning Objectives, and reorganized end-of-chapter content.

Chapter-specific updates include:

Chapter 1: Limits, Alternatives, and Choices features a new Learning Objective on consumption possibilities and a revised definition of "entrepreneur" that clarifies why risk taking is socially beneficial and, thus, why entrepreneurial ability is a valuable economic resource.

Chapter 2: The Market System and the Circular Flow includes a revised explanation of property rights, a clarified discussion of firms' motives for choosing the lowest-cost production methods, an updated "McHits and McMisses" "Consider This" box, and a revised discussion of the circular flow model.

Chapter 3: Demand, Supply, and Market Equilibrium contains wording improvements that clarify the main concepts.

Chapter 4: Elasticity is a new chapter that focuses solely on elasticity. This content has been moved forward from Chapter 6 of the 18th edition, allowing this topic to be covered directly after supply and demand. This content will be available in both the Macro and Micro splits. The material on consumer and producer surplus has been moved to Chapter 5.

Chapter 5: Market Failures: Public Goods and Externalities is a new chapter that first examines consumer surplus, producer surplus, efficiency, and efficiency losses (all from Chapter 6, 18th edition). It then devotes the remainder of the chapter to market failures, specifically public goods and externalities (both from Chapter 16, 18th edition). The chapter also features a new "Last Word" section that discusses the pros and cons of cap-and-trade emissions-control policies and a new "Consider This" box that concisely discusses the Coase Theorem.

Chapter 6: Consumer Behavior features additional coverage and discussion of the consumer-choice aspects of behavioral economics, including prospect theory, framing effects, loss aversion, anchoring effects, mental accounting, and the endowment effect. A new "Consider This" box discusses the hedonic treadmill and a new "Last Word" section explains how governments and firms may use the insights of behavioral economics to encourage desired outcomes.

Chapter 7: Businesses and the Costs of Production features a revised section on economic costs, explicit costs, implicit costs, accounting profit, normal profit, and economic profit; a new section on the rising price of gasoline that replaces the previous section on the doubling of the price of corn; and a rewritten example on daily newspapers.

Chapter 8: Pure Competition in the Short Run is a new chapter that contains information on pure competition in the short run from Chapter 9 of the 18th edition. This chapter features improved pedagogy and a new "Last Word" on the short-run shutdown condition.

Chapter 9: Pure Competition in the Long Run is a new chapter that contains information on pure competition in the long run from Chapter 9 of the 18th edition. This chapter features a new overview introductory section, a new figure clarifying decreasing-cost industries, and a revised discussion of why long-run equilibrium in pure competition yields allocative efficiency. This chapter also introduces creative destruction as a long-run competitive force.

Chapter 10: Pure Monopoly features a revised discussion of rate regulation for a natural monopoly and a precise identification of the income transfers of monopoly.

Chapter 11: Monopolistic Competition and Oligopoly features a revised Figure 11.2 with labels at key points, and an updated discussion of OPEC emphasizing the difficulty that it has had with its members complying with its established oil quotas.

Chapter 11 Web: Technology, R&D, and Efficiency contains a revised discussion of creative destruction.

Chapter 12: The Demand for Resources features improved discussions to clarify the main concepts.

Chapter 13: Wage Determination provides an improved introduction to monopsony.

Chapter 14: Rent, Interest, and Profit features a new section on the interest rate on money loans; an expanded explanation of the differences between insurable and noninsurable risks; an additional source of noninsurable risk (new products or production methods pioneered by rivals); and a new "Consider This" piece on Steve Jobs as an entrepreneur.

Chapter 15: Natural Resource and Energy Economics features a new "Consider This" piece that deals with the high risk associated with commercializing alternative fuel sources.

Chapter 16: Public Finance: Expenditures and Taxes is a new chapter on public finance that combines new material with topics from 18th edition Chapters 4, 16, and 17. This chapter features new pie charts on state and local government expenditures and tax revenues, two new "Consider This" boxes on state lotteries and value-added taxes, and a new "Last Word" on recent research that compares the redistributive effects of the tax system by itself with the redistributive effects of the *overall* tax-spending system.

Chapter 17: Asymmetric Information, Voting, and Public Choice adds new material to topics that were located in several other chapters in the 18th edition, including: asymmetric information from Chapter 16, government failures and voting inefficiencies and paradoxes from Chapter 17, and the principal-agent problem from Chapter 4. This chapter has a new "Consider This" box on the collective-action problem, a new discussion of political corruption, and a new "Global Perspective" piece comparing bribery rates in various countries.

Chapter 18: Antitrust Policy and Regulation now emphasizes that monopoly pricing raises significant concerns about income transfers (from consumers to producers) as well as efficiency losses.

Chapter 19: Agriculture: Economics and Policy contains a new update of the historical trends of real agricultural prices and clarifications of some of the main concepts.

Chapter 20: Income Inequality, Poverty, and Discrimination extensively updates the data on the distribution of income, poverty, and family wealth.

Chapter 21: Health Care features a detailed explanation and extensive coverage of the Patient Protection and Affordable Care Act of 2010, a new section that explains the history behind why the United States is uniquely dependent on employer-provided health insurance, an improved discussion of why insurance increases prices by increasing demand, and a new "Last Word" on how the health care system of Singapore uses high out-of-pocket costs to keep medical spending down.

Chapter 22: Immigration provides the latest available data on legal and illegal immigration.

Chapter 23: An Introduction to Macroeconomics includes two new "Consider This" boxes. The first contrasts economic investment with financial investment and the second discusses the recession of 2007–2009 in the context of the introductory analysis.

Chapter 24: Measuring Domestic Output and National Income adds new definitions and data for the terms *durable goods*, *nondurable goods*, and *services* in the discussion of personal consumption.

Chapter 25: Economic Growth has substantially revised Learning Objectives that provide a better preview of the chapter; tightened discussions in the "Consider This" boxes on patents in India and on women, the labor force, and economic growth; a new discussion relating the recession to the growth and production possibilities analysis in Figure 25.2; and updates on growth accounting from the *Economic Report of the President*.

Chapter 26: Business Cycles, Unemployment, and Inflation includes a revised discussion on business cycles, new data on unemployment rates during the recent recession, and a new discussion of core inflation.

Chapter 27: Basic Macroeconomic Relationships features new "Consider This" boxes discussing the Great Recession, the paradox of thrift, and the investment riddle, and an improved discussion of investment instability.

Chapter 28: The Aggregate Expenditures Model provides a revised introduction that links to the prior chapters, improved discussions in the "Assumptions and Simplifications" and "International Linkages" sections, and a new application that relates the Great Recession to the AE model.

Chapter 29: Aggregate Demand and Aggregate Supply has a new introduction that provides a current and relevant example for students, and a reorganized and updated "Last Word" on oil prices.

Chapter 30: Fiscal Policy, Deficits, and Debt provides explicit definitions of expansionary and contractionary fiscal policy and political business cycles, an updated discussion of current fiscal policy, detailed coverage of the 2008 and 2009 stimulus packages, and a new "Last Word" on Social Security and Medicare funding shortfalls.

Chapter 31: Money, Banking, and Financial Institutions features a new section on the financial crisis of 2007–2008, with emphasis on the mortgage default crisis, mortgage-backed securitization, failures and near failures of financial firms, the Treasury's TARP rescue, the Fed's extraordinary new lender-of-last resort facilities, and the Wall Street Reform and Consumer Protection Act of 2010. Also new is a "Last Word" on electronic banking.

Chapter 32: Money Creation contains a clarified discussion of a bank's balance sheet and an updated "Last Word" that contrasts the lack of action by the Fed during the early 1930s compared to the Fed's forceful actions during the financial crisis of 2007–2008.

Chapter 33: Interest Rates and Monetary Policy features a fully updated discussion of recent U.S. monetary policy, a new "Consider This" box on the ballooning balance sheet of the Fed during the recession of 2007–2009, and the conversion of the AD-AS summary figure from the previous edition to a new "Last Word" section.

Chapter 34: Financial Economics provides a revised introduction to the discussion of present value, a new section on applications of the security market line, and a new "Consider This" piece that discusses Ponzi schemes and Bernie Madoff.

Chapter 35: Extending the Analysis of Aggregate Supply features a crisper discussion of economic growth with ongoing inflation, along with a modified Figure 35.7, and an updated discussion of the Phillips Curve.

Chapter 36: Current Issues in Macro Theory and Policy has a new "Consider This" box on the Fed's actions prior to the financial crisis and an updated discussion of the Taylor Rule in the "Last Word."

Chapter 37: International Trade contains relevant content from Chapter 5 of the 18th edition. This chapter features additional explanation that clarifies how comparative advantage differs from absolute advantage, a new "Consider This" box on misunderstanding the gains from trade, and a streamlined discussion of multilateral trade agreements and free-trade zones.

Chapter 38: The Balance of Payments, Exchange Rates, and Trade Deficits features a streamlined explanation of why the balance-of-payments statement always balances, a revised discussion of official reserves and balance-of-payments deficits and surpluses, and updated discussions of exchange rates.

Chapter 39 Web: The Economics of Developing Countries includes a revised discussion of large populations and the standard of living and updated coverage of the role of government in improving the growth prospects of developing countries.

Distinguishing Features

AP Practice Tests On pages AP-1–AP-28 you will find two complete practice tests (one microeconomics and one macroeconomics). These tests can be assigned to students to help prepare them for the AP exam administered in May.

Comprehensive Explanations at an Appropriate Level *Economics* is comprehensive, analytical, and challenging yet fully accessible to a wide range of students. The thoroughness and accessibility enable teachers to select topics for special classroom emphasis with confidence that students can read and comprehend other independently assigned material in the book. Where needed, an extra sentence of explanation is provided. Brevity at the expense of clarity is false economy.

Fundamentals of the Market System Many economies throughout the world are still making difficult transitions from planning to markets while a handful of other countries such as Venezuela seem to be trying to reestablish government-controlled, centrally planned economies. Our detailed description of the institutions and operation of the market system in Chapter 2 (The Market System and the Circular Flow) is therefore even more relevant than before. We pay particular attention to property rights, entrepreneurship, freedom of enterprise and choice, competition, and the role of profits because these concepts are often misunderstood by beginning students worldwide.

Extensive Treatment of International Economics We give the principles and institutions of the global economy extensive treatment. The appendix to Chapter 3 (Demand, Supply, and Market Equilibrium) has an application on exchange rates. Chapter 37 (International Trade) examines key facts of international trade, specialization and comparative advantage, arguments for protectionism, impacts of tariffs and subsidies, and various trade agreements. Chapter 38 (Balance of Payments, Exchange Rates, and Trade Deficits) discusses the balance of payments, fixed and floating exchange rates, and U.S. trade deficits. Web Chapter 39 (The Economics of Developing Countries) takes a look at the special problems faced by developing countries and how the advanced industrial countries try to help them.

As noted previously in this preface, Chapter 37 (International Trade) is constructed such that teachers who want to cover international trade early in the course can assign it immediately after Chapter 3. Chapter 37 requires only a good understanding of production possibilities analysis and supply and demand analysis to comprehend. International competition, trade flows, and financial flows are integrated throughout the micro and macro sections. “Global Perspective” boxes add to the international flavor of the book.

Early and Extensive Treatment of Government The public sector is an integral component of modern capitalism. This book introduces the role of government early. Chapter 5 (Market Failures: Public Goods and Externalities) systematically discusses public goods and government policies toward externalities. Chapter 16 (Public Finance: Expenditures and Taxes) examines taxation and government expenditures in detail, and Chapter 17 (Asymmetric Information, Voting, and Public Choice) looks at salient facets of asymmetric information, voting, and public choice theory as they relate to market failure and government failure. Both the micro and the macro sections of the text include issue- and policy-oriented chapters.

Stress on the Theory of the Firm We have given much attention to microeconomics in general and to the theory of the firm in particular, for two reasons. First, the concepts of microeconomics are difficult for most beginning students; abbreviated expositions usually compound these difficulties by raising more questions than they answer. Second, we wanted to couple analysis of the various market structures with a discussion of the impact of each market arrangement on price, output levels, resource allocation, and the rate of technological advance.

Step-by-Step, Two-Path Macro As in the previous edition, our macro continues to be distinguished by a systematic step-by-step approach to developing ideas and building models. Explicit assumptions about price and wage stickiness are posited and then systematically peeled away, yielding new models and extensions, all in the broader context of growth, expectations, shocks, and degrees of price and wage stickiness over time.

In crafting this step-by-step macro approach, we took care to preserve the “two-path macro” that many teachers appreciated. Teachers who want to bypass the immediate short-run model (Chapter 28: The Aggregate Expenditures Model) can proceed without loss of continuity directly to the short-run AD-AS model (Chapter 29: Aggregate Demand and Aggregate Supply), fiscal policy, money and banking, monetary policy, and the long-run AD-AS analysis.

Emphasis on Technological Change and Economic Growth

This edition continues to emphasize economic growth. Chapter 1 (Limits, Alternatives, and Choices) uses the production possibilities curve to show the basic ingredients of growth. Chapter 25 (Economic Growth) explains how growth is measured and presents the facts of growth. It also discusses the causes of growth, looks at productivity growth, and addresses some controversies surrounding economic growth. Chapter 25's "Last Word" examines the rapid economic growth in China. Web Chapter 39 focuses on developing countries and the growth obstacles they confront. Web Chapter 11 (Technology, R&D, and Efficiency) provides an explicit and cohesive discussion of the microeconomics of technological advance, including topics such as invention, innovation, and diffusion; start-up firms; R&D decision making; market structure and R&D effort; and creative destruction.

Focus on Economic Policy and Issues

For many students, the micro chapters on antitrust, agriculture, income inequality, health care, and immigration, along with the macro chapters on fiscal policy and monetary policy, are where the action is centered. We guide that action along logical lines through the application of appropriate analytical tools. In the micro, we favor inclusiveness; teachers can effectively choose two or three chapters from Part 6.

Integrated Text and Web Site

Economics and its Web site are highly integrated through in-text Web buttons, Web-based end-of-chapter questions, bonus Web chapters, multiple-choice self-tests at the Web site, math notes, and other features. Our Web site is part and parcel of our student learning package, customized to the book.

The in-text Web buttons (or indicators) merit special mention. Three differing colors of rectangular indicators appear throughout the book, informing readers that complementary content on a subject can be found at our Web site, **www.glencoe.com/mcconnellAP19**. The indicator types are:

Worked Problems Written by Norris Peterson of Pacific Lutheran University (WA), these pieces consist of side-by-side computational questions and computational procedures used to derive the answers. In essence, they extend the textbook's explanations of various computations—for example, of real GDP, real GDP per capita, the unemployment rate, the inflation rate, per-unit production costs, economic profit, and more. From a student's perspective, they provide "cookbook" help for solving numerical problems.

WORKED PROBLEMS
W 1.1
Budget lines

Interactive Graphs These pieces (developed under the supervision of Norris Peterson) depict 30 major graphs and instruct students to shift the curves, observe the outcomes, and derive relevant generalizations. This hands-on graph work will greatly reinforce the graphs and their meaning.

INTERACTIVE GRAPHS
G 1.1
Production possibilities curve

Origin of the Ideas These pieces, written by Randy Grant of Linfield College (OR), are brief histories of 70 major ideas identified in the book. They identify the particular economists who developed ideas such as opportunity cost, equilibrium price, the multiplier, comparative advantage, and elasticity.

ORIGIN OF THE IDEA
O 1.1
Origin of the term "economics"

Organizational Alternatives

Although teachers generally agree on the content of principles of economics courses, they sometimes differ on how to arrange the material. *Economics* includes 11 parts, and thus provides considerable organizational flexibility. We place microeconomics before macroeconomics because this ordering is consistent with how contemporary economists view the direction of linkage between the two components. The introductory material of Parts 1 and 2, however, can be followed immediately by the macroanalysis of Parts 7 and 8. Similarly, the two-path macro enables covering the full aggregate expenditures model or advancing directly from the basic macro relationships chapter to the AD-AS model.

Some teachers will prefer to intersperse the microeconomics of Parts 3 and 4 with the problems chapters of Part 6. Chapter 19 on agriculture may follow Chapters 8 and 9 on pure competition; Chapter 18 on antitrust and regulation may follow Chapters 10, 11, and 11Web on imperfect competition models and technological advance. Chapter 22 on immigration may follow Chapter 13 on wages; and Chapter 20 on income inequality may follow Chapters 13 and 14 on distributive shares of national income.

Finally, as noted before, Chapter 37 on international trade can easily be moved up to immediately after Chapter 3 on supply and demand for teachers who want an early discussion of international trade.

Pedagogical Aids

Economics is highly student-oriented. The "To the Student" statement at the beginning of Part 1 details the book's many pedagogical aids. The 19th edition is also accompanied by a variety of high-quality supplements that help students master the subject and help teachers implement customized courses.

Supplements for Students and Teachers

Study Guide One of the world's leading experts on economic education, William Walstad of the University of Nebraska–Lincoln, prepared the *Study Guide*. Many students find either the printed or digital version indispensable. Each chapter contains an introductory statement, a checklist of behavioral objectives, an outline, a list of important terms, fill-in questions, problems and projects, objective questions, and discussion questions.

The *Guide* comprises a superb "portable tutor" for the principles student. Separate *Study Guides* are available for the macro and micro paperback editions of the text.

AP Teacher's Manual To accompany this AP Edition of *Economics*, we have produced an AP-specific Teacher's Manual. This teacher's manual, revised by AP teacher Lisa Ellison, provides a useful pacing guide for the AP teacher and pinpoints important topics that are covered on the AP Exam. This teacher's manual will help the AP teacher streamline the course while still providing students with the essential information necessary for student success on the AP Exam. It is available on the teacher's side of the Online Learning Center.

Instructor's Manual Laura Maghoney of Solano Community College revised and updated the *Instructor's Manual*, and Shawn Knabb of Western Washington University checked and brought the end-of-chapter questions, problems, and solutions to the *Manual*. The revised *Instructor's Manual* includes:

- Chapter summaries.
- Listings of "what's new" in each chapter.
- Teaching tips and suggestions.
- Learning objectives.
- Chapter outlines.
- Extra questions and problems.
- Answers to the end-of-chapter questions and problems, plus correlation guides mapping content to the learning objectives.

The *Instructor's Manual* is available on the teacher's side of the Online Learning Center.

Test Banks McGraw-Hill provides students and teachers with a variety of test banks. The AP Test Banks, which were revised by AP teachers Robert Larkin and Jacob Clifford, include chapter, part, and two complete AP Practice Exam banks. These banks are located on *Connect Economics*, but there are also additional banks available on the books Web site. Test Bank I contains about 6500 multiple-choice and true-false questions, most of which were written by the text authors. Randy Grant revised Test Bank I for the 19th edition. Test Bank II contains around 6000 multiple-choice and true-false questions, updated by Felix Kwan of Maryville University. All Test Bank I and II questions are organized by learning objective, topic, AACSB Assurance of Learning, and Bloom's Taxonomy guidelines. Test Bank III, written by William Walstad, contains more than 600 pages of short-answer questions and problems created in the style of the book's end-of-chapter questions. Test Bank III can be used to construct student assignments or design essay and problem exams. Suggested answers to the essay and problem questions are included. In all, more than 14,000 questions give teachers maximum testing flexibility while ensuring the fullest possible text correlation.

Like the AP Test Banks, Test Banks I and II are available in *Connect Economics*, which allows teachers to create customized tests that contain both questions that they select from the test banks as well as questions that they craft themselves. Test Bank III is available in MS Word on the password-protected teacher's side of the Online Learning Center.

PowerPoint Presentations With the assistance of Laura Maghoney, the PowerPoint Presentations for the 19th edition were updated by a dedicated team of instructors: Jill Beccaris-Pescatore of Montgomery County Community College, Stephanie Campbell of Mineral Area College, Amy Chataginer of Mississippi Gulf Coast Community College and Dorothy Siden of Salem State College. Each chapter is accompanied by a concise yet thorough tour of the key concepts. Teachers can use these Web-site presentations in the classroom, and students can use them on their computers.

Digital Image Library Every graph and table in the text is available on the teacher's side of the Web site.

McGraw-Hill Connect Economics McGraw-Hill *Connect Economics* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success. McGraw-Hill *Connect Economics* helps prepare students for their future by enabling faster learning, more efficient studying, and higher retention of knowledge.

All of the end-of-chapter questions and problems, the thousands of questions from the AP Test Banks and Test Banks I and II, and additional resources are available in *Connect Economics*.

Online Learning Center (www.glencoe.com/mcconnellAP19) The Web site accompanying this book is a central resource for students and teachers alike. The optional Web Chapters (Chapter 11W: Technology, R&D, and Efficiency and Chapter 39W: The Economics of Developing Countries) plus the two new Content Options for Instructors (The United States in the Global Economy and Previous International Exchange-Rate Systems), are posted as full-color PDF files. The in-text Web buttons alert the students to points in the book where they can springboard to the Web site to get more information. Students can also review PowerPoint presentations and test their knowledge of a chapter's concepts with a self-graded multiple-choice quiz. The password-protected Teacher Center houses the AP Teacher's Manual, test banks, and links to EZ Test Online, PowerPoint presentations, and the Digital Image Library.

Computerized Test Bank Online A comprehensive bank of test questions is provided within McGraw-Hill's flexible electronic testing program EZ Test Online (**www.eztestonline.com**). EZ Test Online allows teachers to simply and quickly create tests or quizzes for their students. Teachers can select questions from multiple McGraw-Hill test banks or author their own, and then either print the finalized test or quiz for paper distribution or publish it online for access via the Internet.

This user-friendly program allows teachers to sort questions by format; select questions by learning objectives or Bloom's taxonomy tags; edit existing questions or add new ones; and scramble questions for multiple versions of the same test. Teachers can export their tests for use in WebCT, Blackboard, and PageOut, making it easy to share assessment materials. Instant scoring and feedback is provided, and EZ Test Online's record book is designed to easily export to teacher gradebooks.

Assurance-of-Learning Ready Many educational institutions are focused on the notion of assurance of learning, an important element of some accreditation standards. *Economics* is designed to support your assurance-of-learning initiatives with a simple yet powerful solution. Each chapter in the book begins with a list of numbered learning objectives to which each end-of-chapter question and problem is then mapped. In this way, student responses to those questions and problems can be used to assess how well students are mastering each particular learning objective. Each test bank question for *Economics* also maps to a specific learning objective.

You can use our test bank software, EZ Test Online, or *Connect Economics* to easily query for learning outcomes and objectives that directly relate to the learning objectives for your course. You can then use the reporting features to aggregate student results in a similar fashion, making the collection and presentation of assurance-of-learning data simple and easy.

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We give special thanks to Norris Peterson and Randy Grant, who created the "button" content on our Web site. We again thank James Reese of the University of South Carolina at Spartanburg, who wrote the original Internet exercises. Although many of those questions were replaced or modified in the typical course of revision, several remain virtually unchanged. We also thank Laura Maghoney and the team of instructors who updated the PowerPoint slides for the 19th edition. Shawn Knabb deserves great thanks for accuracy-checking the end-of-chapter questions and problems and their solutions, as well as for creating the variations of all of the problems. Thanks to the dedicated instructors who created and revised our additional study tools, including Steve Price, Shannon Aucoin, Brian Motii, Amy Scott, Emilio Gomez, Amy Stapp, Richard Kramer, and Mark Wilson. Finally, we thank William Walstad and Tom Barbiero (the coauthor of our Canadian edition) for their helpful ideas and insights.

We are greatly indebted to an all-star group of professionals at McGraw-Hill—in particular Douglas Reiner, Noelle Fox Bathurst, Harvey Yep, Lori Koetters, Jen Saxton, Melissa Larmon, and Brent Gordon—for their publishing and marketing expertise.

We thank Keri Johnson for her selection of the "Consider This" and "Last Word" photos and Mary Kazak Sander and Maureen McCutcheon for the design.

The 19th edition has benefited from a number of perceptive formal reviews. The reviewers, listed at the end of the preface, were a rich source of suggestions for this revision. To each of you, and others we may have inadvertently overlooked, thank you for your considerable help in improving *Economics*.

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AP Course and Exam Information

About the AP Economics Course

Course Themes and Structure

The Advanced Placement (AP) program was created by the College Board, which also developed the SAT exam. The AP Economics course descriptions and exams are written by the AP Economics Development Committee, which consists of college economic professors and high school teachers with experience teaching the AP Economics course. This committee has studied the economics course descriptions from hundreds of university professors to determine which concepts to include in the AP Economics course descriptions and the focus of the AP Economics Exams. The College Board requires audits of high school courses with the AP designation to ensure that the high school curriculum meets standards equivalent to the college economics course. From time to time, the College Board asks college students to take the AP Exam, so that the College Board may compare scores and ensure that the score distribution for high school test-takers is appropriate.

Microeconomics and macroeconomics are generally two one-semester courses that explore different aspects of our economy. Because the resources we need to produce the products we want are scarce, we have to make decisions about how to satisfy our unlimited wants with those limited, scarce resources. While microeconomics focuses on the small picture of decision making by individuals and firms, macroeconomics studies the big picture of national economies, governments, monetary systems, and international trade.

About the Exam

The AP Microeconomics Exam and AP Macroeconomics Exam are entirely separate exams. Students may opt to take either exam or both. Each exam is scheduled for two hours and ten minutes, with one test in the morning and the other in the afternoon of the same day. Students are given 70 minutes to answer 60 multiple-choice questions. Then, after a ten-minute reading period, students have 50 minutes to write answers to three free-response questions.

What is Covered

TABLE 1A Breakdown of the AP Microeconomics Exam

Percentage of Questions	Topics	Chapters in this book related to the Exam
8–14%	Basic Economic Concepts	1, 2, 37
55–70%	The Nature and Functions of Product Markets	3, 4, 5, 6, 7, 8, 9, 10, 11, 18, 25
10–18%	Factor Markets	12, 13, 14
12–18%	Market Failure and the Role of Government	5, 16, 17, 20

TABLE 1B Breakdown of the AP Macroeconomics Exam

Percentage of Questions	Topics	Chapters in this book related to the Exam
8–12%	Basic Economic Concepts	1, 2, 3
12–16%	Measurement of Economic Performance	13, 23, 24, 26 18, 25
10–15%	National Income and Price Determination	27, 28, 29, 35
15–20%	Financial Sector	14, 31, 32
20–30%	Inflation, Unemployment, and Stabilization Policies	28, 30, 33, 35, 36
5–10%	Economic Growth and Productivity	25
10–15%	Open Economy: International Trade and Finance	37, 38

Understanding the Format

As we explained earlier, each of the AP Economics Exams—microeconomics and macroeconomics—is a two-hour and ten-minute exam. The College Board schedules these exams on the same day in May, with one exam in the morning and one in the afternoon. The multiple-choice section accounts for two-thirds of the score, and a free-response section provides the other one-third of the score.

Multiple-Choice Questions The first portion of the exam consists of sixty multiple-choice questions, which are to be answered within seventy minutes. The multiple-choice questions can include a wide range of information, including definitions and applications of principles, calculations, interpretations of graphs, explanations of the causes or results of an economic action, and choosing an appropriate economic policy to deal with an economic event.

Free-Response Questions The second portion of the exam consists of three free-response questions, with approximately half of the score given for the first written response and the rest divided between the other two written responses. The sixty minutes of free-response time begins with a mandatory ten-minute reading period, during which you may begin outlining your answers. The College Board suggests that you spend approximately twenty-five minutes writing the long response and divide the other twenty-five minutes between the shorter responses. The long response generally involves interconnections among several different concepts central to the course, while the shorter responses generally focus on one specific concept or a pair of related concepts.

TABLE 2 Breakdown of the AP Economics Exam Format

Summary of Exam Format		
Section I:	**Multiple Choice** 60 questions Time: 70 minutes	No calculators are allowed. Use a #2 pencil with a very good eraser for this section.
	[10-minute break]	
Section II:	**Free Response** Three free-response questions Time: 50 minutes One long question (25 minutes) and two short questions (25 minutes together)	There is a 10 minute required reading period before writing the answers to the three free-response questions. This time can also be used to begin outlining answers. No calculators are allowed. Use blue or black ink for this section.

Grading of the AP Exam

The multiple-choice section of the exam is scored electronically, while readers grade the free-response sections. The College Board then applies a weighted formula and combines the raw multiple-choice and free-response scores to create a composite score. Finally, a conversion factor is used to award the student one of five final scores with a 5 being extremely well qualified and a 1 being no recommendation.

Because the AP Microeconomics and Macroeconomics courses are intended to represent the two one-semester college courses, the two AP Exams are scored independently. You may opt to take either exam or to take both exams. A passing score on either exam can provide college credit for institutions that accept AP credit, but colleges and universities differ markedly in requirements and credits offered. Some schools accept a score of 3 for credit, while other schools require a 4 or a 5 in order to receive credit.

TABLE 3 Overall Grade Distribution

	Grade Distribution
Multiple Choice:	67%
Free Response:	33% The long (first) free-response question represents 50% of the free-response score, while each of the other two free-response questions represents 25% of the free-response score.

Multiple-Choice Questions

Each question has five potential answers labeled A-E. Each correct answer is worth one point, while questions left blank earn no points.

To guess or not to guess? Beginning with the May 2011 exam, the College Board will assess no penalty for wrong answers. While you will earn no credit for a wrong answer, you will not face any additional penalty for guessing. So it is in your best interest to answer every question on the exam.

Free-Response Questions

AP Economics responses are quite different from the formal essays written for some other AP subjects, which require thesis statements and five-paragraph development structure. AP Economics free-response questions generally consist of a series of questions and sub-questions which can be answered in several sentences. Responses should *directly* answer the questions asked.

Keep in mind the economic concept of efficiency and apply that to your free-response writing. Be complete but be efficient about it. Directly answer the question asked, and explain why that answer is correct. Do not write as though you have swallowed a dictionary, reaching for complex language and unnecessary difficulty. Some of the best answers use the appropriate terms and the clearest language to explain the situation, causes and effects, and reasoning. The readers want to see a clear analysis and your understanding.

Many of the free-response questions also require you to draw one or more graphs. As the exam directions indicate, it is *very* important that you correctly label your graphs. Your axis labels should be clear (for example, Price and Quantity, or Price Level and Real Output). Every curve should be appropriately labeled. If you want to indicate the shift of a curve, be sure to draw arrows between the curves to show the direction of movement, and label the second curve differently (for example, D1 and D2). Draw equilibrium points where appropriate and indicate those equilibrium prices or quantities on the axes of your graph. Remember that the readers want to award you points for every correct portion of your response, so make their job as easy as possible.

Hints and Strategies

Multiple-Choice Questions

Because the College Board no longer places an additional penalty on wrong answers, you should answer every question in the multiple-choice section of the exam. It is best to answer questions in the order they appear, rather than skipping questions throughout the test, out of concern that you might skip a line and mismark subsequent answers. Make a note of answers you want to go back to review once you've finished, but don't skip a question entirely. Carefully erase corrections completely.

Be careful not to overanalyze questions. In many cases, the answer may seem to be too obvious when it is correct. Don't second-guess yourself. The AP Exam questions are designed to test information you should have learned in the course, not reach for the most obscure concepts. While some questions will test your ability to discern concepts (for example, the difference between a change in demand and a change in quantity demanded), they are not designed to trick you if you understand those concepts.

With that in mind, also remember that several of the test questions will be written at a high level in order to identify students deserving scores of 4 and 5. You may face test questions about concepts you have not studied or do not remember, but it is still important to answer every question. If you can eliminate a couple of obviously wrong answers, you are that much closer to a correct answer.

Watch carefully for key terms in a question that can help you rule out incorrect answers. For example, "long run" and "short run" result in different graphs for firms entering and exiting the industry in Micro, and a different slope for aggregate supply and Phillips Curves in Macro. The terms "nominal" and "real" can help you differentiate the effects of inflation. If you pay careful attention to the terms, you may be able to rule out two or more of the potential answers.

For questions regarding graphical analysis, quickly draw yourself a graph to visualize the answer. Don't just rely on your memory; seeing the graph can help you to remember the relative locations of the average total cost and average variable cost curves, or how a change in aggregate demand affects real output and price levels. It is important to use these visual aids to avoid simple mistakes that cost you points.

Calculators cannot be used during the AP Economics exam. Generally, the math involved in multiple-choice questions is simple enough that if you understand the formulas, the answer will be clear. For example, reserve requirement ratios will tend to be 5%, 10%, 20%, or 25% to make it easy for you to calculate money multipliers. The opportunity costs involved in calculating comparative advantage will reduce to numbers that are easy to compare.

It is important to watch your pace as you move through the exam questions. You have just over one minute to answer each question. Some questions, such as definitions, can be answered very quickly, while others may require deeper analysis or time to draw a graph to find the answer. The key is to keep moving and keep an eye on the time. If you finish early, double check that you have answered every question on your answer sheet, and review the questions you had made a note to review one last time.

Free-Response Questions

At the beginning of the free-response portion of the exam, you will have a mandatory ten-minute reading period. Use that time to very carefully review each question. Start to sketch graphs and write notes right on the question page, so you can outline your answers.

One key to writing a good free response is to focus on the verbs in the free-response questions. "Identify" calls for a brief, direct answer to the question, while "explain" calls for an actual explanation of the reasoning for your answer. "Define" means to do exactly that—define what the term means. It is not enough to give an example of the concept in action. Some students have found that circling all of the verbs on the question sheet helps them to identify what they should do for each part of the question.

Organization is essential for a good free-response answer. Be sure to answer the questions in the order they were asked. Directly answer the question that was asked. For example, if the question asks you what will happen to employment, don't answer by explaining what you think will happen to the unemployment rate; answer about employment.

In writing your answers, it is critical to make linkages between concepts. This is one issue readers have consistently identified as a weakness in the responses they read. In Micro, *why* does an increase in the price of strawberries lead to an increase in the demand for grapes? In Macro, *why* does an increase in the money supply cause an increase in new home sales? Be sure to explain how a change in one factor affects other factors, and the mechanisms that cause that change to happen.

Remember that in the free-response portion of the exam, readers *give* you points for correct answers, rather than *subtracting* points for incorrect answers. Previous readers have noted that if a question asked for one appropriate policy, students were not penalized for answering with two policies. For example, if the question asked for an appropriate fiscal policy for resolving a recession, and a student responded that the government should lower taxes and lower government spending, the student would earn the point for the correct answer of lowering taxes, even though the second answer of lower government spending was incorrect. However, if the question asks about a specific policy solution such as an open market operation, and you answer by discussing changes in the discount rate, even if your answer pertaining to the discount rate is correct, you will not earn the point because you did not answer the question that was asked.

It is important to look for details in the question that will help you to correctly draw your graphs. Look for terms like “short run” and “long run”. A Micro question may ask you to draw a graph showing a firm making an initial short-run profit. Drawing a graph in long-run equilibrium will cost you easy points. In the same way, a Macro question may ask you to draw a graph illustrating an economy in short-run equilibrium at less than full-employment output. In order to illustrate that lower output, you will have to draw a vertical long-run aggregate supply curve to the right of current equilibrium. Be careful to label every axis and curve and show any curve shifts and equilibrium.

When you have finished, it is very important to reread each question and sub-question to be sure you have answered every single part of the question. Because readers give points for correct answers, rather than subtracting for incorrect answers, it is in your best interest to guess. What will happen to the price? What will happen to exports? What will happen to the number of workers hired? The only possible answers are “increase”, “decrease”, or “no change”, so make your best effort even if you are not entirely sure of your answer.

One last consideration: handwriting. You must write your answer in blue or black ink. Use your best handwriting to make it easy for your reader to find and read your answers, so you can earn all of the points you deserve.

AP Macroeconomics Correlation

Topic	Pages
I. Basic Economic Concepts (8–12%)	
A. Scarcity, choice, and opportunity costs	4, 5, 7, 9, 10, 12–14, 17, 18
B. Production possibilities curve	11–18
C. Comparative advantage, absolute advantage, specialization, and exchange	6–12, 18, 20, 21, 404, 405, 437, 754–779, COI1–6 through COI1–12, COI1–20, COI1–21
D. Demand, supply, and market equilibrium	47–65
E. Macroeconomic issues: business cycle, unemployment, inflation, growth	472–483, 527–529
II. Measurement of Economic Performance (12–16%)	
A. National income accounts	
1. Circular flow	40, 41, 495, 496
2. Gross domestic product	486, 487
3. Components of gross domestic product	487–493
4. Real versus nominal gross domestic product	497–499
B. Inflation measurement and adjustment	
1. Price indices	535, 537, 543
2. Nominal and real values	497–499, 538
3. Costs of inflation	473, 538, 539
C. Unemployment	
1. Definition and measurement	473, 529, 530
2. Types of unemployment	530, 531
3. Natural rate of unemployment	531
III. National Income and Price Determination (10–15%)	
A. Aggregate demand	
1. Determinants of aggregate demand	592
2. Multiplier and crowding-out effects	560–564, 573, 574, 578, 580–585, 587, 624, 625, 628, 629, 632
B. Aggregate supply	
1. Short-run and long-run analyses	594–597
2. Sticky versus flexible wages and prices	478–483, 750
3. Determinants of aggregate supply	598–600
C. Macroeconomic equilibrium	
1. Real output and price level	601, 685
2. Short and long run	594–597, 600–607, 718–720
3. Actual versus full-employment output	532, 594–597, 602–604
4. Economic fluctuations	557–560
IV. Financial Sector (15–20%)	
A. Money, banking, and financial markets	
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2. Time value of money (present and future value)	300, 301, 698–700
3. Measures of money supply	637–642, 645, 646, 672, 675
4. Banks and creation of money	655–657, 663–677
5. Money demand	671–673
6. Money market	671–673
7. Loanable funds market	298–303, 310, 312
B. Central bank and control of the money supply	
1. Tools of central bank policy	675–680
2. Quantity theory of money	738, 739
3. Real versus nominal interest rates	302, 540, 555

*COI (Content Options for Instructors) are additional online chapters located at www.glencoe.com/mcconnellAP19.

V. Inflation, Unemployment, and Stabilization Policies (20–30%)	
A. Fiscal and monetary policies	
1. Demand-side effects	731, 732
2. Supply-side effects	731, 732
3. Policy mix	747, 748
4. Government deficits and debt	612, 625–632
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a) Demand-pull inflation	536
b) Cost-push inflation	536, 537
2. The Phillips curve: short run versus long run	728, 729
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VI. Economic Growth and Productivity (5–10%)	
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B. Investment in physical capital	267, 268, 302, 309
C. Research and development, and technological progress	6, 474–475
D. Growth policy	506, 511–514
VII. Open Economy: International Trade and Finance (10–15%)	
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2. Exchange rate determination	785–792
3. Currency appreciation and depreciation	785–789, CO11–10, CO11–11
C. Net exports and capital flows	490, 491, 495, 502, 574–577, 586, 591, 593, 594, 755, 795
D. Links to financial and goods markets	755, 756, CO11–3, CO11–4, CO11–5

AP Microeconomics Correlation

Topics	Pages
I. Basic Economic Concepts (8–14%)	
A. Scarcity, choice, and opportunity cost	4, 5, 7, 9, 10, 12–14, 17, 18
B. Production possibilities curve	11–18
C. Comparative advantage, absolute advantage, specialization, and trade	18, 20, 404, 405, 437, 754–777, 778, 779, CO11–6 through CO11–12, CO11–20, CO11–21
D. Economic systems	30–40
E. Property rights and the role of incentives	30–32, 37, 41, 42, 110, 312, 324, 325–327, 357, 511, 518, 522, 523
F. Marginal analysis	5, 13, 14, 24, 59, 97, 98, 102–104, 120, 121, 125–129, 158,159, 200–202, 209, 210
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2. Determinants of supply and demand	50–54
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