

# Preparing Students for the AP Economics Exams

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Economics is the stepchild of social studies. Students often refuse to believe it is social studies at all. At an AP Summer Institute, the initial introductions hardly ever reveal someone fulfilling their life-long dream of being an economics teacher: It is a chorus of “no one else wanted it,” or “I was the youngest in my department,” or “I wanted to teach AP U.S. Government and Politics, and it was together on the master schedule.” However, very often, the second part of the sentence is “but now I love it.” Advanced Placement Economics is one of the best assignments in secondary education: It is unique, it is exciting, and more than anything, it is teachable. Students are a blank canvas when they walk into the course. Hardly any of them know anything about the “dismal science” and they all can learn: It is one of the few opportunities in secondary education to introduce students to something entirely new. This makes economics especially responsive to good teaching strategies. The single most important strategy—and the mantra that a successful AP Economics teacher must embrace—is that these students must understand by learning to think using the discipline’s tools, and developing an intuition for economics.

Economics is full of relatively ironclad rules: increasing input costs decreases supply; countries should produce goods in which they have a comparative advantage. In Micro, profit maximizing is always  $MC=MR$ ; in Macro, changes in expected inflation shift the short-run Phillips’ curve. When the rules are so cut-and-dried, it seems a simple thing to teach them as rules. But there are many compelling reasons to teach students to understand instead:

- **Most of the concepts are inter-related, and understanding one reinforces an understanding of the others.** It’s not a matter of understanding hundreds of concepts or memorizing hundreds of rules: it is a matter of understanding a dozen concepts vs. memorizing hundreds of random, arbitrary rules.

- **Without understanding, there is no economic intuition.** Without economic intuition, wrong answers often feel exactly right, especially for bright students. After all, all the answers are either *up*, *down*, *stays the same*, or *can’t tell*. Students who rely on knowing what a correct answer “looks like” really crash and burn here.
- **On the exam, there will be things the students haven’t seen.** Economics models lend themselves very well to introducing a slight variation that is not found in any textbook and has not been explicitly tested before. A student with understanding will make that slight leap easily. A student without that understanding cannot.
- **Students who understand in December will pass in May:**

**students who have memorized will not.** The once-a-year AP testing schedule is a burden all single-semester teachers bear, but it is not changing. If students have a four-month gap between teaching and testing, memorization is utterly useless. Furthermore, as Macroeconomics and Microeconomics are among the last AP exams (scheduled in 2014 for Thursday morning and afternoon of Week 2), many students are fatigued by the time the second Thursday of testing rolls around. Anything merely memorized is gone.

- **Students who understand economics will be empowered by that understanding.** Economics is hard, but not impossible. When students begin to feel like they truly understand something that so recently seemed esoteric, they are proud of themselves. They like the subject. They sign up for the exam as seniors, even if it is of little practical application post-graduation because they want to take the test, as a challenge to themselves, and to show others what they have mastered.

The first step in teaching-to-understand, not teaching “the rules,” is to work with the fundamental economic models from the outset. Many of the concepts in economics are illustrated through models. These models are noted in the course description. Students must: (1) be able to draw these models, (2) understand

the assumptions of the models, and (3) use the models for analysis. Do not teach a concept and then model it: Show a given model from the beginning, and explain why it takes that shape. A good course requires the students to practice continually using the models. This is an excellent place to include current events. A short contemporary news article can often be analyzed and illustrated using a model. One of the best ways to have students practice graphing is to use bell ringers at the start of each class requiring the use of a model. The goal is to have students solve problems using the models—not to solve the problem according to “rules,” and then take the additional step of deciding how the solution would look on a model. For example, a student of macroeconomics who understands why Long Run Aggregate Supply is a vertical line will be able to predict how it will shift (or not shift) in response to almost anything. A student who has to check a question against a list of memorized “determinants” will flounder, and is much more likely to carelessly shift it the wrong way. In the same way, students of microeconomics who understand why average total costs head upwards after marginal costs rise above the average will rarely draw the model incorrectly, and will see that it “looks wrong” if they do. A student armed with a clever mnemonic will switch the lines half the time, and has no chance of catching the error.

Another important strategy for teaching understanding is providing opportunities for active learning. There are many simulations in economics that help students internalize the concepts and develop economic intuition. For microeconomics, an important concept is the idea of diminishing returns in a short-run productive process. Most high school students are not familiar with production. A short simulation ties the concept to an experience. And since this concept is the basis for short-run cost curves and marginal revenue product, this experience helps them understand several important course concepts. In macroeconomics, having students act



Photo by AP Economics student, Laura Meyer

Students in Kathryn Gustafson's AP Economics course (grades 10–12) at Farmington High School in Farmington, Michigan, work to create a submission for the Michigan Council for Economic Education Video Challenge.

out currency exchange makes it clear to them that the supply of one currency is conditional on the demand for another. These types of activities and many others are available through the Council for Economic Education's Virtual Economics CD-ROM.<sup>1</sup>

Furthermore, students must understand the math required for the exam. This is often an area where social studies teachers feel intimidated and encourage

students to memorize the various formulas. However, students—even students in AP Calculus BC—often have very weak skills in the type of arithmetic called for on the AP economics exam. In both classes, students need to be able to handle basic fractions. For macroeconomics, they must be able to determine 10% or 5% of a number and understand that 10% is  $\frac{1}{10}$ . In microeconomics, they need to understand what an average is before

they can understand why average fixed costs go down as production increases; they need to see the mid-point formula for determining elasticity coefficients as a technique, not a rule. Students will misuse the formulas every time if they are not taught these basics.

Finally, it is vital that the course cover the economic concepts described in the College Board course description, not the scope and sequence of any adopted textbook. None of the popular textbooks cover every single topic in the outline and all of them cover many topics that are not tested. A teacher can spend a great deal of time teaching the aggregate expenditures model (Macro) or the indifference curve (Micro) and not move students forward on the exam.

Likewise, following a textbook alone might well leave students unable to determine the significance of marginal utility/dollar (Micro) or the model of the market for loanable funds (Macro), two things they certainly must be able to do on the AP exam. Likewise, it is essential to leave time for review. It is in the review period that the various concepts are finally and firmly interrelated, and the connections all revealed. Many times, students who struggled with the pieces will understand the whole picture, if there is enough time to show it to them.

### Test-Taking Strategies—Multiple-Choice

In addition to understanding, students need to be prepared for the structure and verbiage of the AP exam. Test-taking strategies can be taught throughout the course while teaching economic concepts. Because the AP exam has both a multiple-choice component and a free response component, these types of assessments should be used predominantly throughout the course. Because economics is so *applied*, multiple-choice items work well for formative assessment. A very useful instructional strategy in both Macro and Micro is to put students in small groups and give each group

one copy of several multiple-choice questions. Students work together to share their analyses of the concepts behind the questions, and then share these with the group. This allows the teacher to correct student misunderstandings while students learn from each other. Students diagnose their own misunderstandings of concepts. This small group discussion builds skills, and concept understanding, and gives students confidence.

#### *Additional tips for multiple-choice questions*

- **Determine what the question is about and which model is relevant.** For example, in Macro, if the question is about the money supply, the key components to consider are the money market and monetary policy; distractors about fiscal policy can be ignored. In Micro, if the question is about the relationship between cost curves, the answer will often be trivial if a model is sketched out.
- **Answer the question that was asked.** This might seem obvious, but students often start reading a question and formulating a response before they finish reading the question. There often are correct statements as distractors, which do not answer the question that was asked. If a student doesn't focus on what the question asked, these distractors might seem very engaging.
- **Formulate the answer before looking at the distractors.** Sometimes students become confused with all the verbiage in the answer choices. If they read the stem and try to formulate an answer before reading the answer choices, they often are more successful with multiple-choice questions.

- **Work sideways and backwards.** Answer choices are often X leads to Y leads to Z. Instead of testing each possibility, determine first if X (or Y or Z) must be going up or down. Use that to eliminate answers. Then test another variable. This keeps students from getting lost in a chain of causal relationships.

### Test-Taking Strategies: Free Response

The AP Economics Free Response sections—both in Macro and Micro—are beautiful examples of the art of test-writing. Each one is a little gem of a review, carrying students through an extended series of economics concepts and showing the fundamental relationships between them. They are not, however, essays: They are more akin to a very sophisticated and multi-faceted word problem. The AP Microeconomics and AP Macroeconomics Development Committees have recently created a statement of writing expectations for the exam: “[W]hen answering the Macroeconomics or Microeconomics free-response questions, a student should respond clearly and concisely. Including paragraph or even full-sentence responses is not always necessary; however, it is important to address the verb prompts appropriately.... *A written response that presents conflicting answers is likely to lead to the loss of points.*”<sup>72</sup> [Emphasis added]. This means that students need to answer the question completely, but they do not need to over-explain, and students who do so are likely to make an incorrect statement by accident. Symbols, arrows, and abbreviations are fine. Fancy vocabulary and convoluted sentences cannot help and may well do real harm.

The *verb prompts* mentioned in the statement above are very important. They not only tell students what they must do, but also identify where points will be given. Points are only given for what the students are asked to do. Common verbs are *show, iden-*



*tify, explain, and calculate. Show* means that the answer must be found on the model. Students should draw their models carefully, making sure that they are legible and accurately labeled. *Identify* means to list or tell the answer. *Explain* means to give the economic rationale for an answer. Often this means the student discusses the linkages or steps that move from the question to the answer. Models can be used as part of the analysis. *Calculate* means to provide a numerical answer and to include the way the answer was determined.

#### *Additional tips for free response questions*

**Use the 10-minute reading period carefully.** Focus on the verbs and what the questions ask. Practice the models and outline responses to the questions.

**Answer each part of a question in the order it was asked.** Each question is written in a specific order to elicit an explicit analysis and logic. By following this order, students will tend to produce the correct logic.

**Consistency is key.** Because the free response portion of the test asks students to follow steps in a logical analysis, it is imperative that their answers are consistent. When a question asks a student to answer part B based on their answer in part A, the student's answer must logically follow. One tip is to develop the habit of crossing out the words "Given your answer above ..." and physically writing in the piece of data that should be considered. So for Macro, "Given your answer in part b, what will happen to aggregate demand?" becomes "Given a rise in the real interest rate, what will happen to aggregate demand?"; in Micro, "Given your answer in part b, what will happen to deadweight loss?" becomes "Given the introduction of a subsidy, what will happen to deadweight loss?" This technique can really help students

who get intimidated by the multi-step process. Once the full question is in front of them, they know the answer.

**Time should not be a problem.** For both macroeconomics and microeconomics, these free response questions are incredibly efficient. Absent a significant learning difference, a student who is running out of time needs more conceptual understanding or is writing too much.

**Go back and check labels and arrows.** A simple oversight is easy to make and easy to correct.

**Draw models large and makes shifts of lines fairly dramatic.** A third to a quarter of a page is a good size for a model. Very small models and small shifts of lines are difficult to interpret.

The best way to prepare students for this portion of the exam is to have them practice throughout the course and as a review for the exam. Previous free response questions can be found on AP Central and can be used for formative assessments or quizzes. Help students learn the pacing for answering questions by using the time noted in the instructions for the free response questions. Each short free response question should be answered in approximately 12 ½ minutes. By giving students questions to answer in a fixed time period, they learn to focus quickly on answering the question without unnecessary information. By going over the rubric used to assess the questions, students internalize the expectations for free response questions. Because these questions are comprehensive, they review and connect the various concepts.

Teaching AP Economics is a fun and exhilarating experience. Typically, students take this course at the end of high school. They walk in the first day with their game faces on. Their attitude says "go ahead, try to interest me, and by the way, I already know everything." They

walk out realizing that half the things that they assumed were unquestionable truths, like "life is priceless," or "anything worth doing is worth doing well," aren't really truths at all, and that they have been blind to some of the most fundamental principles tying society together. The most unlikely students will catch fire, and suddenly begin to understand the world around them. Watching a student go from "What is economics?" to "Of course I am majoring in economics!" in 12 weeks is a heady feeling. If they are taught to understand economics, many of them will learn to love it, and they will hunt you down after the exam, give you a huge hug, and tell you jokingly: "I got a six!"

#### **Notes**

1. The Council for Economic Education, <http://ve.councilforeconed.org/>
2. College Board, "Economics: Microeconomics, Macroeconomics. Course Description" (New York, College Board, 2012), 5. To access this course description, go to <http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html>.

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