CollegeBoard AP
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FREQUENTLY ASKED **QUESTIONS** ABOUT THE

AP® PROGRAM

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The College Board is a national not-for-profit association of more than 5,000 member schools, colleges and universities, with a challenging mission: To connect students to college success. One of the College Board's most ambitious and important teaching and learning programs is the Advanced Placement Program® (AP®). As a set of 38 college-level courses taught in high school, AP has become the most influential general education program in the country, and it represents the highest standard of academic excellence in schools across the nation. The Advanced Placement Program is a collaborative effort between motivated students, dedicated teachers, and committed high schools, colleges, and universities. Ninety percent of the colleges and universities in the United States, as well as colleges and universities in 24 other countries, have an AP policy granting incoming students credit, placement, or both on the basis of their AP Exam grades. Many of these institutions grant up to a full year of college credit (sophomore standing) to students who earn a sufficient number of qualifying AP grades. Since its inception in 1955, the AP Program has allowed millions of students to take college-level courses and exams, and to earn college credit or placement while still in high school.

This brochure provides responses to some of the most common questions about the AP Program, and is particularly focused on questions regarding recent calls by Congress and others for a dramatic increase in enrollment and success in AP math and science courses.

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Does AP benefit the majority of students in schools that participate in the AP Program?

Yes. School superintendents and principals increasingly recognize the value of AP® as leverage to increase achievement for all students—to serve as the tide that lifts all boats. They have discovered that the more AP teachers there are in a school, the more rigorous and challenging the curriculum becomes in AP and non-AP classes alike. Further, because most AP teachers only teach one or two AP classes, and three to four non-AP classes, many non-AP students benefit from the enhanced training that AP teachers receive.

Do typically underrepresented and low-income students benefit from AP? What about the number of underrepresented and low-income students who are doing well on the AP Exams?

Schools that make Advanced Placement accessible to all students usually experience the benefit of higher standards throughout the entire school. Over the past decade, as AP has expanded to many more schools with low-income and traditionally underrepresented minority students, AP participation and success have increased dramatically among such students.

Over the past 10 years, the number of minority students participating in AP has risen at a remarkable rate, with the number of low-income students and Latino students almost quadrupling, the number of African American students more than tripling, and the number of Native American students more than doubling.

During the same 10 years, the number of successful AP Exam scores (3 or higher) has increased by 192 percent among African American students, 233 percent among Latino students, and 128 percent among Native American students.

Does participation in AP help students succeed once they get to college?

Two new research studies from the University of California and the National Center for Educational Accountability each show that AP courses that result in students earning AP Exam grades of 3 or higher are impacting college performance and completion.[1] These studies move beyond the simplistic correlation studies of the past, which have always shown strong correlations between taking AP courses and college persistence, and actually now demonstrate that among academically comparable students, an AP experience that culminates in an exam grade of 3 or higher has a significant impact on a student's likelihood of college success. Simply said, a high-quality AP course in high school does an excellent job of fortifying students for a successful transition into the battery of college courses they'll experience in their first semester at college.

Five-Year College Graduation Rates: Comparing AP Students to Students with Comparable Academic Profiles

Student Group	AP Exam Grade of 3, 4, 5	AP Exam Grade of 1, 2	Took AP Course, but not Exam
African American	28% higher	22% higher	16% higher
Hispanic	28% higher	12% higher	10% higher
White	33% higher	22% higher	20% higher
Low Income	26% higher	17% higher	12% higher
Not Low Income	34% higher	23% higher	19% higher

Source: Chrys Dougherty, Lynn Mellor, and Shuling Jian, *The Relationship Between Advanced Placement and College Graduation* (National Center for Educational Accountability, 2006)

[1.] Geiser, Saul and Veronica Santelices. *The Role of Advanced Placement and Honors Courses in College Admissions.* University of California, Berkeley, 2004; and Dougherty, Chrys, Lynn Mellor, and Shuling Jian. *The Relationship Between Advanced Placement and College Graduation.* National Center for Educational Accountability, 2005.

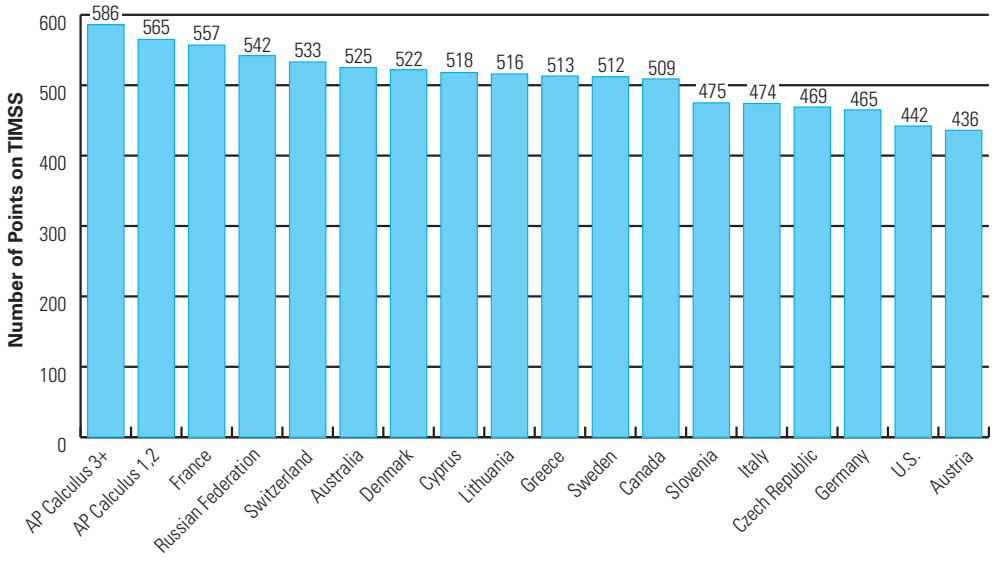
Why should we encourage more high school students to take AP math and science courses?

Increasing rigorous math and science education in the United States will significantly boost our high school graduates' math and science proficiency. It will open many career opportunities for young people and benefit the nation as a whole.

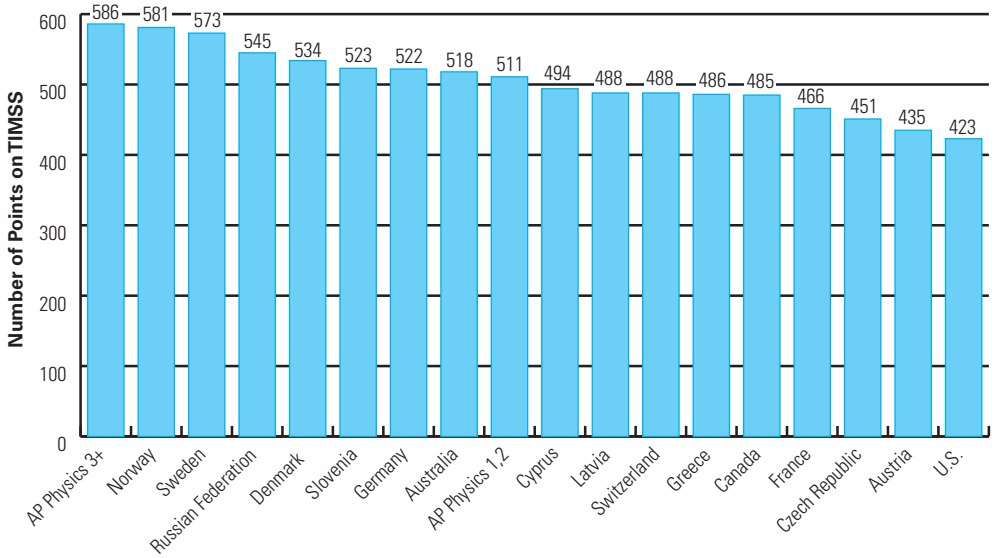
Today, only 32 percent of American undergraduates are earning degrees in science and engineering, compared to 66 percent of undergraduates in Japan, 59 percent in China, and 36 percent in Germany. In 2004, China graduated 600,000 engineers, India graduated 350,000, and the United States graduated 70,000.[2]

Research indicates that AP math and science courses allow American students to achieve a level of proficiency that exceeds that of students from all other nations.[3]

TIMSS Report: International Student Achievement in Mathematics



TIMSS Report: International Student Achievement in Physics



2. Committee on Prospering in the Global Economy of the 21st Century: An Agenda for American Science and Technology. *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*. The National Academy of Sciences, The National Academy of Engineering, and The Institute of Medicine of the National Academies, 2005.

3. Gonzalez, Eugenio J., Kathleen M. O'Connor, and Julia A. Miles. *How Well Do Advanced Placement Students Perform on the TIMSS Advanced Mathematics and Physics Tests?* The International Study Center, Boston College, 2001.

Does a higher level of proficiency in math and science during the high school years indicate that these proficient students will major in science or technology in college?

Yes. AP math and science students are much more likely than other students to major in science, technology, engineering, or mathematics (STEM) disciplines than students whose first exposure to college-level math and science courses is in college.[4]

In the nation overall:

- only 6.7 percent of bachelor's degrees are earned in mathematics and engineering
- only 1.4 percent of bachelor's degrees are earned in physical sciences
- only 3.7 percent of bachelor's degrees are earned in computer and information sciences
- only 4.7 percent of bachelor's degrees are earned in biological/life sciences[5]

When tracking AP students' selection of college majors, we can see that their interest in the discipline persists. Large percentages of students who take AP math or science exams then major or minor in engineering, mathematics, or science disciplines:

AP Exam Taken	Percent of AP Students That Major/Minor in Discipline	Percentage of AP Students Earning Bachelor's Degrees
AP Biology	28%	76%
AP Calculus AB	23%	75%
AP Calculus BC	33%	82%
AP Chemistry	16%	76%
AP Computer Science A	23%	72%
AP Computer Science AB	26%	70%
AP Physics B	40%	75%
AP Physics C: Mechanics	39%	75%
AP Physics C: Electricity and Magnetism	42%	78%

Does AP math and science participation affect a student's chance of graduating from college on time?

Absolutely. Strong correlations exist between taking AP math and science (and all other AP subjects) and college completion. Sixty-one percent of students who've taken two AP courses in high school will graduate from college in four years or less. Forty-five percent of students who've taken one AP course will graduate from college in four years or less. Only 29 percent of students who haven't taken an AP course will graduate in four years or less.[6]

But we can only make claims that AP is impacting college completion rates by comparing students with similar academic and socioeconomic profiles. When we only compare students who are academically similar, it is clear that AP courses of sufficient quality to produce exam grades of 3 or higher have the power to impact a student's ability to persist in college and obtain a degree.[7] For this reason, it is essential that the new AP courses offered nationwide are coupled with adequate preparation of students in the years prior to AP. A successful AP expansion initiative will focus as much attention on student and teacher preparation in grades 6–11 as it does on student and teacher support in the twelfth-grade AP course.

4. Morgan, Rick and Behroz Maneckshana. *AP Students in College: An Investigation of Their Course-Taking Patterns and College Majors.* Princeton: ETS, 2000.

5. U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2002.

6. Adelman, Clifford. *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment.* US Department of Education, 1999.

7. Chrys Dougherty, Lynn Mellor, and Shuling Jian, *The Relationship Between Advanced Placement and College Graduation* (National Center for Educational Accountability, 2006).

How can we be sure that we haven't already reached the point at which all motivated and prepared students have access to an AP math or science course?

Statistical analysis of this year's group of high school students indicates that large numbers of students have an academic profile indicating a strong likelihood of earning an AP Exam grade of 3 or higher if they had an AP Biology course to take. Only 100,000 students in U.S. schools have access to AP Biology this year, but 800,000 U.S. students have the academic background to be able to score a 3 or higher on the AP Biology Exam, if they only had the course to take. Similarly, there are hundreds of thousands of students with the academic potential to succeed in the other AP math and science courses.[8]

How can we introduce more low-income students to AP?

A lot of attention has focused on this issue since the publication of *Rising Above the Gathering Storm*, the report that warned that the United States is on a losing path in the national global marketplace, partly due to our weak science and math education. It's clear that we need to train many more AP teachers, particularly in math and science. In his State of the Union address on January 31, 2006, President Bush called for training 70,000 math and science teachers to teach AP and IB courses in order for our nation to maintain its edge globally. IB also provides rigorous academics.

In addition, we have to introduce this kind of rigorous academic program into more schools in more diverse communities. Bipartisan legislation to achieve this goal was recently introduced by Senators Lamar Alexander, Jeff Bingaman, Peter Domenici, and Barbara Mikulski—along with 40 other cosponsors.

The road to AP success for most students starts early. Students need solid grounding in prealgebra and algebra, as well as the physical sciences, starting in grades 6, 7, and 8. They also need to develop strong reading, writing, and critical thinking skills in the elementary and middle grade levels. We strongly support new and existing initiatives that give students access to enriching, rigorous course work in grades K–10 so that they are ready for the challenges of AP by the time they reach grades 11 and 12.

Will the effort to introduce rigorous academic programs into more schools take money away from other education programs?

Much more money has to be spent on education if the United States is to remain a great democracy and a great global leader. The education piece of the pie needs to get larger, not smaller. The expansion of rigorous academic programs like AP and IB should be high on the education priority list because students from every socioeconomic background need access to rigorous course work in math, science, foreign language and culture, and many other areas. If we are to maintain our position in the world, rigor can't just be for the elite.

The proposed legislation for expanding AP math and science courses is actually designed to do much more than launch new AP courses in U.S. schools. In fact, it is designed to provide states with resources for increasing the rigor and quality of their math and science programs in grades 6–11, using AP as a twelfth-grade anchor from which the school can develop a curriculum that sequentially prepares students for the rigor of AP and college. The high standards embodied in twelfth-grade AP courses are just one piece of the proposed legislation, which also provides funding for professional development and student preparation in the math and science courses taught in grades 6–11. By anchoring the 6–12 math and science programs in a twelfth-grade AP math or science course, each grade level will foster a set of higher expectations and higher learning than is currently required and delivered in most U.S. schools.

[8] Ewing, Maureen, Wayne Camara, and Roger E. Millsap. *The Relationship Between PSAT/NMSQT Scores and AP Examination Grades: A Follow-Up Study.* The College Board, 2006.

How successful are our high schools in introducing such rigor?

The picture is definitely improving. Eleven years ago, fewer than half a million American students took 700,000 AP Exams. Last spring, 1.2 million students took more than 2 million AP Exams. In 2005, all 50 states and the District of Columbia had an increase in the percentage of students succeeding in AP since 2000.

Where are we seeing the greatest AP success?

The state of New York leads the nation in the percentage of public high school graduates succeeding in AP. Following New York are Maryland, Utah, California, Virginia, Connecticut, Massachusetts, and Florida. This growth has been continuing steadily while AP courses have maintained their high standards. In the past year, numerous states have begun to take explicit policy steps to increase AP enrollment and success through measures such as requiring all high schools to offer AP, paying for the administration of the PSAT/NMSQT® for all tenth- or eleventh-grade students (which can help identify students who have high potential to succeed in AP), offering incentives to schools to grow stronger AP programs, and supporting strong teacher professional development programs for prospective AP teachers. Among the states that have taken or are exploring those policy steps are Arkansas, Texas, Illinois, New Mexico, Michigan, Pennsylvania, Minnesota, Massachusetts, Alabama, Kentucky, Mississippi, Wisconsin, and Nevada.

Why are schools using AP to drive school reform?

For several reasons:

- AP Exams provide incentives for students and teachers to attain higher standards.
- Raising standards in the senior year requires raising standards across grade levels.
- Pre-AP® and AP professional development help create a vertically aligned curriculum.

It's important to remember, however, that any effective school reform or redesign program anchored in AP must be multipronged, giving as much attention to raising the rigor and quality of teaching in the middle school years as it does to AP classes in high school.

What percent of America's public high schools participate in AP programs today?

The good news is that 68 percent of our public high schools now participate in AP. The news will be even better when the remaining 32 percent provide their students with that opportunity.

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