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Advanced Placement
Report to the Nation

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Contents

A Word About Comparing States and Schools

Media and others occasionally rank states, districts, and schools on the basis of AP Exam results, despite repeated warnings that such rankings may be problematic. AP Exams are valid measures of students' content mastery of college-level studies in academic disciplines but should never be used as a sole measure for gauging educational excellence and equity.

Introduction

As we celebrate the fiftieth anniversary of the Advanced Placement Program® (AP®) in U.S. schools, we should honor the educators who are enabling a wider and more diverse group of U.S. students than ever before to succeed in college-level studies in high school. Yet we must also gaze clear-eyed at the inequities that remain and the challenges that accompany success in expanding access to AP. This *Report* uses a combination of state, national, and AP Program data to provide each U.S. state with context for celebrating its successes, understanding its unique challenges, and setting meaningful and data-driven goals to prepare more students for college success.

Part I of the *Report* comprises three powerful themes that appear once we situate each state's AP participation and performance data within the context of its own racial/ethnic demographics and population size. Because one of the chief purposes of Part I is to provide state departments of education with new data to gauge success and identify current challenges in providing equitable educational opportunity (and because current, reliable racial/ethnic demographic data for nonpublic schools is not available for all states), the data in Part I represent public schools only. **New this year: Educators should be tracking the quality of learning in AP courses as their AP programs expand, so the *Report* presents data that will allow the nation to track from year to year the quality of student learning in AP courses.**

Part II of the *Report* uses data from all schools participating in AP, public and nonpublic, to identify the most successful AP classrooms in the world currently, and to provide overall participation and performance information for each of the AP subject areas. **New this year: To inform teaching and learning, this section of the *Report* also analyzes the results of the AP Examinations to provide AP teachers, department chairs, college faculty, and other educators with feedback about the knowledge and skills AP students are particularly demonstrating—or failing to demonstrate.**

In addition to the data presented in this *Report*, the Advanced Placement Press Room (at www.collegeboard.com/appress) contains much additional data and research to supplement the tables and charts herein.

What is the Advanced Placement Program®?

The College Board partners with colleges and universities[1] to create assessments of college-level learning—the AP Exams—in 35 subject areas. The College Board then supports secondary schools in training teachers and developing a curriculum of high academic intensity and quality that will enable students to meet the standards for college-level learning in these subjects. As a result, most colleges and universities in the United States, as well as institutions in more than 30 other countries, use AP Exam results in the admissions process as a designation of a student's ability to succeed in rigorous curricula, and also award college credit or placement into a higher-level college course so that college entrants can move directly into the courses that match their level of academic preparation for college.

How are the AP® Exams scored?

AP Exams, with the exception of AP Studio Art, which is a portfolio assessment, each consist of dozens of multiple-choice questions, which are scored by machine, and free-response questions (essays, translations, problems), which are scored at the annual AP Reading by 7,000 college faculty and AP teachers, using scoring standards developed by college and university faculty who teach the corresponding college course.

What is the scale for the AP Exam grades?

The composite score for each AP Exam is converted to an AP Exam grade of 5, 4, 3, 2, or 1. AP Exam grades of 5 are equivalent to the top A-level work in the corresponding college course. AP Exam grades of 4 are equivalent to a range of work representing mid-level A to mid-level B performance in college. Similarly, AP Exam grades of 3 are equivalent to a range of work representing mid-level B to mid-level C performance in college.

Why report on how many high school graduates succeeded on an AP Exam?

With 75% of U.S. high school graduates entering college,[2] the nation is steadily democratizing entrance to college. But high college drop-out rates and the fact that about half of all college freshmen are taking at least one remedial course show us that it is not enough simply for secondary schools to help students gain admission.[3] If we are to succeed in democratizing what really counts—successful college degree completion—the gulf between high school graduation standards and freshman college course requirements must be eliminated.

U.S. Department of Education research has established the rigor of a student's high school curriculum as the best predictor of bachelor's degree attainment.[4] And new research from the University of California at Berkeley[5] and the National Center for Educational Accountability[6] finds that an AP Exam grade, and a grade of 3 or higher in particular, is a strong predictor of a student's ability to persist in college and earn a bachelor's degree.

How does this *Report* define success on an AP Exam?

Throughout the *Advanced Placement Report to the Nation*, "success on an AP Exam" is defined as an exam grade of 3 or higher. As noted above, a 3 is the grade that research consistently and currently finds predictive of college success and graduation.

That said, we should not discount or devalue the experience of students who take an AP course but do not earn an exam grade of 3 or higher. In fact, while the Third International Math and Science Study (TIMSS) found that U.S. advanced math and physics students "were not leading, but lagging behind other students around the world in mathematics and physics achievement," AP students, even those scoring 1s and 2s on the AP Exam, were hailed for having demonstrated in the study calculus and physics knowledge comparable to that of the highest achieving calculus and physics students in the world.[7]

In Calculus:

- U.S. students did not fare well, ranking 22 out of 23 countries.
- The exception: AP Calculus students. Even those students who earned AP Calculus grades of 1 or 2 demonstrated the same level of math achievement as students from the top-performing nation, France.

In Physics:

- U.S. students fared worse than students of any other nation, ranking 23 out of 23 countries.
- The exception: AP Physics students. Even those students who earned AP Physics grades of 1 or 2 were only bested by students from the top two nations, Norway and Sweden.

But because more research is needed to establish the conditions under which AP Exam grades lower than 3 relate to college success, reduction of remediation required, and other outcomes, this *Report* uses an AP Exam grade of 3 or higher as the definition of "success on an AP Exam."

Advanced Placement **Report to the Nation 2006**

Part I:
Three Themes for the Nation

Theme #1: Excellence and Equity in College-Level Achievement

A wider segment of the U.S. student population than ever before is achieving success[8] on an AP Exam before leaving high school.

Leading the nation:

In the state of **New York**, nearly 23 percent of students in the class of 2005 earned an AP Exam grade of 3 or higher while in high school. This year, two other states—**Maryland** and **Utah**—joined **New York** in seeing more than 20 percent of their students achieve such AP results. **California**, **Virginia**, **Connecticut**, **Massachusetts**, and **Florida** are all poised to achieve that milestone soon, perhaps with this year's class of 2006.

Greatest strides:

States that have seen the greatest amount of positive change in the proportion of students who succeed on an AP Exam in high school, are **Maryland**, **North Carolina**, **Washington**, **Connecticut**, and **Delaware**.

And **Maine** is the only state that has gone from being below the national average five years ago to now achieving success greater than the national average.

Why do these achievements deserve celebration?

Over the past five years, the size of the U.S. public high school population has increased by more than 100,000 students (see Appendix C). So a reasonable success, during a time of such population growth, would have been just to maintain the percentage of high school students who take and succeed on an AP Exam, keeping pace with the population growth.

But U.S. schools have done much more than just maintain the proportion of students successful on AP Exams. Five years ago, 10 percent of U.S. public school students scored a 3 or higher on an AP Exam in high school; last year, 14 percent achieved such scores.

In other words, over the past five years:

- The overall high school population has increased by 104,149 students (see Appendix C).
- The number of students succeeding on an AP Exam in high school has increased by 118,036 students.

Educators and leaders at the federal, state, district, and school levels deserve tremendous credit for enabling a wider segment of our nation's youth than ever before to achieve success on an AP Exam.

Table 1: *AP Participation and Performance in Public Schools*

State	Percentage of Students Scoring 3 or Higher on an AP Exam During High School Years[9]		Change: 2000 to 2005
	High School Class of 2000	High School Class of 2005	
Alabama	3.9	5.3	1.4
Alaska	10.1	12.4	2.3
Arizona	7.2	9.2	2.0
Arkansas	4.3	7.7	3.4
California	15.0	19.7	4.7
Colorado	12.2	16.9	4.7
Connecticut	13.6	19.1	5.5
Delaware	7.6	12.9	5.3
District of Columbia	6.6	8.7	2.1
Florida	13.5	18.5	5.0
Georgia	9.7	13.5	3.8
Hawaii	5.8	8.2	2.4
Idaho	6.5	9.6	3.1
Illinois	9.9	14.1	4.2
Indiana	6.0	8.9	2.9
Iowa	4.9	6.7	1.8
Kansas	4.4	6.5	2.1
Kentucky	5.5	8.3	2.8
Louisiana	1.9	2.5	0.6
Maine	10.1	14.4	4.3
Maryland	14.1	21.0	6.9
Massachusetts	14.5	18.7	4.2
Michigan	8.8	11.6	2.8
Minnesota	8.1	11.5	3.4
Mississippi	2.3	3.3	1.0
Missouri	3.7	6.0	2.3
Montana	6.8	10.0	3.2
Nebraska	3.2	4.4	1.2
Nevada	9.1	12.0	2.9
New Hampshire	9.2	11.5	2.3
New Jersey	12.9	16.5	3.6
New Mexico	6.1	8.5	2.4
New York	17.9	22.8	4.9
North Carolina	11.3	17.1	5.8
North Dakota	4.4	6.0	1.6
Ohio	7.1	10.1	3.0
Oklahoma	5.4	8.2	2.8
Oregon	7.1	10.7	3.6
Pennsylvania	8.3	10.5	2.2
Rhode Island	6.9	8.1	1.2
South Carolina	10.0	12.6	2.6
South Dakota	5.9	8.8	2.9
Tennessee	6.2	8.9	2.7
Texas	9.9	13.7	3.8
Utah	17.4	20.5	3.1
Vermont	11.5	15.4	3.9
Virginia	15.9	19.3	3.4
Washington	7.6	13.2	5.6
West Virginia	4.6	5.8	1.2
Wisconsin	10.5	14.5	4.0
Wyoming	3.8	5.8	2.0
Nation	**10.2**	**14.1**	**3.9**

Theme #2: Maintaining Quality in the AP Classroom

The AP Exam, an instrument developed to be equivalent in rigor and difficulty from year to year, measures outcomes of AP courses and indicates that the quality of learning in AP classrooms has not suffered as schools have invited more students to take on the challenge of an AP course.

AP Examinations are criterion-referenced tests, so students' exam grades are reported in relation to an absolute standard of performance. This standard is set by college and university professors who administer AP Exam questions to their own students and identify the knowledge and skills that must be demonstrated on each question. Any student who achieves those absolute standards can receive a high score on an AP Exam. In other words, AP Exams are not graded on a curve, so low-performing AP Exam takers cannot water down the scoring scale.

To ensure that each AP Exam, from year to year, is of equivalent difficulty and rigor, selected multiple-choice questions, which are not disclosed, are woven back into subsequent AP Exams, enabling psychometricians and statisticians to ensure that an AP Exam grade one year represents the same level of content mastery as in previous years.

The following graphs, for six high-volume AP Examinations, show that the students who took AP Exams in 2005 are achieving learning outcomes equivalent to those experienced by the smaller, less diverse AP student population who took AP Exams in 2001.

Reading the "Equated Scores" charts:

These charts show the number of points earned on equated multiple-choice sections from year to year as the population taking a particular AP Exam has expanded and diversified. Trace the performance of high-proficiency students (students at the 90th percentile), moderate-proficiency students (students at the 75th and 50th percentiles), and low-proficiency students (students at the 25th percentile) from year to year to gauge whether any type of student is achieving significantly higher or lower performance than in earlier years.

Across AP Exams, there are no statistically significant increases or decreases from 2001 to 2005, indicating that educators have done a tremendous job of preserving quality and learning outcomes even while increasing the number of students that have access to such instruction.

Figure 1. AP Biology Equated Scores, 2001–2005

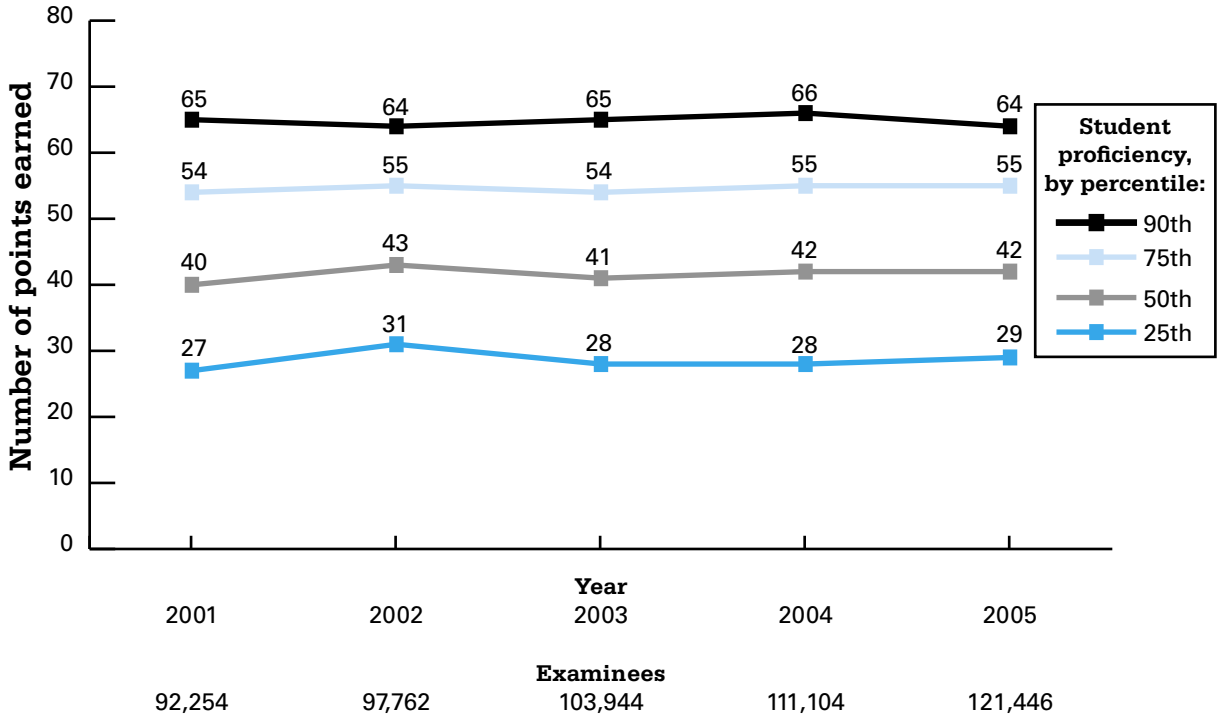


Figure 2. AP Calculus AB, Equated Scores, 2001–2005

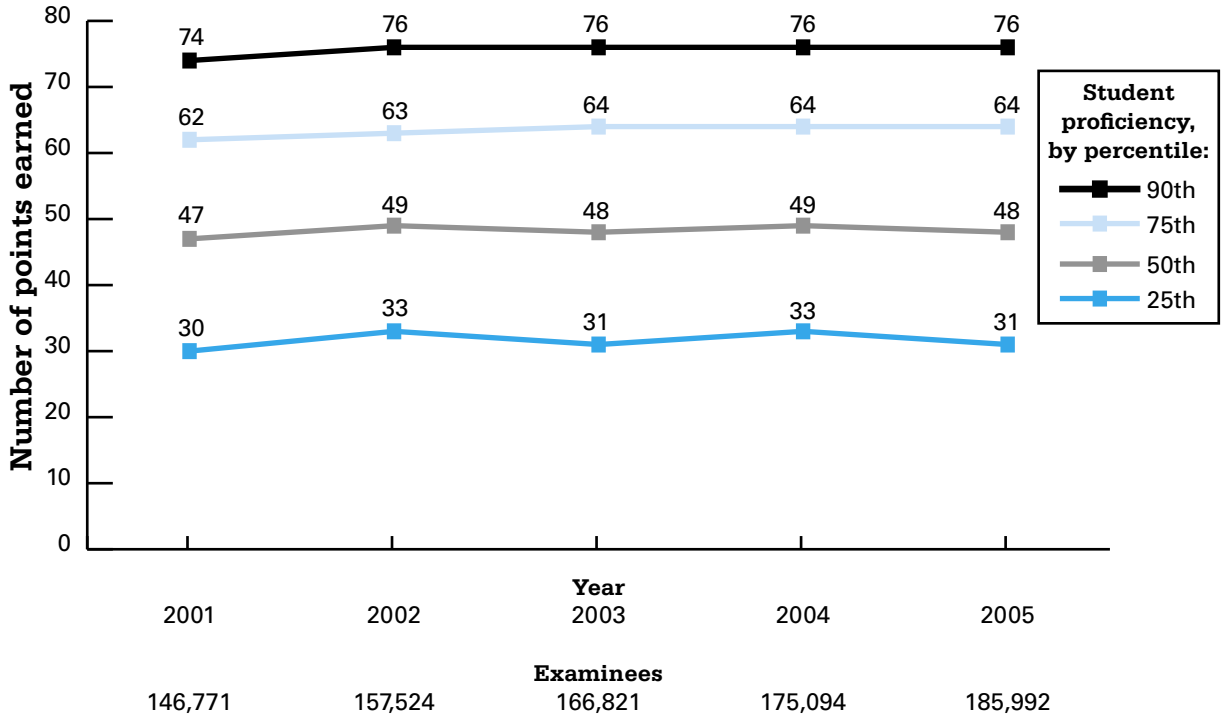


Figure 3. AP English Literature and Composition, Equated Scores, 2001–2005

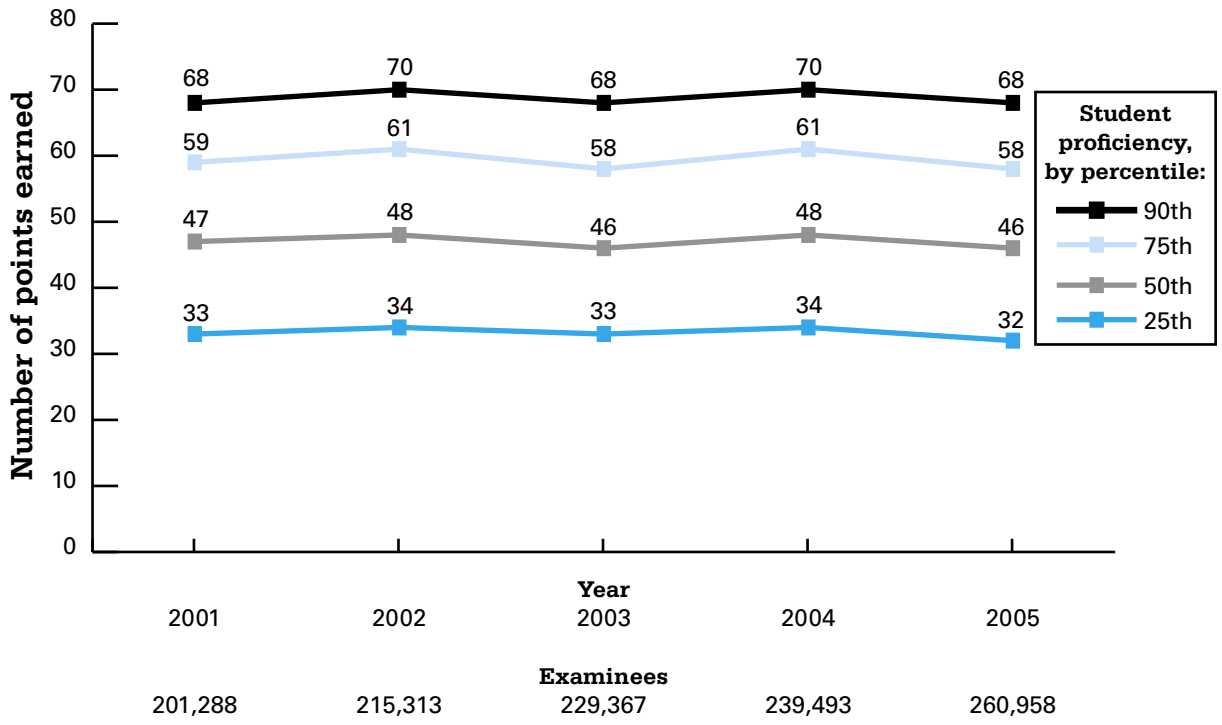
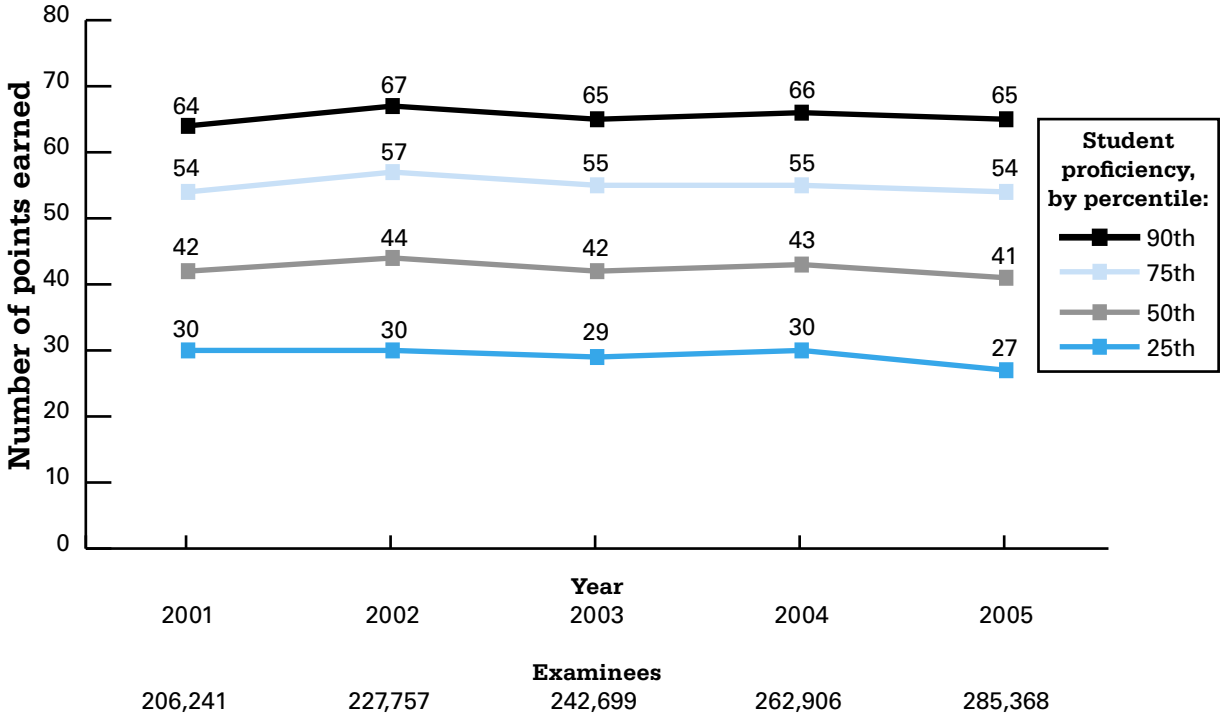


Figure 4. AP U.S. History, Equated Scores, 2001–2005



Theme #3: Closing Equity Gaps

Despite increased diversification of the AP classroom, African American and Native American students remain significantly underrepresented in AP programs nationwide, and Latino students remain underrepresented in AP programs in many states.

The Advanced Placement Program's official Equity Policy Statement states:

"The College Board encourages the elimination of barriers that restrict access to AP courses for students from ethnic, racial, and socioeconomic groups that have been traditionally underrepresented in the AP Program. Schools should make every effort to ensure that their AP classes reflect the diversity of their student population."

African American, Latino, and Native American students have been traditionally underrepresented in AP courses, and no state with large numbers of African American or Native American students has yet succeeded at providing AP opportunities that allow for equitable representation of these students.

However, **Florida**, **Maryland**, and the **District of Columbia** have each achieved the significant milestone of seeing Latino student representation in AP courses outpace Latino student representation in non-AP courses. **California** and **Texas**, two states with large Latino student populations, are each within reach of achieving this goal.

Some words of caution and concern:

Despite the strides that have been made by educators to provide traditionally underrepresented students with AP courses, poor AP Exam results indicate that often these teachers and students are not receiving adequate preparation for the rigors of an AP course. As a result, traditionally underrepresented students currently demonstrate significantly lower performances on AP Exams. See Appendix B for mean AP Exam grades, by race/ethnicity, for each AP subject area.

Major initiatives are needed to ensure adequate preparation of students in middle school and ninth and tenth grades, so that students will then have a fair shot at success when provided with an AP opportunity.

Just as important: as the racial/ethnic demographics of America's classrooms continue to shift, major initiatives must be enacted to build schools' capacities to offer AP courses to the steadily diversifying student population.

Figure 5. The Class of 2005: Race/Ethnicity of AP Examinees vs. Graduating Seniors in U.S. Public Schools

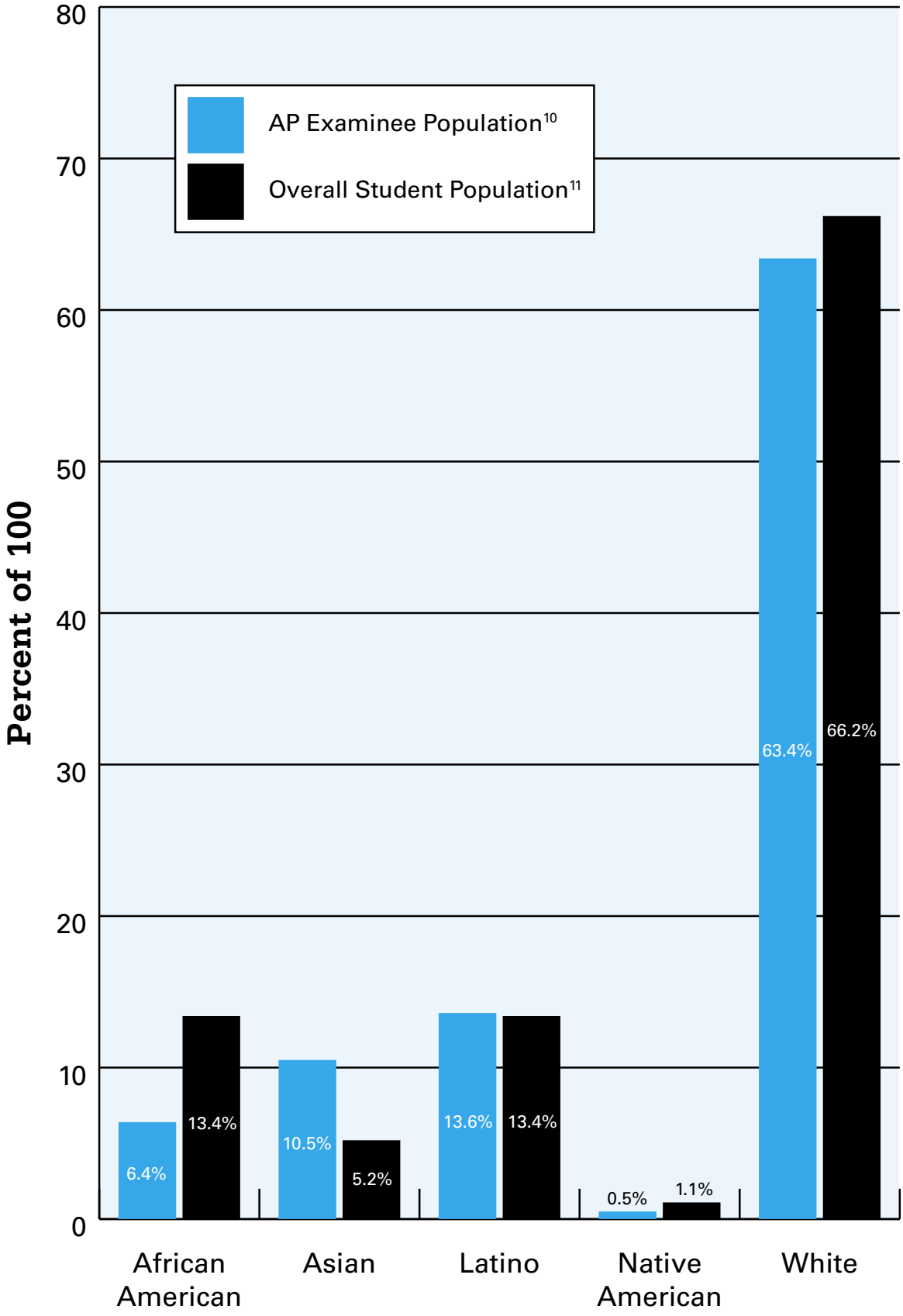


Table 2: *Equity Gaps: Racial/Ethnic Demographics of Total Student Population[11] vs. AP Examinees[10] (U.S. Public Schools, Class of 2005)*

	African American Students			Latino Students			Native American Students		
State	% of Student Population	% of AP Examinees	Equity Gap Eliminated	% of Student Population	% of AP Examinees	Equity Gap Eliminated	% of Student Population	% of AP Examinees	Equity Gap Eliminated
Alabama	32.2%	14.7%		1.2%	1.5%	✓	1.3%	0.5%	
Alaska	3.6%	1.1%		3.0%	2.8%		19.9%	4.6%	
Arizona	4.7%	2.0%		29.0%	17.5%		5.8%	2.0%	
Arkansas	21.0%	13.3%		4.0%	3.7%		0.5%	1.1%	✓
California	7.3%	3.5%		35.5%	30.4%		0.9%	0.4%	
Colorado	4.5%	2.9%		16.4%	9.7%		0.9%	0.7%	
Connecticut	11.1%	4.4%		10.0%	6.5%		0.2%	0.2%	✓
Delaware	27.5%	11.0%		4.4%	3.6%		0.4%	0.6%	✓
District of Columbia	81.7%	55.1%		9.6%	16.2%	✓	*	0.3%	*
Florida	19.7%	10.0%		19.5%	23.4%	✓	0.3%	0.4%	✓
Georgia	32.4%	19.9%		3.9%	3.4%		0.1%	0.3%	✓
Hawaii	1.5%	1.6%	✓	4.2%	2.8%		0.3%	0.7%	✓
Idaho	0.5%	0.2%		7.5%	3.9%		1.0%	0.5%	
Illinois	14.3%	7.2%		11.7%	10.2%		0.3%	0.2%	
Indiana	7.9%	3.6%		2.9%	2.3%		0.2%	0.3%	✓
Iowa	2.6%	1.0%		2.9%	2.1%		0.5%	0.2%	
Kansas	6.6%	3.4%		6.7%	4.2%		1.1%	0.5%	
Kentucky	8.6%	4.5%		1.9%	1.3%		0.4%	0.4%	✓
Louisiana	39.8%	16.1%		1.7%	3.0%	✓	0.7%	0.2%	
Maine	1.4%	0.3%		0.7%	0.8%	✓	0.5%	0.7%	✓
Maryland	33.1%	14.1%		4.9%	5.5%	✓	0.4%	0.3%	
Massachusetts	8.3%	3.2%		7.4%	4.4%		0.5%	0.2%	
Michigan	13.6%	4.7%		2.7%	2.3%		0.9%	0.4%	
Minnesota	4.5%	1.5%		2.5%	1.6%		1.2%	0.3%	
Mississippi	46.0%	31.9%		0.5%	1.0%	✓	0.1%	0.7%	✓
Missouri	13.3%	4.0%		1.9%	1.8%		0.3%	0.5%	✓
Montana	0.4%	0.1%		2.1%	1.0%		7.2%	1.3%	
Nebraska	4.7%	2.0%		5.4%	3.7%		0.8%	0.6%	
Nevada	8.1%	3.3%		19.4%	12.6%		1.4%	0.6%	
New Hampshire	1.1%	0.5%		1.8%	1.3%		0.2%	0.0%	
New Jersey	14.7%	5.0%		13.6%	9.5%		0.2%	0.1%	
New Mexico	2.2%	0.9%		45.2%	36.6%		11.0%	5.7%	
New York	14.0%	6.5%		11.1%	10.4%		0.3%	0.3%	✓
North Carolina	26.8%	12.6%		4.1%	3.0%		1.1%	0.6%	
North Dakota	0.9%	0.1%		1.1%	0.6%		5.9%	0.9%	
Ohio	10.5%	5.7%		1.4%	1.6%	✓	0.1%	0.2%	✓
Oklahoma	9.4%	5.4%		5.5%	5.3%		18.3%	9.1%	
Oregon	2.0%	0.7%		8.3%	4.4%		1.6%	0.8%	
Pennsylvania	11.3%	4.3%		3.1%	2.2%		0.1%	0.2%	✓
Rhode Island	8.3%	2.3%		11.8%	3.7%		0.4%	0.0%	
South Carolina	37.8%	15.5%		2.2%	2.2%	✓	0.2%	0.3%	✓
South Dakota	0.8%	1.1%	✓	1.3%	1.0%		4.6%	0.2%	
Tennessee	19.9%	13.8%		1.2%	2.1%	✓	0.1%	0.4%	✓
Texas	13.5%	6.8%		35.0%	32.2%		0.3%	0.5%	✓
Utah	0.8%	0.3%		7.4%	5.1%		1.3%	0.3%	
Vermont	0.5%	0.2%		0.6%	1.3%	✓	0.2%	0.1%	
Virginia	24.6%	9.4%		5.4%	5.1%		0.3%	0.4%	✓
Washington	4.4%	2.2%		8.1%	5.6%		2.0%	0.7%	
West Virginia	3.9%	1.5%		0.4%	1.0%	✓	0.1%	0.4%	✓
Wisconsin	5.3%	1.9%		3.4%	2.0%		1.0%	0.5%	
Wyoming	1.2%	0.3%		6.0%	2.4%		1.7%	0.8%	
Nation	**13.4%**	**6.4%**		**13.4%**	**13.6%**	✓	**1.1%**	**0.5%**	

* Precise Native American student enrollments for the District of Columbia are not available from the Western Interstate Commission for Higher Education.

Advanced Placement **Report to the Nation 2006**

Part II:

AP Subject Areas: Participation, Performance, and Feedback for Educators

An Overview of Part II of the *Advanced Placement Report to the Nation*

Total secondary school enrollments, and particularly enrollments disaggregated by race/ethnicity, are not consistently available for nonpublic schools. Accordingly, Part I of this *Report*, designed for state and national policymakers and leaders, focused only on public schools in its state-by-state tables.

Part II of this *Report* broadens its focus to examine AP participation globally, and not just the participation within U.S. public schools. Accordingly, the data in Part II include the thousands of U.S. nonpublic schools that offer AP, as well as the hundreds of schools overseas that provide AP courses for their students.

In Part II, we recognize the schools in each AP discipline that in 2005 achieved the tremendous success of helping a larger proportion of their total school population succeed on a particular AP Exam than any other school in the world. See below for an index to the schools cited in this *Report*.

In addition, for the first time in this annual *Report*, we are including feedback on student learning for AP teachers and administrators. This feedback is an excerpt from a much longer and more substantive exam results commentary available to the public on the AP Central® Web site. We encourage all AP teachers and administrators to avail themselves of the complete commentary, and to use it to revise and focus syllabi as necessary to address weaknesses or deficiencies in the curriculum.

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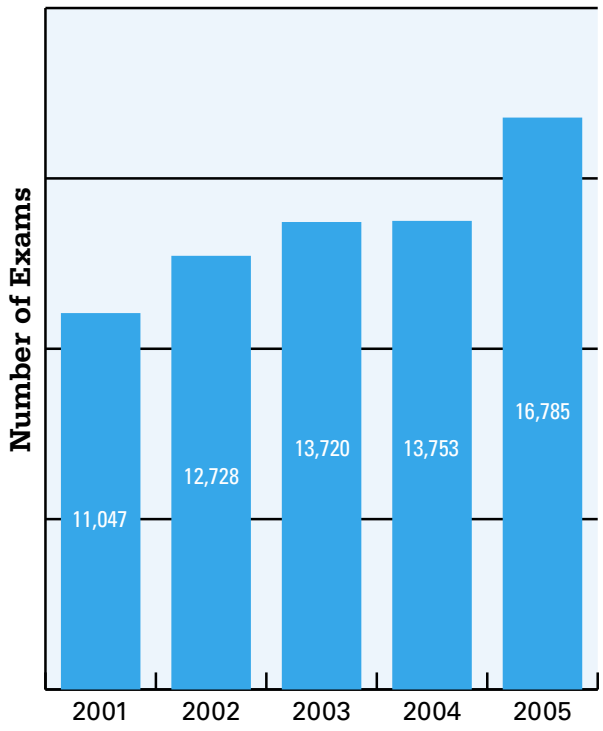
AP Art History

AP Art History
Number of Exams, 2001–2005



Exemplary AP Art History Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Art History:

Small-size school (<300 students in grades 10–12):
Georgiana Bruce Kirby Preparatory School (Santa Cruz, CA)

- Head of School: Joshua Karter
- AP Teacher: Jeff House
- Teachers of Foundation Courses: Susana Terrell, Maura Smith, Joe Poirot

Medium-size school (300–799 students in grades 10–12):
The Marist School (Atlanta, GA)

- Head of School: Fr. Joel Konzen, SM
- AP Teacher: Michael Prieze

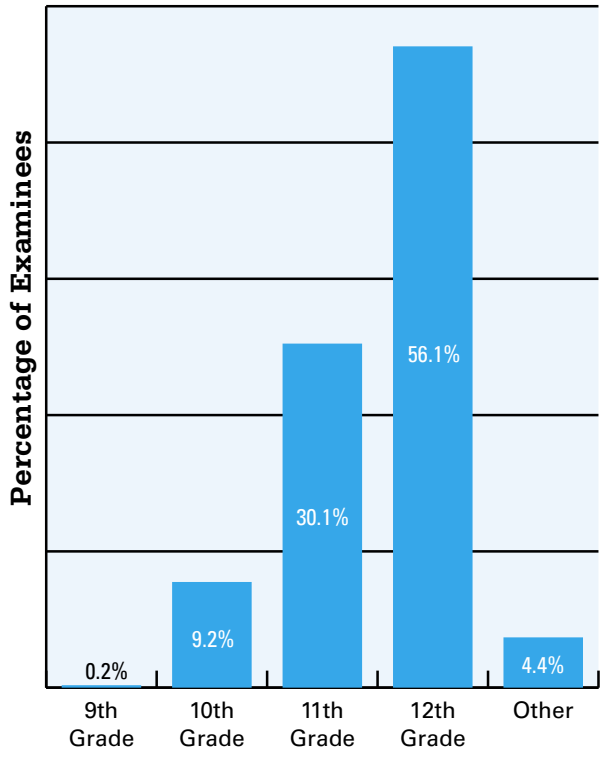
Large-size school (800+ students in grades 10–12):
Montgomery High School (Skillman, NJ)

- Head of School: James H. Misek
- AP Teacher: Frank Chmiel, Larry Krieger

School with the Largest Number of Latino Students Scoring 3+:
Barbara Goleman High School (Miami, FL)

- Head of School: Marcos M. Moran
- AP Teacher: Gretchen Marfisi

AP Art History
Examinees by Grade Level, 2005

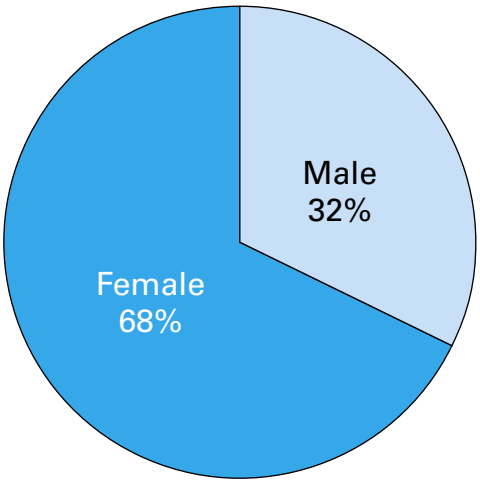


AP Grade Distribution, 2005

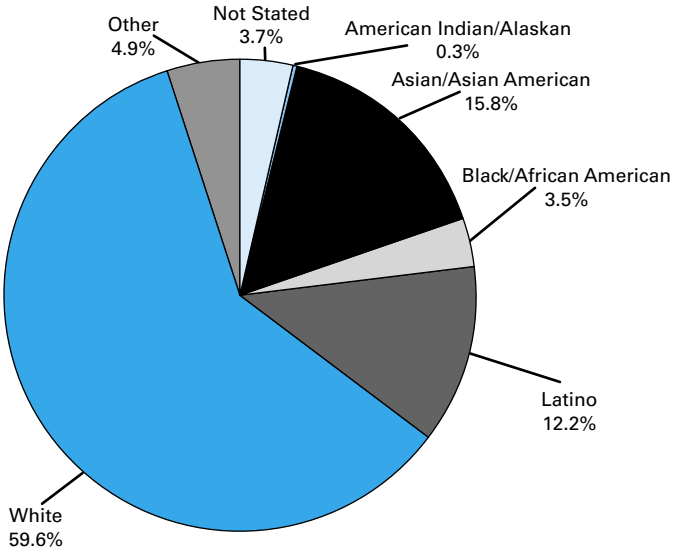
Exam Grade	Number of Examinees	% At
Score of 5	2,323	13.8%
Score of 4	4,237	25.2%
Score of 3	5,105	30.4%
Score of 2	2,951	17.6%
Score of 1	2,169	12.9%
	16,785	100.0%

Number of Schools Offering This Course: 1,230

AP Art History
Examinees by Gender, 2005



AP Art History
Examinees by Race and Ethnicity, 2005



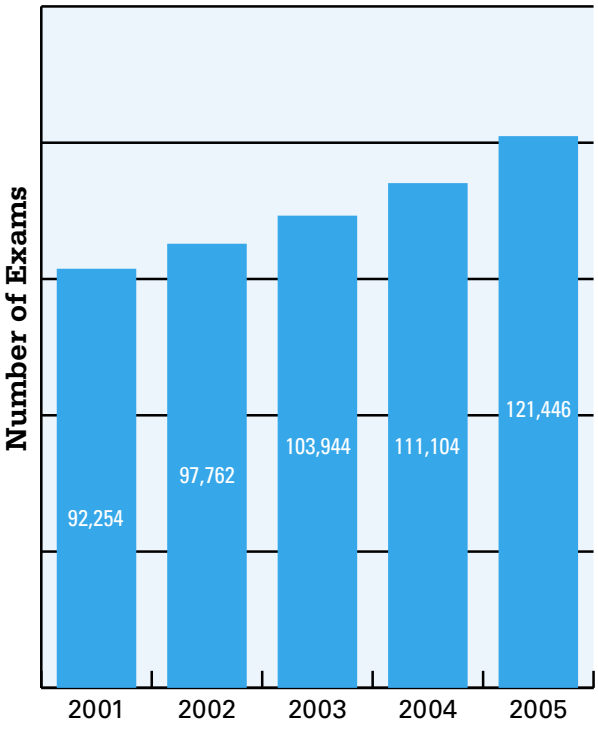
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, available in its entirety as a free download from the AP Central Web site.

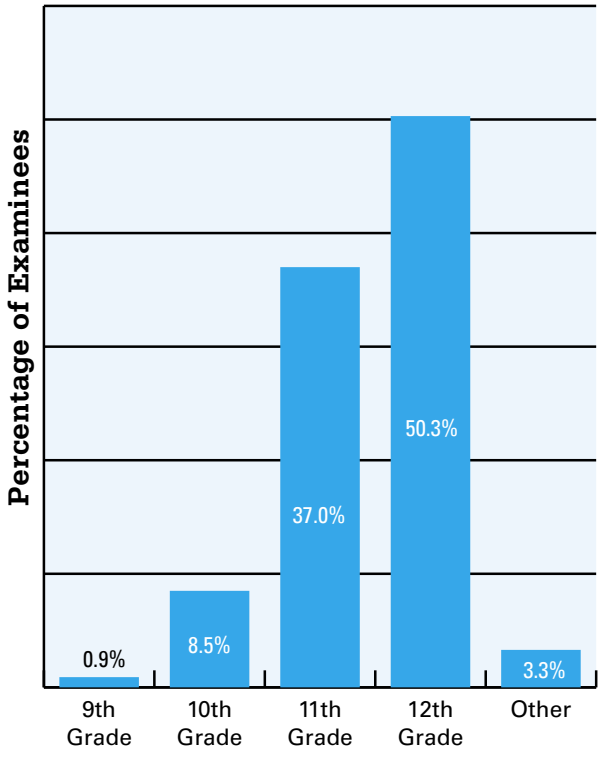
- The thousand years of medieval art in the West is a general content area that needs to be taught more extensively and fully than is currently happening.
- While a student only needs one text, each AP teacher should use more than one textbook in preparing their lessons and presentations to ensure that they teach any period of Art History fully.
- Students must know art historical periods and be able to link discrete images to the concerns (cultural, social, political, etc.) of a particular era. Too many students were unable to situate a particular work within its period or movement (Renaissance, Rococo, Classical, Hellenistic, Romantic, etc.).
- The text-based question, now in its fourth year, remains difficult for students. All major survey textbooks contain primary source materials, and these should be integrated into the teaching of each period. Students' inability to deal with primary documents is a recurrent problem.
- Students are doing better than ever before on questions about global art (beyond the European tradition), and it is clear that teachers are addressing these aspects of the course more fully than in the past.

AP Biology

AP Biology
Number of Exams, 2001–2005



AP Biology
Examinees by Grade Level, 2005



Exemplary AP Biology Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Biology:

Small-size school (<300 students in grades 10–12):
Keystone School (San Antonio, TX)

- Heads of School: Hugh McIntosh (Headmaster), Suzanne Elizondo (Principal)
- AP Teacher: Layne Steinhelper
- Teacher of Foundation Course: Donald Howk

Medium-size school (300–799 students in grades 10–12):
The Bishop's School (La Jolla, CA)

- Head of School: Michael W. Teitelman
- AP Teachers: Julie Zedalis, Mary Fran Cullen
- Teacher of Foundation Course: Ted Torretti

Large-size school (800+ students in grades 10–12):
Monta Vista High School (Cupertino, CA)

- Head of School: April L. Scott
- AP Teachers: Tim Krieger, Pamela Tsai, Debbie Frazier
- Teachers of Foundation Courses: Lani Giffin, Lora Lerner, Hanah Ahn, Joanne Shimoguchi, Katheryn McElwee

School with the Largest Number of African American Students Scoring 3+: Brooklyn Technical High School (Brooklyn, NY)

- Head of School: Dr. Lee D. McCaskill
- AP Teacher: Dr. Tzall, Dr. Stein, Mr. Harber, Mr. Morgan

School with the Largest Number of Latino Students Scoring 3+:
Coral Reef Senior High School (Miami, FL)

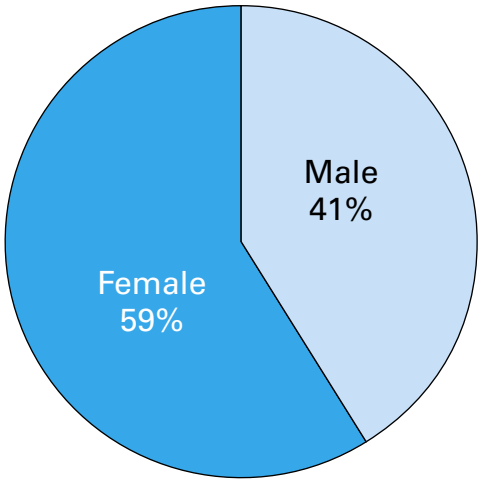
- Head of School: Adrianne Leal
- AP Teachers: Melissa Duart, Laura Vogl

AP Grade Distribution, 2005

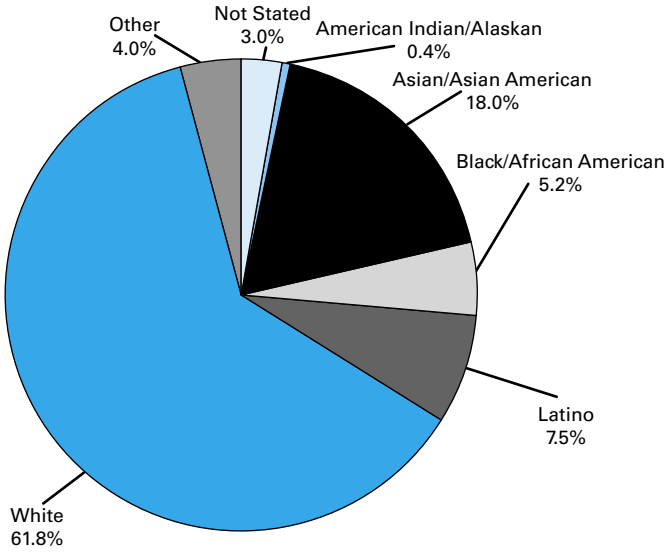
Exam Grade	Number of Examinees	% At
Score of 5	22,055	18.2%
Score of 4	24,448	20.1%
Score of 3	27,820	22.9%
Score of 2	28,357	23.3%
Score of 1	18,766	15.5%
	121,446	100.0%

Number of Schools Offering This Course: 7,727

AP Biology
Examinees by Gender, 2005



AP Biology
Examinees by Race and Ethnicity, 2005



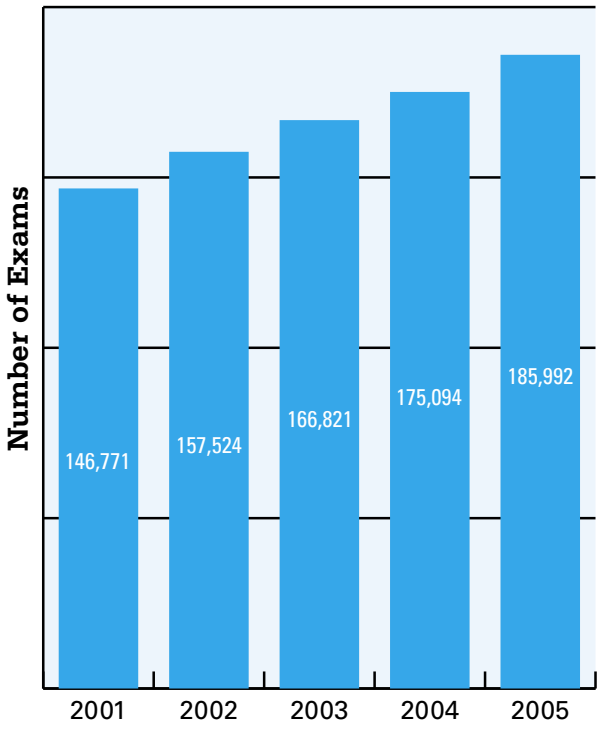
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, available in its entirety as a free download from the AP Central Web site.

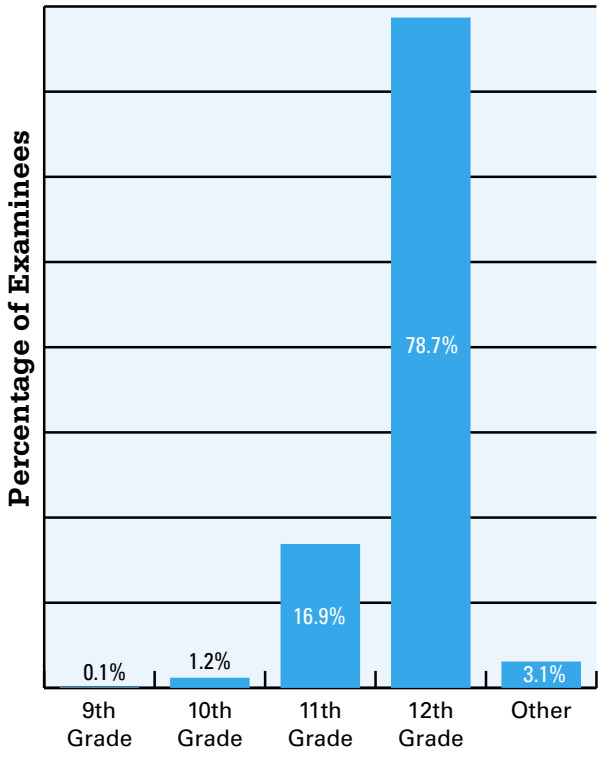
- Remember to teach across the themes and to have students reflect on and discuss how the themes are integrated in the study of biology.
- Many students appeared to conceptualize the biology of plants based on their knowledge of animals. For example, it was common for students to define pollen as sperm. Similarly, they expected meiosis to lead directly to gametes rather than to multicellular gametophytes that form gametes by mitosis. Include plants and plant evolution in the course syllabus.
- Evolution, as the central theme in biology, should be integrated into each unit that is presented; otherwise, much of biology becomes an endless series of facts and figures without unification. The success of angiosperms, for example, only makes sense in light of their unique evolutionary history.
- A common group of misperceptions included the idea that antibodies are on the same level of organization as the cell, that antibodies are long-lived, and that antibodies are an active part of the nonspecific immune system.
- Continue to have students practice making graphs, identifying variables, and understanding differences between constants and controls. Accurate labeling should be stressed. When analyzing and explaining experimental data, emphasize the importance of cause, effect, and result. Have students practice designing and performing their own experiments. Also, stress the use of proper units (e.g., rate/min.) and analysis of results with explanations connected to the data.
- Developing the skills to write coherent biology essays requires practice. Give students the opportunity to answer essay questions throughout the year, and score their responses with the same rigor as they will be scored on the AP Biology Exam. Finally, remind students to address all parts of the question.

AP Calculus AB

AP Calculus AB
Number of Exams, 2001–2005



AP Calculus AB
Examinees by Grade Level, 2005



Exemplary AP Calculus AB Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Calculus AB:

Small-size school (<300 students in grades 10–12): Polytechnic School (Pasadena, CA)

- Head of School: Deborah E. Reed
- AP Teacher: Jonathan Fay
- Teacher of Foundation Course: Laurianne Williams

Medium-size school (300–799 students in grades 10–12): The Harker School (San Jose, CA)

- Heads of School: Richard A. Hartzell (Head of School), Christopher Nikoloff (Director)
- AP Teachers: Danae Romrell, Judy James, Anthony Silk, Bradley Stoll

Large-size school (800+ students in grades 10–12): Harvard Westlake School (North Hollywood, CA)

- Head of School: Harry L. Salamandra Jr.
- AP Teachers: Catherine Campbell, Beverly J. Feulner, Suzanne Lee, James J. O'Connor, Jeffrey S. Snapp
- Teachers of Foundation Courses: Darin Beigie, Josh B. Budde, Kay Carlson, Paula Evans, Christopher Dean Gragg, Jacob J. Hazard, Roderick Huston, Dvora Inwood, Kanwaljit S. Kochar, Matthew Maring, Jane Balkin Matz, Michael Mori, Kent Nealis, Tim O'Connell, Susan Olson, Robert A. Pavich, Megan C. Phillips, Daniel Harmon Reeves, Karen Salerno, Karen Stern, William C. Thill, Kevin Weis

School with the Largest Number of African American Students Scoring 3+: Brooklyn Technical High School (Brooklyn, NY)

- Head of School: Dr. Lee D. McCaskill
- AP Teachers: Michael Elkes, Chang Tao, Matthew Natale, Sherwin Wise

School with the Largest Number of Latino Students Scoring 3+: Miami Coral Park Senior High School (Miami, FL)

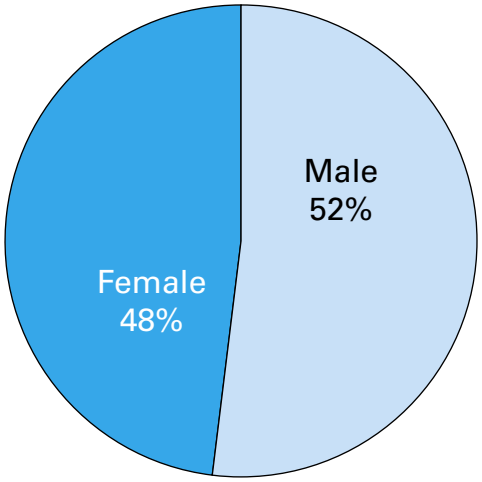
- Head of School: Dr. Nick JacAngelo
- AP Teacher: Mercedes Revilla

AP Grade Distribution, 2005

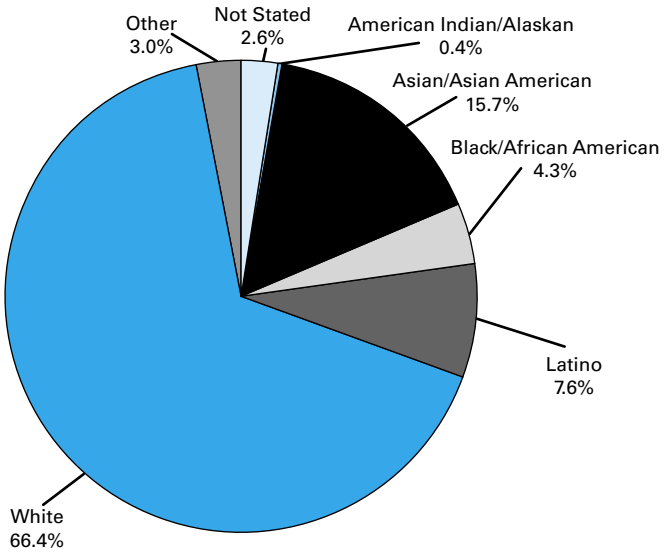
Exam Grade	Number of Examinees	% At
Score of 5	38,539	20.7%
Score of 4	36,347	19.5%
Score of 3	33,006	17.7%
Score of 2	31,141	16.7%
Score of 1	46,959	25.2%
	185,992	100.0%

Number of Schools Offering This Course: 11,183

AP Calculus AB
Examinees by Gender, 2005



AP Calculus AB
Examinees by Race and Ethnicity, 2005



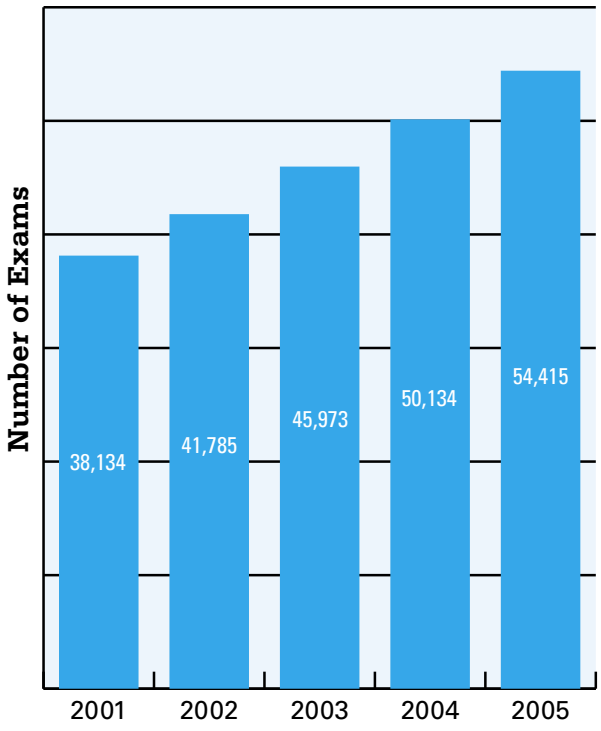
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

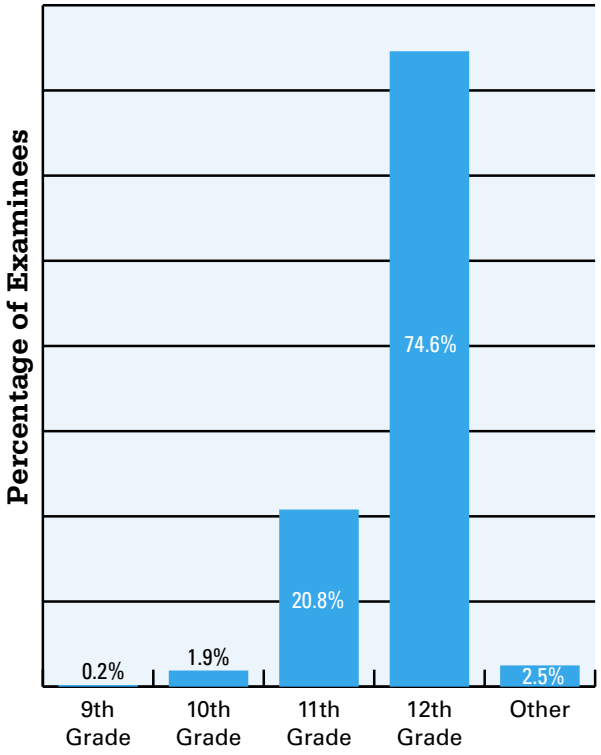
- Emphasize that careful and explicit explanations are required to link the sign of the derivative to the behavior of the function. Indicating precise intervals for which properties hold must be done explicitly in interval or inequality notation and cannot be interpreted from a sign chart. Sign charts without accompanying explanatory text cannot stand alone as justification.
- Give students practice with AP Calculus free-response questions that involve rates and require construction of functions that describe how amounts change over time (see the 2005 Form B question AB2/BC2 and the 2002 question AB2/BC2, for example).
- Give students more practice in finding global extrema and encourage them to test all candidates by comparing the function values at each of the critical points and endpoints to determine the absolute maximum and absolute minimum function values. This method is often much neater and easier than using a derivative test.
- Give students more practice with functions that are given numerically at a finite number of domain values. Students must learn that under those circumstances it is not valid to create and then reason from a continuous function.
- Help students develop a deeper understanding of estimation methods. Place less emphasis on the Trapezoidal Rule (the formula) and more emphasis on the trapezoidal method.
- Explain the change in the sign chart policy. Although this was communicated to teachers in various ways (on AP Central, at the 2004 AP Calculus Reading, in College Board workshops, and via the AP participation mailing to schools), it is clear that some students still do not understand the new policy.
- Provide students with opportunities to practice written communication skills, since the AP Calculus Exams are requiring more justifications.
- Give students more practice in working with functions defined by a definite integral with a variable limit.
- Despite the recent emphasis on multiple ways of presenting a function, many students had difficulty with a tabular form where they were unable to determine an explicit expression.

AP Calculus BC

AP Calculus BC
Number of Exams, 2001–2005



AP Calculus BC
Examinees by Grade Level, 2005



Exemplary AP Calculus BC Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Calculus BC:

Small-size school (<300 students in grades 10–12): Keystone School (San Antonio, TX)

- Heads of School: Hugh McIntosh (Headmaster), Suzanne Elizondo (Principal)
- AP Teacher: Deborah Preston
- Teacher of Foundation Course: Shirley Rich

Medium-size school (300–799 students in grades 10–12): Korean Minjok Leadership Academy (Kangwon, South Korea)

- Head of School: Donhee Lee
- AP Teachers: Ha Dong Woo, Chun Hyun Ku
- Teachers of Foundation Courses: Changsoo Bahn, JaeJun Sim

Large-size school (800+ students in grades 10–12): Thomas Jefferson High School for Science and Technology (Alexandria, VA)

- Head of School: Elizabeth V. Lodal
- AP Teachers: Cathy Eagen, P. Gabriel, K. Parnell
- Teachers of Foundation Courses: S. Webb, M. Spoden, S. Torbert

School with the Largest Number of Latino Students Scoring 3+: G. Holmes Braddock High School (Miami, FL)

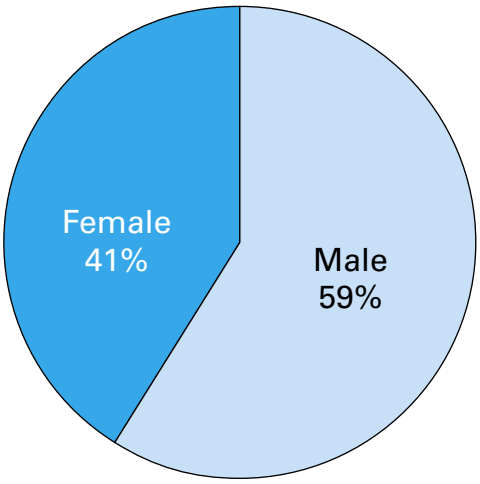
- Head of School: Manuel S. Garcia
- AP Teacher: Teresita Lemus
- Teacher of Foundation Course: Teresita Lemus

AP Grade Distribution, 2005

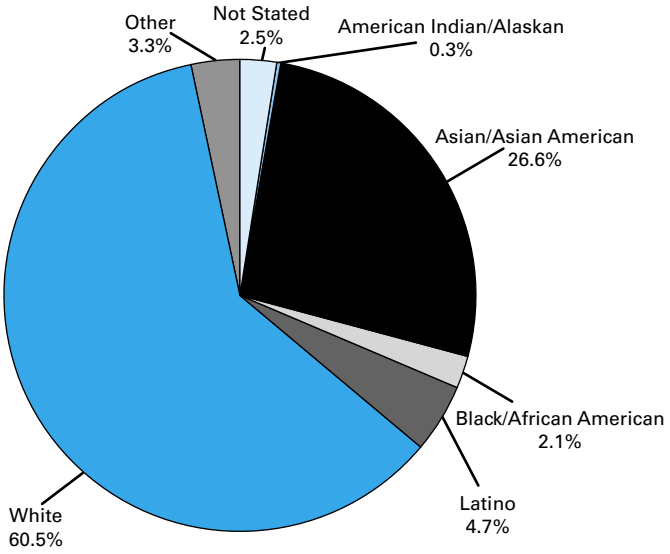
Exam Grade	Number of Examinees	% At
Score of 5	23,877	43.9%
Score of 4	9,237	17.0%
Score of 3	10,929	20.1%
Score of 2	3,695	6.8%
Score of 1	6,677	12.3%
	54,415	100.0%

Number of Schools Offering This Course: 4,191

AP Calculus BC
Examinees by Gender, 2005



AP Calculus BC
Examinees by Race and Ethnicity, 2005

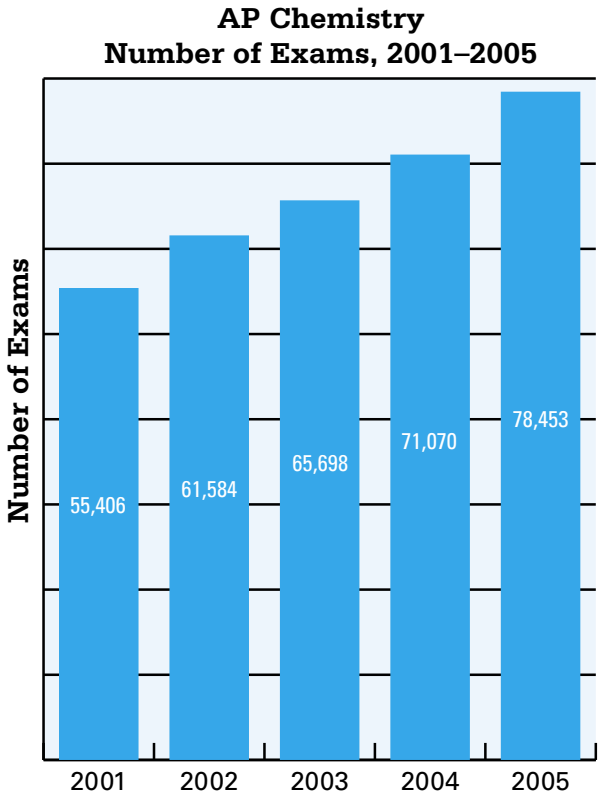


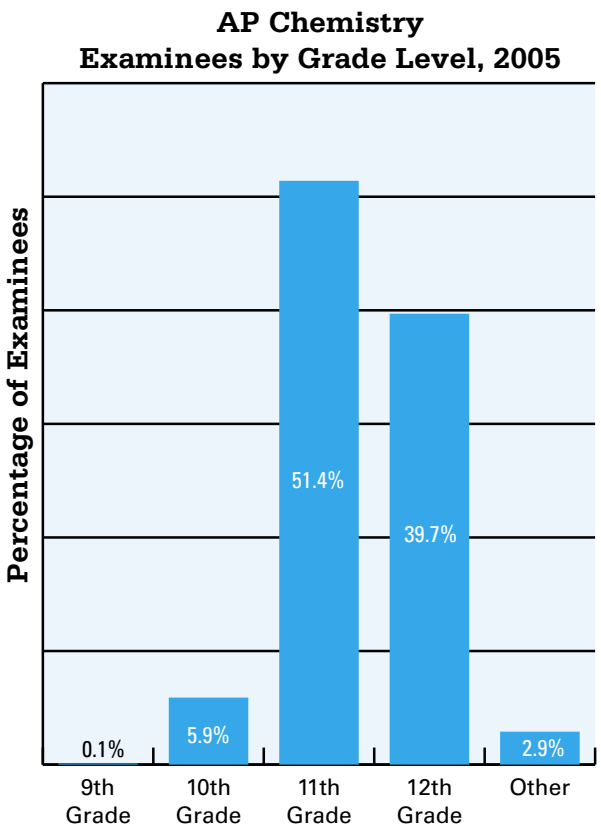
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- Emphasize the method for finding area in polar coordinates. Some students were unfamiliar with this standard procedure.
- Help students understand the difference between a relative and an absolute argument and the various means by which a global argument can be made. As has been the case on past AP Calculus Exams, students often had difficulty distinguishing between a local argument and a global one when dealing with extrema. Teachers and students should be familiar with the method of testing all candidates, as that is often the easiest way to make an argument about global extrema.
- Give students practice with performing Euler's method calculations without a calculator, since they will be expected to do this on the exam. Assign problems that require students to work with decimals and fractions by hand throughout the year.
- Teach students how to use concavity to determine the nature of an Euler's method estimate.
- Explain the change in the sign chart policy. Although this was communicated to teachers in various ways (on AP Central, at the 2004 AP Calculus Reading, in College Board workshops, and via the AP participation mailing to schools), it is clear that some students still do not understand the new policy.
- Emphasize techniques and methods that will give students experience with writing and manipulating power series, particularly ones that have only even or only odd powers. The communication of precise mathematics with standard language and notation is very important in a series problem. Students need to be comfortable using both limit and summation notation accurately.
- Help students understand all aspects of series problems. Many students wrote only the terms of the series when they were referring to the entire series. Series questions require that students know and understand a variety of convergence tests, and complete arguments must include a reference to appropriate convergence and divergence tests. See the current *AP Calculus AB and Calculus BC Course Description* for a complete list of series topics that BC students should know. In addition, students must present a complete endpoint analysis when asked for the interval of convergence of a given power series.

AP Chemistry





Exemplary AP Chemistry Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Chemistry:

Small-size school (<300 students in grades 10–12):
University School of Nashville (Nashville, TN)

- Heads of School: Steven Robins (Principal), Vince Durnan (Director)
- AP Teacher: George Flatan
- Teacher of Foundation Course: Lorna Morris

Medium-size school (300–799 students in grades 10–12):
The Harker School (San Jose, CA)

- Heads of School: Richard A. Hartzell (Head of School), Christopher Nikoloff (Director)
- AP Teachers: Rachel Freed, Robbie Korin

Large-size school (800+ students in grades 10–12):
Thomas Jefferson High School for Science and Technology (Alexandria, VA)

- Head of School: Elizabeth V. Lodal
- AP Teachers: Omar Acio, Ashley Jones, Brian Kennedy

School with the Largest Number of Latino Students Scoring 3+:
Miami Palmetto Senior High School (Miami, FL)

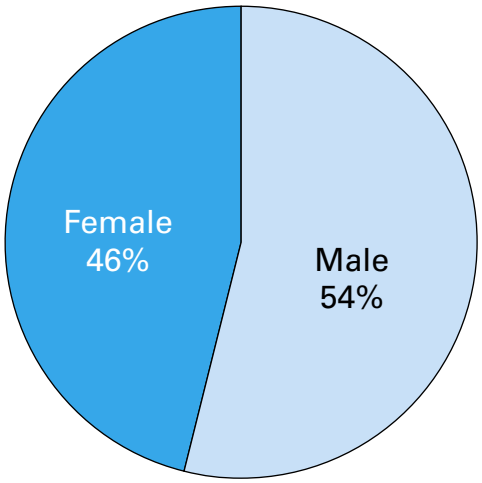
- Heads of School: Howard Weiner, Janet Hupp
- AP Teacher: Ely J. Salon
- Teachers of Foundation Courses: Susie Kamons, Monica Avalos, Linda Bray

AP Grade Distribution, 2005

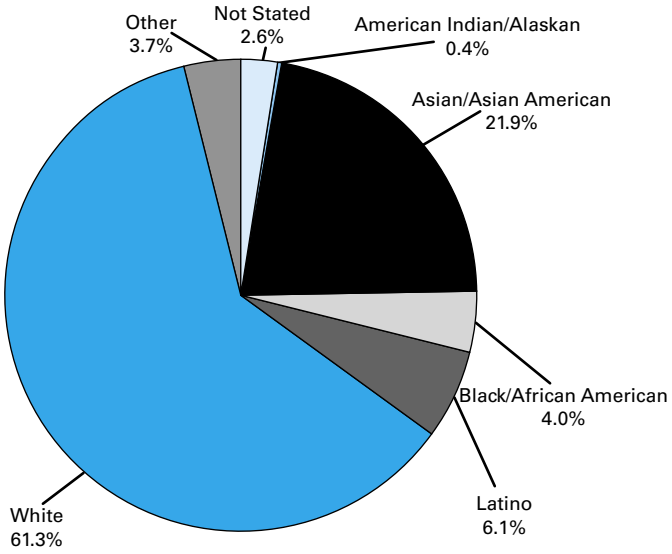
Exam Grade	Number of Examinees	% At
Score of 5	11,796	15.0%
Score of 4	14,340	18.3%
Score of 3	17,775	22.7%
Score of 2	15,493	19.7%
Score of 1	19,049	24.3%
	78,453	100.0%

Number of Schools Offering This Course: 6,150

AP Chemistry
Examinees by Gender, 2005



AP Chemistry
Examinees by Race and Ethnicity, 2005



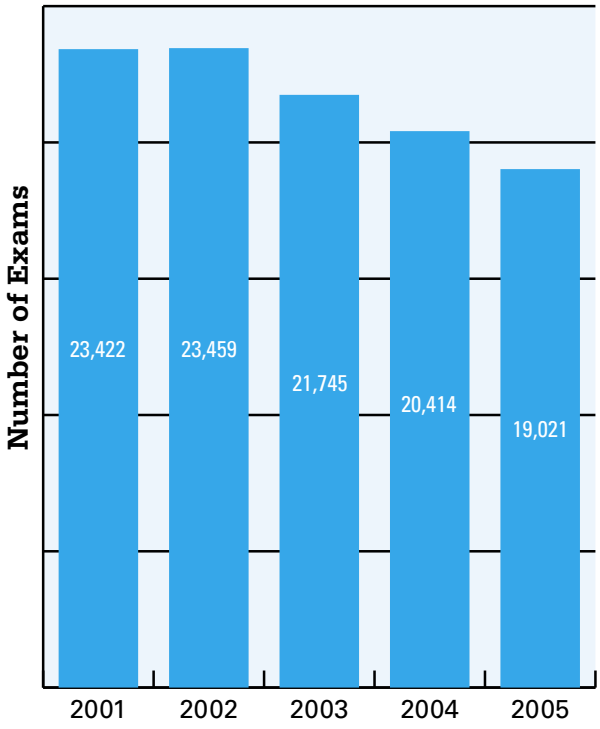
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- Reinforce stoichiometry skills throughout the year, making the point that mole-based calculations are a component of most quantitative chemistry topics.
- Drill students in the skill of unit analysis to produce the correct units for the rate constant *k*.
- Assign more varied types of kinetics problems, including those with integrated rate law data.
- Teach students to recognize the difference between a double replacement equation and a net ionic equation.
- Review chemical equations throughout the year in connection with other materials such as synthesis reactions in connection with periodicity and properties of elements, decomposition reactions in connection with thermodynamics and entropy, redox reactions in connection with electrochemistry, acid/base reactions in connection with equilibrium, complex ion and Lewis acid/base reactions in connection with molecular structure and equilibrium, and combustion reactions in connection with thermochemistry.
- Stress that molecules are three-dimensional and that bond angles should reflect this.
- Have students practice determining hybridization and number of sigma and pi bonds in molecules.
- Have students practice calculating formal charge in order to determine the best Lewis structure for a molecule.
- Emphasize vocabulary: atom, ion, formula unit, molecule, atomic versus ionic radius, intermolecular versus intramolecular, ionic versus covalent, isotope, etc.
- Continue to discuss the relationship between chemical principles and experimental/measured properties. It was difficult to discern in many student responses if they understood the relationship.
- Teachers should stress that the arrangement of the periodic table is a consequence of the structure of the atom, and that atomic structure is **not** a result of placement on the periodic table. (Generally, students attributed properties in all parts of a question on this topic to the position of the elements on the periodic table rather than addressing the question in terms of chemical principles.)

AP Computer Science A and AB

AP Computer Science A and AB
Number of Exams, 2001–2005



Exemplary AP Computer Science A and AB Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Computer Science A and AB:

Small-size school (<300 students in grades 10–12):
Talented & Gifted Magnet High School (Dallas, TX)

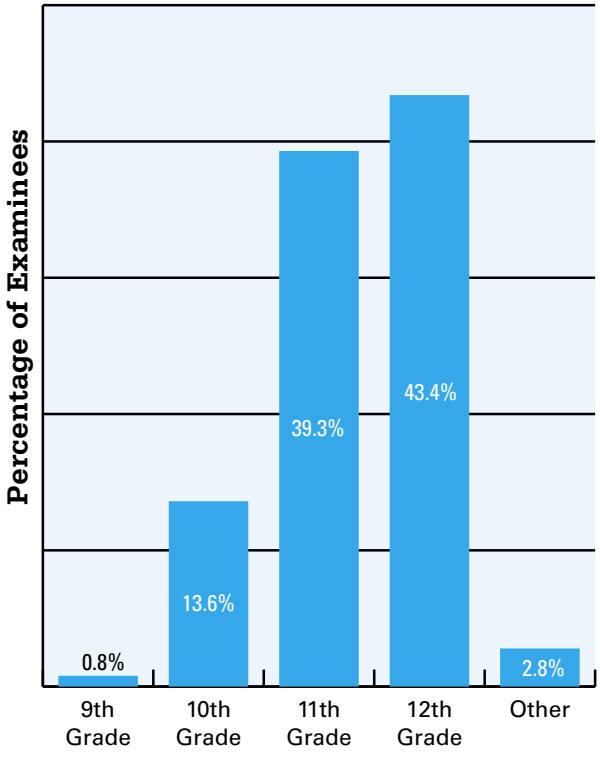
Medium-size school (300–799 students in grades 10–12):
Edgemont High School (Scarsdale, NY)

- Head of School: Mr. William Manfredonia
- AP Teacher: Martin Rosenberg

Large-size school (800+ students in grades 10–12):
Troy High School (Fullerton, CA)

- Head of School: Charles F. Maruca
- AP Teachers: Don Allen, David Wittry
- Teacher of Foundation Course: Laurie Downum, Kent Goodman, Mike Reid, Paul Rodriguez, Don Allen, David Wittry

AP Computer Science A and AB
Examinees by Grade Level, 2005

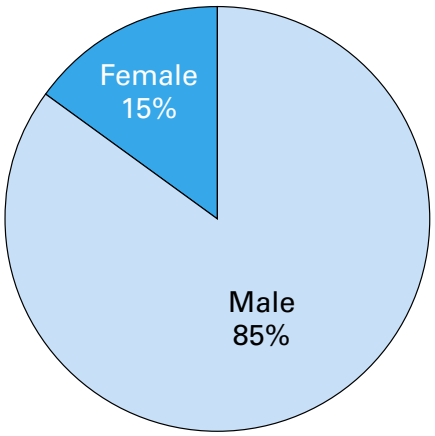


AP Grade Distribution, 2005

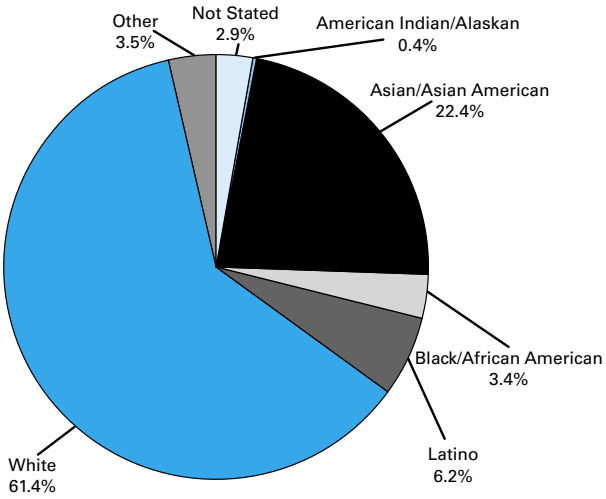
Exam Grade	Number of Examinees	% At
Score of 5	4,086	21.5%
Score of 4	4,230	22.2%
Score of 3	3,020	15.9%
Score of 2	1,913	10.1%
Score of 1	5,772	30.3%
	19,021	100.0%

Number of Schools Offering This Course: 2,138

AP Computer Science A and AB Examinees by Gender, 2005



AP Computer Science A and AB Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in these AP courses are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

Computer Science A:

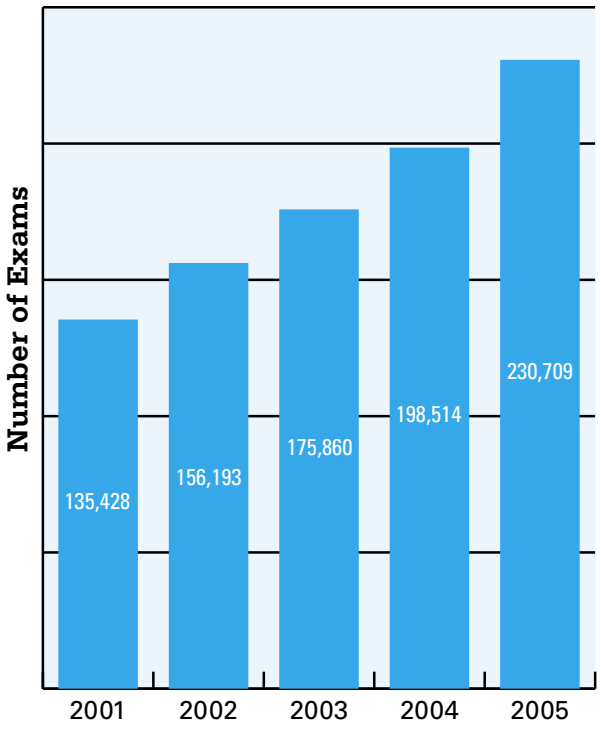
- Familiarize students with both arrays and ArrayLists, as both are likely to be seen on future exams. In particular, arrays are commonly used when the size of a list is fixed, while an ArrayList is commonly used when the list size is dynamic. Students must be careful to recognize these two different structures and use the correct form of access for each. They must also be comfortable with interacting classes, where a simple class is provided and another class stores and manipulates objects of that simple class. In addition, the mechanics of creating objects using "new" should be well understood.
- In general, students need to be more comfortable with inheritance and polymorphism. They need to see examples of inheritance hierarchies and be able to recognize when fields and methods can be inherited and when they need to be overridden. In particular, students should be aware of the limitations of private fields when implementing inheritance, and the use of super to call methods from a parent class. Design questions that require students to make choices in the creation of classes or data structures are likely to appear on future exams. Students must be comfortable with designing classes from scratch.
- Code reuse and abstraction are important concepts on the AP Computer Science A Exam.

Computer Science AB:

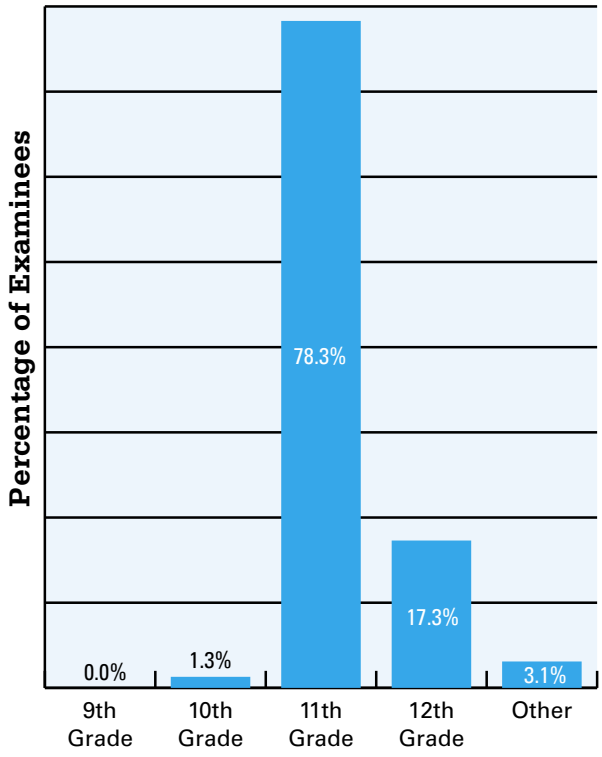
- Some teachers may have de-emphasized linked structures in their classes. While many Java collection classes have been added to the curriculum, it is important to note that students are still expected to construct and manipulate linked lists (using ListNode) and trees (using TreeNode). For trees, traversals will commonly utilize recursion, although not always. Students should be comfortable in creating and tracing recursive methods.
- Design questions, which require students to make choices in the creation of classes or data structures, are likely to appear on future exams. Students must be familiar with different data structures and their performance and be able to select among them, given program specifications. They also need to be aware that some questions may require descriptive answers, so they must be able to write clear and focused responses.
- Computer Science AB students were familiar with the case study and were capable of using inheritance to build upon existing code. There will be a free-response question and several multiple-choice questions based on the case study every year. Teachers should continue to emphasize the case study, both as a teaching tool and as required background for the exam.

AP English Language and Composition

AP English Language and Composition
Number of Exams, 2001–2005



AP English Language and Composition
Examinees by Grade Level, 2005



Exemplary AP English Language and Composition Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP English Language and Composition:

Small-size school (<300 students in grades 10–12):
Keystone School (San Antonio, TX)

- Heads of School: Hugh McIntosh (Headmaster), Suzanne Elizondo (Principal)
- AP Teachers: Suzanne Elizondo, Milinda Schwab
- Teacher of Foundation Course: Milinda Schwab

Medium-size school (300–799 students in grades 10–12):
St. John's School (Houston, TX)

- Head of School: John Allman
- AP Teachers: Dwight Raulston, Harriet Reynolds, Jim Saltzman, Bryan Rutledge
- Teachers of Foundation Courses: Z. Bart Thornton, Carol George, Dan Alig, Angie Flowers, Ruth Bellows

Large-size school (800+ students in grades 10–12):
Harvard Westlake School (North Hollywood, CA)

- Head of School: Harry L. Salamandra Jr.
- AP Teachers: Lisa Foster, Julie Kang, Jeffrey Kwitny, Jocelyn Medawar-Turner, Jeremy Yetman Michaelson, Eric Schrode, Martha Wheelock
- Teachers of Foundation Courses: Amanda F. Angle, Stephen Bellon, Stephen Chae, Michael Anthony Chavez, Jennifer Nassar Dohr, Ellen D. Ehrlich, Jordan Ethe, Stephanie Friedman, Julia A. Grody, Chitra Kallay, Paul Mastin, Jane Balkin Malz, Francis Norris, Noah B. Salamon, Jonathan Wimbish

School with the Largest Number of African American Students Scoring 3+: Morgan Park High School (Chicago, IL)

- Head of School: Dr. Beryl Shingles
- AP Teacher: Marilyn Jackson

School with the Largest Number of Latino Students Scoring 3+:
Coral Reef Senior High School (Miami, FL)

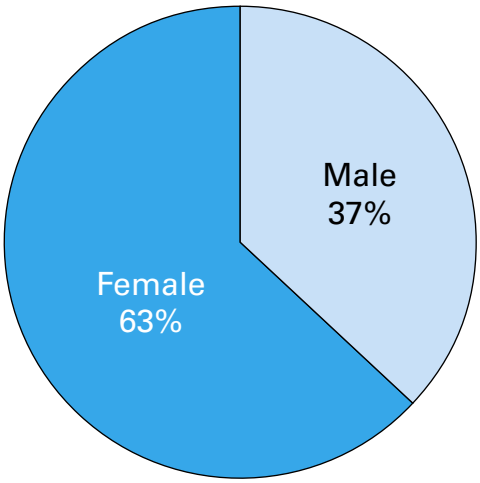
- Head of School: Adrianne Leal
- AP Teachers: Arline Margolis, Lourdes Moller Gomez, Christina Strickland

AP Grade Distribution, 2005

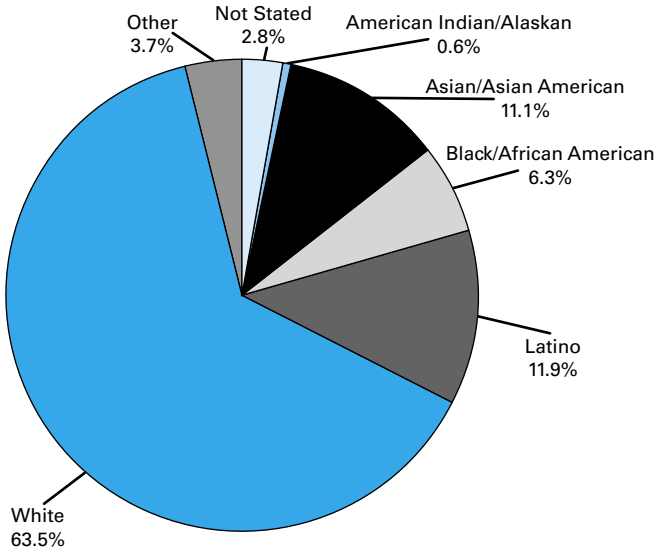
Exam Grade	Number of Examinees	% At
Score of 5	17,315	7.5%
Score of 4	37,805	16.4%
Score of 3	75,080	32.5%
Score of 2	76,799	33.3%
Score of 1	23,710	10.3%
	230,709	100.0%

Number of Schools Offering This Course: 7,624

AP English Language and Composition Examinees by Gender, 2005



AP English Language and Composition Examinees by Race and Ethnicity, 2005



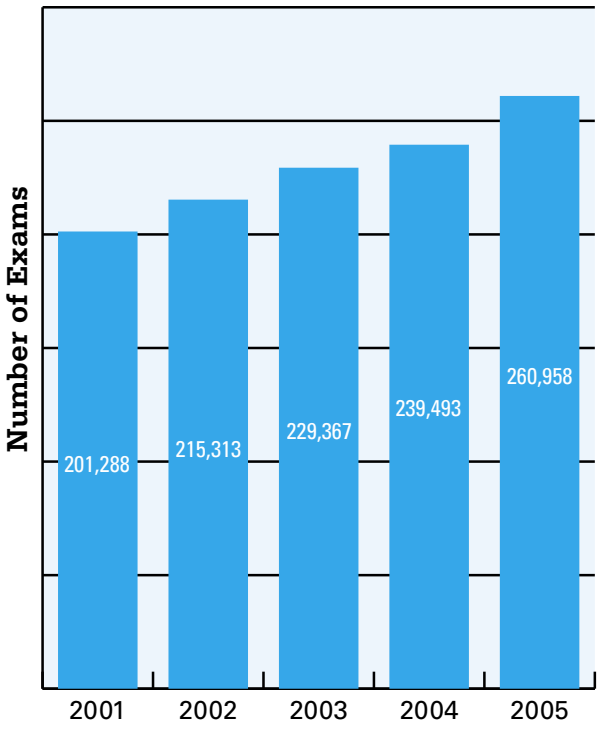
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

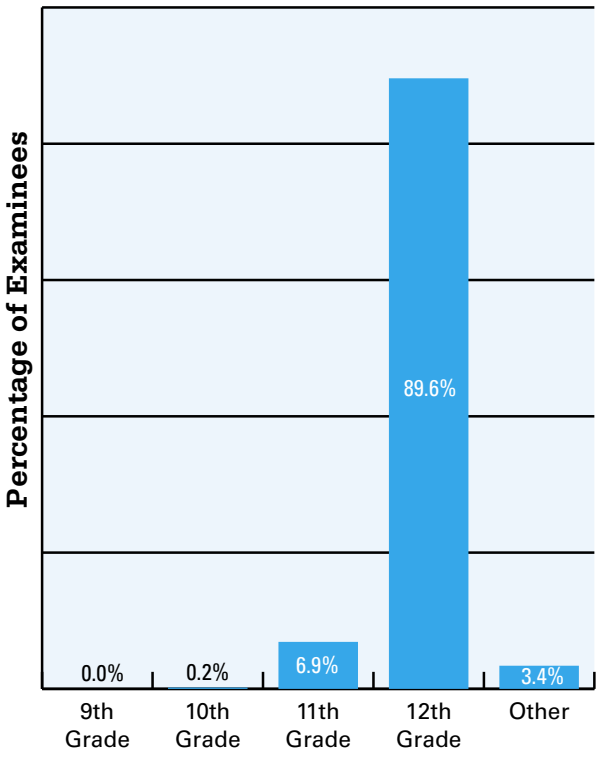
- Emphasize rhetorical training that has roots in the Classical period, particularly in the works of Isocrates in ancient Greece, and Cicero and Quintilian in Rome. This is the function of producing the citizen orator, the liberally educated person who is able to respond to the vast array of issues that confronts anyone who lives in a complex culture such as ours. A citizen orator reads widely in current events, history, politics, literature, science, and the arts and is able to write essays for a general audience that draw upon that person's reading.
- Instruct students in rhetorical purpose and expose them to a wide variety of texts that accomplish different rhetorical purposes: commenting on a cultural phenomenon, informing a reader about something novel and important, convincing a reader to accept a salient central idea, persuading a reader to think or act in a different way, and so on.
- Instruct students in the difference between writing an essay and producing an answer for an exam question. The former is a rich, self-sufficient composition. It contextualizes the prompt for an engaged and curious reader, enters into conversation with the reader, elaborates its points with ample reasoning and evidence, and offers road signs that guide the reader through the argument. The latter simply makes claims about the prompt and then offers material, often briefly and summarily, to support those claims.
- As teachers are teaching canonical works from American, British, and world literature, they should show students how texts from contemporary culture accomplish many of the same purposes the canonical works do.
- Teachers are urged to ask their students to see more than one side of challenging, controversial issues. Doing so is a difficult task in contemporary culture. The media to which students are exposed—newspapers, radio, television, the Internet—frequently promote only one side of an issue and offer only a glimmer of rational discussion about the complexity of the controversy. Instruction in courses preparing students for the AP English Language and Composition Exam, therefore, needs to attend to discussions of current events in the media but transcend their one-sidedness.

AP English Literature and Composition

AP English Literature and Composition
Number of Exams, 2001–2005



AP English Literature and Composition
Examinees by Grade Level, 2005



Exemplary AP English Literature and Composition Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP English Literature and Composition:

Small-size school (<300 students in grades 10–12):
Cape Fear Academy (Wilmington, NC)
- Head of School: John B. Meehl
- AP Teacher: Audrey Holsten
- Teachers of Foundation Courses: Amanda Holliday, Barbara Newton, Mallory Tarses

Medium-size school (300–799 students in grades 10–12):
Sidwell Friends School (Washington, D.C.)
- Head of School: Bruce Stewart
- AP Teachers: JoAnne Lanouette, Kristen McElhiney, Diane Scattergood
- Teachers of Foundation Courses: Erika Berry, Ashish Patwardhan, Neal Tonken

Large-size school (800+ students in grades 10–12):
Harvard Westlake School (North Hollywood, CA)
- Head of School: Harry L. Salamandra Jr.
- AP Teachers: Lisa Foster, Geraldine Harding, Lisa Rado, Laurence Weber
- Teachers of Foundation Courses: Amanda F. Angle, Stephen Bellon, Stephen Chae, Michael Anthony Chavez, Jennifer Nassar Dohr, Ellen D. Ehrlich, Jordan Ethe, Stephanie Friedman, Julia A. Grody, Chitra Kallay, Paul Mastin, Jane Balkin Malz, Francis Norris, Noah B. Salamon, Jonathan Wimbish

School with the Largest Number of African American Students Scoring 3+: Renaissance High School (Detroit, MI)
- Head of School: Deborah Harley
- AP Teacher: Dolores Davis
- Teachers of Foundation Courses: Jamie Tobin, Cedric Small, Flora Case

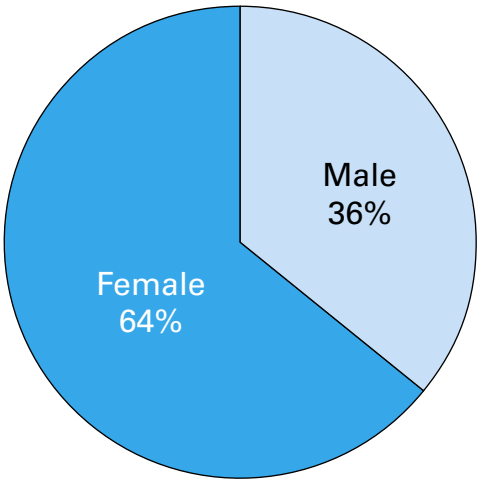
School with the Largest Number of Latino Students Scoring 3+:
Coral Reef Senior High School (Miami, FL)
- Head of School: Adrianne Leal
- AP Teachers: Kevin Kasenow, Julio Machado, Reisa Flyler

AP Grade Distribution, 2005

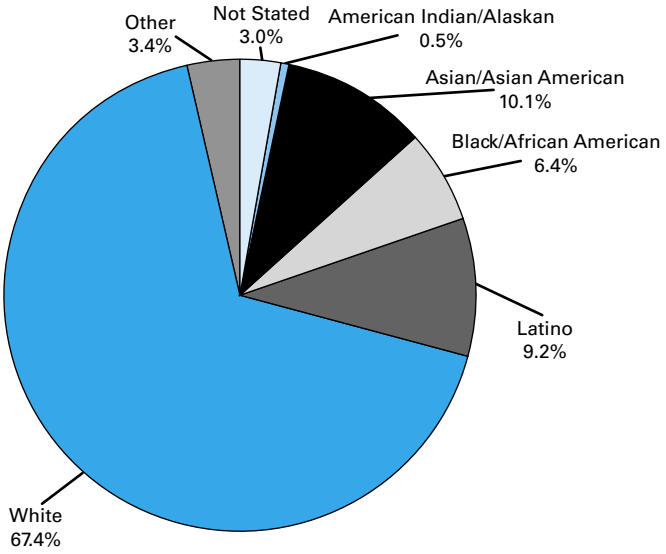
Exam Grade	Number of Examinees	% At
Score of 5	21,043	8.1%
Score of 4	52,405	20.1%
Score of 3	88,170	33.8%
Score of 2	77,501	29.7%
Score of 1	21,839	8.4%
	260,958	100.0%

Number of Schools Offering This Course: 11,438

AP English Literature and Composition Examinees by Gender, 2005



AP English Literature and Composition Examinees by Race and Ethnicity, 2005

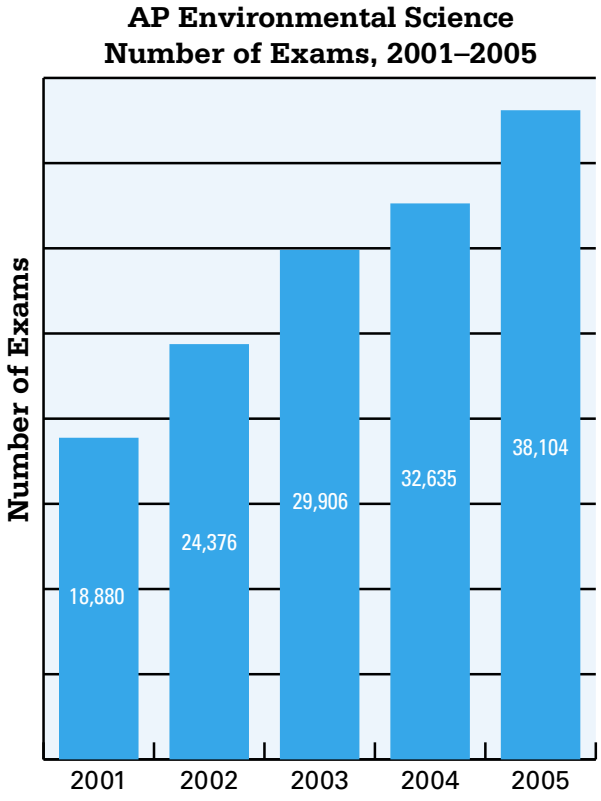


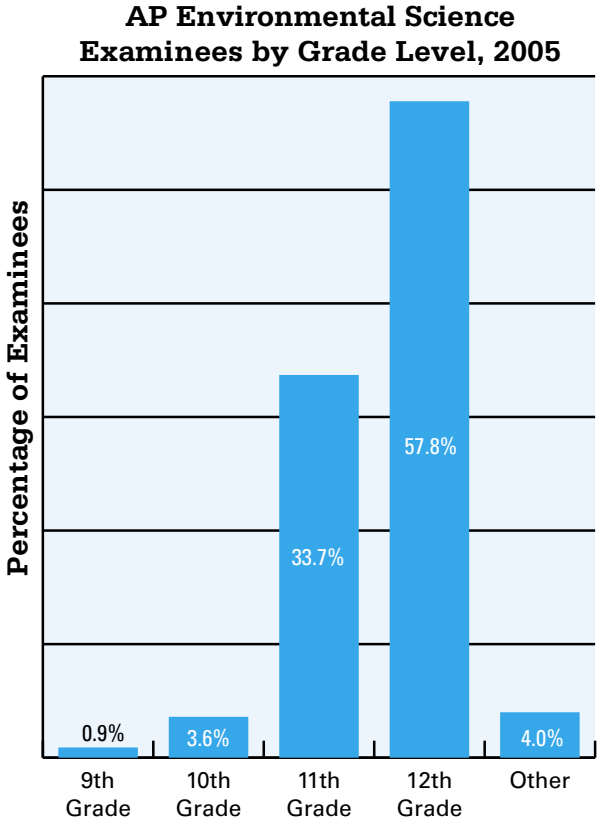
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- First and foremost, students must spend more time reading and analyzing literary language, both poetry and prose, for often the techniques are similar. Although students need to be introduced to the elements of poetic language such as hyperbole, simile, and metaphor, these devices must be taught in context as techniques that contribute to meaning. Students often assert, for example, that the poet uses some rhythmic pattern like iambic tetrameter, but they are unable to analyze what this meter contributes to meaning or, more importantly, how the deviations from the basic pattern affect meaning.
- Stress that mature thinking and writing recognize and explore the ambiguities and ironies that plague human existence. The concept of irony continues to elude students.
- Require students to pay as much attention to prose texts as they do to poetry. Although literature teachers sometimes act as though close reading is a technique intended primarily for the study of poetry, in fact all literature, including novels and plays of significant literary merit, responds to close attention to language, style, and nuances of vocabulary, as well as to character analysis and plot.
- Convey to students that generalizations without detailed support, and paraphrase without analysis, are serious flaws in an essay. Repeating the same idea three times with no significant new information does not strengthen an essay.
- Advise students to think in terms of an essay, not a string of sentences, not a list of terms, not a tangled web of unconnected details. Essays should contain an introduction, a body, and a conclusion, and the organizational pattern should grow organically from the detailed analysis that precedes the writing.

AP Environmental Science





Exemplary AP Environmental Science Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Environmental Science:

Small-size school (<300 students in grades 10–12):
The Early College at Guilford (Greensboro, NC)
- Head of School: Tony Lamair Burks II
- AP Teacher: Beverly Cea

Medium-size school (300–799 students in grades 10–12):
Raleigh Charter High School (Raleigh, NC)
- Head of School: Dr. Thomas E. Humble
- AP Teacher: Daniel F. Smith

Large-size school (800+ students in grades 10–12):
East Chapel Hill High School (Chapel Hill, NC)
- Head of School: David J. Thaden
- AP Teachers: Gail Boyarsky, Erin Schindledecker, Kari Wilkinson, James Timmons

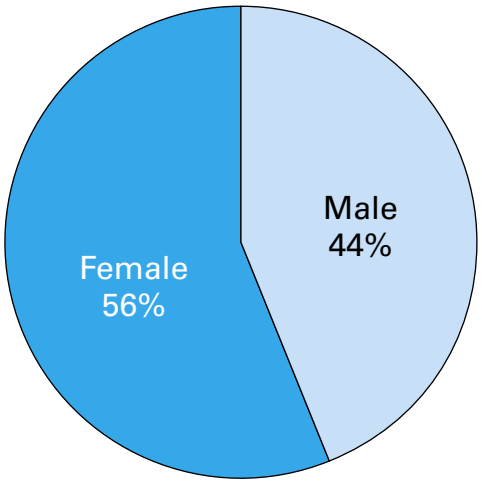
School with the Largest Number of Latino Students Scoring 3+:
South Gate Senior High School (South Gate, CA)
- Head of School: Patrick Moretta
- AP Teachers: Terri Stevens, James Estabrook

AP Grade Distribution, 2005

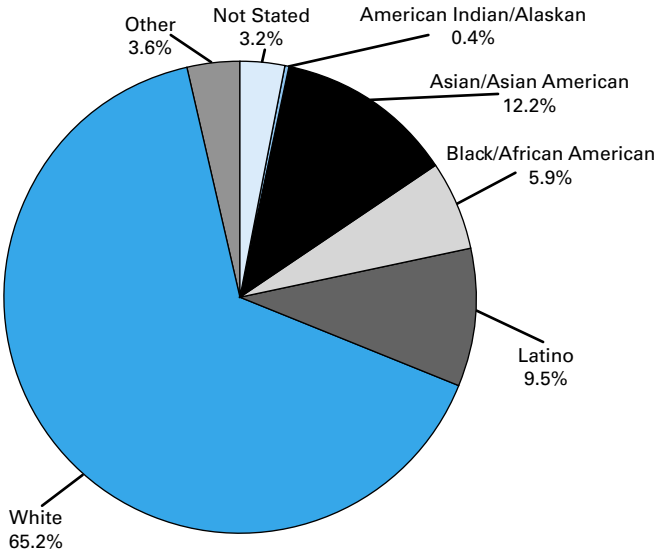
Exam Grade	Number of Examinees	% At
Score of 5	3,551	9.3%
Score of 4	8,901	23.4%
Score of 3	7,204	18.9%
Score of 2	6,813	17.9%
Score of 1	11,635	30.5%
	38,104	100.0%

Number of Schools Offering This Course: 1,920

AP Environmental Science Examinees by Gender, 2005



AP Environmental Science Examinees by Race and Ethnicity, 2005

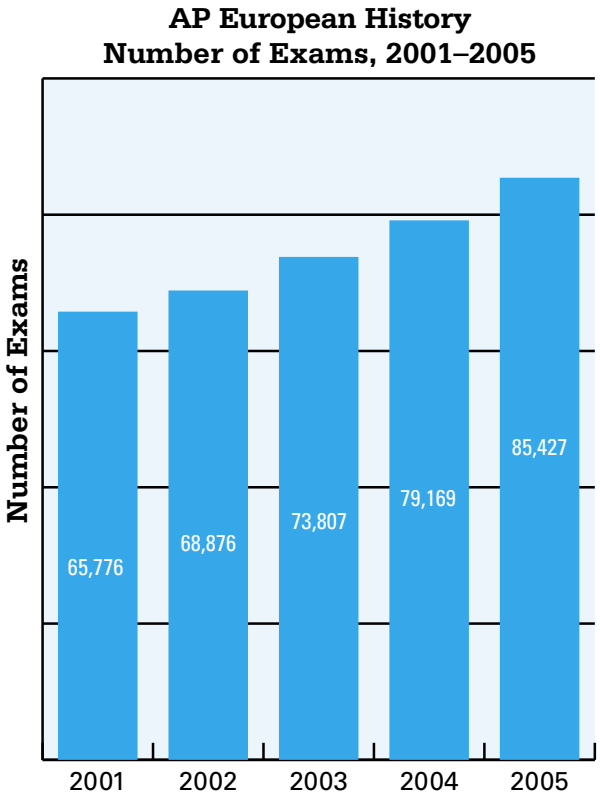


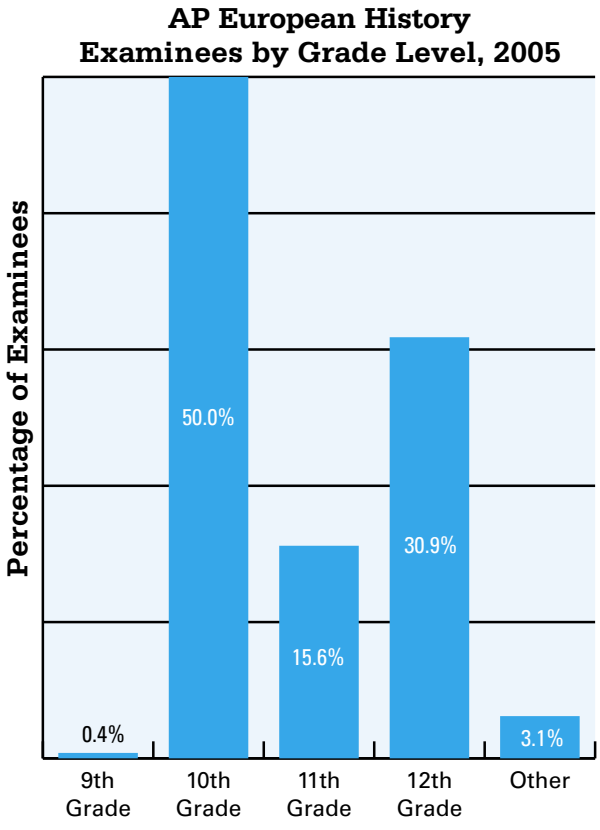
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- The laws of thermodynamics have a great deal of relevance to many aspects of environmental science. While students seem to understand the need to capture solar energy, they need a much deeper understanding of what it means to lose useful energy when it is transferred from one trophic level to another.
- During the study of biomes, it would be advantageous to relate the impact of human activities to specific characteristics of the various biomes.
- It is strongly suggested that current environmental topics and events be integrated into the instruction of the AP Environmental Science course.
- It is essential that teachers help their students develop or refresh their number sense and improve their confidence by practicing simple arithmetic operations (especially division) and problem-solving skills throughout the year. In particular, teachers need to reinforce how to manipulate decimal numbers and how to handle large numbers, using scientific notation where applicable; and they need to teach students to pay attention to units (and unit cancellation). Teachers should provide students with practice working with relatively simple numbers *without calculators* and remind students to show all of their calculations.

AP European History





Exemplary AP European History Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP European History:

Small-size school (<300 students in grades 10–12):
Keystone School (San Antonio, TX)

- Heads of School: Hugh McIntosh (Headmaster), Suzanne Elizondo (Principal)
- AP Teacher: William J. Spedding
- Teacher of Foundation Course: William Spedding

Medium-size school (300–799 students in grades 10–12):
The Westminster Schools (Atlanta, GA)

- Head of School: Kevin Reel
- AP Teachers: Dave Drake, Jere Link, Wade Boggs, Ashton Richards, Anthony Guidici

Large-size school (800+ students in grades 10–12):
Stanton College Preparatory School (Jacksonville, FL)

- Head of School: Debra W. Lynch
- AP Teachers: Lara Audelo, Brian Heggood, Amanda Hohne, Dave Holcombe, David Howard, Ana Shepard
- Teachers of Foundation Courses: Lara Audelo, Amanda Hohne, David Howard, Kristyn Hughes, Mary Krieger, Ana Shepard

School with the Largest Number of African American Students Scoring 3+: Morgan Park High School (Chicago, IL)

- Head of School: Dr. Beryl Shingles
- AP Teacher: Martin Luzzo

School with the Largest Number of Latino Students Scoring 3+:
South Gate Senior High School (CA)

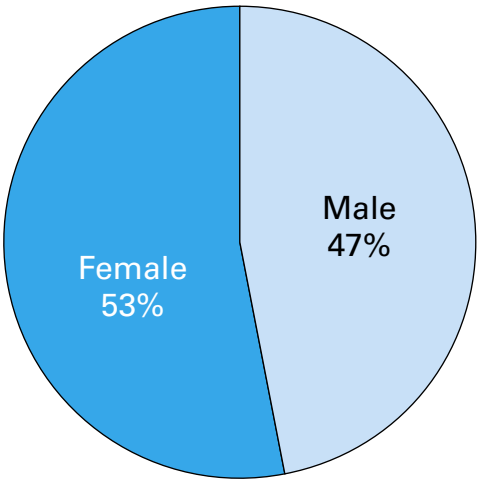
- Head of School: Patrick Moretta
- AP Teachers: Ray Aubele, Bill Crosgrove, Gregg Schlappy

AP Grade Distribution, 2005

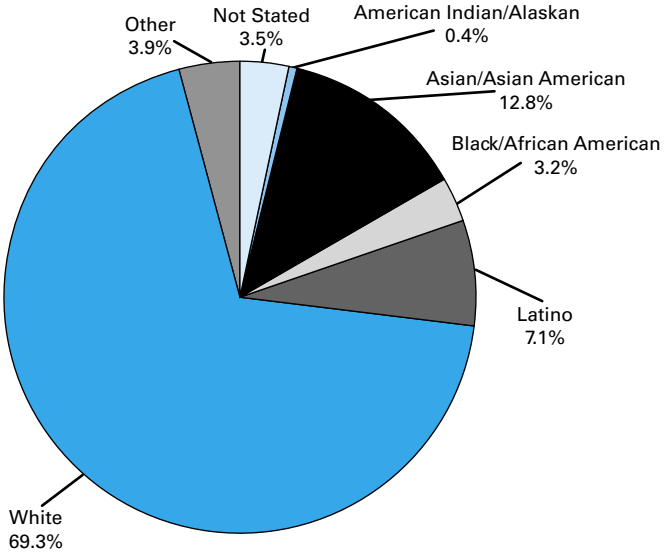
Exam Grade	Number of Examinees	% At
Score of 5	10,073	11.8%
Score of 4	16,926	19.8%
Score of 3	31,396	36.8%
Score of 2	14,696	17.2%
Score of 1	12,336	14.4%
	85,427	100.0%

Number of Schools Offering This Course: 4,011

AP European History Examinees by Gender, 2005



AP European History Examinees by Race and Ethnicity, 2005

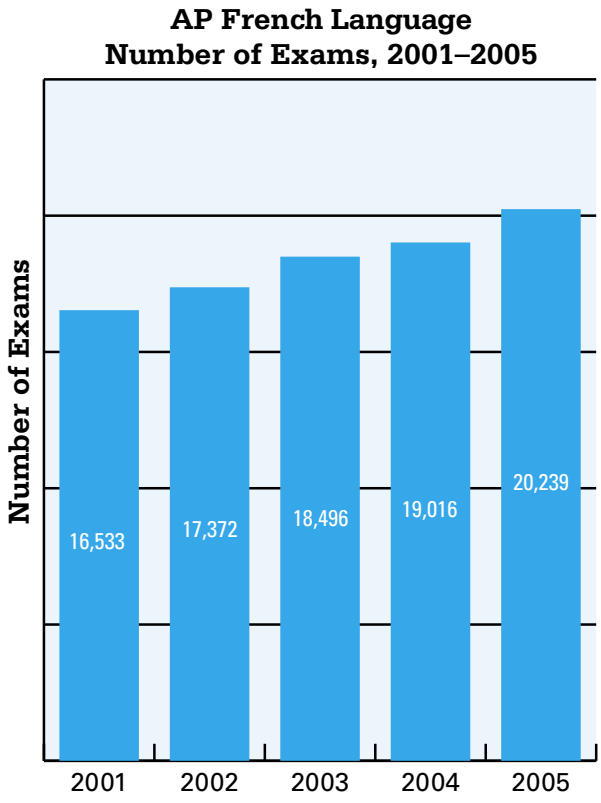


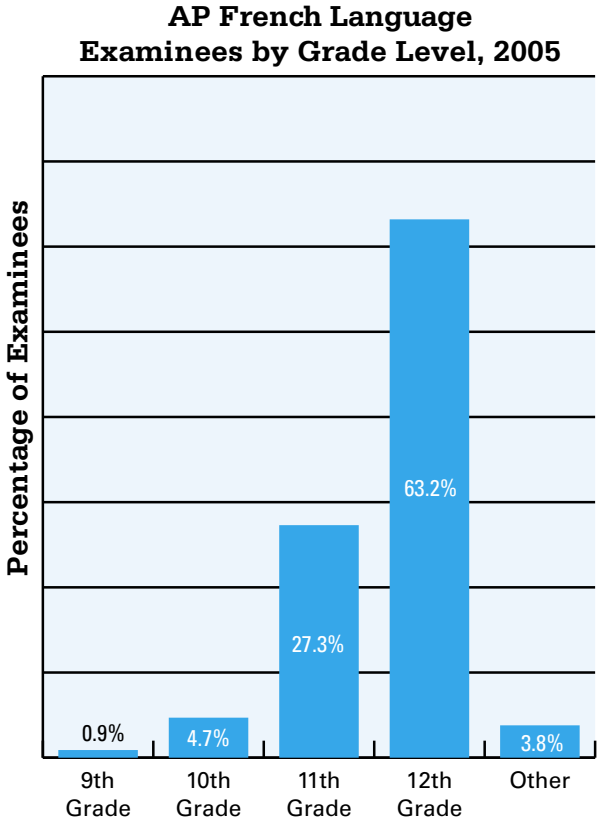
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- **Students were well informed about many aspects of European History, but not about mass politics.** The topic is listed in the Course Description and covered in many textbooks (usually in one chapter). Teachers should be sure that they are using the most recent edition of the *AP European History Course Description* as the guideline for their course. Students should be taught the phenomenon of mass politics and should be able to link it to events commonly covered in an AP European History course (e.g., the Dreyfus Affair, the rise of the SPD in Germany, the 1905 Russian Revolution, and the women's suffrage movement).
- Students would especially benefit from an increased emphasis on the social history component of the course, since this is an area that continues to give students difficulty on the exam. Class discussions, primary source readings, and essay writing on social history topics would help students develop their understanding in this area. *The AP European History Course Description* identifies social history concepts to be covered by the course.
- When analyzing primary sources in the Document-Based Question (DBQ), students should:
  - Pay careful attention to the meaning of documents, especially those with ambivalence and ambiguity, and describe them without using overblown prose or exaggerated analysis.
  - Make an effort to do point-of-view analysis on as many documents as possible, but at least three.
- Essay performance could be enhanced if students developed a much stronger awareness of chronology and historical context, and improved their analytical skills (e.g., cause and effect, change versus continuity).
- Specific evidence is essential for a compelling essay. Stress the importance of eschewing moralizing judgments that are not grounded in historical context.

AP French Language





Exemplary AP French Language Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP French Language:

Small-size school (<300 students in grades 10–12):
Lycée Français La Perouse (San Francisco, CA)
- Head of School: Michele Gragnolt
- Teachers: Aurelie Basso, Florence Lardeux

Medium-size school (300–799 students in grades 10–12):
San Francisco University High School (San Francisco, CA)
- Head of School: Michael Diamonti
- AP Teachers: Roselyne Pilaar, Pierre R. Larzul
- Teachers of Foundation Courses: Roselyne Pilaar, Pierre R. Larzul

Large-size school (800+ students in grades 10–12):
Thomas Jefferson High School for Science and Technology (Alexandria, VA)
- Head of School: Elizabeth V. Lodal
- AP Teacher: Luc Beeckman

School with the Largest Number of Latino Students Scoring 3+:
Cypress Bay High School (Weston, FL)
- Head of School: Charles Scott Neely
- AP Teachers: Dr. Declan Lyons, Kassandra Gordon, Marguente Kirschner
- Teachers of Foundation Courses: Vivianne Adrien, Kalebra Williams

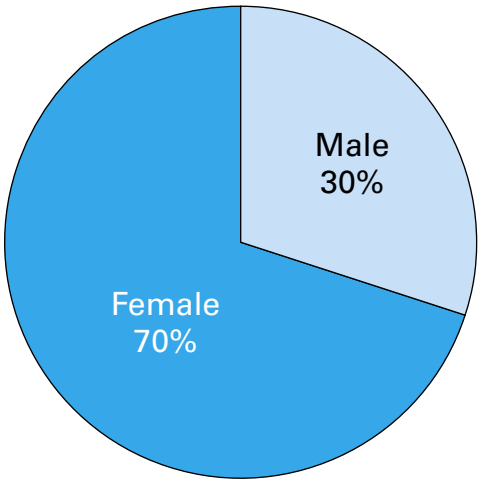
AP Grade Distribution, 2005

Exam Grade		Number of Examinees	% At
Total Group	Score of 5	2,864	14.2%
	Score of 4	3,738	18.5%
	Score of 3	5,585	27.6%
	Score of 2	4,033	19.9%
	Score of 1	4,019	19.9%
		20,239	100.0%
Exam Grade		**Number of Examinees**	**% At**
Standard Group*	Score of 5	1,308	8.6%
	Score of 4	2,550	16.7%
	Score of 3	4,446	29.1%
	Score of 2	3,444	22.6%
	Score of 1	3,518	23.0%
		15,266	100.0%

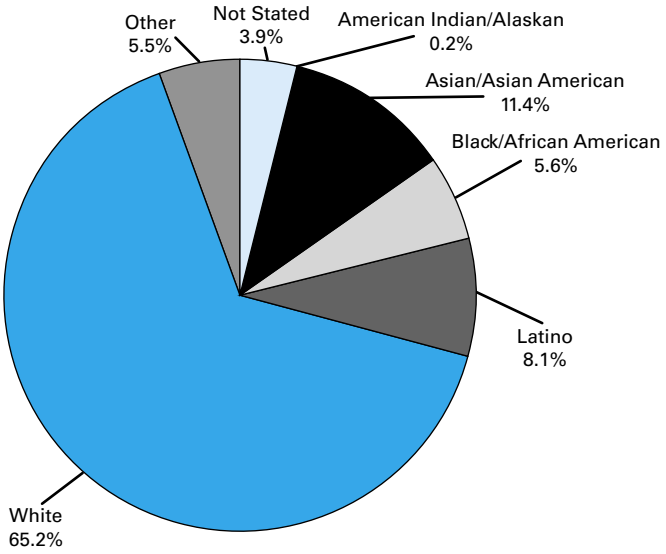
*Standard students generally receive most of their foreign language training in U.S. schools. They did not indicate on their answer sheet that they regularly speak or hear the foreign language of the examination, or that they have lived for one month or more in a country where the language is spoken.

Number of Schools Offering This Course: 3,363

AP French Language Examinees by Gender, 2005



AP French Language Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

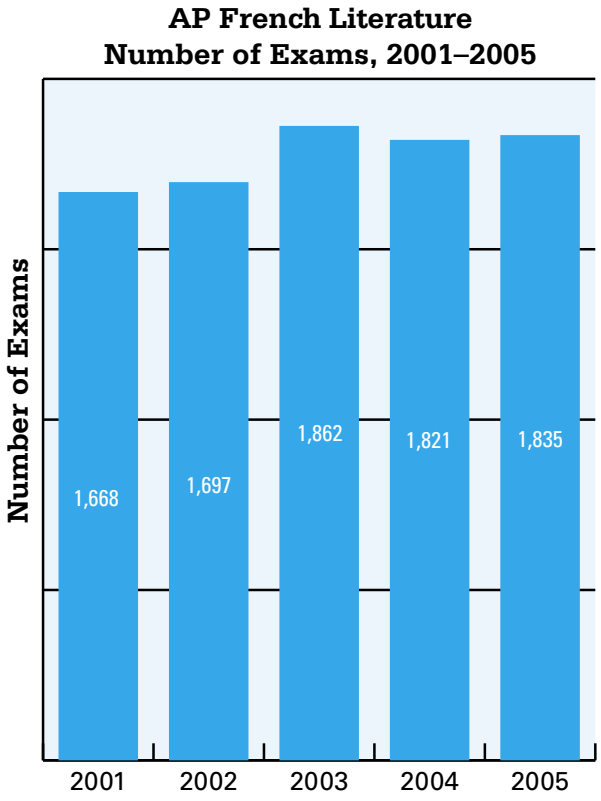
To succeed in writing at the level required for success on the AP French Exam, students should be taught to:

- organize their remarks clearly (e.g., introduction, body, conclusion);
- avoid a conclusion that merely restates the introduction;
- make effective use of examples (e.g., news items, personal experiences, anecdotes);
- use connecting expressions (e.g., *d'ailleurs*, *néanmoins*, *en plus*, *pourtant*, *à cause de*), rhetorical questions, parallel constructions, antithesis, conditional sentences, and so on.

To prepare students for effective interpersonal communications in French, as measured in the speaking section of the AP French Exam:

- teach students to use words of transition as well as comparative and superlative structures;
- practice *si* (conditional) clauses with students;
- teach students the difference between *commentez*, *racontez*, *contrastez*, *décrivez*, and so on; and
- urge students to minimize their use of *quelque* chose *comme ça* and similar expressions that produce a sense of vagueness.

AP French Literature



Exemplary AP French Literature Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP French Literature:

Small-size school (<300 students in grades 10–12):
National Cathedral School (Washington, D.C.)

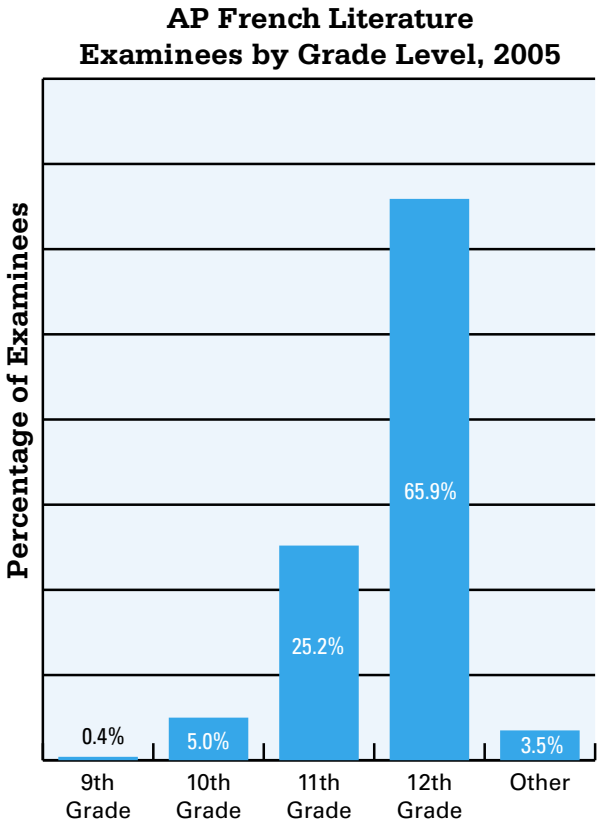
- Head of School: Kathleen O'Neill Jamieson
- AP Teacher: Michele Spittler

Medium-size school (300–799 students in grades 10–12):
Horace Mann School (Riverdale, NY)

- Heads of School: Dr. Thomas Kelly, Dr. Barbara Tischler
- AP Teachers: Anne Lawday, Sonya Rotman
- Teachers of Foundation Courses: Nicolair Tchertkoff, Michael Dale

Large-size school (800+ students in grades 10–12):
Thomas Jefferson High School for Science and Technology (Alexandria, VA)

- Head of School: Elizabeth V. Lodal
- AP Teacher: Genevieve Delfosse

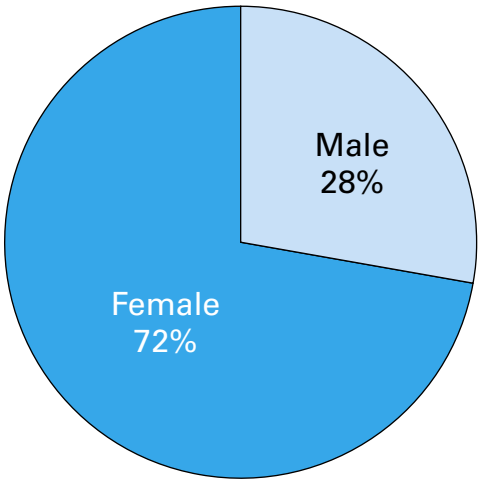


AP Grade Distribution, 2005

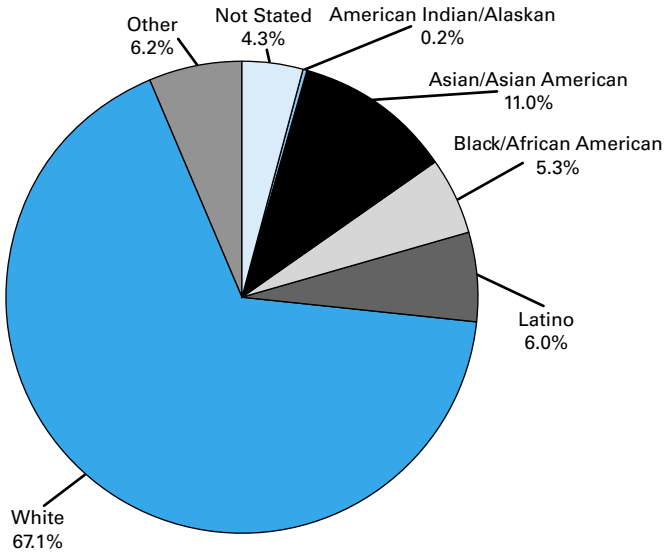
Exam Grade	Number of Examinees	% At
Score of 5	474	25.8%
Score of 4	460	25.1%
Score of 3	401	21.9%
Score of 2	259	14.1%
Score of 1	241	13.1%
	1,835	100.0%

Number of Schools Offering This Course: 441

AP French Literature
Examinees by Gender, 2005



AP French Literature
Examinees by Race and Ethnicity, 2005

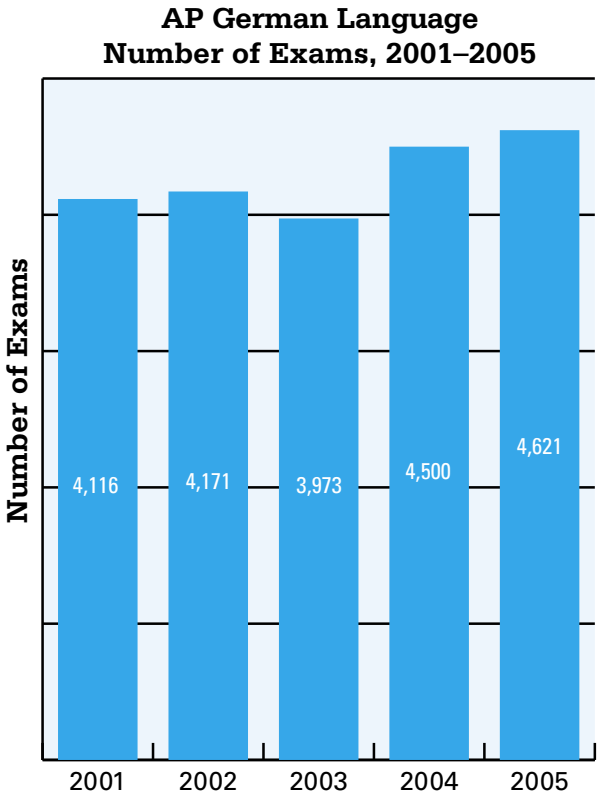


Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- Students should be familiar with the analytical terms that are used for both poetry (e.g., *strophe*, *rime*, *tercet*) and prose (e.g., *récit*, *monologue intérieur*, *intrigue*, *point de vue*), although they should be reminded that the simple naming of terms does not constitute an analysis of the text.
- Instruct students to not merely *identify* a literary feature of a work but to *explain* its function, its use, and its effect in the text. Teach the principles of a well-organized essay. Show students how to select examples from the text to support their interpretation and arguments.
- This year, the literary *essai* question asked students to assess the importance of fate or destiny in either *Candide* or *La Guerre de Troie n'aura pas lieu*. The question's focus on the theme of fate or destiny prompted a considerable majority of the students to write about *La Guerre de Troie n'aura pas lieu* rather than *Candide*. The satirical dimension of *Candide*, where a series of calamities debunks a form of philosophical optimism, was perhaps underappreciated. Not all of the students understood that *fatalité* and *destin* are essentially synonymous; some mistook *fatalité* to mean death. Plot summary in lieu of analysis (*Analysez l'importance de la fatalité ou du destin dans…*) is an eternal mistake.

AP German Language



Exemplary AP German Language Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP German Language:

Small-size school (<300 students in grades 10–12):
ISF Internationale Schule Frankfurt-Rhein-Main (Germany)

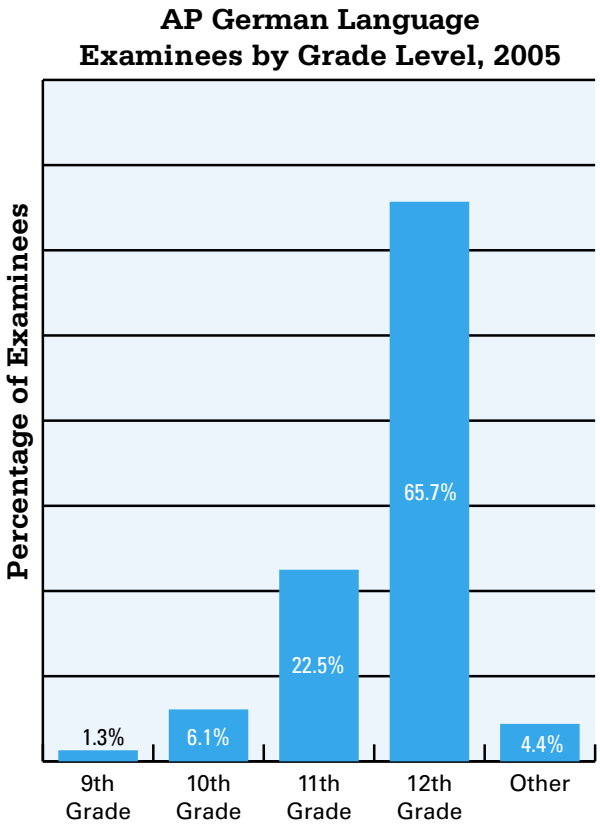
- Head of School: Angus Slesser
- AP Teachers: Britta Ganze, Leonare Flacke
- Teachers of Foundation Courses: Ulrike Schaum, Sonja Habben

Medium-size school (300–799 students in grades 10–12):
Heidelberg American High School (Germany)

- Head of School: Dr. Allen Davenport
- AP Teacher: Jane Bingham

Large-size school (800+ students in grades 10–12):
Rochester Adams High School (Rochester Hills, MI)

- Head of School: Diann M. Flack
- AP Teacher: Janie Barner



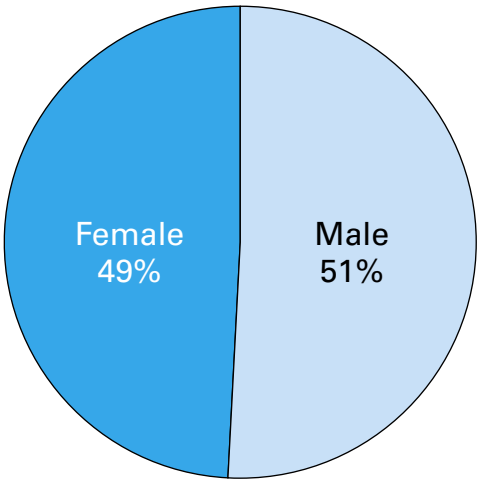
AP Grade Distribution, 2005

Exam Grade		Number of Examinees	% At
Total Group	Score of 5	1,136	24.6%
	Score of 4	947	20.5%
	Score of 3	1,043	22.6%
	Score of 2	873	18.9%
	Score of 1	622	13.5%
		4,621	100.0%
Exam Grade		**Number of Examinees**	**% At**
Standard Group*	Score of 5	279	9.8%
	Score of 4	595	20.8%
	Score of 3	783	27.4%
	Score of 2	697	24.4%
	Score of 1	501	17.5%
		2,855	100.0%

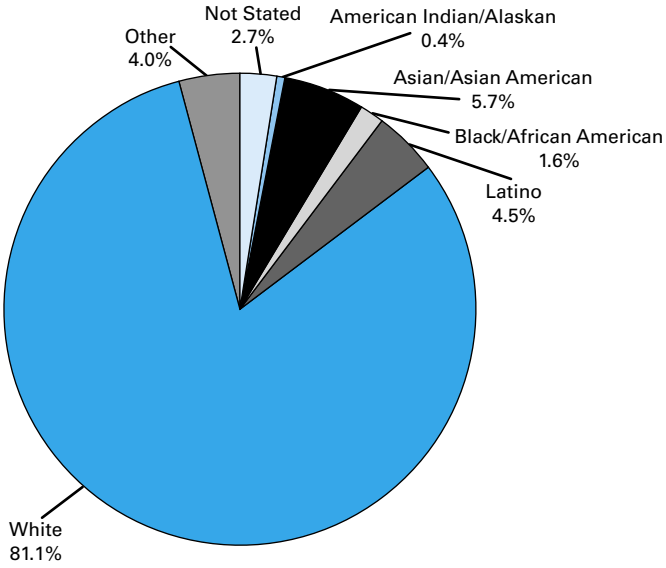
*Standard students generally receive most of their foreign language training in U.S. schools. They did not indicate on their answer sheet that they regularly speak or hear the foreign language of the examination, or that they have lived for one month or more in a country where the language is spoken.

Number of Schools Offering This Course: 1,222

AP German Language Examinees by Gender, 2005



AP German Language Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

Composition

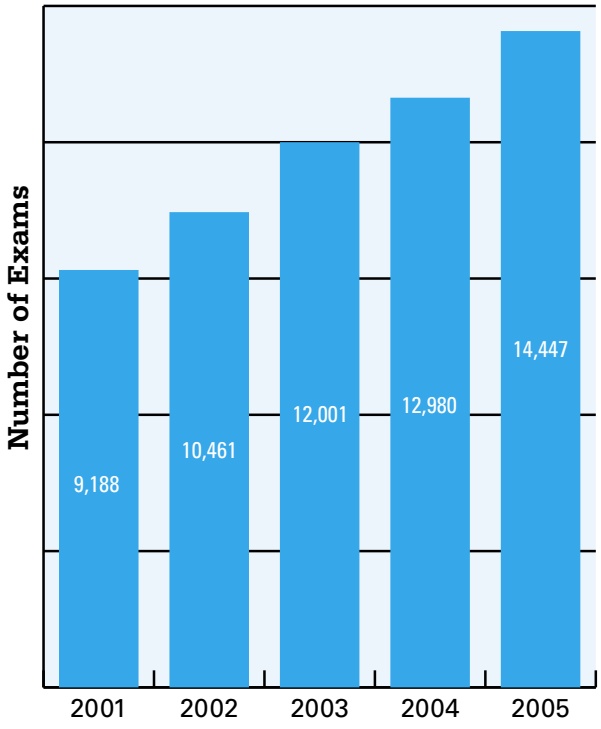
- The most productive strategy for preparing students for the composition section of the exam is to conduct frequent, timed, in-class writing sessions that are evaluated according to the same standards used at the AP Reading. Scoring guidelines for all parts of the German Language Exam are available on AP Central (http://apcentral.collegeboard.com). To ensure that all AP students are familiar with the assessment scale, many teachers periodically involve students, either in groups or in pairs, in the scoring of their compositions according to the guidelines. Actual student responses and scoring commentaries are also available on AP Central and can be used to enhance students' understanding of the scoring scale. Prompts that ask students to give arguments and counterarguments, as well as prompts that ask for a coherent narrative, provide students with exceptionally good practice.

Speaking assessment:

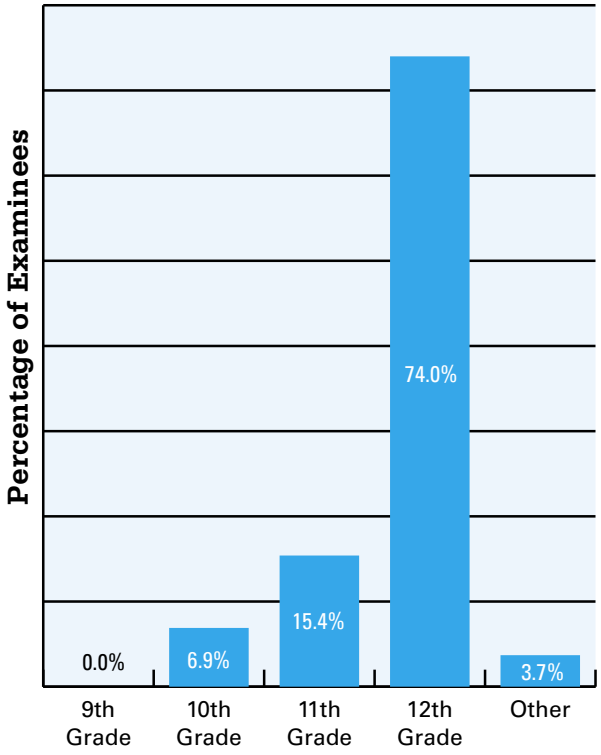
- Most important is the students' actual experience with producing oral narratives of the prescribed length. Frequency of practice and familiarity with the scoring guidelines pay large benefits. Additionally, teachers should give specific attention to lexical items and grammatical markers that lend cohesion to narratives.

AP Government and Politics: Comparative

AP Government and Politics: Comparative
Number of Exams, 2001–2005



AP Government and Politics: Comparative
Examinees by Grade Level, 2005



Exemplary AP Government and Politics: Comparative Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Government and Politics: Comparative:

Small-size school (<300 students in grades 10–12): Academy of Notre Dame De Namur (Villanova, PA)
- Head of School: Maria Valentino Marino
- AP Teacher: Sister Nancy Bonshock, SND

Medium-size school (300–799 students in grades 10–12): Governor's School for Government and International Studies (Richmond, VA)
- Head of School: N. Douglas Hunt
- AP Teachers: Mary Jane McKay, Matt McGuire
- Teachers of Foundation Courses: Les Schreiber, Phil Sorrentino, Tinsley Pollard, John Wilkes, Daniel Brown, Brenda Ericson, Sarah Dwelte, Michael White

Large-size school (800+ students in grades 10–12): St. Ignatius College Prep (Chicago, IL)
- Heads of School: Catherine A. Karl, Ph. D. (Principal), Rev. Brian Paulson, SJ (President)
- AP Teachers: Diane Haleas Hines, Lawrence Socha
- Teachers of Foundation Courses: John Chandler, James Connelly, Sr. Therese Decanio O.P., Jean Erickson, Anthony Evensen, Brian Hardy, James Hasten, Diane Hales Hines, Rychelle Hooper, Richard Kehoe, Martin Kelley, Brendan Malone, Gregory Maloney, Patricia Messbarger, Gregory Off, James Owens, Kevin Rigney, Lawrence Socha, RoseMary Sullivan, Terence Tyrrell, Jay Wood

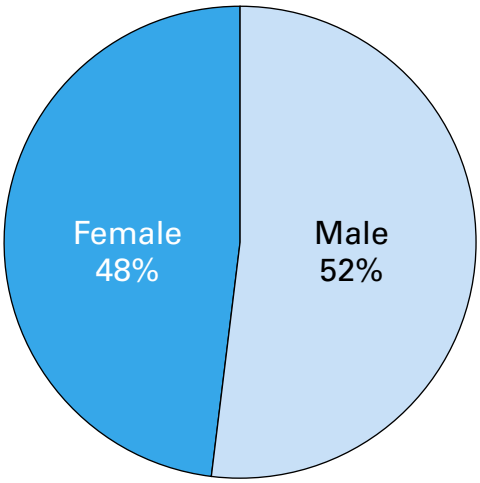
School with the Largest Number of Latino Students Scoring 3+: James Monroe High School (North Hills, CA)
- Head of School: Lynda D. Schwarz
- AP Teachers: Paul Graber, Gregg Solkovits

AP Grade Distribution, 2005

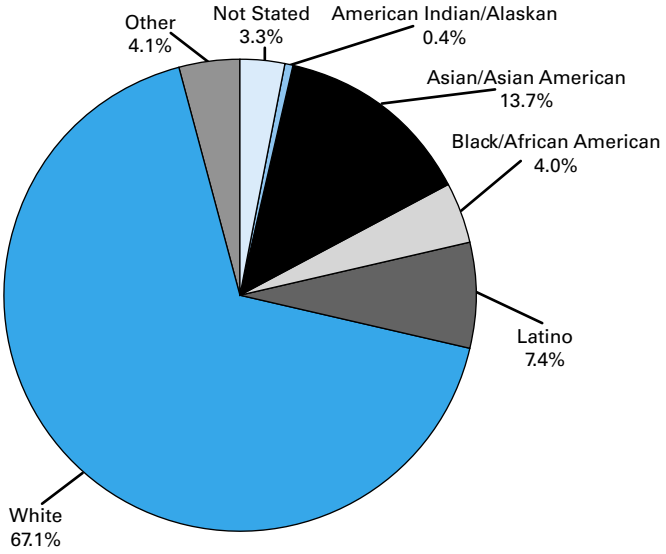
Exam Grade	Number of Examinees	% At
Score of 5	2,062	14.3%
Score of 4	2,329	16.1%
Score of 3	5,022	34.8%
Score of 2	3,052	21.1%
Score of 1	1,982	13.7%
	14,447	100.0%

Number of Schools Offering This Course: 1,255

AP Government and Politics: Comparative Examinees by Gender, 2005



AP Government and Politics: Comparative Examinees by Race and Ethnicity, 2005



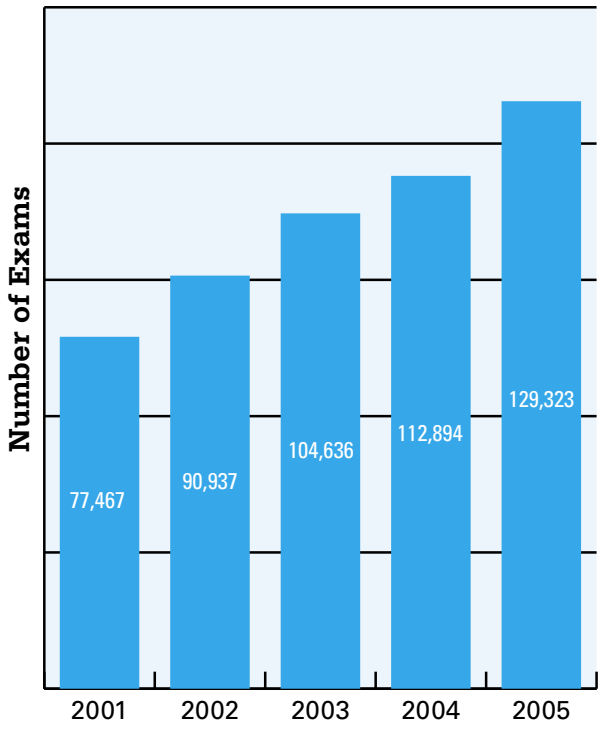
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

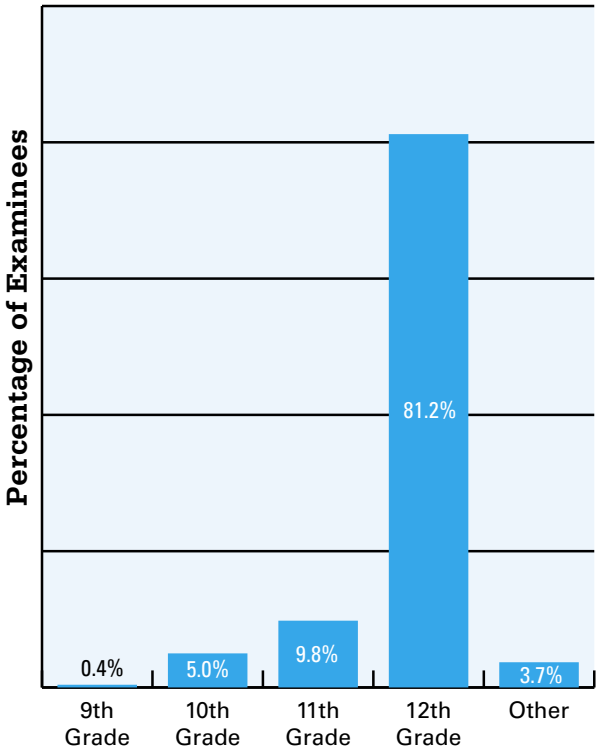
- Political economy and economic development are core comparative politics concepts that should be included in every comparative politics course syllabus. Moreover, students of government and politics should have the analytical and critical thinking skills that enable them to connect and relate information and knowledge about discrete subjects (e.g., institutional arrangements and development). Teachers can design and organize their lectures and student assignments in a manner that helps students develop these skills.
- Students should be aware that comparison involves making specific links between two or more concepts, occurrences, or countries. In order to correctly compare, students must include cross-paragraph references to the political phenomena in each country under consideration. Students should understand that it is important to note both similarities and differences. Class instruction and assignments can help them grasp the task of comparison.
- An important aspect of political change is the effect of past changes on contemporary institutions and policies. Many of the political features of a country have their origins in prior political changes. Lectures and student assignments that make explicit the linkage of current features of a country's government and/or politics to prior events or situations can help students understand more clearly how past political experiences shape contemporary politics.
- Research on gender and development and gender and politics should be a core subject in the AP Comparative Politics and Government course. Again, being able to connect and relate information and knowledge about discrete subjects—in this year's exam, female literacy rate and female representation in government—is an essential analytical and critical thinking skill for students of government and politics.

AP Government and Politics: United States

AP Government and Politics: United States
Number of Exams, 2001–2005



AP Government and Politics: United States
Examinees by Grade Level, 2005



Exemplary AP Government and Politics: United States Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP U.S. Government and Politics:

Small-size school (<300 students in grades 10–12):
Cape Fear Academy (Wilmington, NC)

- Head of School: John B. Meehl
- AP Teachers: Laura Bowen, Beth Bryan
- Teacher of Foundation Course: Mark Campbell

Medium-size school (300–799 students in grades 10–12):
Governor's School for Government and International Studies (Richmond, VA)

- Head of School: N. Douglas Hunt
- AP Teachers: Mary Jane McKay, Matt McGuire
- Teachers of Foundation Courses: Les Schreiber, Phil Sorrentino, Tinsley Pollard, John Wilkes, Daniel Brown, Brenda Ericson, Sarah Dwelle, Michael White

Large-size school (800+ students in grades 10–12):
Thomas Jefferson High School for Science and Technology (Alexandria, VA)

- Head of School: Elizabeth V. Lodal
- AP Teachers: Linda Koepnick, Dale Kummer
- Teachers of Foundation Courses: Haywood Torrence, David Zack, Melissa Schoeplein, Jay Lamb

School with the Largest Number of Latino Students Scoring 3+:
G. Holmes Braddock High School (Miami, FL)

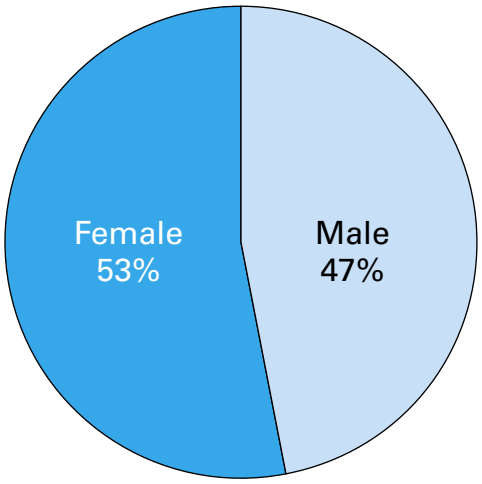
- Head of School: Manuel S. Garcia
- AP Teachers: John Bernabein, Alex Hernandez
- Teachers of Foundation Courses: Tim Hackworth, Ileana Goiricelaya

AP Grade Distribution, 2005

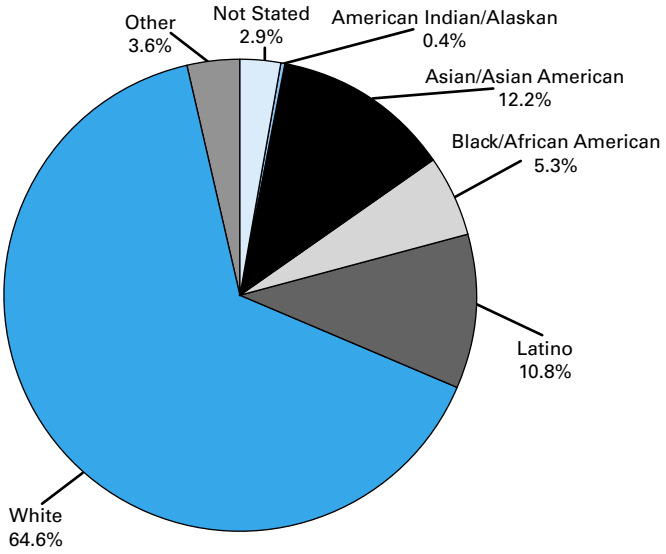
Exam Grade	Number of Examinees	% At
Score of 5	8,349	6.5%
Score of 4	23,990	18.6%
Score of 3	35,364	27.3%
Score of 2	42,742	33.1%
Score of 1	18,878	14.6%
	129,323	100.0%

Number of Schools Offering This Course: 5,569

AP Government and Politics: United States Examinees by Gender, 2005



AP Government and Politics: United States Examinees by Race and Ethnicity, 2005



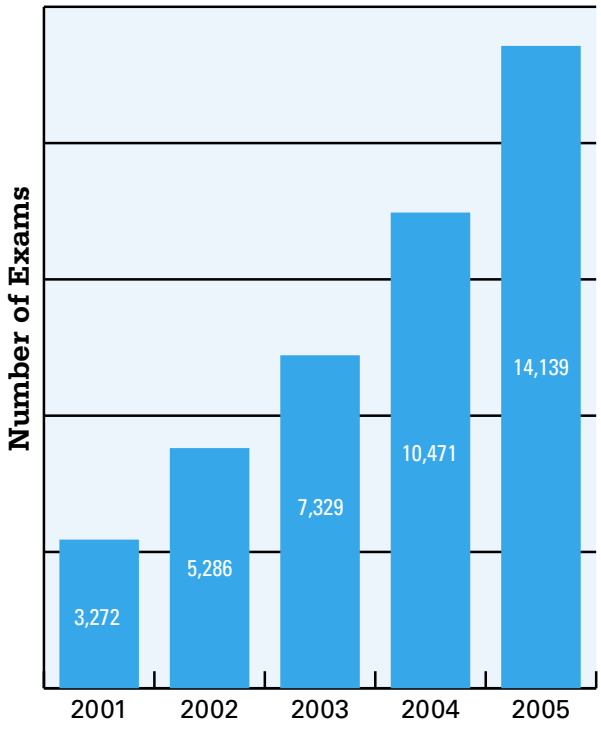
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

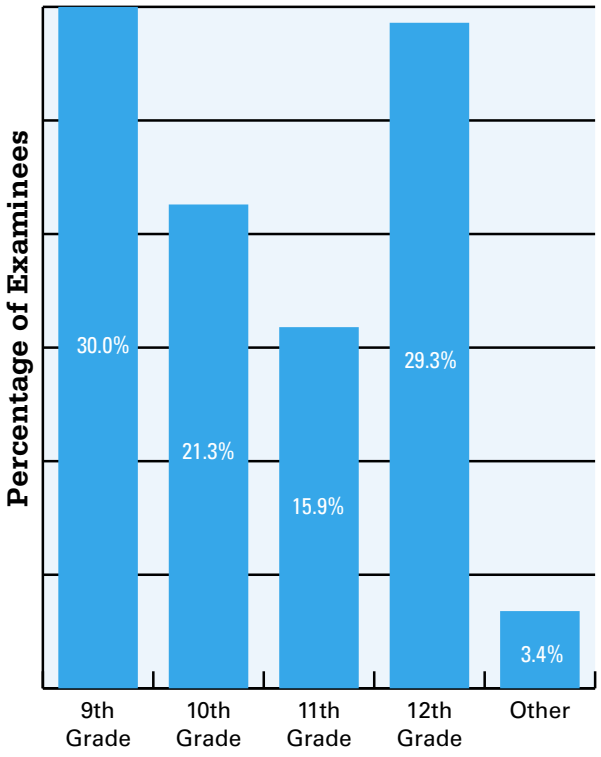
- A free-response question on campaign finance reform was the question that generated the weakest responses from students. This question examined students' knowledge and understanding of major campaign finance reform proposals that have been debated and acted upon by the United States Congress. Students were required to define two of three specified reform proposals—eliminating soft money, limiting independent expenditures, and raising limits on individual contributions—and describe both an argument made by proponents of the proposal and an argument made by opponents of the proposal.
- Many students did not understand that "raising limits on individual contributions" meant that more money could be donated to a candidate. Instead, they seemed to think that raising limits meant that less money could be contributed. Many did not understand that "elimination of independent expenditures" referred to spending by groups or persons unaffiliated with a campaign or candidate. Instead, they seemed to think that this referred to the spending of the candidate's personal resources. Some students incorrectly wrote that soft money was money donated directly to candidates.
- Vocabulary and terminology are important. Political scientists expect students of the subject to know certain core concepts and to be familiar with and understand subject-specific lingo.
- Higher-level thinking and analysis often go hand in hand with adopting a more subject-specific vocabulary. Assignments and classroom activities that require students to apply newly learned vocabulary could greatly strengthen their command of political science lingo and give teachers an opportunity to ascertain poor understanding of the terminology. For topics that generate controversy, such as campaign finance reform, teachers should consider an assignment in which students debate the pros and cons of each policy proposal.

AP Human Geography

AP Human Geography
Number of Exams, 2001–2005



AP Human Geography
Examinees by Grade Level, 2005



Exemplary AP Human Geography Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Human Geography:

Small-size school (<300 students in grades 10–12):
Talented & Gifted Magnet High School (Dallas, TX)

- Head of School: Frank F. Satarino
- AP Teacher: Richard A. Giddens

Medium-size school (300–799 students in grades 10–12):
University School at Nova Southeastern University (Fort Lauderdale, FL)

- Head of School: Jerome Chermak, Ed. D
- AP Teacher: Stephen Marten
- Teachers of Foundation Courses: Margie Chiarolanzio, Lori Horvitz

Large-size school (800+ students in grades 10–12):
Jasper High School (Plano, TX)

- Head of School: Michael Novotny
- AP Teacher: Stephen G. Roelofs
- Teachers of Foundation Courses: Gary Mumford, Michael Stanton

School with the Largest Number of Latino Students Scoring 3+:
Science and Engineering Magnet High School at Townview Center (Dallas, TX)

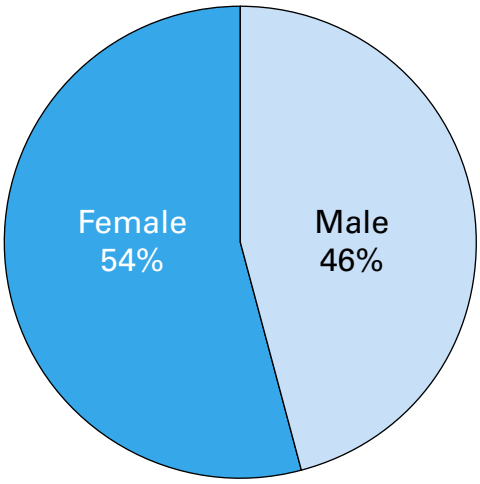
- Head of School: Richard T. White
- AP Teacher: Mrs. Dove, Mr. Perry

AP Grade Distribution, 2005

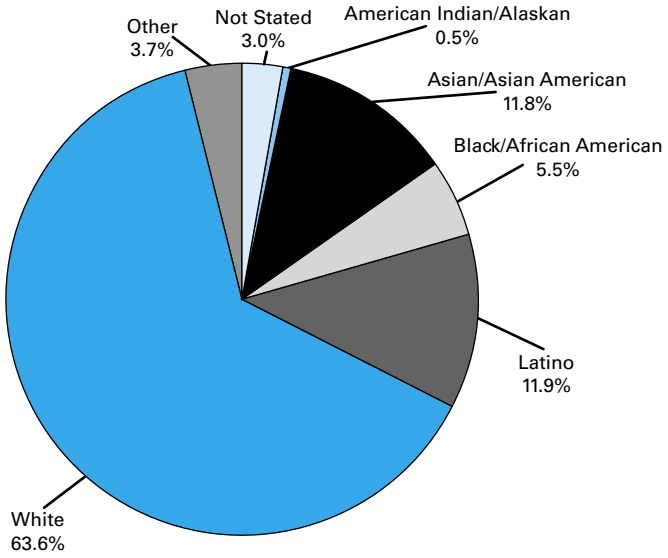
Exam Grade	Number of Examinees	% At
Score of 5	2,074	14.7%
Score of 4	2,946	20.8%
Score of 3	3,274	23.2%
Score of 2	2,387	16.9%
Score of 1	3,458	24.5%
	14,139	100.0%

Number of Schools Offering This Course: 702

AP Human Geography Examinees by Gender, 2005



AP Human Geography Examinees by Race and Ethnicity, 2005



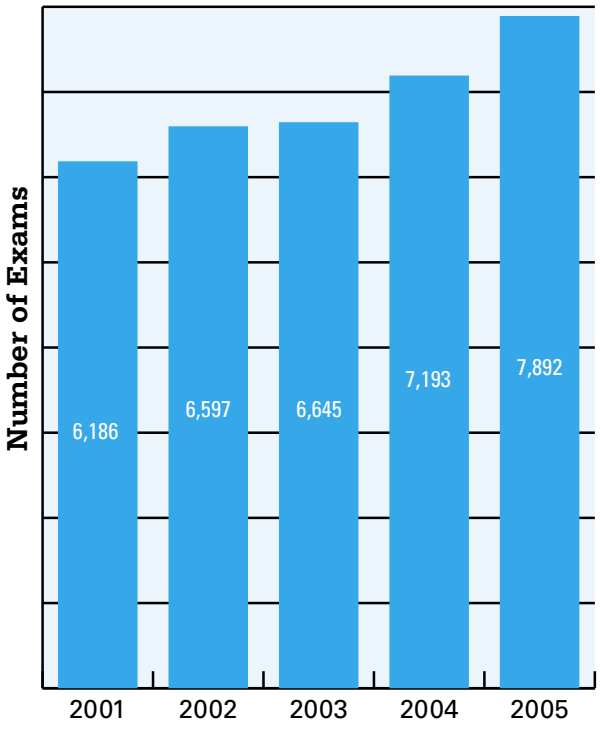
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- Help students become familiar with analyzing spatial processes and linkages across multiple geographic contexts and at a variety of scales, focusing on the inherently geographic aspects of the question.
- Many students were unfamiliar with the concepts of supranationalism and devolution. Several students confused the concept of supranationalism with supernationalism, ultranationalism, and extreme nationalism. Readers saw this especially in responses that discussed expansionism and Nazism as examples of supranationalism. Some students confused the concepts of supranationalism and devolution with each other.
- In general, students found the early twentieth-century immigration flows easier to discuss than the late twentieth-century flows. In addition, students were more able to identify source areas and push factors than to discuss linkages between immigration flows and economic factors in the destination country. Many students confused push factors with pull factors (e.g., identifying job opportunities in the United States as a push factor). Too many responses discussed push factors outside of their appropriate historical context (e.g., bubonic plague, slavery, Irish potato famine).
- Students found the free-response question on urban revitalization challenging. Students seemed most able to link the process of urban revitalization to urban policy and somewhat to sense of place. They were less comfortable discussing how economic and demographic factors have contributed to the process of urban revitalization.

AP Latin[12]

AP Latin
Number of Exams, 2001–2005



Exemplary AP Latin Programs

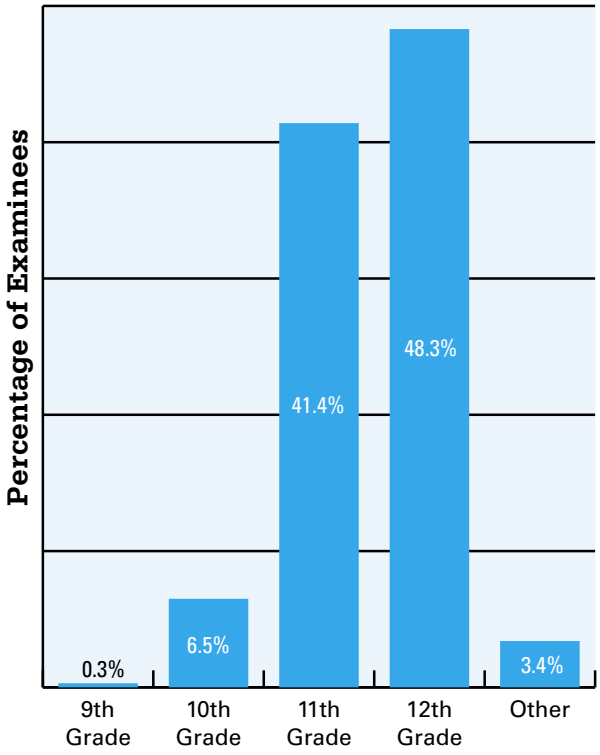
These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Latin:

Small-size school (<300 students in grades 10–12):
Broadwater Academy (Exmore, VA)
- Head of School: Kendell S. Berry
- AP Teacher: Lorri W. Freitas

Medium-size school (300–799 students in grades 10–12):
Trinity School (New York, NY)
- Head of School: Mark S. Simpson
- AP Teachers: Donald Connor, Charles Fornara, Anjali Disouza, William Pagonis, Douglas, Tobin
- Teachers of Foundation Courses: Markus Hunt, Jarred Williams

Large-size school (800+ students in grades 10–12):
Jesuit High School (New Orleans, LA)
- Head of School: Father Rev. Anthony McGinn, SJ
- AP Teachers: Showalter A. Knight, Mitch Chapoton

AP Latin
Examinees by Grade Level, 2005

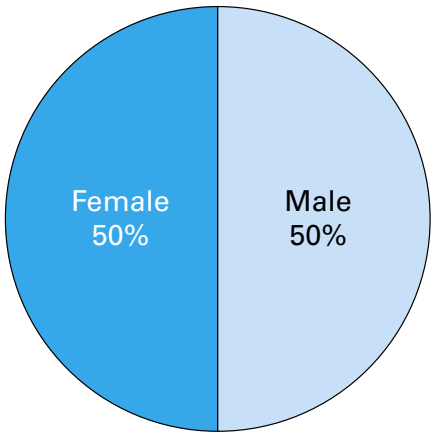


AP Grade Distribution, 2005

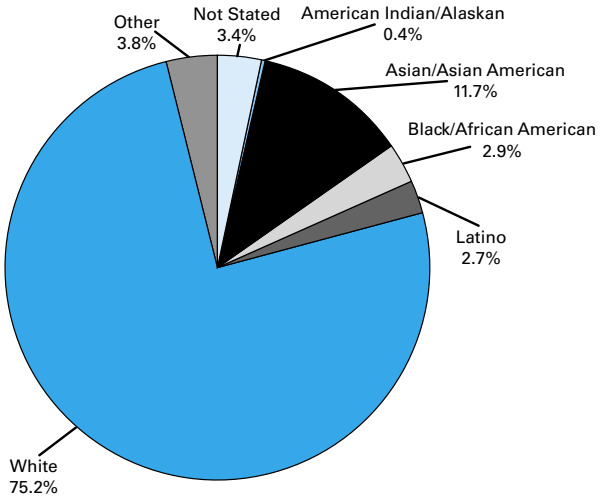
Exam Grade	Number of Examinees	% At
Score of 5	1,446	18.3%
Score of 4	1,430	18.1%
Score of 3	2,107	26.7%
Score of 2	1,265	16.0%
Score of 1	1,644	20.8%
	7,892	100.0%

Number of Schools Offering This Course: 653

AP Latin
Examinees by Gender, 2005



AP Latin
Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in these AP courses are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

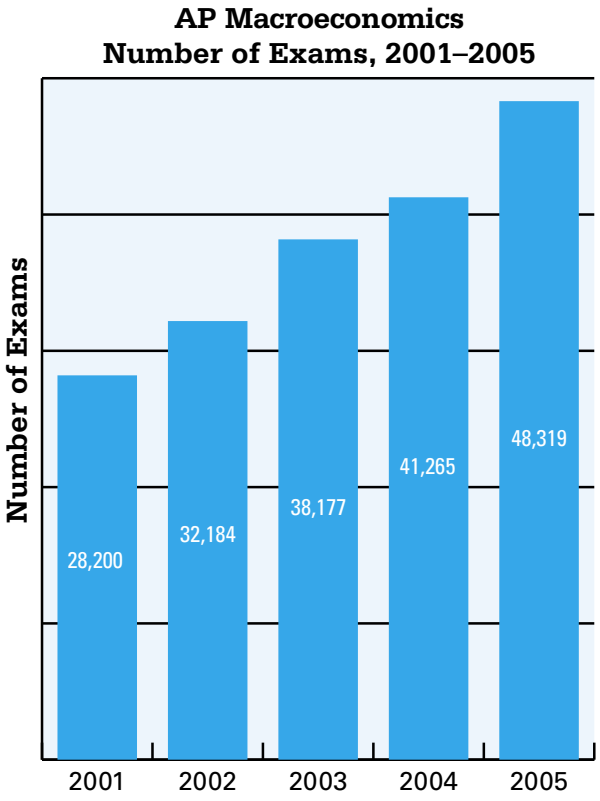
Latin Literature:

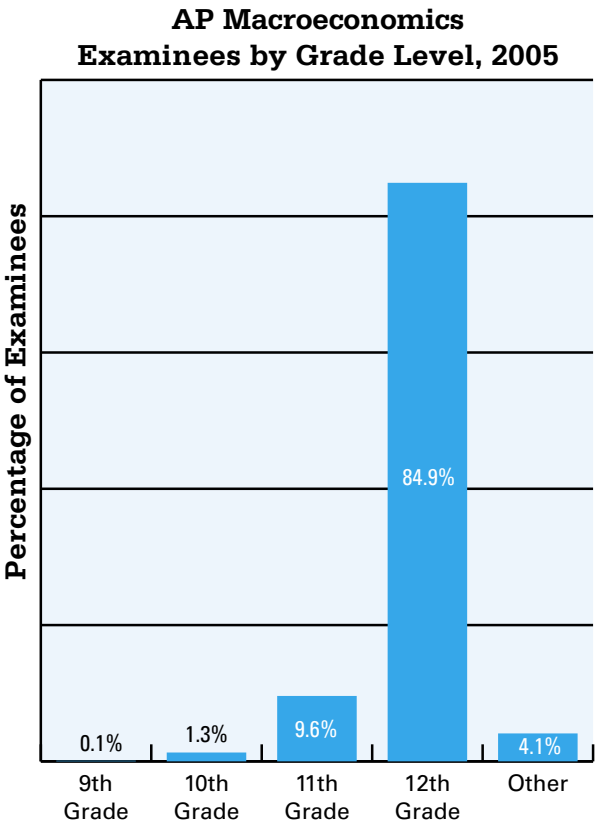
- Students need to practice careful paraphrasing and translation to make clear their understanding of the passage. Students also need practice at identifying short passages within the context of the entire work. Moreover, they should be aware that a concise introductory sentence (not a paragraph) for a short essay question will help them move directly to their first point and will be a more productive use of the limited time they have to respond to the question.
- Students should always be held accountable for literal translations. Such items as verb tense, mood, number, noun case and number, and basic syntax should be given special emphasis.
- Particularly with Horace, attention must be paid to a poet's peculiar vocabulary. Students must get into the habit of accounting for every word, including those seemingly unimportant connectives like *nec*, *-que*, and *atque*. Teachers should place special emphasis on subjunctives, particularly on the perfect subjunctive, which students often confuse with the future perfect, and on subjunctive constructions other than purpose and result clauses.
- Students must be sure to translate the passage accurately and with careful attention to the Latin of the text instead of presenting a loose paraphrase or summary based on their knowledge of the story. They should pay particular attention to the voice and tense of verbs and participles and to the case and number of nouns and adjectives. Students should also be on their guard against words that superficially resemble other words.

Latin: Vergil:

- Teachers should emphasize the importance of the instruction "translate…as literally as possible" and impress upon their students that they not render main verbs as participles, that they be sure to translate present participles as *–ing* forms, and that they be precise with regard to the agreement of adjectives and nouns. One way to help students understand the scoring guidelines is to have them score their own translations by segments.
- Teachers should have their students practice identifying passages in context with attention to the speaker, addressee, and specific situation. Students should be advised not to try to compensate for their inability to handle the Latin by commenting on figures of speech and meter, or by retelling the plot of the entire epic. They should be encouraged to cite line numbers and use ellipses (…) rather than spend time writing out lengthy Latin passages. Conversely, vague citations like "in lines 1–10" are not convincing.
- Students need to be well aware of the entire content of the *Aeneid*. Teachers should focus on student recognition of all significant characters, themes, events, and passages throughout the epic. Suggested methods for preparation include practice essays, group review packets, and class discussion.

AP Macroeconomics





Exemplary AP Macroeconomics Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Macroeconomics:

Small-size school (<300 students in grades 10–12):
Saint Clements School (Toronto, Canada)
- Head of School: Patricia Parisi
- AP Teacher: John Liggett

Medium-size school (300–799 students in grades 10–12):
Korean Minjok Leadership Academy (Kangwon, South Korea)
- Head of School: Donhee Lee
- AP Teachers: Bungyul Nah, Yong-Heuy Han

Large-size school (800+ students in grades 10–12):
Lowell High School (San Francisco, CA)
- Head of School: Paul Cheng
- AP Teachers: James Spellicy, Aster Chin, Kristine Lindsey

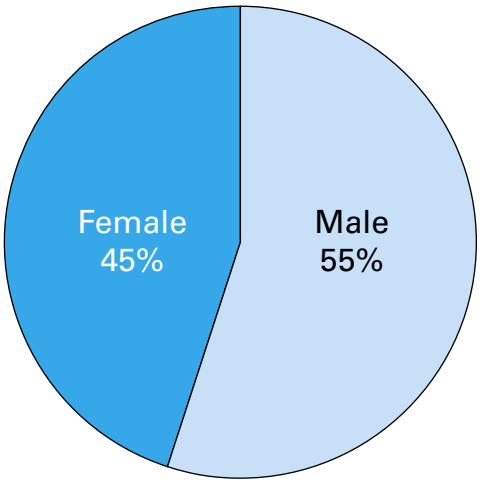
School with the Largest Number of Latino Students Scoring 3+:
Miami Sunset Senior High School (Miami, FL)
- Head of School: Dr. Daniel Tosado (2004–2005)
- AP Teachers: Irene Lirakis
- Teacher of Foundation Course: Irvin Madnikoff

AP Grade Distribution, 2005

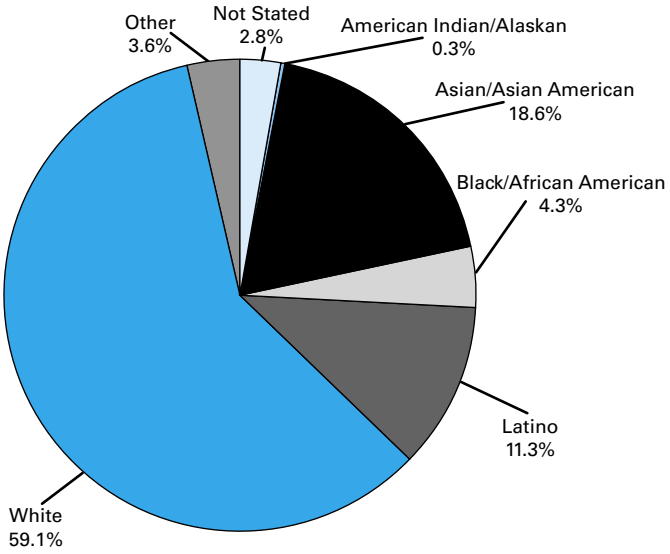
Exam Grade	Number of Examinees	% At
Score of 5	6,910	14.3%
Score of 4	13,970	28.9%
Score of 3	7,667	15.9%
Score of 2	8,157	16.9%
Score of 1	11,615	24.0%
	48,319	100.0%

Number of Schools Offering This Course: 2,539

AP Macroeconomics
Examinees by Gender, 2005



AP Macroeconomics
Examinees by Race and Ethnicity, 2005

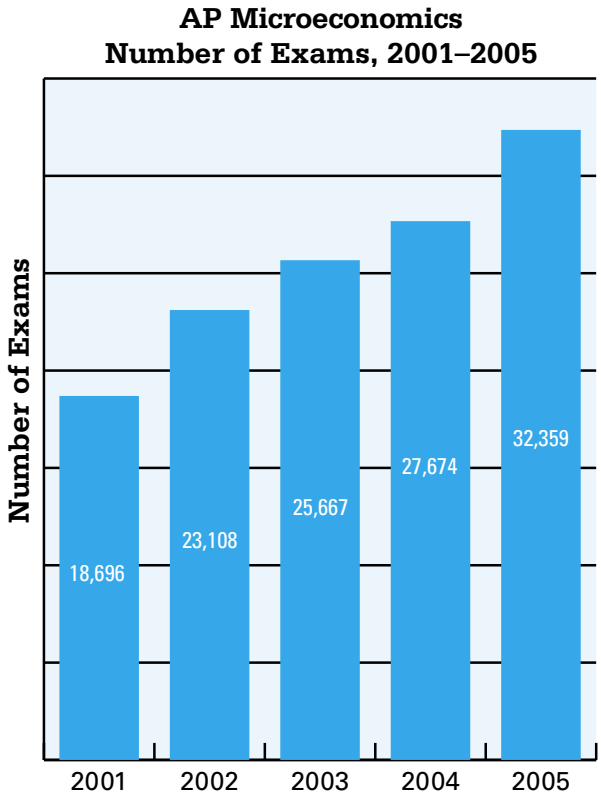


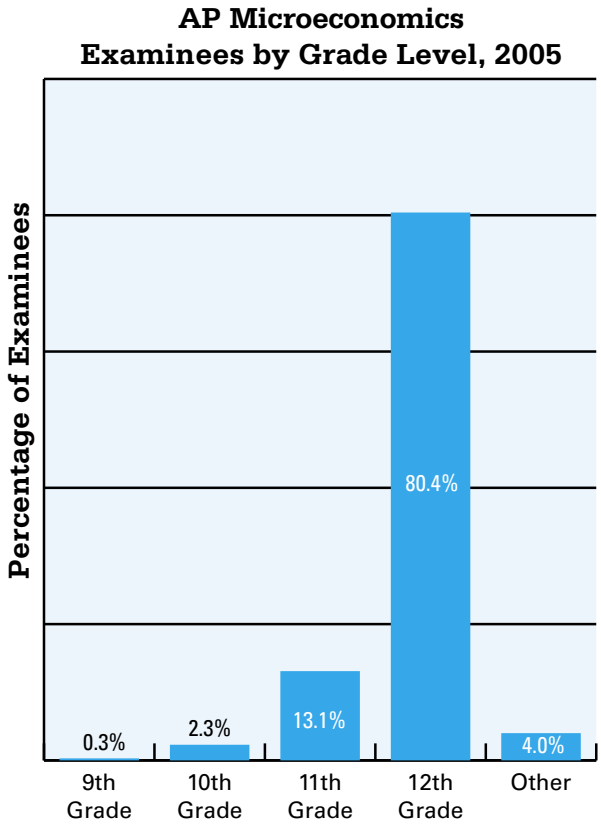
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- It is crucial for students to understand how aggregate supply and demand determine equilibrium output in the short run and the long run, and what causes aggregate supply and demand to change. Equally important is an understanding of how money supply and money demand determine nominal interest rates and how changes in money supply or money demand affect nominal interest rates and aggregate demand. Although the money supply and money demand framework explains the nominal interest rate, one can infer that an increase in the money supply, by reducing the nominal rate and increasing the price level, will reduce the real interest rate.
- A very important distinction to make is the difference in the effect of a change in investment in plant and equipment on aggregate demand and on a nation's capital stock. In the short run, changes in investment demand produce changes in aggregate demand and can change short-run equilibrium output. In the long run, changes in investment change the capital stock, which affects the long-run growth path of GDP. In order to understand how interest-rate changes affect currency values, it is essential that students know that interest rates are returns on financial assets and so they affect the international movement of financial capital.
- Relate the aggregate supply and aggregate demand framework to the Phillips curve. If aggregate demand shifts, there will be an inverse relationship between unemployment and inflation in the short run. This is the relationship depicted by the short-run Phillips curve. If short-run aggregate supply shifts to the left, then there is higher unemployment and higher inflation, amounting to a shift to the right of the short-run Phillips curve. In the long run, output will always return to the long-run equilibrium, which means that inflation does not affect the level of production or unemployment. In the long run, the Phillips curve is vertical.

AP Microeconomics





Exemplary AP Microeconomics Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Microeconomics:

Small-size school (<300 students in grades 10–12):
Antilles School (St. Thomas, Virgin Islands)

- Head of School: Marva Wiklund (current), Theodore F. Morse (2004–2005)
- AP Teacher: David Tyler

Medium-size school (300–799 students in grades 10–12):
Korean Minjok Leadership Academy (Kangwon, South Korea)

- Head of School: Donhee Lee
- AP Teachers: Bungyul Nah, Yong-Heuy Han

Large-size school (800+ students in grades 10–12):
Lowell High School (San Francisco, CA)

- Head of School: Paul Cheng
- AP Teachers: James Spellicy, Aster Chin, Kristin Lubenow-Lindsey

School with the Largest Number of African American Students Scoring 3+: Hume-Fogg Academic High School (Nashville, TN)

- Head of School: Thomas T. Ward
- AP Teacher: Martha K. Robinson

School with the Largest Number of Latino Students Scoring 3+: Christopher Columbus High School (Miami, FL)

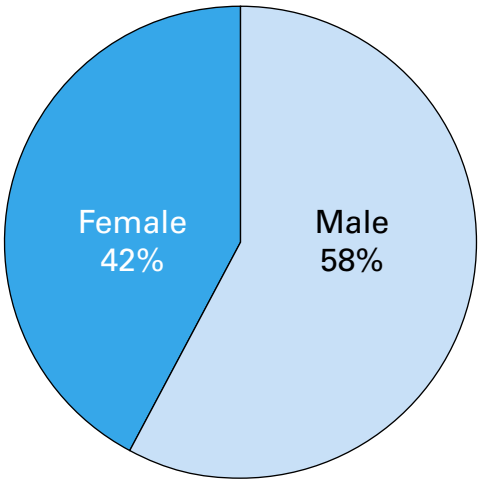
- Head of School: Brother Patrick Mcnamara
- AP Teacher: Dan Ciocca

AP Grade Distribution, 2005

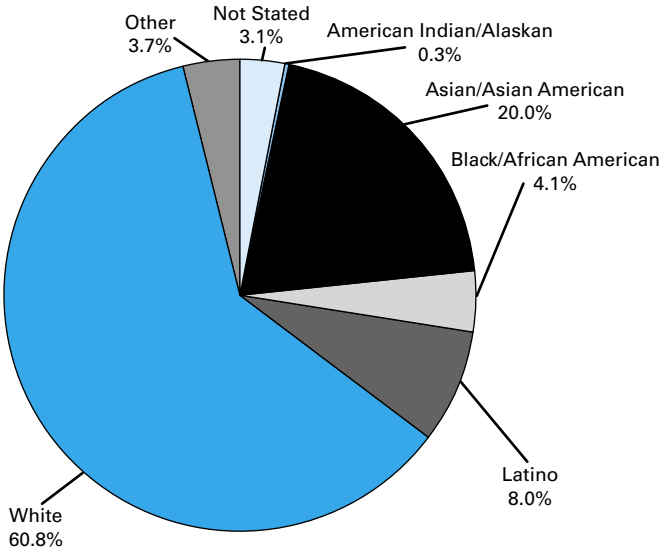
Exam Grade	Number of Examinees	% At
Score of 5	3,931	12.1%
Score of 4	7,789	24.1%
Score of 3	7,198	22.2%
Score of 2	5,670	17.5%
Score of 1	7,771	24.0%
	32,359	100.0%

Number of Schools Offering This Course: 2,169

AP Microeconomics
Examinees by Gender, 2005



AP Microeconomics
Examinees by Race and Ethnicity, 2005

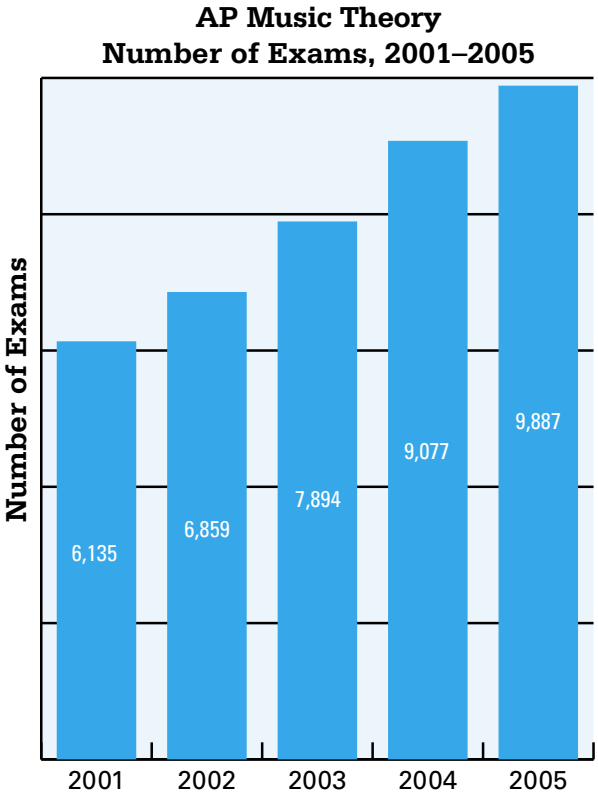


Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- Teachers must emphasize that the price faced by a perfectly competitive firm is constant and cannot be changed by the firm, but that the price can change if market supply or demand change. It is also very important for students to understand that any short-run change in market price will produce short-run changes in profits that result in entry or exit in the long run. Exit and entry will return the price to the original long-run equilibrium price in a constant-cost industry.
- It is necessary to teach students the concepts of consumer surplus, producer surplus, and deadweight loss; how to identify these concepts graphically; and how consumer surplus and producer surplus change when the price changes. It is also very important to teach how the price elasticities of supply and demand affect the distribution of the burden of a per-unit tax between producers and consumers.
- Teach the conditions associated with each market structure in output markets and in labor markets. It is important to establish that in perfectly competitive markets, one firm can sell as much output as it desires at the market price. Similarly, in perfectly competitive markets one firm can hire as much labor as it desires at the market wage. An important idea to teach is that labor usage should be increased as long as marginal revenue product exceeds the wage rate. An additional laborer should not be hired if the marginal revenue product is less than the wage rate.

AP Music Theory



Exemplary AP Music Theory Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Music Theory:

Small-size school (<300 students in grades 10–12):
South Carolina Governor's School for the Arts and Humanities (Greenville, SC)

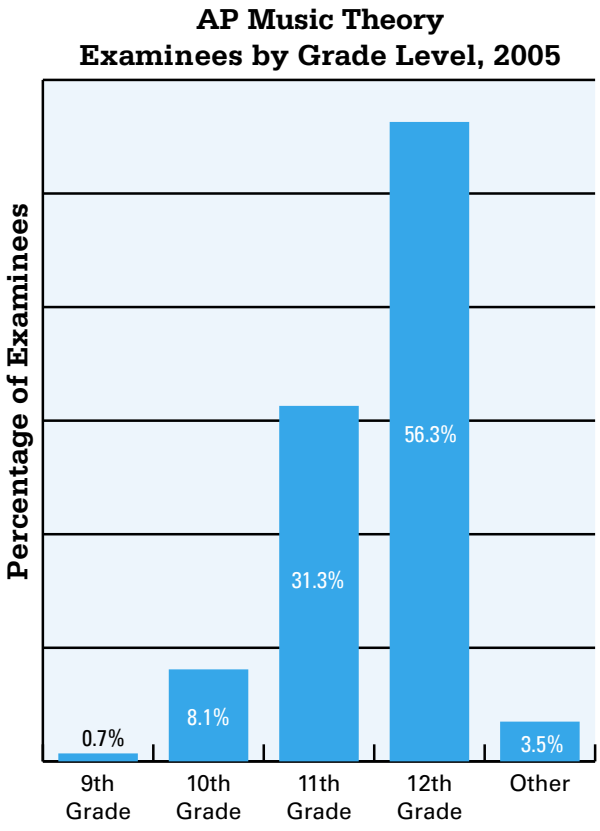
- Heads of School: Donald Beckie, Sharon L. Kazee (Dean)
- AP Teacher: Nancy L. Smith

Medium-size school (300–799 students in grades 10–12):
Charleston County School of the Arts (North Charleston, SC)

- Head of School: Rose Maree Myers
- AP Teacher: Basil Kerr

Large-size school (800+ students in grades 10–12):
Phillips Academy (Andover, MA)

- Head of School: Barbara Landis Chase

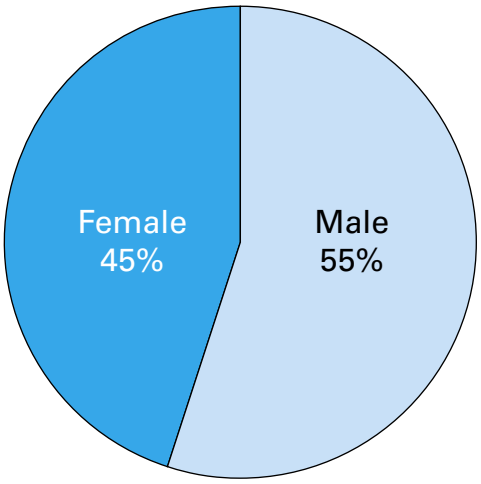


AP Grade Distribution, 2005

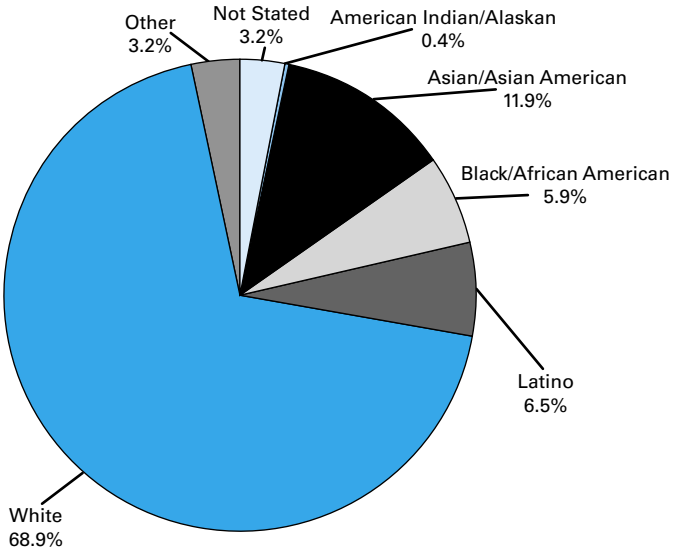
Exam Grade	Number of Examinees	% At
Score of 5	1,800	18.2%
Score of 4	1,836	18.6%
Score of 3	2,633	26.6%
Score of 2	2,584	26.1%
Score of 1	1,034	10.5%
	9,887	100.0%

Number of Schools Offering This Course: 1,901

AP Music Theory Examinees by Gender, 2005



AP Music Theory Examinees by Race and Ethnicity, 2005



Feedback for Educators

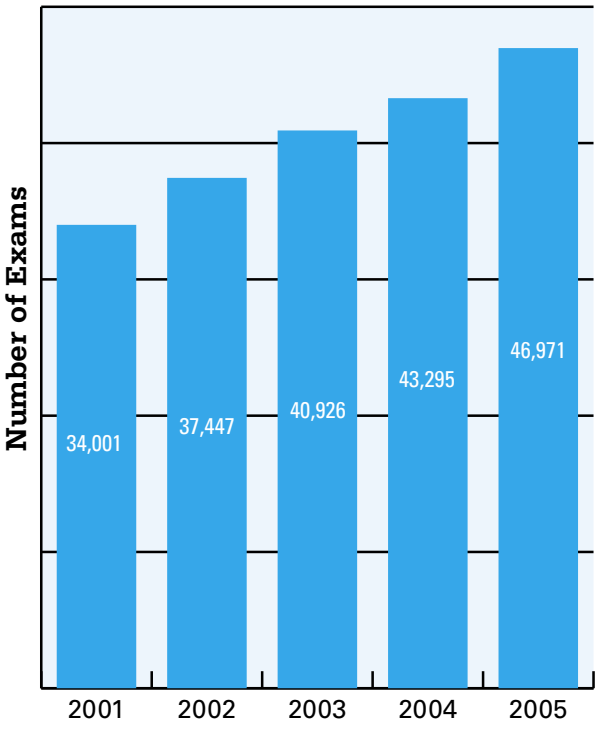
The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

Teachers should emphasize aural skills work in the AP Music Theory course. Readers encourage teachers to adopt the following approaches:

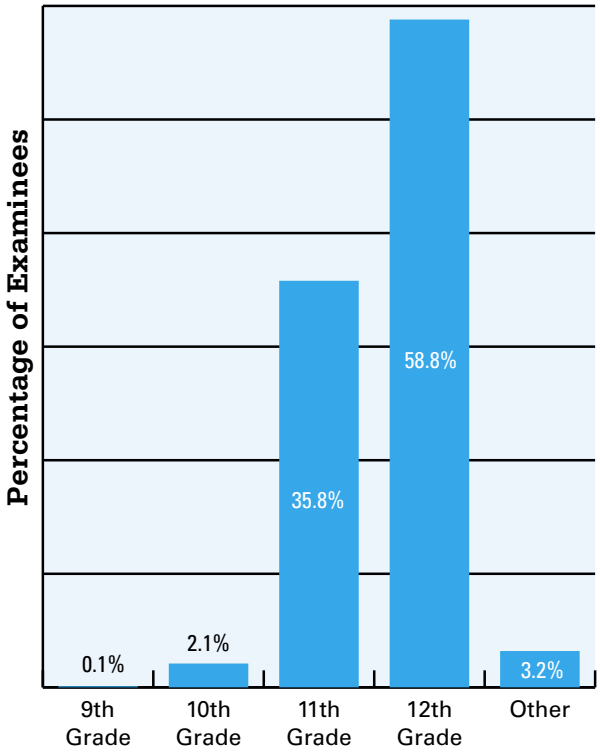
- Keep the written theory work linked at all times to dictation and sight-singing activities.
- Emphasize scalar versus triadic patterns.
- Practice compound meter and its correct notation.
- Use the proper choice of accidental in accord with melodic direction.
- Spend more time on inversions.
- Drill students over and over on functional diatonic chords in a key and basic chord progressions (idiomatic progressions) until they can easily identify them in chordal passages.
- Most important, devote more class time to ear training—it must not be shortchanged!
- Raise the leading tone in minor melodies and progressions.
- Understand which chords are likely to appear and which are not.
- Understand scale degree function.
- Practice hearing the bass and melodic lines (some students may have a particular need for extra practice with one or the other).
- Compare the intervallic relationship between lines (e.g., parallel sevenths are highly unlikely).
- Do not put off the teaching of secondary dominants for too long; students need to be given more time to digest this information.
- Work regularly on the compound meter.
- Remind students to count the duration of the last note.
- Develop a vocabulary of common patterns through frequent drills; include cadence patterns, the establishment of scale and key, and so on.
- Practice both with and without solfege systems.

AP Physics B

AP Physics B
Number of Exams, 2001–2005



AP Physics B
Examinees by Grade Level, 2005



Exemplary AP Physics B Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Physics B:

Small-size school (<300 students in grades 10–12):
Head-Royce School (Oakland, CA)

- Head of School: Carl Thiermann
- AP Teacher: Owen von Kugelgen
- Teachers of Foundation Courses: Chris Harper, Eugene Vann, Jen Brakeman

Medium-size school (300–799 students in grades 10–12):
Korean Minjok Leadership Academy (Kangwon, South Korea)

- Head of School: Donhee Lee
- AP Teachers: Dong-Seong Jeon, Kwangyl Park
- Teachers of Foundation Courses: Hyong-Jong Park, Myungsoo Kim

Large-size school (800+ students in grades 10–12):
Harvard Westlake School (North Hollywood, CA)

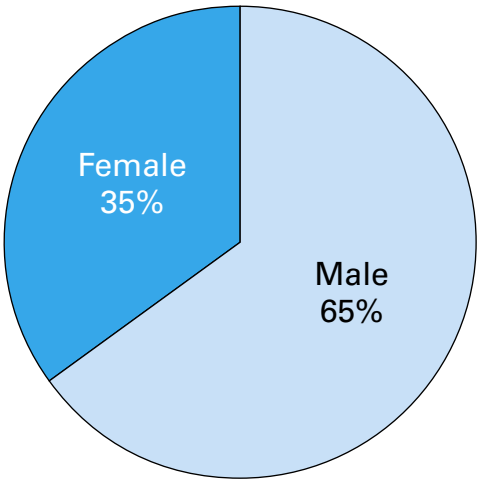
- Head of School: Harry L. Salamandra, Jr.
- AP Teachers: John R. Feulner, Antonio B. Nassar, James Patterson, Jesse Reiner
- Teachers of Foundation Courses: Lawrence K. Axelrod, James M. Brink, David Cleland, Christopher B. Dartt, Deborah Caitlin Dowling, Blaise Eitner, Theresa Frantz, David Fromme, Colby Genrich, David Hinden, John Kim, Stephen R. Marsden, Jane Balkin Matz, Elliott Parivar, Dietrich Schuhi, Wendy Van Norden, Yanni E. Vourgourakis, Walter Wemer, Patricia Whiting, Sandra Wolchok

AP Grade Distribution, 2005

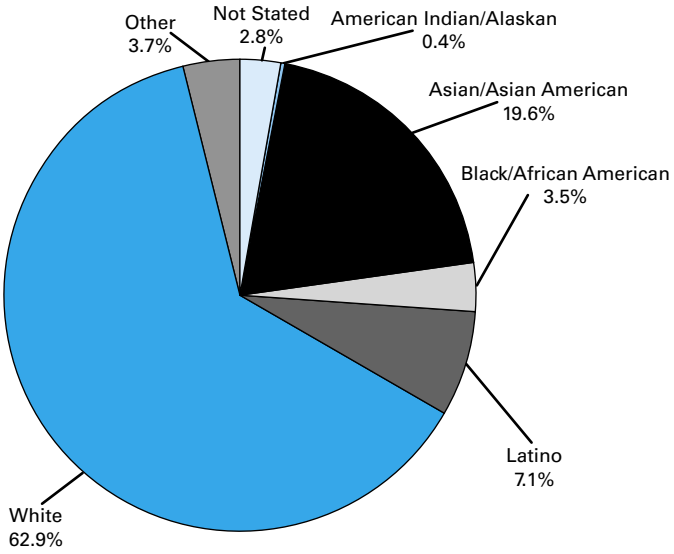
Exam Grade	Number of Examinees	% At
Score of 5	6,559	14.0%
Score of 4	8,592	18.3%
Score of 3	12,992	27.7%
Score of 2	7,148	15.2%
Score of 1	11,680	24.9%
	46,971	100.0%

Number of Schools Offering This Course: 3,840

AP Physics B
Examinees by Gender, 2005



AP Physics B
Examinees by Race and Ethnicity, 2005



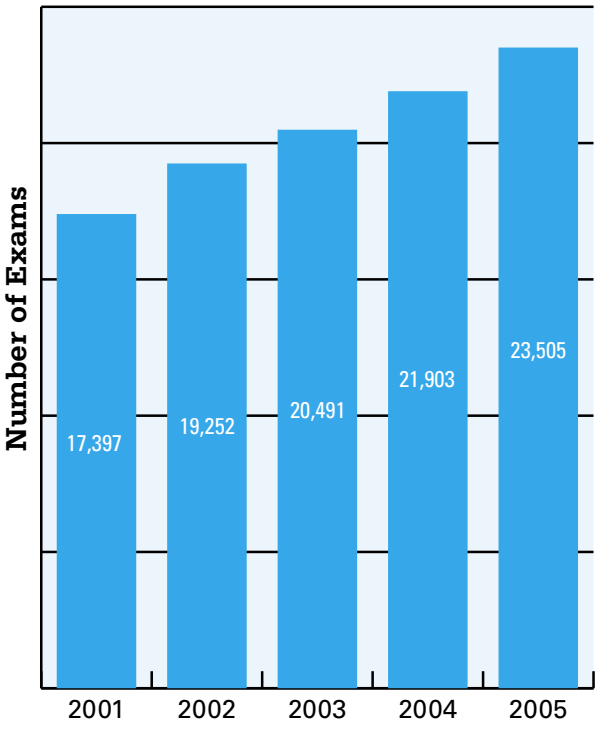
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

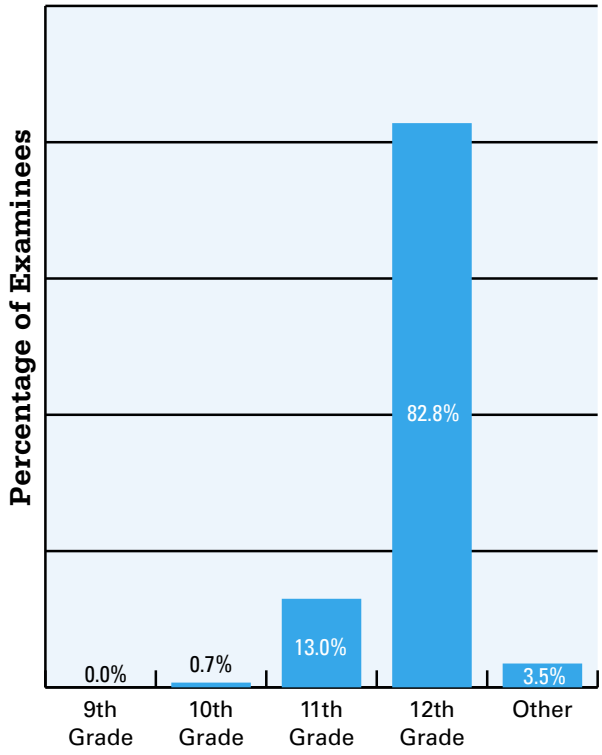
- The areas in which students need work are experimental technique in general and graphical analysis in particular. Students had a great deal of trouble with a straightforward point-charge, indicating that this material needs more thorough coverage.
- As usual, students struggled with the modern physics questions in which they were given a set of energy levels that occur in an atom (actually, singly ionized helium). The levels were the ground state and first three excited states. In part (a) students were given the energies in eV of the first two excited states and the ground state. They were asked to find the energy in eV of the third excited state if the $n = 4$ to $n = 2$ transition yielded a photon with a wavelength of 121.9 nm. In part (b) they were asked to find the momentum of that photon. In parts (c) and (d) the problem switched focus to the photoelectric effect. The 121.9 nm photon struck a silver surface whose work function was 4.7 eV, and students were asked to find the kinetic energy of the emitted photoelectrons and the stopping potential for those electrons.
- In part (a) of the modern physics problem, students confused the energy level with the photon energy. They also appeared to confuse frequency and wavelength, multiplying the wavelength by Planck's constant to try to obtain the energy of the photon. Many students were confused by the term *nanometer*, not knowing that it meant 10^{-9}. Responses to part (b) were full of errors involving units, where students would use a value for hc instead of h. Students who decided that $p = mu$ for a photon ran into difficulty with the zero mass of the photon, a difficulty they neatly sidestepped by inserting the mass of an electron or proton. Part (c) responses included more unit errors involving joules and electron volts. In part (d) students set the stopping potential equal to the kinetic energy of the photoelectrons, forgetting to divide by the electron charge to obtain a potential.

AP Physics C: Mechanics

AP Physics C: Mechanics
Number of Exams, 2001–2005



AP Physics C: Mechanics
Examinees by Grade Level, 2005



Exemplary AP Physics C: Mechanics Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Physics C: Mechanics:

Small-size school (<300 students in grades 10–12):
Commonwealth School (Boston, MA)

- Head of School: William D. Wharton
- AP Teachers: Farhad Riahi, Marcy Paul
- Teacher of Foundation Course: Rebecca Jackman

Medium-size school (300–799 students in grades 10–12):
Illinois Mathematics and Science Academy (Aurora, IL)

- Heads of School: Dr. Stephanie Pace Marshall, Dr. Eric McLaren (Principal)
- AP Teachers: John Eggebrecht, Laura Nickerson, David Workman
- Teachers of Foundation Courses: John Eggebrecht, Laura Nickerson, David Workman

Large-size school (800+ students in grades 10–12):
Phillips Academy (Andover, MA)

- Head of School: Barbara Landis Chase

School with the Largest Number of Latino Students Scoring 3+:
G. Holmes Braddock High School (Miami, FL)

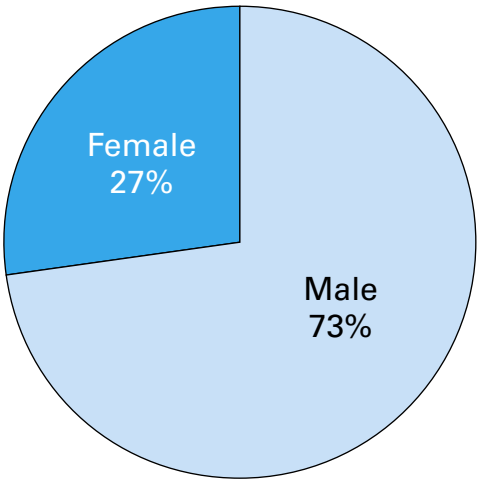
- Head of School: Manuel S. Garcia
- AP Teacher: Odalys Sanchez-Reyes
- Teachers of Foundation Courses: Odalys Sanchez-Reyes, Gretchen Pentzke

AP Grade Distribution, 2005

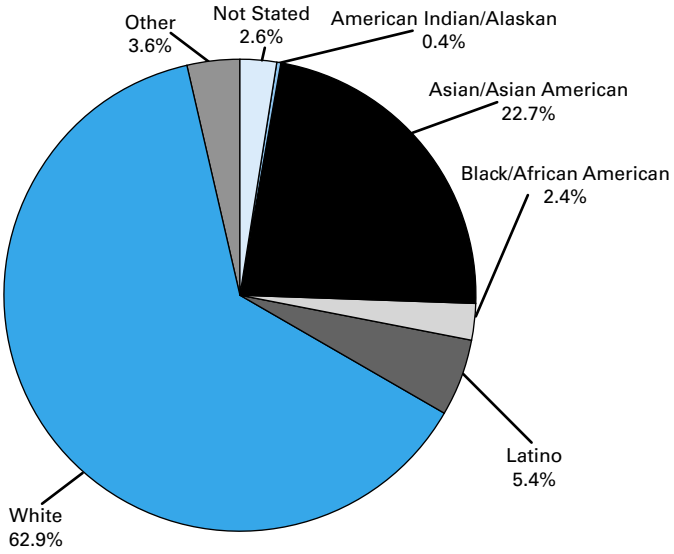
Exam Grade	Number of Examinees	% At
Score of 5	5,595	23.8%
Score of 4	5,565	23.7%
Score of 3	4,988	21.2%
Score of 2	4,029	17.1%
Score of 1	3,328	14.2%
	23,505	100.0%

Number of Schools Offering This Course: 2,510

AP Physics C: Mechanics Examinees by Gender, 2005



AP Physics C: Mechanics Examinees by Race and Ethnicity, 2005



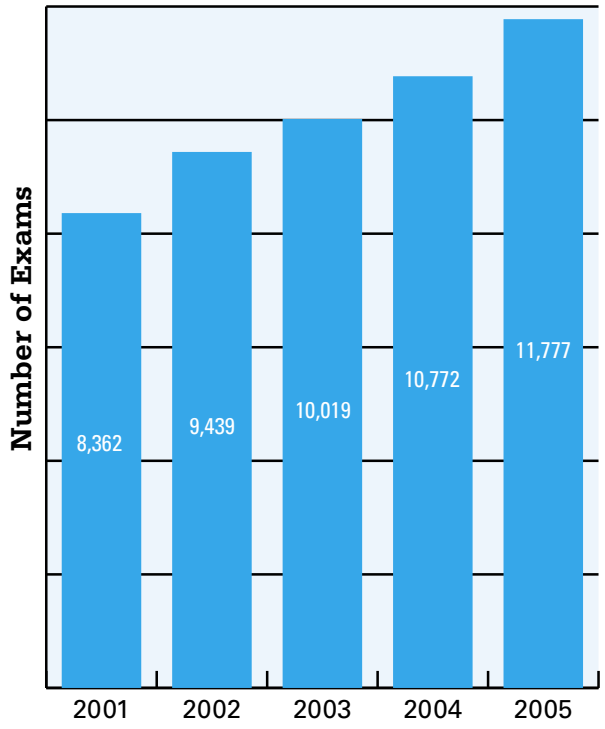
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

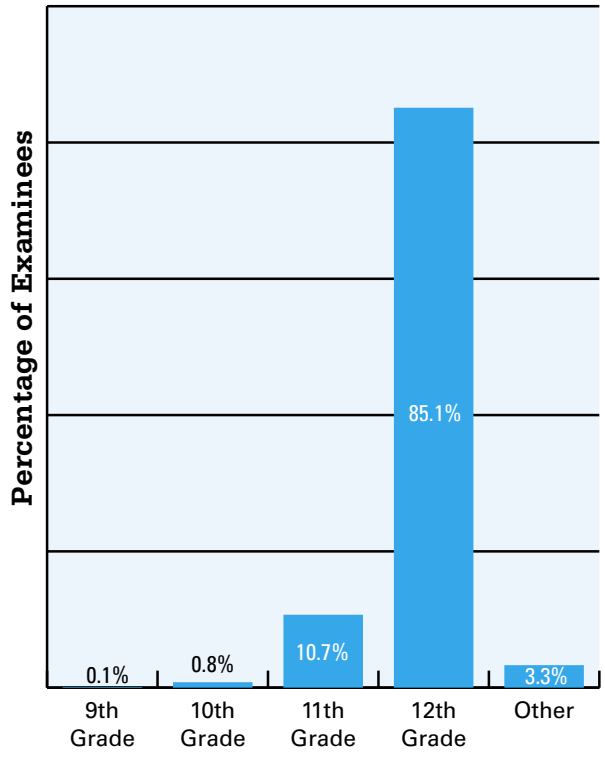
- One salient point that comes out of this year's AP Physics C: Mechanics Exam is that students need to work on their graphing skills. It is not clear if the lack of these skills results from not handling data in a laboratory setting or from an excessive reliance on software packages that do graphing for them. What is clear is that many students are unable to perform tasks involving the presentation of one-dimensional motion in a graphical form, or to analyze a set of data for orbital motion in order to extract physically significant information from it. It is also apparent that some students have forgotten material (such as centripetal acceleration) that they learned in earlier courses.
- Students especially struggled with questions testing their understanding of Newtonian gravitation and Kepler's Third Law. To earn full points, students had to recall that the centripetal acceleration of an object in a circular orbit is u^2/R, where u is the speed of the object and R the radius of its orbit. Parts (a) and (b) asked students to derive Kepler's Third Law of planetary motion from the Newtonian expression of the gravitational force between two objects. Part (c) asked what quantities needed to be graphed in order to yield a linear equation. Parts (d), (e), and (f) probed students' abilities to perform graphical analysis on the given data on the period and orbital radii of four of Saturn's moons, with the object of determining the mass of Saturn. The only point many students earned was for copying the expression for the Newtonian gravitational force and substituting in a variable M_S for the mass of Saturn. Students were unable to set this expression equal to the centripetal force acting on the moons of Saturn. Many did not realize that the orbital velocity is given by $2\pi R/T$, where T is the orbital period and R the orbital radius, and so could not derive Kepler's Third Law.

AP Physics C: Electricity and Magnetism

AP Physics C: Electricity and Magnetism
Number of Exams, 2001–2005



AP Physics C: Electricity and Magnetism
Examinees by Grade Level, 2005



Exemplary AP Physics C: Electricity and Magnetism Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Physics C: Electricity and Magnetism:

Small-size school (<300 students in grades 10–12):
Oklahoma School of Science & Mathematics (Oklahoma City, OK)

- Head of School: Dr. Edna McDuffie Manning
- AP Teachers: Dr. Kurt Bachmann, Dr. R. Shayne Johnston, Dr. Xifan Liu, Dr. Jayanta Rudra
- Teachers of Foundation Courses: Dr. Kurt Bachmann, Dr. R. Shayne Johnston, Dr. Xifan Liu, Dr. Jayanta Rudra, Prof. Tony Comforth, Prof. Chengde Feng, Prof. John Gleason, Prof. Daryl Schwerdtfeger, Dr. Edna McDuffie Manning, Dr. Frank Wang, Dr. Adrian Zimmer

Medium-size school (300–799 students in grades 10–12):
Illinois Mathematics and Science Academy (Aurora, IL)

- Head of School: Stephanie Pace Marshall
- AP Teachers: John Eggebrecht, Laura Nickerson, David Workman
- Teachers of Foundation Courses: John Eggebrecht, Laura Nickerson, David Workman

Large-size school (800+ students in grades 10–12):
Phillips Academy (Andover, MA)

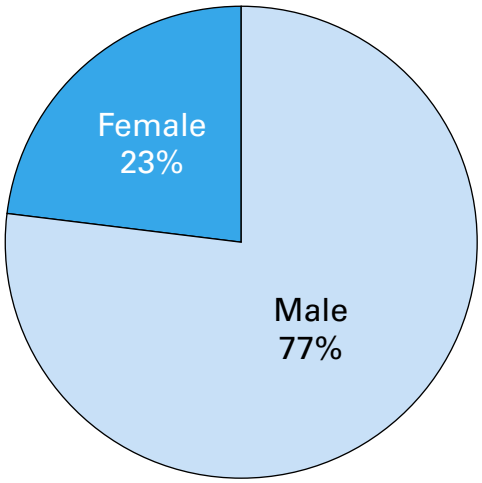
- Head of School: Barbara Landis Chase

AP Grade Distribution, 2005

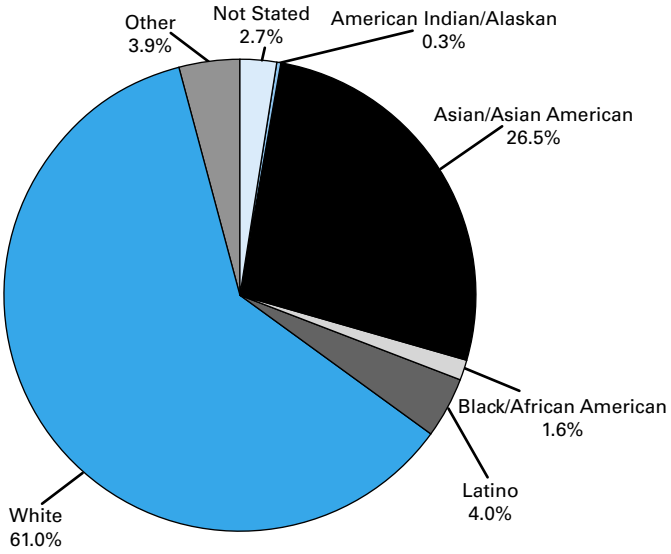
Exam Grade	Number of Examinees	% At
Score of 5	3,395	30.4%
Score of 4	2,625	23.5%
Score of 3	1,490	13.3%
Score of 2	1,991	17.8%
Score of 1	1,676	15.0%
	11,177	100.0%

Number of Schools Offering This Course: 1,478

AP Physics C: Electricity and Magnetism Examinees by Gender, 2005



AP Physics C: Electricity and Magnetism Examinees by Race and Ethnicity, 2005



Feedback for Educators

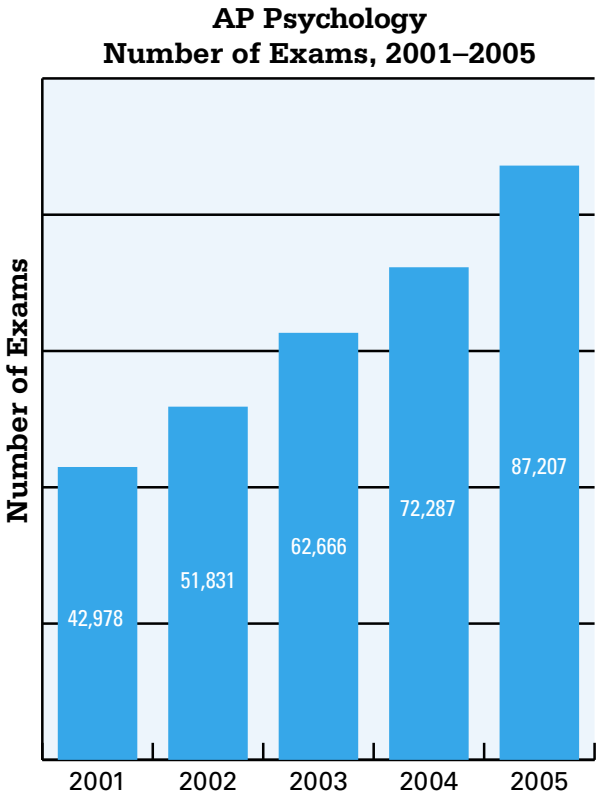
The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, available in its entirety as a free download from the AP Central Web site.

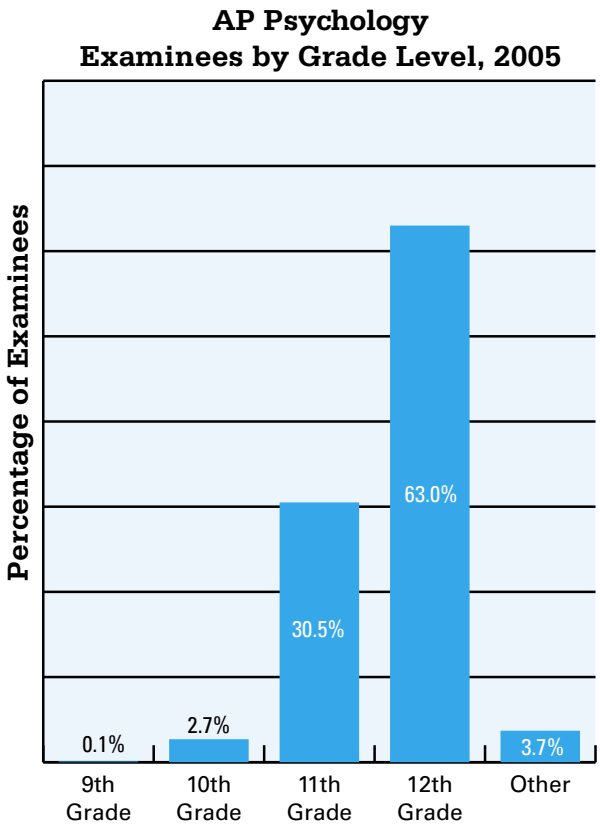
- Performance was good overall, although there were significant shortcomings in student performance on the inductor-resistor problem, where many students had no idea of how an inductor functions in a circuit.

Specific feedback on the inductor-resistor problem:

- This question tested the students' understanding of LR circuits at long and short time scales. Students needed to understand that at short time scales, inductors resist changes in the current flowing through them. In the dc circuit shown, when the switch S was closed, the current flowing through the inductor was zero, and all of the current flowing through R_1 had to flow through R_2. After a long time, the inductor acted like a short circuit, so that all of the current flowing through R_1 flowed through L. When the switch S was opened again, the current continued to flow through L, and the voltage drop across R_2 could be calculated by Ohm's Law. The remaining concept, which is that the voltage drop across an inductor is given by $L(dI/dt)$, was tested in part (b). Part (d) was designed to test students' ability to graph the time-dependent behavior of the current supplied by the battery.
- The most common error was students' failure to recognize what an inductor was. This meant they were also in the dark concerning how the inductor affected the flow of current. Students did not know that the current through the inductor immediately after the switch was closed was zero, or that at long periods after the switch was closed the inductor would act as a wire. Some students lost a few points to algebra errors, but the most serious error was ignorance of the inductor.
- For those students who did know what the inductor was, the graph presented little difficulty.

AP Psychology





Exemplary AP Psychology Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Psychology:

Small-size school (<300 students in grades 10–12):
Rowland Hall-St. Mark's School (Salt Lake City, UT)
- Head of School: Alan Sparrow
- AP Teacher: Diane Guido

Medium-size school (300–799 students in grades 10–12):
Gulliver Preparatory School (Pinecrest, FL)
- Head of School: Patrick W. Snay
- AP Teacher: Robert Ewen

Large-size school (800+ students in grades 10–12):
Great Neck South High School (Great Neck, NY)
- Head of School: Randolph H. Ross
- AP Teachers: David Moya, Michelle Sorise, Kathy McAleer

School with the Largest Number of African American Students Scoring 3+: Whitney M. Young Magnet High School (Chicago, IL)
- Head of School: Dr. Joyce Kenner
- AP Teacher: Bernice Reist-Jones

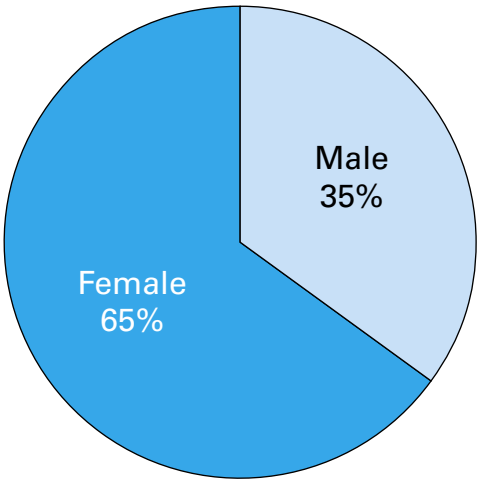
School with the Largest Number of Latino Students Scoring 3+:
Miami Coral Park Senior High School (Miami, FL)
- Head of School: Dr. Nick JacAngelo
- AP Teacher: Dianne Holmes

AP Grade Distribution, 2005

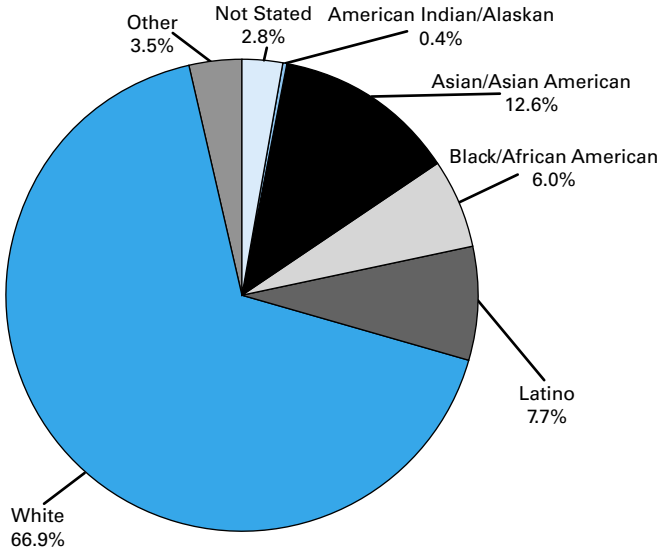
Exam Grade	Number of Examinees	% At
Score of 5	16,761	19.2%
Score of 4	23,926	27.4%
Score of 3	17,916	20.5%
Score of 2	11,715	13.4%
Score of 1	16,889	19.4%
	87,207	100.0%

Number of Schools Offering This Course: 3,511

AP Psychology
Examinees by Gender, 2005



AP Psychology
Examinees by Race and Ethnicity, 2005

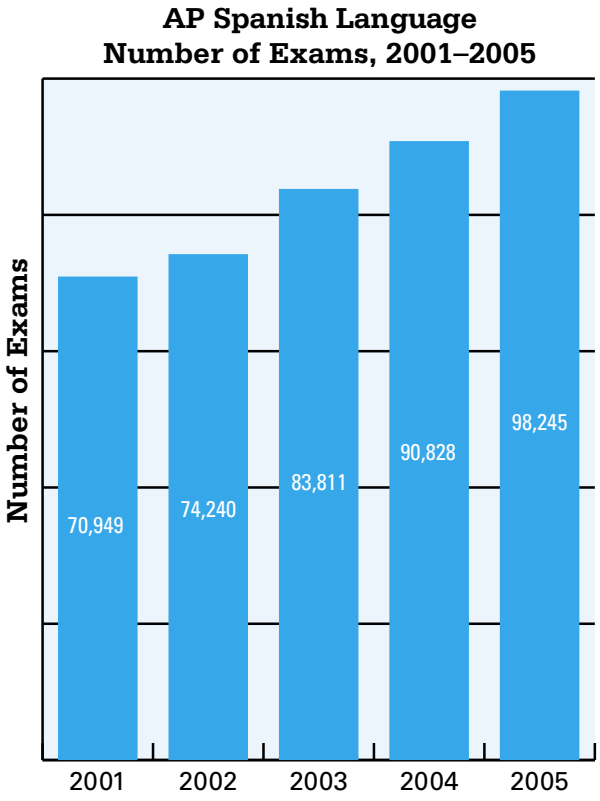


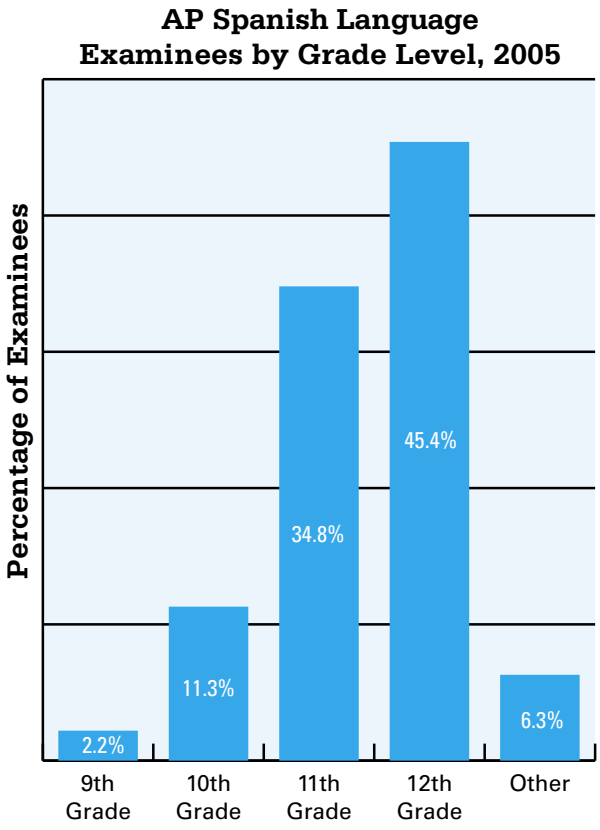
Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- The AP Psychology Exam in 2005 pushed students to move beyond defining terms and concepts and toward application, evaluation, and judgment of concepts, principles, and terms in psychology.
- Some of the terms, particularly *optimistic explanatory style* and *ethnocentrism*, seemed to induce much more guessing than actual content explanation, and seemed not to have been taught to many students.
- One of the questions presented three controversies in psychology: the nature of language acquisition, hypnosis, and diagnostic labeling. Students had to identify the two sides of each controversy and then select a side to advocate based on the quality of evidence. The three controversies were selected from diverse areas in psychology, addressed both depth and breadth in psychology, and allowed students to demonstrate more sophisticated ability in weighing the nature of psychological evidence.
- Students often addressed the question of whether hypnosis is effective (a lower level but still valid question) instead of comparing explanations of how hypnosis works, which is what the question required. Students tended to address both the language acquisition and diagnostic labeling questions with greater competence.
- It is especially useful to encourage students to approach free-response questions as an opportunity to demonstrate their ability to identify relationships and apply higher-order thinking skills. Students may have come to expect (wrongly) that each exam question will have some methods-oriented structure. They need to be encouraged to read the question carefully and respond appropriately. It is reasonable to prepare students to expect one of the questions to ask them to go into some depth of explanation.

AP Spanish Language





Exemplary AP Spanish Language Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Spanish Language:

Small-size school (<300 students in grades 10–12):
Colegio Maya (Guatemala City, Guatemala)
- Head of School: Sherry Miler
- AP Teacher: Anabella de Boud
- Teachers of Foundation Courses: Isabel de Morales, Monica de Bernard

Medium-size school (300–799 students in grades 10–12):
Cristo Rey Jesuit High School (Chicago, IL)
- Head of School: Patricia Garrity
- AP Teachers: Angel Pradas, Maria Roche, Rosa E. Sanchez

Large-size school (800+ students in grades 10–12):
Edinburg North High School (Edinburg, TX)
- Head of School: Ramiro Guerra
- AP Teachers: Marina Fernandez, Mariana Maani, Hilda Ybanez
- Teachers of Foundation Courses: Gilbert Enriquez, Prea Garcia, Ninfa Garza, Rosa Lopez, Jose Martinez

School with the Largest Number of Latino Students Scoring 3+:
La Joya High School (La Joya, TX)
- Head of School: Judith Solis
- AP Teacher: Yolanda Gracia

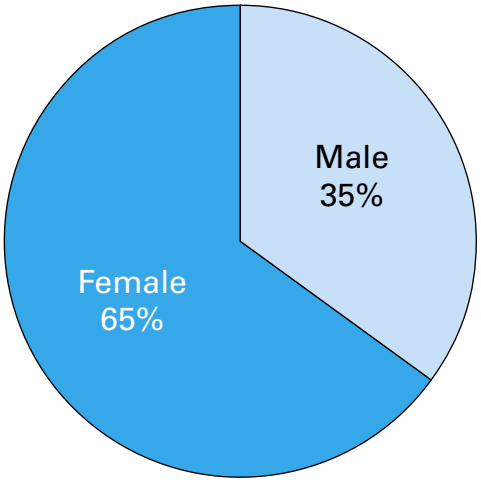
AP Grade Distribution, 2005

Exam Grade		Number of Examinees	% At
Total Group	Score of 5	20,002	20.4%
	Score of 4	22,688	23.1%
	Score of 3	28,712	29.2%
	Score of 2	16,725	17.0%
	Score of 1	10,118	10.3%
		98,245	100.0%
Exam Grade		**Number of Examinees**	**% At**
Standard Group*	Score of 5	3,367	8.3%
	Score of 4	6,268	15.4%
	Score of 3	12,220	30.0%
	Score of 2	10,703	26.3%
	Score of 1	8,135	20.0%
		40,693	100.0%

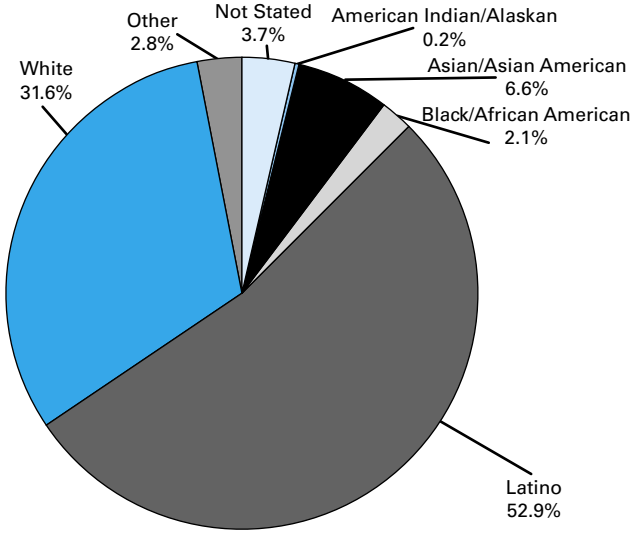
*Standard students generally receive most of their foreign language training in U.S. schools. They did not indicate on their answer sheet that they regularly speak or hear the foreign language of the examination, or that they have lived for one month or more in a country where the language is spoken.

Number of Schools Offering This Course: 6,193

AP Spanish Language Examinees by Gender, 2005



AP Spanish Language Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

Practice in the following language areas can be helpful:

- *Accents.* Accents must be written correctly and clearly. An accent over a consonant, two accents in a word, unclear placement of an accent (e.g., between two vowels), and words missing their required accents are all incorrect. Students will find it helpful to learn the division of words into syllables as well as the guidelines for when the stress falls on the last or penultimate syllable.
- *Identifying the gender of nouns*
- *Noun/adjective and subject/verb agreements*
- *Verb conjugations.* Routinely identifying the stem of a given tense as part of the process of learning and reviewing verb tenses can be helpful for students.
- *Use of the subjunctive*
- *Sequencing of verb tenses*

Composition:

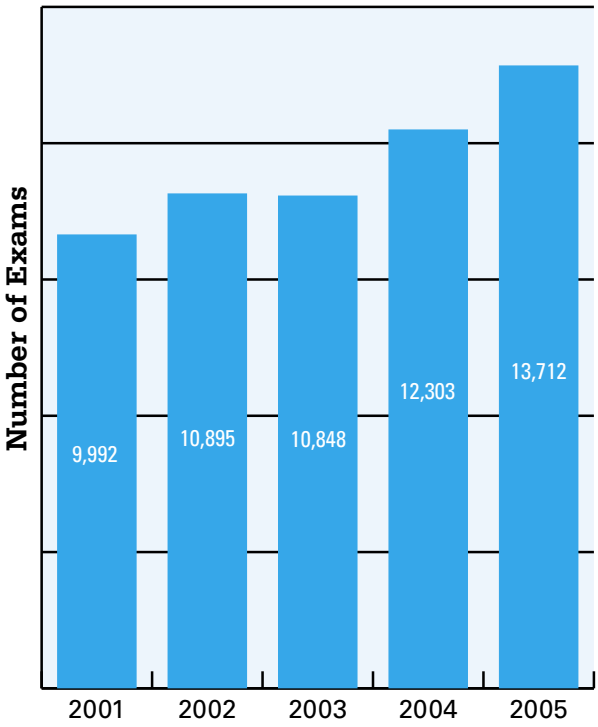
- Reading well-written Spanish prose can greatly enrich students' preparation for the Spanish essay question. If their school libraries have limited Spanish language resources, teachers and students may be able to access online sources of Spanish language books, articles, and newspapers. Additionally, many public libraries have Spanish language print and video resources. It is through reading and ensuing discussions that students gain and develop ideas, enhancing the tools they need to respond to any question in a thoughtful and thorough manner.

Directed Responses:

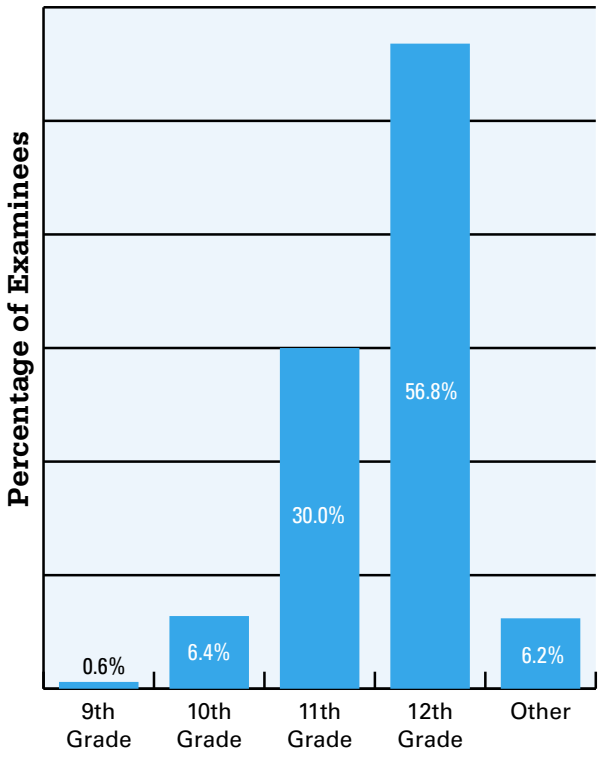
- It is very helpful to expose students to a variety of voices, speakers, and accents throughout the course. In so doing, teachers help students learn how to deal with any unfamiliar voice or accent they may hear on the exam. Even in areas where there are no radio or TV programs in Spanish, the Internet offers many free resources, including radio programs, video material, and Spanish language TV channels. Many public libraries also offer a variety of Spanish language multimedia resources.
- In addition to practicing simulated directed responses throughout the year, a variety of other classroom activities such as debates or interviews can help students learn how to respond spontaneously and thoughtfully in the target language. Teachers should continue to help students master verb tenses and vocabulary beyond the most basic level, an effort that has been paying off, as Readers noted the more frequent use of both the present and past subjunctive in many responses on this year's exam.

AP Spanish Literature

AP Spanish Literature
Number of Exams, 2001–2005



AP Spanish Literature
Examinees by Grade Level, 2005



Exemplary AP Spanish Literature Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Spanish Literature:

Small-size school (<300 students in grades 10–12):
Colegio Internacional de Carabobo (Valencia, Venezuela)
- Head of School: Joe Houston Walker
- AP Teacher: Elizabeth Ojeda

Medium-size school (300–799 students in grades 10–12):
Valley View High School (Pharr, TX)
- Head of School: Kelle VanHee
- AP Teachers: Maria Salinas, Ana Capeda
- Teacher of Foundation Course: Rosalba Barajas

Large-size school (800+ students in grades 10–12):
Harvard Westlake School (North Hollywood, CA)
- Head of School: Harry L. Salamandra Jr.
- AP Teachers: Roser Gelida, Nancy Holme-Elledge
- Teachers of Foundation Courses: Kristen Bacich, Andrew Brabbee, Melissa Carrillo, Judith Hartjenstein, Julie D. Holirah, Jeannette A. Rodriguez, Jane Balkin, Margaret Reimer, Allan G. Sasaki, Dianne Tritica, Javier Zaragoza

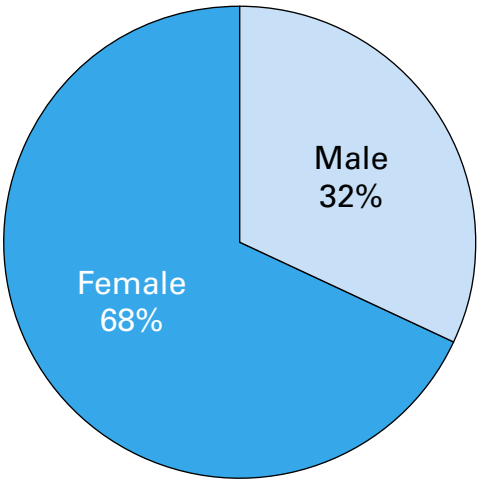
School with the Largest Number of Latino Students Scoring 3+:
Roma High School (TX)
- Head of School: Noe Muniz Jr.
- AP Teacher: Jose A. Ramos
- Teachers of Foundation Courses: Mrs. Sonia Garza, Mrs. Veronica Ibanez, Mr. Manuel Tello, Mrs. Paula Ayala

AP Grade Distribution, 2005

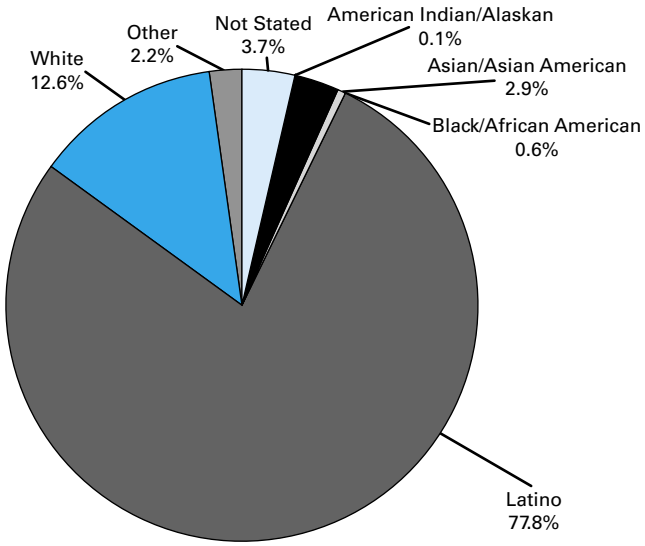
Exam Grade	Number of Examinees	% At
Score of 5	1,616	11.8%
Score of 4	2,816	20.5%
Score of 3	4,226	30.8%
Score of 2	1,848	13.5%
Score of 1	3,206	23.4%
	13,712	100.0%

Number of Schools Offering This Course: 1,316

AP Spanish Literature Examinees by Gender, 2005



AP Spanish Literature Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

Poetry Analysis

- Teachers should discuss poetic devices and language in the context of actual poems and explore how they serve to communicate ideas, feelings, and so on, so students are prepared to fully analyze the poem on the exam.

Thematic Analysis

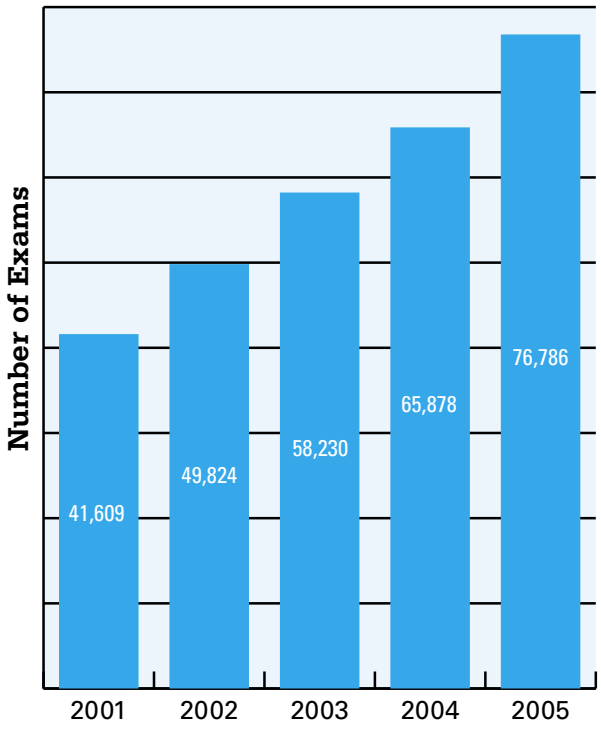
- Before writing, students should think through the topic, jot down relevant notes concerning the character(s) through which this theme is evidenced, and outline the essay. Teach students to set aside a few minutes at the end of the suggested time allotment in order to proofread, correct, and edit their work.
- When answering this type of question, it is essential that students clearly state which work they are treating and limit their responses to that one work as stipulated by the question's instructions. Teachers should stress to their students the need to read all of the works on the required reading list so that they will have a more fully developed perspective and a better choice when faced with this question on the exam.

Text Analysis

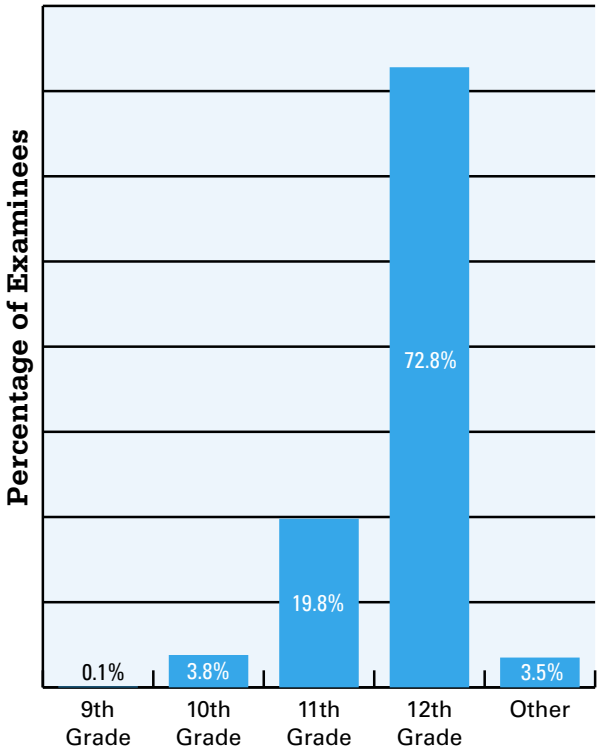
- Teachers can further help their students by including units on literary analysis with every genre they study and with all of the required texts. Close reading and careful consideration of the vocabulary used and other linguistic or stylistic features of the texts will be beneficial to students throughout their AP Spanish Literature course and, certainly, in preparation for the analytical, thematic, and textual questions on the exam.

AP Statistics

AP Statistics
Number of Exams, 2001–2005



AP Statistics
Examinees by Grade Level, 2005



Exemplary AP Statistics Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Statistics:

Small-size school (<300 students in grades 10–12):
Roxbury Latin School (West Roxbury, MA)
- Head of School: Kerry P. Brennan
- AP Teachers: John Lieb, Livingston Carrol

Medium-size school (300–799 students in grades 10–12):
Northside College Preparatory High School (Chicago, IL)
- Head of School: James C. Lalley
- AP Teachers: James Lynn, Elizabeth Runkel, Yvonne Smith
- Teachers of Foundation Courses: Nicole Flores, Martha Mulligan, Elizabeth Tomasiewicz, Janet Walker

Large-size school (800+ students in grades 10–12):
Mission San Jose High School (Fremont, CA)
- Head of School: Stuart Kew
- AP Teachers: Jan Frydendahl, David Lau
- Teachers of Foundation Courses: Bill Jaber, Linda Kadis, Kevin Mallon, Denise Nguyen, Vangi Sugden

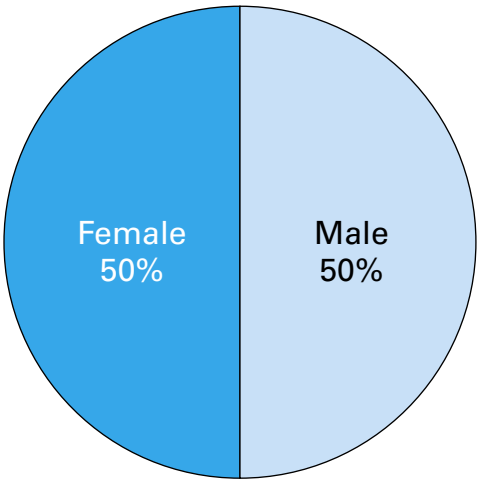
School with the Largest Number of Latino Students Scoring 3+:
Belen Jesuit Preparatory School (Miami, FL)
- Head of School: Marcelino Garcia, S.J.
- AP Teacher: Jose E. Roca
- Teachers of Foundation Courses: Olga Ramon, Edward Garland, Miriam Cambo-Martinez, Adriana Suarez

AP Grade Distribution, 2005

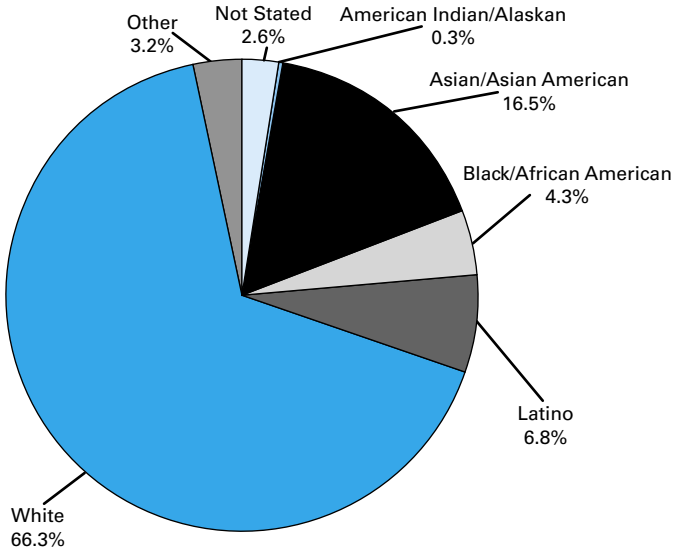
Exam Grade	Number of Examinees	% At
Score of 5	9,649	12.6%
Score of 4	17,534	22.8%
Score of 3	19,389	25.3%
Score of 2	14,755	19.2%
Score of 1	15,459	20.1%
	76,786	100.0%

Number of Schools Offering This Course: 4,045

AP Statistics
Examinees by Gender, 2005



AP Statistics
Examinees by Race and Ethnicity, 2005



Feedback for Educators

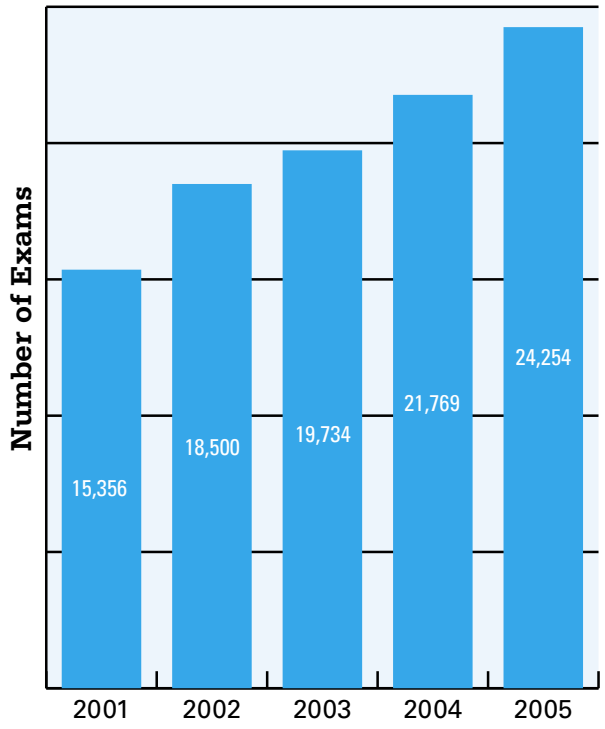
The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

There are several topics in the curriculum that many students do not seem to understand and that perhaps deserve more attention or examples to help clear up the confusion.

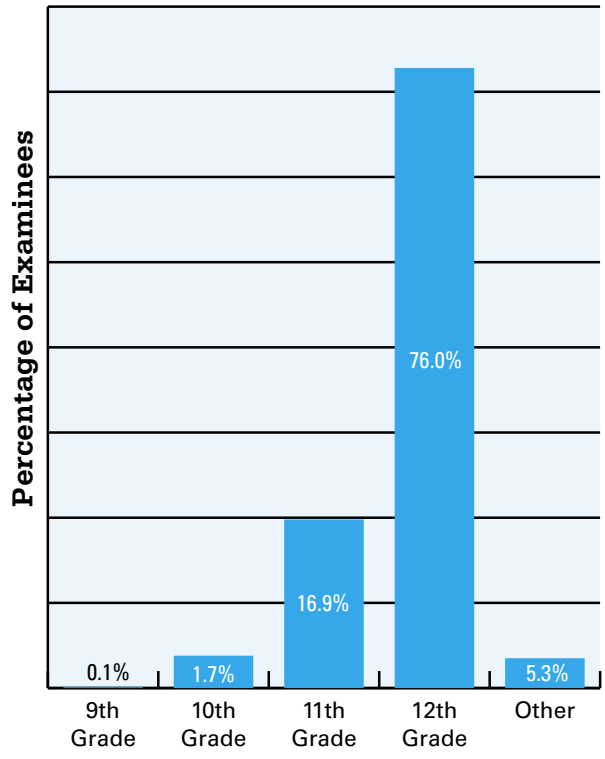
- The difference between a random variable and sample data: While a probability model can be used to generate "sample data" by observing the values of the random variable, the distinction between a random variable and data seems fuzzy, and this causes difficulty for students in exam situations. Emphasizing the difference between a probability model and data, perhaps with dice or cards, is an important activity to complete before students become involved in the details of each separately.
- The difference between discrete and continuous random variables: In particular, many students will take a discrete random variable and treat it as if it were continuous. For example, in part (c) students would get a median of 1.6 or 1.75 because they tried to estimate or interpolate the value that would be the 50th percentile as if there were a continuum of values between 1 and 2.
- Shapes of distributions and descriptive statistics:
  - Students should know that the shape of a distribution affects the relation of descriptive statistics, not that the statistics affect the shape. So, a distribution skewed to the right should have a mean greater than a median, but the mean being greater than the median does not automatically imply that a distribution is skewed to the right.
  - Students should recognize that distributions can take on a variety of shapes. While the most common shapes are those that are skewed to the left, skewed to the right, or symmetric, others may be bimodal, trimodal, or have very odd shapes that are difficult to describe.
  - Students seem to think that skewness in one direction is the same as having outliers. It is possible to have a distribution that is skewed to the left with outliers in the right tail.
  - Far too often, students give Readers the impression that they think that all symmetric distributions are normal.
- Distinguishing between a sample and a sampling distribution.

AP Studio Art[13]

AP Studio Art
Number of Exams, 2001–2005



AP Studio Art
Examinees by Grade Level, 2005



Exemplary AP Studio Art Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP Studio Art:

Small-size school (<300 students in grades 10–12): Greenwich Academy (Greenwich, CT)
- Head of School: Molly King
- AP Teachers: Sherry Tamalonis, Andrew Hall
- Teacher of Foundation Course: Kim Tamalonis

Medium-size school (300–799 students in grades 10–12): Design and Architecture Senior High School (Miami, FL)
- Head of School: Dr. Stacey Mancuso
- AP Teachers: Efrain Montesino, Ellen Abramson, Tavare Hill, Stacey Mancuso
- Teacher of Foundation Course: Tavare Hill

Large-size school (800+ students in grades 10–12): Alexander W. Dreyfoos Jr. School (West Palm Beach, FL)
- Head of School: Ellen Van Arsdale
- AP Teacher: Peter Stodolak
- Teachers of Foundation Courses: Marsha Christo, Jane Grandusky, John Griffin, Arlene Leis, Connie Rudy, Scott Armetta

School with the Largest Number of African American Students Scoring 3+: Design and Architecture Senior High School (Miami, FL)
- Head of School: Dr. Stacey Mancuso
- AP Teachers: Efrain Montesino, Ellen Abramson, Tavare Hill, Stacey Mancuso
- Teacher of Foundation Course: Tavare Hill

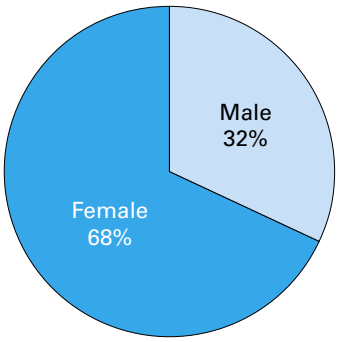
School with the Largest Number of Latino Students Scoring 3+: Design and Architecture Senior High School (Miami, FL)
- Head of School: Dr. Stacey Mancuso
- AP Teachers: Efrain Montesino, Ellen Abramson, Tavare Hill, Stacey Mancuso
- Teacher of Foundation Course: Tavare Hill

AP Grade Distribution, 2005

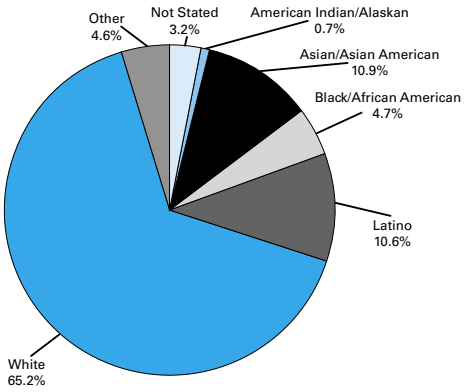
Exam Grade	Number of Examinees	% At
Score of 5	2,561	10.6%
Score of 4	4,223	17.4%
Score of 3	9,374	38.6%
Score of 2	6,552	27.0%
Score of 1	1,544	6.4%
	24,254	100.0%

Number of Schools Offering This Course: 2,711

AP Studio Art
Examinees by Gender, 2005



AP Studio Art
Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

2-D Design: Concentration. The concentration section suffered from an uneven understanding of the concept of concentration, as well as inconsistent development of visual ideas (see additional comments about across-the-board problems with concentrations in the Drawing Concentration text). Teachers might look to bodies of work by famous artists to help students understand what is meant by the phrase "development of a visual idea." Check out Richard Diebenkorn's *Ocean Park* series of paintings, Joseph Cornell's *Medici* series of assemblage boxes, Deborah Butterfield's horse sculptures, and Faith Ringgold's story quilts as examples.

2-D Design: Breadth. This year, as in 2004, it seemed that students were really struggling with the concept of breadth. Readers saw many portfolios that defined breadth as simply many works in different media, without any breadth of approach evident. 2-D Design also receives the most portfolios that use a single medium (frequently photography) to demonstrate breadth. Although it is possible to articulate a variety of design issues in single medium, students who attempt this are often not focusing on breadth of design issues. Students who wish to execute the breadth section in a single medium should select works in which the breadth in their approach is obvious.

The 3-D Design Portfolio, though only occupying a small percentage of the total number of exams is, in many ways, Studio Art's star portfolio. The work is generally strong, revealing obvious good teaching. For each of the past four years Readers have seen increasingly sophisticated work in this portfolio—work that demonstrates a solid understanding of three-dimensional design principles. However, there is a consistent problem with detail slides and second views that is most obvious in this portfolio. Students often include details that are not very informative and second views that do not display much more than the first view. This is a wasted opportunity. Second views and details that truly deliver more information help the Readers understand the work better and score accurately.

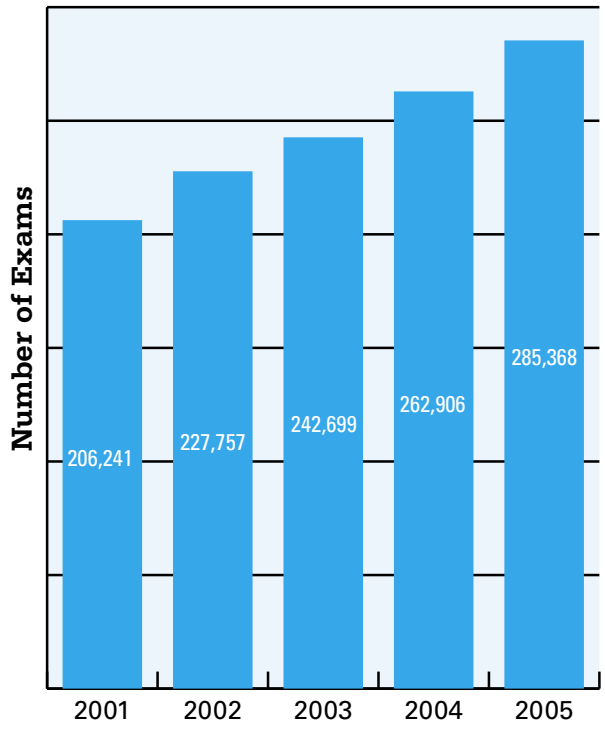
The Drawing Portfolio has traditionally yielded higher quality work overall, in part because of its clarity and focus. Possibly another aspect of this success is the fact that drawing can be taught very well with a minimum of tools and equipment. Further, most high school teachers understand that drawing is a fundamental art skill, and it is usually a keystone in art programs.

Drawing: Quality. There was an increase in the number of mixed media works that had a digital component. Digital work is not allowed in the Drawing Portfolio, so those portfolios were scored as irregular.

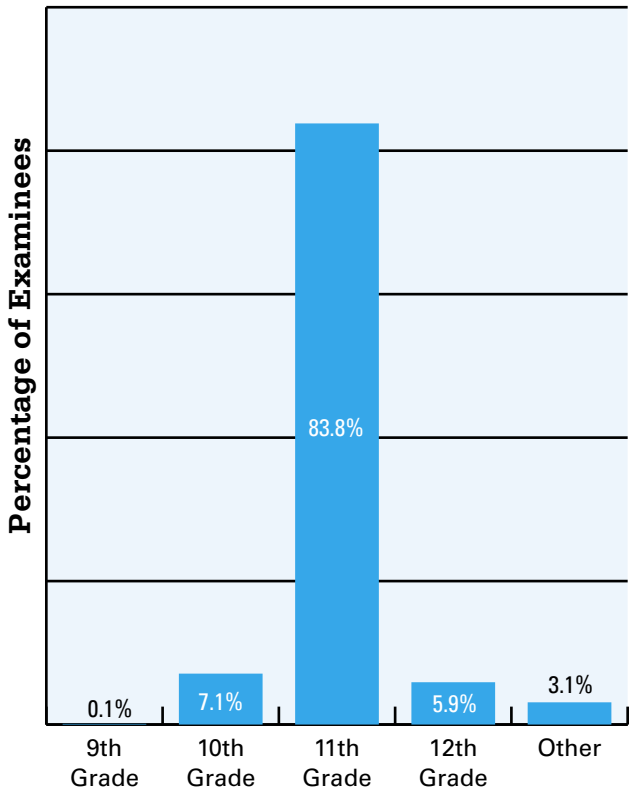
Drawing: Concentration. Though the Drawing Concentrations were generally better this year than last, it is clear that teachers and students still struggle with the definition of "concentrations." *The AP Studio Art Poster and Course Description* asks for sustained development of a visual idea in this section, and this was often the area that Readers found lacking in the work. They also noted that vague or unclear concentration statements often seemed to go together with weaker or undeveloped work. At times it seemed that the concentration statement was developed after the work was completed, rather than as a guiding starting point. More work should be done to help students develop cogent and original concentration statements at the beginning of their work on the concentration. Students are better able to do their best work when they clearly understand the goal they aspire to fulfill.

AP U.S. History

AP U.S. History
Number of Exams, 2001–2005



AP U.S. History
Examinees by Grade Level, 2005



Exemplary AP U.S. History Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP U.S. History:

Small-size school (<300 students in grades 10–12):
Keith Country Day School (Rockford, IL)

- Head of School: Jon Esler
- AP Teacher: Dr. Ronald C. Lee
- Teacher of Foundation Course: Bradley Scott

Medium-size school (300–799 students in grades 10–12):
Governor's School for Government and International Studies (Richmond, VA)

- Head of School: Norman Douglas Hunt
- AP Teachers: Sarah Dwelle, Brenda Ericson, Daniel Brown
- Teachers of Foundation Courses: John Wilkes, Mary Jane McKay, Phil Sorrentino, Les Schreiber, Tinsley Pollard, Michael White, Marr McGuire

Large-size school (800+ students in grades 10–12):
Thomas Jefferson High School for Science and Technology (Alexandria, VA)

- Head of School: Elizabeth V. Lodal
- AP Teachers: David Kobrin, John Struck, Jan Vallone

School with the Largest Number of African American Students Scoring 3+: Southwest DeKalb High School (Decatur, GA)

- Head of School: John R. Prince
- AP Teachers: Raymond Maple, James Bailey
- Teacher of Foundation Course: Timothy Rich

School with the Largest Number of Latino Students Scoring 3+: G. Holmes Braddock High School (Miami, FL)

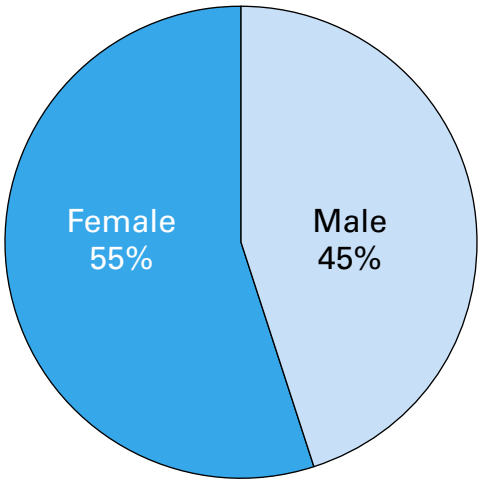
- Head of School: Manuel S. Garcia
- AP Teachers: Tim Hackworth, Ileana Gairicelaya, David Reese
- Teacher of Foundation Course: Susan Kalinsky

AP Grade Distribution, 2005

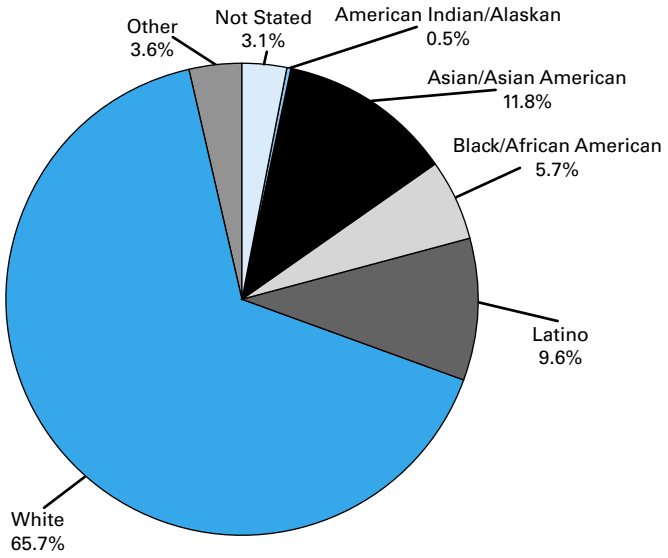
Exam Grade	Number of Examinees	% At
Score of 5	26,220	9.2%
Score of 4	56,507	19.8%
Score of 3	61,145	21.4%
Score of 2	77,996	27.3%
Score of 1	63,500	22.3%
	285,368	100.0%

Number of Schools Offering This Course: 9,922

AP U.S. History
Examinees by Gender, 2005



AP U.S. History
Examinees by Race and Ethnicity, 2005



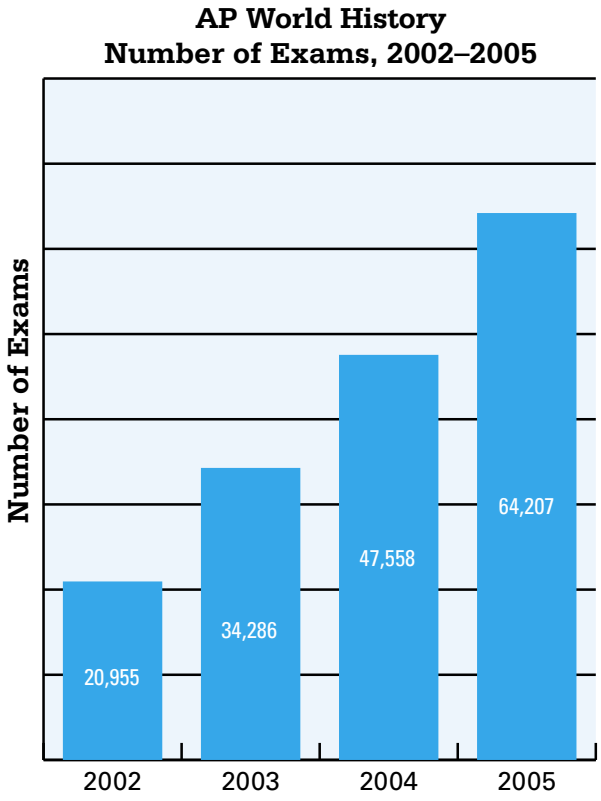
Feedback for Educators

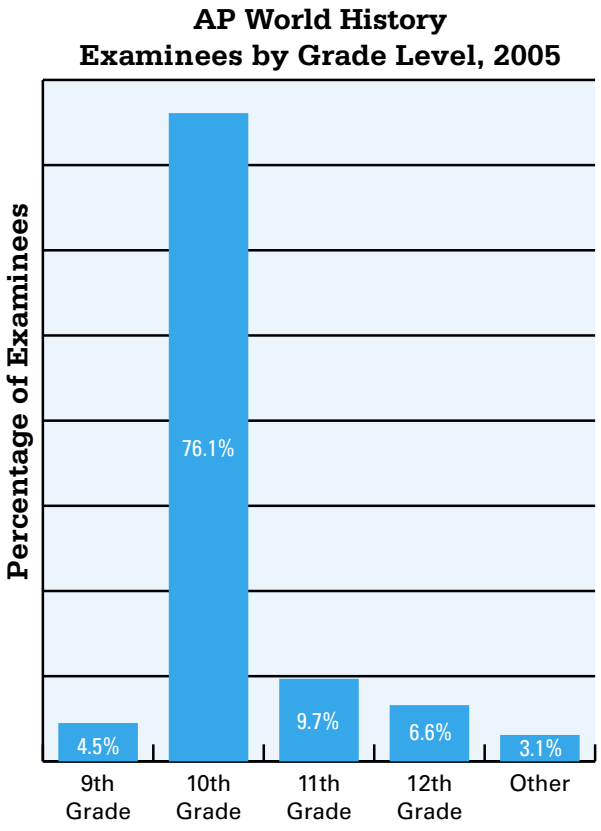
The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

Feedback regarding the essay question on the 1960s–1970s:

- One of the essay questions sought to assess students' knowledge of how two of three movements—the civil rights movement, the antiwar movement, and the women's movement—transformed American society in the 1960s and 1970s. The question asked students to illustrate their knowledge of the movements they selected and the impact those movements had on American society during those two decades, focusing on the changes that may or may not have occurred as a result. Though oriented toward social history, the question offered ample opportunity for students to discuss the political and economic impact of those movements.
- This was a straightforward question, but generally students did a better job on the civil rights movement and less so on the antiwar and women's movements. Most of the essays on the civil rights movement were relegated to the 1950s; however, students usually brought the changes into the 1960s and 1970s with a discussion of the movement's social impact. Although most students selected the civil rights movement as one of the two periods they would discuss, the choice between the other two movements was fairly evenly divided. On the whole, students who dealt with the issue of transformation and/or understood the limitations of change resulting from the movements wrote better—often excellent—essays.
- Students tended to include everything they knew about the movements, whether it was relevant to the time period or not. This was especially true in their treatment of the civil rights movement. Weaker essays often demonstrated little knowledge and few facts about the antiwar and women's movements. Some students offered anything and everything they knew about race, gender, war, or the 1960s, thus leaving the question unanswered. The term *transform* may have been a problem for students.
- Instruct students on how to answer the question that has been asked, stressing the importance of such terms as *analyze*, *assess*, and *compare and contrast*, and reminding them to focus on the question's intent. Encourage students not only to define terms but also to handle ideas and concepts. Always emphasize the basics of good writing, including the importance of the thesis, good organization, and supporting evidence.

AP World History





Exemplary AP World History Programs

These schools lead the world in helping the widest segment of their total school population achieve an exam grade of 3 or higher in AP World History:

Small-size school (<300 students in grades 10–12):
The Early College at Guilford (Greensboro, NC)
- Head of School: Tony Lamair Burks II
- AP Teacher: Larry "Guy" Ferguson

Medium-size school (300–799 students in grades 10–12):
St. John's School (Houston, TX)
- Head of School: John Allman
- AP Teachers: Wendall Zartman, Bella Thacker,
- Teachers of Foundation Courses: Gara Johnson-West, Emily Baker, Tracy Spaight,

Large-size school (800+ students in grades 10–12):
Walter Johnson High School (Bethesda, MD)
- Head of School: Dr. Christopher Garran
- AP Teachers: Ty Henley, Mike Williams, Esther Adams, Nathan Schwartz
- Teachers of Foundation Course: Walter Johnson Social Studies Dept.

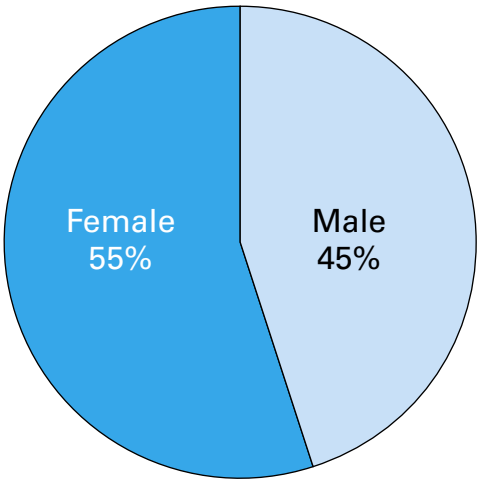
School with the Largest Number of Latino Students Scoring 3+:
Coral Reef Senior High School (Miami, FL)
- Head of School: Adrianne Leal
- AP Teachers: Kevin Blankenship, Luca Zini

AP Grade Distribution, 2005

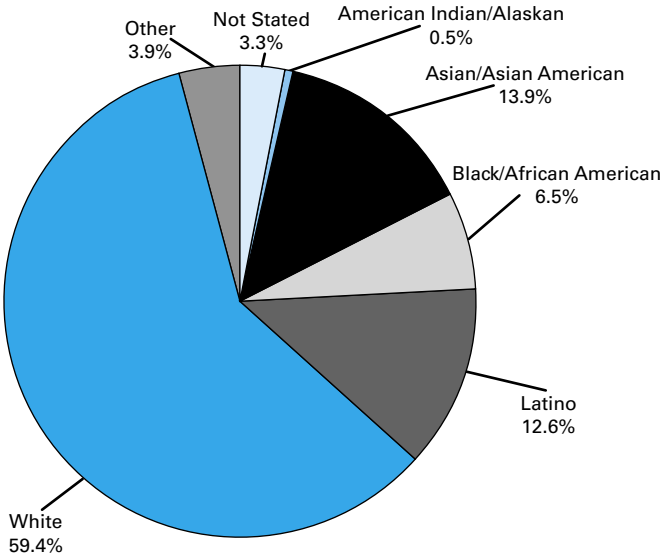
Exam Grade	Number of Examinees	% At
Score of 5	6,577	10.2%
Score of 4	10,957	17.1%
Score of 3	16,212	25.2%
Score of 2	15,021	23.4%
Score of 1	15,440	24.0%
	64,207	100.0%

Number of Schools Offering This Course: 2,380

AP World History
Examinees by Gender, 2005



AP World History
Examinees by Race and Ethnicity, 2005



Feedback for Educators

The following observations on student learning in this AP course are excerpted from the Chief Reader's commentary on student performance, which is available in its entirety as a free download from the AP Central Web site.

- Teachers need to continue to emphasize and explain the use of point of view in student responses to the document-based question (DBQ). They should also avoid allowing students to use the word *bias*. Too many students simply stated that an individual is biased because they are X, Y, or Z and then believed they had fulfilled the requirement for that point. Instead, students must go beyond a mere description of an individual or defining characteristic and *explain* why this fact is significant in the analysis of the document. It is key when addressing point of view to explain how the authors' *background* or *experiences* influenced their ideas.
- Teach students to focus on the meaning of the question. Too many responses to the DBQ attempted to include generic information that had little bearing on the core issues. Additionally, avoid teaching "tricks" to garner points for point of view and additional documents. Instead, emphasize the underlying historical-thinking skills that are relevant to these tasks.
- Teachers need to prepare students to read essay prompts closely so that they are able to respond to the question that has been asked. This will improve the caliber of their thesis statements. Better thesis statements will result in clearer distinctions between argument and evidence. In addition, teachers should teach a broad range of approaches to the change-over-time question so that students do not force their responses to conform to a formula. Change-over-time should be taught as applying both to changes within chronological periods and between them. As always, a good essay results from a good thesis.
- Students must be taught to write a thesis statement that has more content than merely "There were similarities and differences." Teach students to ask themselves *what* was similar and *what* was different. Then they can craft a thesis statement that presents an argument based on similarities and differences grounded in the actual historical context, rather than just write generalities.
- Teachers should use the AP World History Exam scoring guidelines as scaffolding when they teach the comparison essay. Let students have a copy of these guidelines while they write their essays. Eventually they will internalize them. Also, to ensure they are providing students with adequate information, teachers should consult additional texts beyond the ones they use in the classroom.

Appendixes

Advanced Placement **Report to the Nation 2006**

Appendix A:
AP Data at a Glance

(More detailed data for the class of 2005 are available in Appendixes B, C, and D.)

School Participation in AP in 2005

- Students representing 15,380 secondary schools took AP Exams.
  - 14,573 of these schools are located in the 50 U.S. states and the District of Columbia.
    - 11,498 are public schools, an increase of 302 over last year.
    - 3,075 are nonpublic schools, an increase of 127 over last year.
  - 807 of these schools are located outside the U.S. or in U.S. territories, an increase of 47 over last year.
- These schools offer, on average, eight different AP courses from which their students can choose.

The High School Class of 2005: U.S. Public Schools

(Comparison point: the high school class of 2000: U.S. public schools)

By focusing on the AP experiences acquired by the class of 2005 before they exited high school, we can assess the nation's progress in fortifying its college-bound students with a successful AP experience.

- Total high school graduates:
  - 2000: 2,550,483 students
  - 2005: 2,654,632 students
- Total high school graduates who took an AP Exam at some point in high school:
  - 2000: 405,475 (15.9 percent)
  - 2005: 609,807 (23.0 percent)
- Total high school graduates who earned a 3 or higher on an AP Exam at some point in high school:
  - 2000: 260,658 (10.2 percent)
  - 2005: 378,694 (14.3 percent)
- Total number of AP Exams taken by the Class of 2005 across their entire high school years: 1,550,475
- Total number of AP Exams earning grades of 3 or higher, as taken by the Class of 2005 across their entire high school years: 917,051

Which AP Exams Were Taken by the Class of 2005 During Their High School Years?

AP Exams taken by the largest numbers of students of the class of 2005 during their high school years:

1. AP U.S. History (207,817 students)
2. AP English Literature and Composition (203,697 students)
3. AP English Language and Composition (162,357 students)
4. AP Calculus AB (141,732 students)
5. AP U.S. Government and Politics (103,224 students)
6. AP Biology (88,223 students)
7. AP Spanish Language (71,517 students)
8. AP Psychology (68,847 students)
9. AP Statistics (61,018 students)
10. AP European History (58,474 students)

AP Exam taken by the smallest number of students of the class of 2005 during their high school years:

AP French Literature (793 students)

Appendix B:
AP Exams Taken in U.S. Public Schools by the Class of 2005 During Their High School Years

	AP Grade	Number of Students for Each Examination																
		Exams Total	Art History	Biology	Calculus AB	Calculus BC	Chemistry	Computer Science A	Computer Science AB	Economics Macro	Economics Micro	English Lang. & Composition	English Lit. & Composition	Environmental Science	European History	French Language	French Literature	German Language
African American	5	2440	20	233	343	171	77	21	4	52	31	168	157	18	57	87	9	4
	4	6417	62	423	616	105	148	58	7	275	89	563	752	115	183	134	7	8
	3	13519	101	671	816	205	322	38	11	213	169	2010	2532	193	564	187	11	11
	2	23763	100	1371	1035	95	469	33	11	324	176	4747	6070	257	394	138	10	7
	1	34305	149	2149	3778	329	1478	359	29	913	644	3070	4673	1264	739	244	16	15
	T	80444	432	4847	6588	905	2494	509	62	1777	1109	10558	14184	1847	1937	790	53	45
Mean Grade		1.99	2.31	2.01	1.89	2.66	1.75	1.72	2.13	2.00	1.82	2.05	1.99	1.57	2.19	2.60	2.68	2.53
Asian/ Asian American	5	37271	208	3934	4931	4894	2438	461	349	1304	656	1791	1954	361	993	150	24	35
	4	45167	445	3502	4380	1906	2381	583	201	2169	1187	3246	4336	800	1577	258	28	56
	3	52869	563	3365	3787	2131	2692	361	218	1063	1002	5602	7112	624	2697	467	25	58
	2	44933	344	3406	3561	695	2050	217	108	1064	742	5727	6344	573	1201	326	14	35
	1	33588	330	2055	4648	1207	2334	708	216	1346	971	1290	1644	1104	1092	381	12	26
	T	213828	1890	16262	21307	10833	11895	2330	1092	6946	4558	17656	21390	3462	7560	1582	103	210
Mean Grade		3.04	2.92	3.24	3.07	3.79	3.05	2.95	3.33	3.15	2.96	2.92	2.94	2.64	3.02	2.66	3.37	3.19
Latino: Chicano/ Mexican American	5	9982	40	116	422	185	60	18	6	69	31	153	154	34	53	10	1	1
	4	12920	105	260	607	128	116	52	6	328	90	552	697	123	179	31	2	7
	3	17709	192	514	858	217	227	45	12	283	148	1951	2238	159	478	87	3	12
	2	23344	189	955	1128	85	344	26	7	444	200	5143	4634	216	397	123	3	20
	1	31298	230	1435	3390	301	1145	181	35	1402	670	3390	2805	812	825	267	19	37
	T	95253	756	3280	6405	916	1892	322	66	2526	1139	11189	10528	1344	1932	518	28	77
Mean Grade		2.44	2.39	1.98	1.99	2.79	1.73	2.07	2.11	1.90	1.78	2.01	2.12	1.77	2.09	1.83	1.68	1.90
Latino: Puerto Rican	5	874	5	32	71	38	15	4	4	9	5	30	44	9	21	3	*	1
	4	1480	12	76	111	20	29	6	2	38	14	114	155	20	43	3	*	1
	3	2354	19	103	101	31	36	7	2	34	14	305	385	32	103	10	*	2
	2	2742	23	169	119	12	63	5	2	53	23	423	574	37	79	2	*	2
	1	2675	14	148	270	29	119	32	2	106	65	154	253	115	113	10	*	2
	T	10125	73	528	672	130	262	54	12	240	121	1026	1411	213	359	28	1	8
Mean Grade		2.52	2.60	2.38	2.40	3.20	2.08	1.98	3.33	2.13	1.93	2.46	2.41	1.92	2.39	2.54	*	2.63
Latino: Other	5	11362	36	220	457	227	93	30	12	42	15	207	220	52	125	44	4	5
	4	11771	98	324	576	137	161	58	7	337	99	634	751	187	264	84	9	16
	3	15227	200	540	672	212	296	39	13	253	124	1666	1954	194	593	164	5	14
	2	16616	143	848	698	108	340	39	19	327	145	3112	3202	237	417	119	3	13
	1	19474	175	935	1849	258	709	238	29	970	417	1614	1641	681	604	172	15	18
	T	74450	652	2867	4252	942	1599	404	80	1929	800	7233	7768	1351	2003	583	36	66
Mean Grade		2.72	2.50	2.32	2.32	2.96	2.12	2.02	2.43	2.04	1.94	2.27	2.32	2.03	2.45	2.50	2.56	2.65

Government Politics: Comp.	Government Politics: U.S.	Human Geography	Latin Literature	Latin: Vergil	Music Theory	Physics B	Physics C: Electricity & Magnetism	Physics C: Mechanics	Psychology	Spanish Language	Spanish Literature	Statistics	Studio Art: 2-D Design	Studio Art: 3-D Design	Studio Art: Drawing	U.S. History	World History	Number of Students
13	60	17	5	3	36	31	23	30	252	42	4	55	29	3	44	290	51	
27	340	43	7	4	38	59	21	45	673	136	9	179	62	8	69	978	174	
110	864	62	7	7	94	193	17	69	815	287	16	387	145	14	182	1831	365	
150	2175	80	5	11	139	187	34	90	733	361	7	558	92	17	137	3237	513	
163	2294	216	27	27	148	833	44	205	1855	696	17	1513	41	9	64	5534	770	
463	5733	418	51	52	455	1303	139	439	4328	1522	53	2692	369	51	496	11870	1873	39,258
2.09	1.90	1.96	2.18	1.94	2.29	1.67	2.60	2.10	2.25	1.99	2.55	1.78	2.85	2.59	2.78	1.93	2.05	
226	797	173	42	68	211	922	651	1076	2162	457	55	1677	104	6	203	3343	615	
266	2353	197	50	59	173	1188	540	931	2189	891	64	2322	118	19	208	5541	1003	
562	3625	185	47	61	220	1901	274	831	1697	1543	85	2267	244	37	406	5904	1213	
305	4512	107	35	40	156	1011	367	642	1084	1236	30	1726	164	34	223	5859	995	
246	2013	173	65	63	44	1603	310	502	1328	802	46	1875	24	7	42	4386	695	
1605	13300	835	239	291	804	6625	2142	3982	8460	4929	280	9867	654	103	1082	25033	4521	63,829
2.95	2.65	3.11	2.87	3.10	3.44	2.82	3.40	3.36	3.33	2.79	3.19	3.02	3.17	2.83	3.28	2.90	2.97	
15	80	19	1	1	12	50	16	32	123	7612	274	63	17	9	23	243	39	
26	422	22	1	1	17	97	24	50	282	6855	677	194	40	14	69	766	80	
78	950	47	3	2	47	203	15	78	386	4616	1471	342	109	24	168	1529	217	
112	2349	58	0	7	67	201	34	90	322	1428	756	442	120	29	182	2831	402	
120	2756	151	6	5	55	794	48	160	845	541	1330	1122	40	11	53	5436	881	
351	6557	297	11	16	198	1345	137	410	1958	21052	4508	2163	326	87	495	10805	1619	43,780
2.16	1.89	1.99	2.18	2.13	2.31	1.82	2.46	2.28	2.24	3.93	2.51	1.91	2.61	2.78	2.65	1.85	1.76	
4	19	2	1	*	8	8	2	3	52	388	5	10	5	1	5	62	8	
14	55	6	2	*	12	11	1	14	116	334	21	36	14	0	8	162	29	
24	127	8	1	*	20	45	3	15	100	357	36	72	28	3	27	242	61	
18	209	11	1	*	24	22	10	15	93	172	18	66	16	3	25	393	60	
16	169	17	0	*	12	97	5	11	138	93	48	116	3	1	9	429	77	
76	579	44	5	3	76	183	21	58	499	1344	128	300	66	8	74	1288	235	4,935
2.63	2.22	2.20	3.60	*	2.74	1.97	2.29	2.71	2.70	3.56	2.35	2.19	3.03	2.63	2.66	2.25	2.28	
25	88	41	1	4	13	45	21	50	304	8012	395	83	43	7	51	330	60	
33	368	80	5	1	20	111	42	79	520	4585	743	246	66	17	88	857	168	
100	836	98	3	9	49	212	25	124	553	2665	1197	363	164	30	213	1357	290	
78	1630	80	5	9	88	165	38	107	476	740	473	358	106	19	145	1963	366	
102	1648	204	9	8	55	493	52	127	904	289	732	812	24	7	34	3073	576	
338	4570	503	23	31	225	1026	178	487	2757	16291	3540	1862	403	80	531	7580	1460	34,211
2.41	2.04	2.35	2.30	2.48	2.32	2.07	2.67	2.63	2.58	4.18	2.89	2.16	3.00	2.98	2.96	2.13	2.16	

	AP Grade	Number of Students for Each Examination																
		Exams Total	Art History	Biology	Calculus AB	Calculus BC	Chemistry	Computer Science A	Computer Science AB	Economics Macro	Economics Micro	English Lang. & Composition	English Lit. & Composition	Environmental Science	European History	French Language	French Literature	German Language
Native American	5	405	1	31	60	33	16	5	6	8	7	29	29	8	9	1	*	0
	4	929	8	47	85	22	28	12	5	30	16	99	126	29	31	0	*	1
	3	1602	14	78	100	21	49	3	1	20	17	260	283	19	83	5	*	2
	2	2093	12	123	106	13	63	4	0	27	13	372	461	27	49	5	*	6
	1	1862	8	109	250	25	100	26	4	49	26	155	216	46	48	14	*	2
	T	6891	43	388	601	114	256	50	16	134	79	915	1115	129	220	25	1	11
Mean Grade		2.41	2.58	2.40	2.33	3.22	2.21	2.32	3.56	2.41	2.56	2.43	2.36	2.43	2.56	1.76	*	2.18
White	5	132445	871	9630	19994	10681	4962	1345	849	3064	1732	9143	11573	1846	4684	922	103	523
	4	212189	1719	11633	19910	4644	6358	1670	501	6988	3746	20281	29914	4827	8341	1333	125	585
	3	278594	1926	13439	17848	5466	8663	1077	500	4059	3678	37533	50042	3889	15713	2348	116	706
	2	230030	1038	13771	16417	1854	7317	636	293	4377	2891	32798	38022	3465	7027	1836	73	597
	1	131147	722	6521	21094	3055	8209	1926	549	4568	3023	5157	6384	4821	5183	1810	88	384
	T	984405	6276	54994	95263	25700	35509	6654	2692	23056	15070	104912	135935	18848	40948	8249	505	2795
Mean Grade		2.98	3.16	3.07	3.01	3.70	2.79	2.98	3.30	2.98	2.89	2.96	3.02	2.76	3.01	2.72	3.16	3.10
Other	5	6040	66	491	693	450	242	38	50	135	77	398	485	88	241	89	13	46
	4	9568	125	609	667	201	268	61	26	338	191	899	1217	219	396	102	10	30
	3	13047	155	671	641	272	358	48	21	195	169	1653	2111	202	759	150	6	22
	2	11863	92	772	644	94	350	31	20	213	142	1875	1915	134	326	101	9	20
	1	9000	69	542	974	187	500	130	32	337	220	487	627	315	359	119	11	10
	T	49518	507	3085	3619	1204	1718	308	149	1218	799	5312	6355	958	2081	561	49	128
Mean Grade		2.83	3.05	2.91	2.85	3.53	2.65	2.50	3.28	2.77	2.70	2.78	2.85	2.61	2.92	2.89	3.10	3.64
Not Stated	5	4760	38	377	546	345	158	44	31	98	58	292	413	64	158	39	3	24
	4	7097	64	366	608	128	171	54	11	232	128	588	969	160	272	77	3	17
	3	9012	82	408	559	189	272	27	17	133	122	1047	1580	122	488	113	4	15
	2	8336	53	483	522	68	224	21	11	162	107	1231	1551	115	245	83	3	16
	1	6356	42	338	790	123	313	68	22	195	161	398	498	189	271	75	4	9
	T	35561	279	1972	3025	853	1138	214	92	820	576	3556	5011	650	1434	387	17	81
Mean Grade		2.88	3.01	2.98	2.87	3.59	2.68	2.93	3.20	2.85	2.68	2.76	2.85	2.68	2.86	2.80	2.88	3.38
National Total	5	205579	1285	15064	27517	17024	8061	1966	1311	4781	2612	12211	15029	2480	6341	1345	157	639
	4	307538	2638	17240	27560	7291	9660	2554	766	10735	5560	26976	38917	6480	11286	2022	184	721
	3	403933	3252	19789	25382	8744	12915	1645	795	6253	5443	52027	68237	5434	21478	3531	170	842
	2	363720	1994	21898	24230	3024	11220	1012	471	6991	4439	55428	62773	5061	10135	2733	116	716
	1	269705	1739	14232	37043	5514	14907	3668	918	9886	6197	15715	18741	9347	9234	3092	166	503
	T	1550475	10908	88223	141732	41597	56763	10845	4261	38646	24251	162357	203697	28802	58474	12723	793	3421
Mean Grade		2.88	2.98	2.97	2.89	3.66	2.73	2.83	3.25	2.83	2.75	2.78	2.85	2.57	2.92	2.67	3.06	3.08

* Frequency distributions and mean grades are reported when there are five or more AP Exam takers in a field.

Government Politics: Comp.	Government Politics: U.S.	Human Geography	Latin Literature	Latin: Vergil	Music Theory	Physics B	Physics C: Electricity & Magnetism	Physics C: Mechanics	Psychology	Spanish Language	Spanish Literature	Statistics	Studio Art: 2-D Design	Studio Art: 3-D Design	Studio Art: Drawing	U.S. History	World History	Number of Students
3	13	2	0	0	2	9	12	14	32	11	*	10	4	0	4	36	10	
7	57	7	0	0	7	15	5	14	66	7	*	32	11	2	13	127	19	
17	118	7	1	1	11	41	3	14	69	20	*	49	26	3	28	204	35	
14	172	4	3	4	10	24	2	23	48	24	*	54	19	5	17	330	57	
15	93	13	1	4	6	64	7	21	58	41	*	61	6	2	10	307	73	
56	453	33	5	9	36	153	29	86	273	103	4	206	66	12	72	1004	194	3,265
2.45	2.39	2.42	2.00	1.67	2.69	2.22	3.45	2.73	2.88	2.25	*	2.40	2.82	2.42	2.78	2.26	2.15	
1146	4892	966	156	203	1008	2811	1469	2639	10090	1941	175	5210	442	110	698	14242	2325	
1249	13975	1155	196	236	1138	4318	1221	2755	13557	3676	240	9881	982	148	1014	29957	3916	
2717	19819	1200	339	394	1524	7042	726	2548	10321	6536	284	10993	2036	351	2298	36844	5619	
1652	21186	788	255	249	1329	3623	942	1953	6619	5889	102	8068	1334	274	1535	36982	4838	
838	6083	813	367	339	412	5065	733	1315	6210	4375	181	6703	313	82	255	20565	3004	
7602	65955	4922	1313	1421	5411	22859	5091	11210	46797	22417	982	40855	5107	965	5800	138590	19702	386,392
3.03	2.85	3.14	2.63	2.80	3.18	2.83	3.34	3.31	3.31	2.68	3.13	2.97	2.98	2.93	3.06	2.86	2.88	
61	190	45	6	8	30	119	62	108	407	296	22	177	35	2	38	699	133	
71	615	54	6	13	37	187	54	127	569	421	40	353	38	4	60	1335	225	
150	1003	71	10	10	67	324	39	113	443	509	68	459	127	20	155	1703	343	
103	1231	38	6	14	55	173	47	98	368	363	30	358	97	19	106	1765	254	
69	563	57	14	17	26	328	38	86	432	258	43	431	32	5	32	1405	245	
454	3602	265	42	62	215	1131	240	532	2219	1847	203	1778	329	50	391	6907	1200	19,031
2.89	2.62	2.97	2.62	2.69	2.95	2.64	3.23	3.14	3.07	3.07	2.84	2.71	2.84	2.58	2.91	2.73	2.79	
43	140	20	7	12	35	103	69	95	295	470	18	145	12	2	25	503	78	
51	434	22	11	10	34	135	38	97	419	532	34	268	26	2	36	968	132	
100	654	27	5	13	42	210	10	87	315	522	71	313	61	13	89	1134	168	
61	831	19	7	8	59	116	30	47	216	284	51	279	39	8	53	1180	153	
35	416	55	11	12	29	207	26	52	311	204	88	290	14	2	14	955	139	
290	2475	143	41	55	199	771	173	378	1556	2012	262	1295	152	27	217	4740	670	15,106
3.02	2.62	2.53	2.90	3.04	2.93	2.75	3.54	3.36	3.11	3.39	2.40	2.77	2.89	2.78	3.02	2.76	2.79	
1536	6279	1285	219	299	1355	4098	2325	4047	13717	19229	948	7430	691	140	1091	19748	3319	
1744	18619	1586	278	325	1476	6121	1946	4112	18391	17437	1829	13511	1357	214	1565	40691	5746	
3858	27996	1705	416	498	2074	10171	1112	3879	14699	17055	3228	15245	2940	495	3566	50748	8311	
2493	34295	1185	317	342	1927	5522	1504	3065	9959	10497	1468	11909	1987	408	2423	54540	7638	
1604	16035	1699	500	476	787	9484	1263	2479	12081	7299	2487	12923	497	126	513	42090	6460	
11235	103224	7460	1730	1940	7619	35396	8150	17582	68847	71517	9960	61018	7472	1383	9158	207817	31474	609,807
2.92	2.66	2.94	2.65	2.81	3.09	2.71	3.31	3.24	3.17	3.43	2.73	2.85	2.97	2.88	3.03	2.72	2.74	

Appendix C: Raw Numbers for Table 1: U.S. Public Schools

State	2000 # of students[11]	2005 # of students[11]	2000 # of students who took an AP Exam in high school	2005 # of students who took an AP Exam in high school	2000 % of students who took an AP Exam in high school	2005 % of students who took an AP Exam in high school	2000 # of students who scored 3+ on an AP Exam in high school	2005 # of students who scored 3+ on an AP Exam in high school	2000 % of students who scored 3+ on an AP Exam in high school	2005 % of students who scored 3+ on an AP Exam in high school
Alabama	38,402	37,269	2,750	3,597	7.2%	9.7%	1,510	1,959	3.9%	5.3%
Alaska	6,671	7,316	1,028	1,375	15.4%	18.8%	677	904	10.1%	12.4%
Arizona	38,818	49,653	4,378	7,255	11.3%	14.6%	2,805	4,557	7.2%	9.2%
Arkansas	27,335	26,588	2,208	6,393	8.1%	24.0%	1,166	2,058	4.3%	7.7%
California	309,866	343,411	68,648	103,580	22.2%	30.2%	46,495	67,644	15.0%	19.7%
Colorado	38,924	43,531	7,256	11,602	18.6%	26.7%	4,762	7,339	12.2%	16.9%
Connecticut	29,610	34,294	5,665	8,932	19.1%	26.0%	4,034	6,542	13.6%	19.1%
Delaware	6,185	6,694	824	1,660	13.3%	24.8%	467	866	7.6%	12.9%
District of Col.	2,695	2,378	467	642	17.3%	27.0%	179	206	6.6%	8.7%
Florida	102,479	124,676	23,288	41,074	22.7%	32.9%	13,885	23,016	13.5%	18.5%
Georgia	64,774	70,773	11,169	17,272	17.2%	24.4%	6,263	9,582	9.7%	13.5%
Hawaii	10,437	10,126	1,108	1,667	10.6%	16.5%	605	830	5.8%	8.2%
Idaho	16,163	15,521	1,559	2,226	9.6%	14.3%	1,052	1,484	6.5%	9.6%
Illinois	111,835	119,018	15,035	23,625	13.4%	19.8%	11,038	16,739	9.9%	14.1%
Indiana	59,388	55,702	7,064	10,255	11.9%	18.4%	3,553	4,946	6.0%	8.9%
Iowa	33,834	32,262	2,324	3,281	6.9%	10.2%	1,663	2,175	4.9%	6.7%
Kansas	29,102	29,026	2,026	2,843	7.0%	9.8%	1,278	1,876	4.4%	6.5%
Kentucky	36,831	35,695	3,920	6,111	10.6%	17.1%	2,027	2,946	5.5%	8.3%
Louisiana	38,317	33,586	1,214	1,636	3.2%	4.9%	711	830	1.9%	2.5%
Maine	12,229	12,751	1,809	2,846	14.8%	22.3%	1,235	1,833	10.1%	14.4%
Maryland	48,310	54,498	9,781	17,186	20.2%	31.5%	6,811	11,428	14.1%	21.0%
Massachusetts	52,950	58,464	10,399	15,293	19.6%	26.2%	7,680	10,929	14.5%	18.7%
Michigan	91,831	99,080	12,808	17,810	13.9%	18.0%	8,113	11,505	8.8%	11.6%
Minnesota	57,369	57,650	7,712	10,145	13.4%	17.6%	4,620	6,612	8.1%	11.5%
Mississippi	24,194	22,144	1,361	1,937	5.6%	8.7%	567	736	2.3%	3.3%
Missouri	52,553	54,581	2,869	5,023	5.5%	9.2%	1,937	3,272	3.7%	6.0%
Montana	10,903	10,209	1,102	1,550	10.1%	15.2%	736	1,023	6.8%	10.0%
Nebraska	19,908	19,093	986	1,395	5.0%	7.3%	632	849	3.2%	4.4%
Nevada	12,953	17,657	1,961	3,579	15.1%	20.3%	1,184	2,116	9.1%	12.0%
New Hampshire	11,829	13,121	1,579	2,311	13.3%	17.6%	1,089	1,503	9.2%	11.5%
New Jersey	74,420	83,653	13,357	19,229	17.9%	23.0%	9,631	13,799	12.9%	16.5%
New Mexico	18,303	17,683	2,033	3,184	11.1%	18.0%	1,125	1,496	6.1%	8.5%
New York	143,469	143,011	39,130	49,770	27.3%	34.8%	25,669	32,665	17.9%	22.8%
North Carolina	61,743	67,122	12,170	19,931	19.7%	29.7%	6,960	11,454	11.3%	17.1%
North Dakota	8,592	7,637	505	669	5.9%	8.8%	376	457	4.4%	6.0%
Ohio	108,992	109,373	12,273	17,935	11.3%	16.4%	7,704	11,075	7.1%	10.1%
Oklahoma	37,646	35,841	3,561	6,344	9.5%	17.7%	2,037	2,941	5.4%	8.2%
Oregon	30,151	30,915	3,164	5,066	10.5%	16.4%	2,129	3,300	7.1%	10.7%
Pennsylvania	113,959	120,847	14,115	19,004	12.4%	15.7%	9,429	12,657	8.3%	10.5%
Rhode Island	8,495	9,689	905	1,203	10.7%	12.4%	588	784	6.9%	8.1%
South Carolina	33,918	33,901	6,016	7,334	17.7%	21.6%	3,381	4,274	10.0%	12.6%
South Dakota	9,224	8,488	886	1,201	9.6%	14.1%	540	744	5.9%	8.8%
Tennessee	44,681	41,862	4,656	6,306	10.4%	15.1%	2,790	3,727	6.2%	8.9%
Texas	212,925	233,922	35,427	58,664	16.6%	25.1%	21,015	32,070	9.9%	13.7%
Utah	32,813	29,528	8,024	8,584	24.5%	29.1%	5,701	6,067	17.4%	20.5%
Vermont	6,468	6,589	1,076	1,498	16.6%	22.7%	744	1,017	11.5%	15.4%
Virginia	64,596	72,149	16,145	21,700	25.0%	30.1%	10,254	13,911	15.9%	19.3%
Washington	58,939	59,608	6,790	12,569	11.5%	21.1%	4,499	7,840	7.6%	13.2%
West Virginia	19,440	16,802	1,641	2,008	8.4%	12.0%	894	971	4.6%	5.8%
Wisconsin	58,545	61,004	8,907	12,878	15.2%	21.1%	6,172	8,823	10.5%	14.5%
Wyoming	6,469	5,510	396	629	6.1%	11.4%	246	317	3.8%	5.8%
Nation	**2,550,483**	**2,691,901**	**405,475**	**609,807**	**15.9%**	**22.7%**	**260,658**	**378,694**	**10.2%**	**14.1%**

Appendix D:
Changes in Equity Gaps from 2000 to 2005

State	African American Students in Class of 2000: U.S. Public Schools			African American Students in Class of 2005: U.S. Public Schools		
	% of Student Population[11]	% of AP Examinees[10]	Equity Gap Eliminated	% of Student Population[11]	% of AP Examinees[10]	Equity Gap Eliminated
Alabama	33.3%	8.9%		32.2%	14.7%	
Alaska	3.7%	1.7%		3.6%	1.1%	
Arizona	4.2%	1.8%		4.7%	2.0%	
Arkansas	21.2%	5.9%		21.0%	13.3%	
California	7.3%	3.0%		7.3%	3.5%	
Colorado	4.3%	2.6%		4.5%	2.9%	
Connecticut	10.8%	3.6%		11.1%	4.4%	
Delaware	24.9%	8.9%		27.5%	11.0%	
District of Col.	86.6%	61.7%		81.7%	55.1%	
Florida	20.3%	8.7%		19.7%	10.0%	
Georgia	32.9%	18.2%		32.4%	19.9%	
Hawaii	1.6%	1.4%		1.5%	1.6%	✓
Idaho	0.4%	0.3%		0.5%	0.2%	
Illinois	14.7%	5.1%		14.3%	7.2%	
Indiana	8.6%	3.2%		7.9%	3.6%	
Iowa	2.2%	1.3%		2.6%	1.0%	
Kansas	6.1%	6.0%		6.6%	3.4%	
Kentucky	7.9%	2.2%		8.6%	4.5%	
Louisiana	38.6%	17.0%		39.8%	16.1%	
Maine	0.7%	0.3%		1.4%	0.3%	
Maryland	32.0%	11.3%		33.1%	14.1%	
Massachusetts	7.6%	2.4%		8.3%	3.2%	
Michigan	12.5%	3.8%		13.6%	4.7%	
Minnesota	2.9%	0.9%		4.5%	1.5%	
Mississippi	46.7%	19.8%		46.0%	31.9%	
Missouri	12.6%	4.4%		13.3%	4.0%	
Montana	0.2%	0.1%		0.4%	0.1%	
Nebraska	3.9%	1.6%		4.7%	2.0%	
Nevada	7.8%	2.4%		8.1%	3.3%	
New Hampshire	0.7%	0.3%		1.1%	0.5%	
New Jersey	14.9%	4.9%		14.7%	5.0%	
New Mexico	2.3%	1.6%		2.2%	0.9%	
New York	15.1%	6.5%		14.0%	6.5%	
North Carolina	26.8%	9.6%		26.8%	12.6%	
North Dakota	0.7%	0.2%		0.9%	0.1%	
Ohio	8.8%	4.4%		10.5%	5.7%	
Oklahoma	8.3%	4.8%		9.4%	5.4%	
Oregon	1.7%	0.6%		2.0%	0.7%	
Pennsylvania	10.3%	2.4%		11.3%	4.3%	
Rhode Island	5.5%	1.0%		8.3%	2.3%	
South Carolina	39.2%	15.8%		37.8%	15.5%	
South Dakota	0.7%	0.7%	✓	0.8%	1.1%	✓
Tennessee	18.0%	11.5%		19.9%	13.8%	
Texas	12.9%	5.0%		13.5%	6.8%	
Utah	0.5%	0.2%		0.8%	0.3%	
Vermont	0.3%	0.3%	✓	0.5%	0.2%	
Virginia	24.1%	8.4%		24.6%	9.4%	
Washington	3.0%	2.1%		4.4%	2.2%	
West Virginia	3.5%	2.0%		3.9%	1.5%	
Wisconsin	4.4%	1.1%		5.3%	1.9%	
Wyoming	0.4%	0.3%		1.2%	0.3%	
Nation	**13.2%**	**6.0%**		**13.4%**	**6.4%**	

State	Latino Students in the Class of 2000: U.S. Public Schools			Latino Students in the Class of 2005: U.S. Public Schools		
	% of Student Population[11]	% of AP Examinees[10]	Equity Gap Eliminated	% of Student Population[11]	% of AP Examinees[10]	Equity Gap Eliminated
Alabama	0.6%	1.2%	✓	1.2%	1.5%	✓
Alaska	2.9%	1.9%		3.0%	2.8%	
Arizona	25.4%	12.7%		29.0%	17.5%	
Arkansas	1.9%	1.7%		4.0%	3.7%	
California	32.5%	26.2%		35.5%	30.4%	
Colorado	13.3%	8.0%		16.4%	9.7%	
Connecticut	8.5%	5.2%		10.0%	6.5%	
Delaware	2.9%	1.0%		4.4%	3.6%	
District of Col.	7.4%	11.8%	✓	9.6%	16.2%	✓
Florida	15.1%	19.6%	✓	19.5%	23.4%	✓
Georgia	1.7%	2.0%	✓	3.9%	3.4%	
Hawaii	4.7%	1.5%		4.2%	2.8%	
Idaho	5.8%	2.1%		7.5%	3.9%	
Illinois	9.7%	7.5%		11.7%	10.2%	
Indiana	2.1%	1.6%		2.9%	2.3%	
Iowa	1.6%	1.0%		2.9%	2.1%	
Kansas	4.1%	2.8%		6.7%	4.2%	
Kentucky	0.5%	0.9%	✓	1.9%	1.3%	
Louisiana	1.3%	3.4%	✓	1.7%	3.0%	✓
Maine	0.5%	0.6%	✓	0.7%	0.8%	✓
Maryland	3.1%	3.6%	✓	4.9%	5.5%	✓
Massachusetts	6.6%	3.0%		7.4%	4.4%	
Michigan	2.3%	1.8%		2.7%	2.3%	
Minnesota	1.5%	1.2%		2.5%	1.6%	
Mississippi	0.2%	0.9%	✓	0.5%	1.0%	✓
Missouri	1.2%	1.5%	✓	1.9%	1.8%	
Montana	1.2%	0.9%		2.1%	1.0%	
Nebraska	3.2%	1.4%		5.4%	3.7%	
Nevada	12.6%	7.9%		19.4%	12.6%	
New Hampshire	1.0%	0.6%		1.8%	1.3%	
New Jersey	11.6%	6.8%		13.6%	9.5%	
New Mexico	42.0%	27.4%		45.2%	36.6%	
New York	11.5%	9.7%		11.1%	10.4%	
North Carolina	1.7%	1.7%	✓	4.1%	3.0%	
North Dakota	0.8%	0.8%	✓	1.1%	0.6%	
Ohio	1.1%	1.3%	✓	1.4%	1.6%	✓
Oklahoma	3.3%	3.1%		5.5%	5.3%	
Oregon	5.3%	3.0%		8.3%	4.4%	
Pennsylvania	2.5%	1.4%		3.1%	2.2%	
Rhode Island	8.3%	2.7%		11.8%	3.7%	
South Carolina	1.0%	1.4%	✓	2.2%	2.2%	✓
South Dakota	0.7%	0.6%		1.3%	1.0%	
Tennessee	0.6%	1.4%	✓	1.2%	2.1%	✓
Texas	32.1%	27.2%		35.0%	32.2%	
Utah	4.2%	2.3%		7.4%	5.1%	
Vermont	0.4%	0.8%	✓	0.6%	1.3%	✓
Virginia	3.2%	3.8%	✓	5.4%	5.1%	
Washington	4.9%	2.9%		8.1%	5.6%	
West Virginia	0.4%	0.8%	✓	0.4%	1.0%	✓
Wisconsin	2.5%	1.6%		3.4%	2.0%	
Wyoming	5.5%	4.0%		6.0%	2.4%	
Nation	**11.1%**	**10.9%**		**13.4%**	**13.6%**	✓

State	Native American Students in Class of 2000: U.S. Public Schools			Native American Students in Class of 2005: U.S. Public Schools		
	% of Student Population[11]	% of AP Examinees[10]	Equity Gap Eliminated	% of Student Population[11]	% of AP Examinees[10]	Equity Gap Eliminated
Alabama	1.2%	1.0%		1.3%	0.5%	
Alaska	19.1%	3.1%		19.9%	4.6%	
Arizona	6.4%	1.5%		5.8%	2.0%	
Arkansas	0.4%	0.3%		0.5%	1.1%	✓
California	0.9%	0.6%		0.9%	0.4%	
Colorado	0.8%	0.5%		0.9%	0.7%	
Connecticut	0.3%	0.2%		0.2%	0.2%	✓
Delaware	0.2%	0.2%	✓	0.4%	0.6%	✓
District of Col.	NA	0.4%	NA	*	0.3%	*
Florida	0.2%	0.3%	✓	0.3%	0.4%	✓
Georgia	0.1%	0.3%	✓	0.1%	0.3%	✓
Hawaii	0.3%	0.4%	✓	0.3%	0.7%	✓
Idaho	0.8%	0.4%		1.0%	0.5%	
Illinois	0.2%	0.2%	✓	0.3%	0.2%	
Indiana	0.1%	0.3%	✓	0.2%	0.3%	✓
Iowa	0.2%	0.2%	✓	0.5%	0.2%	
Kansas	0.9%	0.7%		1.1%	0.5%	
Kentucky	0.1%	0.3%	✓	0.4%	0.4%	✓
Louisiana	0.5%	0.2%		0.7%	0.2%	
Maine	0.5%	0.1%		0.5%	0.7%	✓
Maryland	0.3%	0.3%	✓	0.4%	0.3%	
Massachusetts	0.2%	0.3%	✓	0.5%	0.2%	
Michigan	1.0%	0.4%		0.9%	0.4%	
Minnesota	1.1%	0.3%		1.2%	0.3%	
Mississippi	0.1%	0.3%	✓	0.1%	0.7%	✓
Missouri	0.2%	0.5%	✓	0.3%	0.5%	✓
Montana	6.2%	1.3%		7.2%	1.3%	
Nebraska	0.6%	0.1%		0.8%	0.6%	
Nevada	1.4%	0.8%		1.4%	0.6%	
New Hampshire	0.2%	0.1%		0.2%	0.0%	
New Jersey	0.3%	0.2%		0.2%	0.1%	
New Mexico	10.5%	5.1%		11.0%	5.7%	
New York	0.3%	0.3%	✓	0.3%	0.3%	✓
North Carolina	1.2%	0.6%		1.1%	0.6%	
North Dakota	4.5%	0.6%		5.9%	0.9%	
Ohio	0.1%	0.3%	✓	0.1%	0.2%	✓
Oklahoma	15.0%	7.5%		18.3%	9.1%	
Oregon	1.5%	0.9%		1.6%	0.8%	
Pennsylvania	0.1%	0.2%	✓	0.1%	0.2%	✓
Rhode Island	0.2%	0.3%	✓	0.4%	0.0%	
South Carolina	0.2%	0.4%	✓	0.2%	0.3%	✓
South Dakota	3.5%	0.7%		4.6%	0.2%	
Tennessee	0.1%	0.4%	✓	0.1%	0.4%	✓
Texas	0.2%	0.4%	✓	0.3%	0.5%	✓
Utah	1.0%	0.3%		1.3%	0.3%	
Vermont	0.2%	0.3%	✓	0.2%	0.1%	
Virginia	0.3%	0.4%	✓	0.3%	0.4%	✓
Washington	1.6%	0.8%		2.0%	0.7%	
West Virginia	0.1%	0.3%	✓	0.1%	0.4%	✓
Wisconsin	0.9%	0.3%		1.0%	0.5%	
Wyoming	1.3%	0.8%		1.7%	0.8%	
Nation	**1.1%**	**0.5%**		**1.1%**	**0.5%**	

* Precise Native American student enrollments for the District of Columbia are not available from the Western Interstate Commission for Higher Education.

Notes

1. Faculty from colleges and universities nationwide participate in the development of the AP courses, exams, and scoring standards. These faculty are full-time faculty at dozens of institutions, including Dartmouth College, Harvard University, Princeton University, Spelman College, Stanford University, the University of Texas at Austin, the University of Virginia, the University of Washington, and Yale University. For a complete listing of these faculty and their affiliations, visit the AP Press Room at www.collegeboard.com/appress.

2. Kati Haycock, "Closing the Achievement Gap," *Educational Leadership* (2001), Association for Supervision and Curriculum Development.

3. "Preparing Students for Success in College," *Policy Matters* (2005), American Association of State Colleges and Universities.

4. Clifford Adelman, *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment* (1999), U.S. Department of Education.

5. Saul Geiser and Veronica Santelices, "The Role of Advanced Placement and Honors Courses in College Admissions" (2004), Center for Studies in Higher Education, University of California at Berkeley.

6. Chrys Dougherty, Lynn Mellor, and Shuling Jian, "The Relationship between Advanced Placement and College Graduation" (2005), National Center for Educational Accountability.

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

8. Throughout this *Report*, success on AP Exams is defined as a score of 3 or higher. See page 2 of the *Report* for more information about why this score is used to denote success.

9. This percentage was calculated as follows: the numerator includes each public school student in the graduating class of 2005 who earned an AP Exam grade of 3 or higher on an AP Exam at any point in their high school years; if a student earned more than one AP Exam grade of 3 or higher, she or he was still only counted once. The denominator is simply the overall number of public school students graduating from high school in 2005, as projected in *Knocking at the College Door* (2003), Western Interstate Commission for Higher Education.

10. These examinees include all public school students in the class of 2005 who took an AP Exam at any point in high school.

11. *Knocking at the College Door* (2003), Western Interstate Commission for Higher Education.

12. This page contains data for both AP Latin Exams—AP Latin Literature and AP Latin: Vergil. Charts showing examinees by grade level, race/ethnicity, and gender include demographic data from both AP Latin Exams, so some populations may be slightly inflated when individual students in those populations took both exams in 2005.

13. This page contains data for all three AP Studio Art portfolio assessments: Drawing, 2-D Design, and 3-D Design. Charts showing examinees by grade level, race/ethnicity, and gender include demographic data from all portfolios combined, so some populations may be slightly inflated when individuals in those populations submitted more than one type of portfolio in 2005.

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AP Equity Policy Statement:

The College Board and the Advanced Placement Program encourage teachers, AP Coordinators, and school administrators to make equitable access a guiding principle for their AP programs. The College Board is committed to the principle that all students deserve an opportunity to participate in rigorous and academically challenging courses and programs. All students who are willing to accept the challenge of a rigorous academic curriculum should be considered for admission to AP courses. The Board encourages the elimination of barriers that restrict access to AP courses for students from ethnic, racial, and socioeconomic groups that have been traditionally underrepresented in the AP Program. Schools should make every effort to ensure that their AP classes reflect the diversity of their student population.