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# Setting a Policy for AP<sup>®</sup> Economics

The purpose of this guide is to provide college faculty and administrators with research data, participation and performance data of AP<sup>®</sup> Economics students, curricular content, and sample exam questions to facilitate the establishment of appropriate credit and placement policies for AP Economics.

The Advanced Placement Program<sup>®</sup> (AP) provides motivated students with the opportunity to take college-level courses while still in high school. Students demonstrate their mastery of the curriculum by taking AP Exams—35 exams, including two in Economics, are available in 20 subject areas. In 2005, more than 1.2 million students took AP Exams worldwide. Of the 2.1 million AP Exams taken in 2005, more than 81,000 were in Economics (33,000 in Microeconomics, and 49,000 in Macroeconomics). More than 3,000 colleges and universities, including many international institutions, accept qualifying AP Exam scores for credit, placement, or both.

Throughout its 50-year history, the AP Program has maintained high standards of rigor in its courses and exams. Since its inception, AP has been a respected force in American education due to the critical involvement of college and university faculty members.

## Economics Faculty Involvement in AP

College and university faculty members play a vital role in every stage of development and scoring of an AP course and exam, helping to ensure their high quality. Each AP discipline has its own Development Committee—composed of college and university professors and experienced AP teachers—that is responsible for creating the course guidelines and exam questions. College and university faculty members also serve as the Chief Readers, responsible for establishing the exam-scoring guidelines and overseeing the annual AP Reading of the free-response section for their academic discipline.

“I consider this service to be one of the highlights of my professional work. I am truly impressed with the quality of the exam. From the development of the course content, to the design of questions, to the selection of Readers, to the development of final grading rubrics, to the training of the Readers, to the checking of Reader-grader consistency, to the selection of the final cut-off points for the AP scores, this whole operation is characterized by care and educational sophistication. I am a real proponent of the program; I am proud that I have had a significant part in its development.”

—Clark Ross, AP Economics Development Committee former Chief Reader  
Vice President for Academic Affairs and Dean of Faculty  
Johnston Professor of Economics, Davidson College

The College Board publication *AP and Higher Education* discusses the following topics at greater length: how to set an AP policy, AP research studies, the development of AP courses and exams, and the AP Exam scoring. For more information or to request a copy of this publication, please go to [apcentral.collegeboard.com/highered](http://apcentral.collegeboard.com/highered).

## How to Set an AP Policy

The College Board encourages higher education institutions to base their AP policy decisions on data and research, and recognizes that different institutions and departments will set different policies, based upon factors unique to their institution, student body, and academic discipline. The best way for colleges and universities to determine their AP credit and placement policies is to conduct their own research on the performance of AP and non-AP students at their own institution and in their own department.

### Research on AP Economics Student Performance

Research studies show that students who do well on an AP Exam are academically prepared to place out of a corresponding college course and move on to the next higher-level course in the discipline.

[Taking the AP course and exam stimulates further interest in the subject area and encourages deeper disciplinary knowledge.](#)

Research studies show that students who take the AP Economics Exams are more likely to take further course work in economics than students who do not take the AP Exam. See Tables 1 and 2 for data from this research study.

Table 1: Additional College Economics Course Work AP Microeconomics Students Versus Non-AP Students

	AP EXAM GRADE	PERCENT TAKING ADDITIONAL ECONOMICS COURSES	AVERAGE NUMBER OF COLLEGE ECONOMICS COURSES TAKEN
AP Micro-Economics Students	AP 5	55	1.9
	AP 4	53	1.6
	AP 3	54	1.4
Non-AP Students	Non-AP	44	1.1

Table 2: Additional College Economics Course Work AP Macroeconomics Students Versus Non-AP Students

	AP EXAM GRADE	PERCENT TAKING ADDITIONAL ECONOMICS COURSES	AVERAGE NUMBER OF COLLEGE ECONOMICS COURSES TAKEN
AP Macro-Economics Students	AP 5	63	2.1
	AP 4	52	1.5
	AP 3	55	1.7
Non-AP Students	Non-AP	43	1.1

PDF copies of this research and other research studies can be found at [apcentral.collegeboard.com/colleges/research](http://apcentral.collegeboard.com/colleges/research).

In addition to research studies on AP student performance, the College Board conducts college comparability studies to measure the degree to which the AP courses and exams are equivalent in content and difficulty to corresponding college courses. The AP Exam scoring rubric is established so that the lowest composite score that earns an AP grade of 5 is equivalent to the average score earned by college students who received grades of A in a comparable course. The lowest score that earns an AP grade of 4 is equivalent to the average B, and the lowest score that earns an AP grade of 3 is equivalent to the average C.

The research that the College Board conducts is intended to help institutions and academic departments as they establish appropriate AP policies. AP Central® ([apcentral.collegeboard.com](http://apcentral.collegeboard.com)), the College Board's online home for AP professionals, contains other resources that may assist in this process, including the Course Description, released exam questions, and sample student responses at different levels of ability.

For more information go to:  
[apcentral.collegeboard.com/econmacro/exam](http://apcentral.collegeboard.com/econmacro/exam)  
[apcentral.collegeboard.com/econmicro/exam](http://apcentral.collegeboard.com/econmicro/exam)

## AP Economics Students, Courses, and Exams

### Participation and Performance Data for AP Economics Students in 2005

Total Number of Schools Offering AP Microeconomics: 2,169  
 Total Number of Schools Offering AP Macroeconomics: 2,539

Table 3: AP Microeconomics Exam Score Distribution, 2005

EXAM GRADE	NUMBER OF EXAMINEES	% AT
Score of 5	3,931	12.1%
Score of 4	7,789	24.1%
Score of 3	7,198	22.2%
Score of 2	5,670	17.5%
Score of 1	7,771	24.0%
	32,359	100.0%

Table 4: AP Macroeconomics Exam Score Distribution, 2005

EXAM GRADE	NUMBER OF EXAMINEES	% AT
Score of 5	6,910	14.3%
Score of 4	13,970	28.9%
Score of 3	7,667	15.9%
Score of 2	8,157	16.9%
Score of 1	11,615	24.0%
	48,319	100.0%

Figure 1: AP Microeconomics Examinees by Gender, 2005

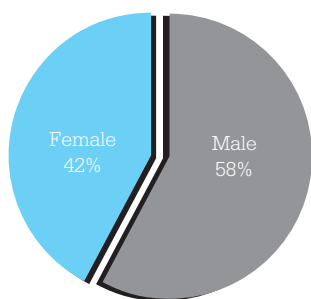


Figure 2: AP Macroeconomics Examinees by Gender, 2005

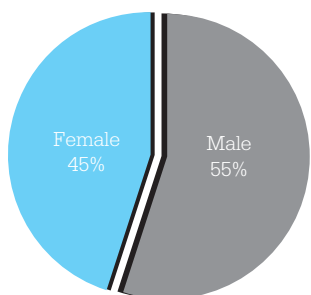


Figure 3: AP Microeconomics Examinees by Race and Ethnicity, 2005

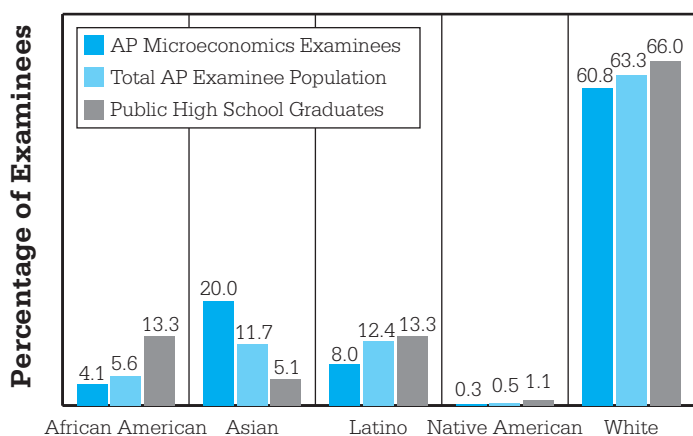
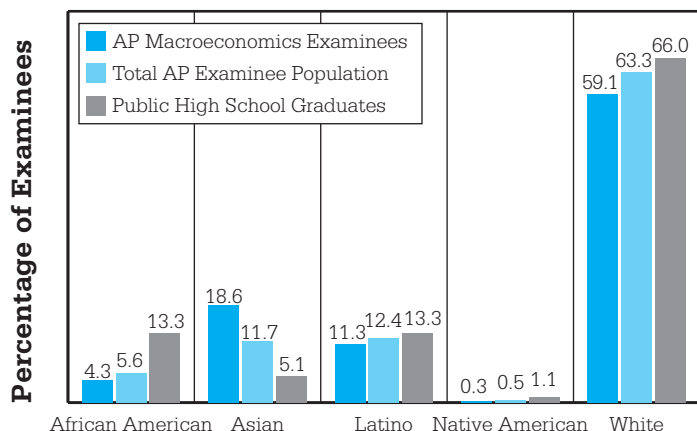


Figure 4: AP Macroeconomics Examinees by Race and Ethnicity, 2005



## The AP Economics Courses

The AP Microeconomics and Macroeconomics courses are designed to provide students with a learning experience equivalent to that of introductory college courses in micro and macro economics.

The Development Committee creates the guidelines for the AP Economics courses and designs the AP Exams. Periodically the Development Committee conducts curriculum surveys, sent to professors who teach the comparable college-level courses, which help ensure that the AP Economics courses remain current with concepts and themes as taught in college and university classrooms.

### AP Microeconomics

The purpose of the microeconomics course is to give students a thorough understanding of the principles of economics that apply to the functions of individual decision makers, both consumers and producers, within the economic system. It places primary emphasis on the nature and functions of product markets, and includes the study of factor markets and of the role of government in promoting greater efficiency and equity in the economy. The Development Committee has created a topic outline that covers the main subject areas that should be taught, along with the relative weight to be assigned to each topic.

- I. Basic Economic Concepts..... 8–14%
  - A. Scarcity, choice, and opportunity cost
  - B. Production possibilities curve
  - C. Comparative advantage, specialization, and trade
  - D. Economic systems
  - E. Property rights and the role of incentives
  - F. Marginal analysis
- II. The Nature and Functions of Product Markets..... 50–70%
  - A. Supply and demand..... 15–20%
  - B. Theory of consumer choice..... 5–10%
  - C. Production and costs..... 10–15%
  - D. Firm behavior and market structure... 25–35%
- III. Factor Markets..... 10–18%
  - A. Derived factor demand
  - B. Marginal revenue product
  - C. Labor market and firms’ hiring of labor
  - D. Market distribution of income
- IV. Market Failure and the Role of Government..... 12–18%
  - A. Externalities
  - B. Public goods
  - C. Public policy to promote competition
  - D. Income distribution

## AP Credit Policy Info on the Web

Information about AP credit and placement policies at more than 1,000 colleges and universities is available on the College Board’s Web site at [www.collegeboard.com/ap/creditpolicy](http://www.collegeboard.com/ap/creditpolicy).

## AP Macroeconomics

The purpose of the macroeconomics course is to give students a thorough understanding of the principles of economics that apply to a market-based economic system as a whole. Such a course places particular emphasis on the study of national income and price-level determination, and also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. The Development Committee has created a topic outline that covers the main subject areas that should be taught, along with the relative weight to be assigned to each topic.

- I. Basic Economic Concepts..... 8–12%
  - A. Scarcity, choice, and opportunity costs
  - B. Production possibilities curve
  - C. Comparative advantage, specialization, and exchange
  - D. Demand, supply, and market equilibrium
  - E. Macroeconomic issues: business cycle, unemployment, inflation, growth
- II. Measurement of Economic Performance..... 12–16%
  - A. National income accounts
  - B. Inflation measurement and adjustment
  - C. Unemployment
- III. National Income and Price Determination..... 10–15%
  - A. Aggregate demand
  - B. Aggregate supply
  - C. Macroeconomic equilibrium
- IV. Financial Sector..... 15–20%
  - A. Money, banking, and financial markets
  - B. Central bank and control of the money supply
- V. Inflation, Unemployment, and Stabilization Policies..... 20–30%
  - A. Fiscal and monetary policies
  - B. Inflation and unemployment
- VI. Economic Growth and Productivity..... 5–10%
  - A. Investment in human capital
  - B. Investment in physical capital
  - C. Research and development, and technological progress
  - D. Growth policy
- VII. Open Economy: International Trade and Finance... 10–15%
  - A. Balance of payments accounts
  - B. Foreign exchange market
  - C. Net exports and capital flows
  - D. Links to financial and goods market

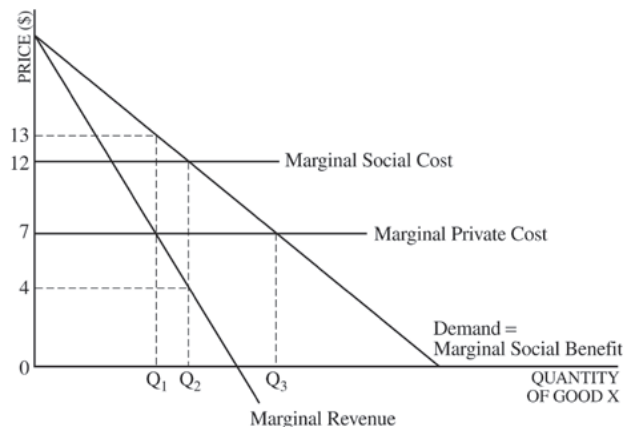
Beginning in fall 2006, AP Economics teachers and principals of schools where AP Economics is taught must certify that their 2007-08 courses follow all the requirements stipulated by the Development Committee, including using a college-level textbook, in order to ensure that the AP course reflects college-level standards. By completing this AP Course Audit, high schools will receive individual licenses to label their economics courses “AP.” In fall 2007, colleges and universities will receive a list of all high schools authorized to use the “AP” designation for their economics courses.

## The AP Economics Exams

Each AP Economics Exam consists of a 70-minute multiple-choice section and a 60-minute free-response essay section. The multiple-choice section, weighted at two-thirds of the final grade, covers all of the topics listed in the outlines above. The free-response section includes one long and two short essay questions that require students to interrelate different content areas and analyze a given economic situation and set forth and evaluate general economic principles pertaining to the course of study (micro or macro). The students are expected to show both analytical and organizational skills in writing the essays and to incorporate explanatory diagrams that clarify their analyses. Some questions will require students to interpret graphs that are provided as part of the questions; other questions will require students to draw their own graphs as part of the answers.

**AP Economics free-response questions from recent exam years are listed below.**

### Question 1 (Microeconomics)

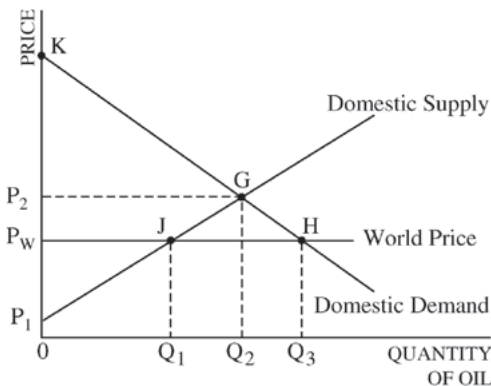


The production of good X creates an externality. The following questions are based on the graph above, which shows the marginal revenue, marginal social benefit, marginal private cost, and marginal social cost associated with the production of good X.

- (a) Is the externality positive or negative? Explain.
- (b) Using labeling from the graph above, identify the socially optimum output. Explain how you determined your answer.

- (c) Suppose that good X is produced by a profit-maximizing monopoly. Answer each of the following.
- Using labeling from the graph above, identify the unregulated firm's output. Explain how you determined your answer.
  - To produce the socially optimum output, indicate whether the government should tax or subsidize the firm.
  - Calculate the dollar value of the needed per-unit tax or subsidy.
- (d) Suppose that good X is produced in a perfectly competitive industry. Answer each of the following.
- Using labeling from the graph on the previous page, identify equilibrium output in the absence of regulation. Explain how you determined your answer.
  - To produce the socially optimum output, indicate whether the government should tax or subsidize the firms in the industry.
  - Calculate the dollar value of the needed per-unit tax or subsidy.

### Question 2 (Microeconomics)



The graph above shows the demand for oil by United States residents, the supply of oil by United States producers, and the world price of oil. Use the labeling of the graph to answer the following questions.

- Identify the following before international trade occurs.
  - Price of oil in the United States market
  - Quantity of oil produced in the United States
- Now assume that the United States begins to import oil at the world market price of  $P_w$ . Identify the quantity imported by the United States.
- Identify the consumer surplus in the United States market for each of the following cases.
  - Before international trade
  - After international trade
- Identify the producer surplus in the United States market for each of the following cases.
  - Before international trade
  - After international trade
- Identify the net gain in total surplus from trade.

### Question 3 (Microeconomics)

J & P Company operates in a perfectly competitive market for smoke alarms. J & P is currently earning short-run positive economic profits.

- Using correctly labeled side-by-side graphs for the smoke alarm market and J & P Company, indicate each of the following for both the market and the J & P Company.
  - Price
  - Output
- In the graph in part (a) for J & P, indicate the area of economic profits that J & P Company is earning in the short run.

- Using a new set of correctly labeled side-by-side graphs for the smoke alarm market and J & P Company, show what will happen in the long run to each of the following.
  - Long-run equilibrium price and quantity in the market
  - Long-run equilibrium price and quantity for J & P Company
- Assume that purchases of smoke alarms create positive externalities. Draw a correctly labeled graph of the smoke alarm market.
  - Label the market equilibrium quantity as  $Q_m$ .
  - Label the socially optimum equilibrium quantity as  $Q_s$ .
- Identify one government policy that could be implemented to encourage the industry to produce the socially optimum level of smoke alarms.

### Question 4 (Microeconomics)

Assume that Company XYZ is a profit-maximizing firm that hires its labor in a perfectly competitive labor market and sells its product in a perfectly competitive output market.

- Define the marginal revenue product of labor (MRPL).
- Using correctly labeled side-by-side graphs, show each of the following.
  - The equilibrium wage in the labor market
  - The labor supply curve the firm faces
  - The number of workers the firm will hire
- Company XYZ develops a new technology that increases its labor productivity. Currently this technology is not available to any other firm. For Company XYZ, explain how the increased productivity will affect each of the following.
  - Wage rates
  - Number of workers hired

### Question 5 (Macroeconomics)

- Assume that national saving in the United States increases. Explain the effect of this increase on the real interest rate in the United States.
- Suppose that real interest rates in the rest of the world remain unchanged.
  - Explain the effect of the real interest rate change in the United States that you identified in part (a) on the demand for the United States dollar in the foreign exchange market.
  - As a result of the effect you identified in (i), what will happen to the international value of the United States dollar?
- Given your answer in part (b), indicate how each of the following will change.
  - United States imports
  - United States exports

### Question 6 (Macroeconomics)

The Federal Reserve buys \$5,000 in bonds from Clark Consulting Services, which then deposits the money in a checking account at First Generation Bank.

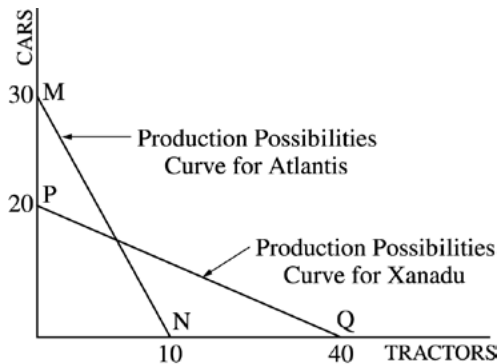
- As a result of the Federal Reserve's action, what is the change in the money supply if the required reserve ratio is 100 percent?
- If the required reserve ratio is reduced to 10 percent, calculate the following.
  - The maximum amount this bank could lend from this deposit
  - The maximum increase in the total money supply from the Federal Reserve's purchase of bonds
- If banks keep some of the deposit as excess reserves, how will this influence the change in the money supply that was determined in part (b) (ii)? Explain.
- If the public decides to hold some money in the form of currency rather than in demand deposits, how will this influence the change in the money supply that was determined in part (b) (ii)? Explain.

### Question 7 (Macroeconomics)

Assume that the United States economy is in a severe recession with no inflation.

- (a) Using a correctly labeled aggregate demand and aggregate supply graph, show each of the following for the economy.
- Full-employment output
  - Current output level
  - Current price level
- (b) The federal government announces a major decrease in spending. Using your graph in part (a), show how the decrease in spending will affect each of the following.
- Level of output
  - Price level
- (c) Explain the mechanism by which the decrease in government spending will affect the unemployment rate.
- (d) The Federal Reserve purchases bonds through its open-market operations.
- Using a correctly labeled graph, show the effect of this purchase on the interest rate.
  - Explain how the change in the interest rate will affect output and the price level.
- (e) Explain how the change in the interest rate you identified in part (d) will affect each of the following.
- International value of the dollar relative to other currencies
  - United States exports
  - United States imports

### Question 8 (Macroeconomics)



Assume that two countries, Atlantis and Xanadu, have equal amounts of resources. Atlantis can produce 30 cars or 10 tractors or any combination, as shown by the line MN in the figure above. Xanadu can produce 20 cars or 40 tractors or any combination, as shown by the line PQ in the figure above.

- (a) Which country has an absolute advantage in the production of tractors? Explain how you determined your answer.
- (b) Which country has a comparative advantage in the production of cars? Using the concept of opportunity cost, explain how you determined your answer.
- (c) If the two countries specialize and trade with each other, which country will import cars? Explain why.
- (d) If the terms of trade are such that one car can be exchanged for one tractor, explain how Atlantis will benefit from such trade.

## How to Get Involved

There are many ways college and university faculty members can help maintain the high standards of the AP Program:

- Participate in a college comparability study
- Be an AP Reader
- Contribute multiple-choice test items for the AP Exam
- Become an AP Faculty Consultant

For more information, please go to: [apcentral.collegeboard.com/highered/getinvolved](http://apcentral.collegeboard.com/highered/getinvolved)

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## The College Board: Connecting Students to College Success

The College Board is a not-for-profit membership association whose mission is to connect students to college success and opportunity. Founded in 1900, the association is composed of more than 5,000 schools, colleges, universities, and other educational organizations. Each year, the College Board serves seven million students and their parents, 23,000 high schools, and 3,500 colleges through major programs and services in college admissions, guidance, assessment, financial aid, enrollment, and teaching and learning. Among its best-known programs are the SAT<sup>®</sup>, the PSAT/NMSQT<sup>®</sup>, and the Advanced Placement Program<sup>®</sup> (AP<sup>®</sup>). The College Board is committed to the principles of excellence and equity, and that commitment is embodied in all of its programs, services, activities, and concerns. For further information, visit [www.collegeboard.com](http://www.collegeboard.com).