

2002-03



**WAKE COUNTY
PUBLIC SCHOOL SYSTEM**

ADVANCED PLACEMENT EXAM RESULTS, 2002-03

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ABSTRACT

Students at 15 Wake County Public School System (WCPSS) high schools took 5,468 Advanced Placement (AP) exams offered by the College Board in 2002-03. The percentage of all juniors and seniors in the district who took at least one AP exam rose from 19.7% in 2001-02 to 20.4% in 2002-03. However, the percentage of exams earning a score of 3 or higher (the score typically needed to qualify for college course credit) decreased by 1.1 percentage points to 79.4% in 2002-03. WCPSS' overall success rate was substantially higher than that of North Carolina (58.0%), the U.S. South (56.7%), and the nation as a whole (61.5%). As in previous years, disparities in participation and performance by high school, gender, and race were observed.

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ADVANCED PLACEMENT EXAM RESULTS 2002-2003

SUMMARY

College-level courses are offered to high school students through the Advanced Placement program. Many colleges and universities provide course credit to students who earn a high score on the end-of-year exams, which are offered by the College Board. Almost 60% of U.S. high schools offer AP course work, and nearly one million high school students took at least one AP exam during the 2002-03 school year (College Board, 2003).

All 15 comprehensive high schools in the Wake County Public School System (WCPSS) offer AP courses, although their availability varies widely. Many students take more than one AP course. However, not all students enrolled in AP courses take an AP exam in the subject. In 2002-03, 2,546 WCPSS juniors and seniors took a total of 5,153 AP examinations. This report examines AP exam participation and performance results for WCPSS with comparisons to the state of North Carolina, U.S. South, and the United States.

PARTICIPATION

The percentage of all WCPSS 11th and 12th-grade students who took at least one AP exam rose from 19.7% in 2001-02 to 20.4% in 2002-03, the highest participation rate ever reported in the district. However, participation in AP testing varied widely by high school, gender, and race. The percentage of juniors and seniors who took one or more AP exams ranged from 10% to 44% of total student membership in these grades at individual high schools. The percentage of female juniors and seniors who took at least one exam was 22.7% compared to 18.4% of male students. Among racial subgroups, the participation rate was highest for Asian students (46.9% took one or more AP exams), followed by White students (23.7%), Hispanic/Latino students (15.9%), and Black students (4.1%).

OVERALL PERFORMANCE

Scores on AP exams range from 1 to 5, and many colleges and universities award course credit for a score of 3 or higher. Thus, one common measure of performance on AP exams is the percent of exams with a score of 3 or higher.

In WCPSS, the percentage of all AP exams with a score of 3 or higher declined to 79.4% in 2002-03, a decrease of 1.1 percentage points from the previous year. However, the WCPSS success rate was significantly higher than results for students in North Carolina, U.S. South, and the United States, where overall passing rates in 2002-03 showed similar declines.

AP exam results varied by gender and race. Male students performed slightly better than female students, with 82.5% of male students and 76.7% of female students scoring a 3 or higher. White

students and Hispanic/Latino students had the highest success rate on exams (81% scored 3 or higher), followed by Asian students (75.7%), and Black students (61.3%).

PERFORMANCE ON SELECTED AP EXAMS

AP exams were offered for 35 courses in 2002-03, and WCPSS students took exams in 31 of the courses. Five courses (Biology, Calculus AB, English Language and Composition, English Literature and Composition, and U.S. History) were selected for a closer look because a relatively large number of students have taken these exams in all WCPSS high schools over the past eight years. WCPSS performance on each of these exams was higher than the performance of students in North Carolina, U.S. South, and the United States. However, the percent of WCPSS exams with a score of 3 or higher declined in all of these exams with the exception of U.S. History. The largest decrease occurred in Biology, where the passing rate dropped from 85.7% in 2001-02 to 75.7% in 2002-03.

It should be noted that several other AP exams showed substantial growth in the number of test-takers in 2002-03. The largest growth was in Environmental Science, where the number of students taking the exam increased from 299 in 2001-02 to 690 students in 2002-03. In spite of the 131% growth in participation, the percentage of exams with a score of 3 or higher increased from 75.3% to 79.4%. In Government & Politics: U.S., the number of students taking the exam grew from 100 students to 216 students, but the percentage of scores at 3 or higher declined from 94% to 87%.

SCHOOL RESULTS

There was large variation across WCPSS high schools in the percentage of 11th and 12th-grade students who took at least one AP exam in 2002-03. Enloe High School (a magnet high school for academically gifted students) had the highest participation rate at 43.9%, while Fuquay-Varina, Garner, and East Wake had the lowest rates (10.1%, 10.4%, and 11.8%, respectively).

The percentage of AP exam scores of 3 or higher also varied widely from school to school in 2002-03, from approximately 56.5% at Fuquay-Varina to 88.3% at Athens Drive and Green Hope. Thirteen of the 15 WCPSS high schools exceeded the national average of 61.5% for the percentage of scores 3 or higher.

OVERALL RESULTS

BACKGROUND

Administered each May, the 35 Advanced Placement (AP) examinations test students' ability to perform at college level in 19 subject areas. The College Board sponsors the program, and participating colleges and universities may grant credit to students who have done well on the AP examinations.

AP examinations are scored on a five-point scale. The scale can be interpreted as follows:

- 1—no recommendation
- 2—possibly qualified
- 3—qualified
- 4—well qualified
- 5—extremely well qualified

Many colleges and universities provide course credit to students scoring a 3 or higher on an AP exam. For descriptions of all AP courses, and information about the AP testing program, consult the College Board's Web site at <http://www.collegeboard.com>

OVERALL AP RESULTS FOR 2002-03

The overall performance of WCPSS students taking AP exams in 2002-03 showed a slight decline compared to the previous year. As shown in Column 3 of Figure 1, the average exam score decreased from 3.48 to 3.42, and the percent of tests with scores of 3 or higher dropped from 80.5% to 79.4%. These declines were not unique to WCPSS; exam scores in North Carolina, the U.S. South, and the U.S. as a whole showed similar patterns

As in previous years, AP exam results in WCPSS surpassed those of North Carolina, the U.S. South, and the nation as a whole. The State of North Carolina is included in statistics for the U.S. South and the nation as a whole. A much higher percentage of WCPSS students scored a 3 or higher than students in the country as a whole—79.4% vs. 61.5%.

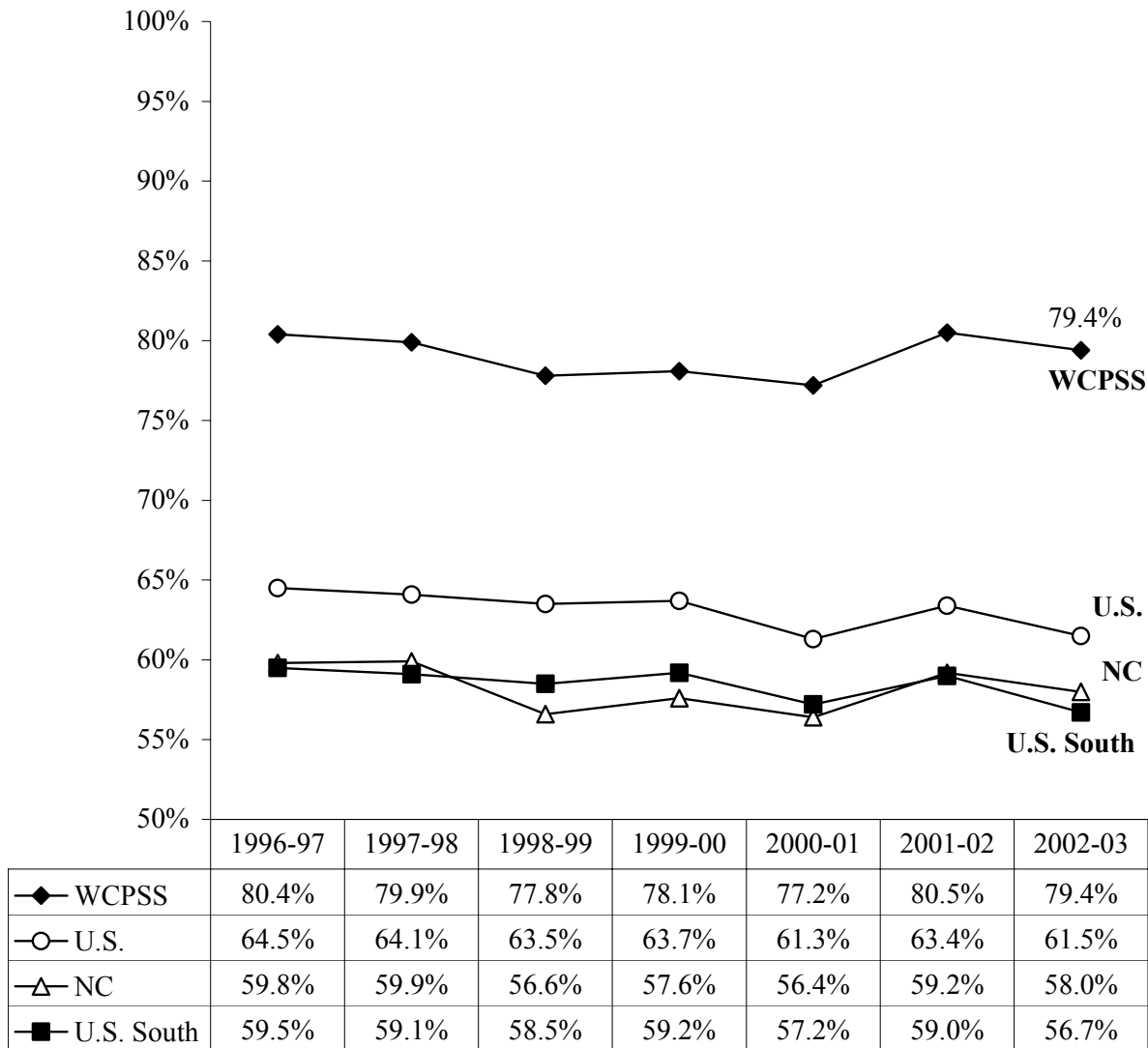
Figure 1
Overall AP Results
For WCPSS, NC, U.S. South, and the U.S.A. (1997-2003)

	Year	WCPSS	N.C.	U.S. South	U.S.A.
Average Exam Score	1996-97	3.42	2.87	2.88	3.02
	1997-98	3.44	2.89	2.88	3.02
	1998-99	3.41	2.81	2.87	3.02
	1999-00	3.38	2.83	2.88	3.01
	2000-01	3.38	2.81	2.84	2.95
	2001-02	3.48	2.87	2.87	3.00
	2002-03	3.42	2.83	2.81	2.95
Percentage of Exams With Scores of 3 or Higher	1996-97	80.4%	59.8%	59.5%	64.5%
	1997-98	79.9%	59.9%	59.1%	64.1%
	1998-99	77.8%	56.6%	58.5%	63.5%
	1999-00	78.1%	57.6%	59.2%	63.7%
	2000-01	77.2%	56.4%	57.2%	61.3%
	2001-02	80.5%	59.2%	59.0%	63.4%
	2002-03	79.4%	58.0%	56.7%	61.5%

Note: The U.S. South as defined by the College Board includes Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

Figure 2 shows the seven-year trend in the percentage of AP exams with scores of 3 or higher for WCPSS, North Carolina, U.S. South, and the United States. The graph shows that WCPSS students have consistently achieved higher scores than their counterparts nationwide.

Figure 2
Percentage of AP Exams With Scores of 3 or Higher for
WCPSS, NC, U.S. South, and United States (1997-03)



WCPSS PARTICIPATION IN AP EXAMS OVER TIME

Student participation in AP testing has increased substantially over the seven-year period 1997-2003. The number of WCPSS juniors and seniors taking the exams grew from 1,441 in 1996-97 to 2,546 in 2002-03. During the same time period, the number of AP exams taken almost doubled, from 2,785 in 1997 to 5,468 in 2002-03.

However, the overall participation **rate** of juniors and seniors (the percentage of all 11th- and 12th-graders who take an AP exam) has not grown at the same pace. It rose from 16.3% in 1997 to 20.4% in 2002-03. Figure 3 shows the number of AP exams taken by WCPSS students over the past seven years, the number of juniors and seniors taking them, the participation rate of juniors and seniors in AP exams, and the percent of all exams with scores of 3 or higher.

Figure 3
WCPSS Participation and Performance on
AP Exams (1997-2003)

Overall for WCPSS	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Number of Juniors and Seniors Taking AP Exams ¹	1,441	1,609	1,723	1,928	2,132	2,344	2,546
Number of AP Exams Taken	2,785	3,197	3,471	3,806	4,320	4,878	5,468
Percentage of Juniors and Seniors Taking AP Exams ²	16.3%	17.4%	18.0%	18.9%	19.7%	19.7%	20.4%
Percentage of AP Exams with Scores of 3 or Higher	80.4%	79.9%	77.8%	78.1%	77.2%	80.5%	79.4%

Notes

1. This report focuses on participation in AP exams by 11th- and 12th-grade students. However, the number of exams taken includes a small number of exams taken by 9th and 10th grade students as well. In 2002-03, there were 7 students in 9th grade and 150 in 10th grade who took at least one AP exam. The majority of them were enrolled at two schools: Broughton (96) and Enloe (37).
2. The percentage is calculated using WCPSS student enrollment data from the 20th day of school each year.

WCPSS PERFORMANCE ON COMMON AP EXAMS

Compared to 2001-02, results on four of five common AP exams showed declines in 2002-03. The percentage of exams with scores of 3 or higher dropped the most in Biology (from 85.7% to 75.7%), followed by English Literature and Composition (from 79.7% to 74.7%), and Calculus AB (from 92.6% to 89.6%). The passing rate rose slightly in U.S. History (from 70.4% to 71.9%), but the average score on the exam declined somewhat (from 3.23 to 3.18). Figure 4 presents performance statistics for the past five years.

Figure 4
WCPSS Performance on 5 Common AP Exams Over Five Years

AP Course	Year	Number of AP Exams	Average Exam Score	Percent of Exams with Scores of 3 or Higher
Biology	1998-99	211	3.26	75.4%
	1999-00	248	3.15	72.6%
	2000-01	227	3.34	73.1%
	2001-02	238	3.65	85.7%
	2002-03	206	3.41	75.7%
Calculus AB	1998-99	354	3.78	84.5%
	1999-00	374	3.84	86.6%
	2000-01	366	3.80	83.9%
	2001-02	418	4.13	92.6%
	2002-03	499	4.01	89.6%
English Language and Composition	1998-99	558	3.27	78.3%
	1999-00	651	3.26	80.6%
	2000-01	824	3.13	72.8%
	2001-02	788	3.35	81.5%
	2002-03	794	3.21	80.1%
English Literature and Composition	1998-99	355	3.34	78.3%
	1999-00	364	3.27	77.5%
	2000-01	462	3.16	74.2%
	2001-02	537	3.34	79.7%
	2002-03	510	3.19	74.7%
U.S. History	1998-99	523	3.18	66.5%
	1999-00	644	3.10	67.5%
	2000-01	691	3.09	64.0%
	2001-02	724	3.23	70.4%
	2002-03	729	3.18	71.9%

Figure 5 shows the seven-year trend in WCPSS performance on five common AP exams.

Figure 5
Percentage of Exams with Scores of 3 or Higher
On Five Common Exams (1997-2003)



Despite the decline in scores in 2002-03, WCPSS’ performance on these five AP exams was much higher than the performance of all students in North Carolina, the U.S. South, and the nation as a whole, all of which also reported overall performance declines. The percentage of WCPSS exams with scores of 3 or higher exceeded the percentage for the U.S. by 17.1 points in Biology, by 24 points in Calculus AB, by 19.2 points in English Language and Composition, by 12.1 points in English Literature and Composition, and by 20.3 points in U.S. History. The achievement edge over North Carolina and the U.S. South was slightly wider on most exams. Figure 6 shows exam results for the past seven years.

Figure 6
Percentage of Exams With Scores of 3 or Higher on 5 Common Exams
For WCPSS, NC, U.S. South, and U.S. (1997-2003)

AP Course		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Biology	WCPSS	76.8%	81.6%	75.4%	72.6%	73.1%	85.7%	75.7%
	NC	57.4%	54.0%	53.1%	54.5%	52.8%	61.1%	55.9%
	U.S. South	60.4%	54.6%	57.3%	57.6%	52.1%	58.1%	51.7%
	U.S.	67.3%	60.9%	65.0%	64.2%	58.5%	64.6%	58.6%
Calculus AB	WCPSS	77.4%	85.9%	84.5%	86.6%	83.9%	92.6%	89.6%
	NC	54.2%	61.2%	55.9%	56.6%	60.8%	64.2%	61.9%
	U.S. South	54.7%	60.9%	57.8%	59.0%	60.3%	63.8%	61.0%
	U.S.	59.3%	65.8%	63.4%	63.2%	63.6%	67.3%	65.6%
English Lang. and Comp.	WCPSS	85.5%	77.6%	78.3%	80.6%	72.8%	81.5%	80.1%
	NC	67.0%	64.7%	60.3%	61.4%	57.9%	63.7%	62.6%
	U.S. South	62.3%	61.8%	61.5%	61.9%	58.7%	62.1%	60.1%
	U.S.	65.1%	64.9%	62.2%	62.9%	58.3%	61.5%	60.9%
English Lit. and Comp.	WCPSS	79.4%	81.2%	78.3%	77.5%	74.2%	79.7%	74.7%
	NC	65.8%	64.2%	64.4%	64.8%	59.3%	61.3%	60.1%
	U.S. South	65.1%	65.3%	64.8%	66.2%	60.1%	63.4%	59.6%
	U.S.	68.9%	68.1%	68.2%	68.7%	63.1%	66.0%	62.6%
U.S. History	WCPSS	74.0%	68.5%	66.5%	67.5%	64.0%	70.4%	71.9%
	NC	49.7%	49.9%	49.2%	49.9%	49.7%	54.7%	50.5%
	U.S. South	48.6%	47.1%	50.8%	48.8%	47.0%	50.3%	47.5%
	U.S.	54.7%	53.7%	50.8%	53.9%	50.9%	53.7%	51.6%

WCPSS RESULTS FOR ALL AP EXAMS

The College Board offers AP exams for 35 courses in the areas of art, science, language arts, mathematics, foreign languages, and social studies. WCPSS students took AP exams in 31 of the courses in 2002-03. Figure 7 presents participation and performance data for all of these exams. For comparative data from previous years, see Figure 19.

Figure 7
WCPSS Participation and Performance on AP Exams (2002-03)

AP Course	Number of Exams	Number of Schools	Percent of Scores of 3 or Higher	AP Course	Number of Exams	Number of Schools	Percent of Scores of 3 or Higher
Art: History	11	3	72.7	French: Language	43	7	76.7
Art Studio: Drawing	9	4	88.9	French: Literature	6	2	100.0
Art Studio: 2-D Design	10	4	50.0	German: Language	13	7	69.2
Biology	206	14	75.7	Gov't Politics Comparative	24	4	79.2
Calculus AB	499	15	89.6	Government Politics: U.S.	216	8	87.0
Calculus BC	226	11	84.5	Latin: Vergil	9	2	66.7
Chemistry	146	12	82.2	Music Theory	11	4	90.9
Computer Science A	14	6	85.7	Physics B	153	11	79.7
Computer Science AB	56	8	71.4	Physics C: Electricity & Magnetism	65	4	72.3
Economics: Macro	7	1	85.7	Physics C: Mechanics	79	4	73.4
Economics: Micro	8	2	87.5	Psychology	196	5	76.5
English Lang. and Comp.	794	15	80.1	Spanish: Language	90	12	74.4
English Lit. and Comp.	510	15	74.7	Spanish: Literature	20	5	85.0
Environment Science	690	13	79.4	Statistics	347	13	83.0
European History	204	13	85.3	U.S. History	729	14	71.9
				World History	77	1	77.9

TRENDS IN AP EXAMS TAKEN BY MOST STUDENTS

Fewer than 100 students in WCPSS took exams in most of the AP subjects, and more than 100 students took only 13 exams in 2002-03. Compared to the previous year, participation declined in four of these exams and increased in nine of them. The AP exam in Environmental Science showed the largest increase in participation—the number of students taking the exam rose 130%, from 299 students in 2001-02 to 690 in 2002-03. Despite the substantial increase in participation, the percentage of Environmental Science exams with scores of 3 or higher rose from 75.3% to 79.4%. The other AP exam showing significant growth in participation was U.S. Government and Politics—the number of students taking the exam increased 116% from the previous year; however, the success rate on the exam declined from 94% to 87%. Figure 8 shows participation and performance data over the past seven years for the 13 AP exams taken by more than 100 students in 2002-03.

Figure 8
WCPSS Participation and Performance on AP Exams Taken by Most Students (1997-2003)

AP Exam		1997	1998	1999	2000	2001	2002	2003
Biology	# of Students	254	185	211	248	227	238	206
	% at or above 3	76.8	81.6	75.4	72.6	73.1	85.7	75.7
Calculus AB	# of Students	349	404	354	374	336	418	499
	% at or above 3	77.4	85.9	84.5	86.6	83.9	92.6	89.6
Calculus BC	# of Students	77	117	150	152	192	202	226
	% at or above 3	93.5	93.2	81.3	90.1	95.3	89.1	84.5
Chemistry	# of Students	138	147	133	197	185	206	146
	% at or above 3	76.1	81.0	74.4	81.7	73.5	72.8	82.2
English Lang. & Comp.	# of Students	497	536	558	651	824	788	794
	% at or above 3	85.5	77.4	78.3	80.6	72.8	81.5	80.1
English Lit. & Comp.	# of Students	301	373	355	364	462	537	510
	% at or above 3	79.4	81.3	78.3	77.5	74.2	79.7	74.7
Environmental Science	# of Students	0	38	87	115	177	299	690
	% at or above 3	NA	81.6	55.2	76.5	82.5	75.3	79.4
European History	# of Students	115	154	189	194	178	197	204
	% at or above 3	87.8	89.0	88.4	88.7	82.6	86.8	85.3
Govt. & Politics U.S.	# of Students	15	21	25	37	49	100	216
	% at or above 3	93.3	81.0	88.0	86.5	98.0	94.0	87.0
Physics B	# of Students	85	107	150	118	131	140	153
	% at or above 3	82.4	87.9	86.7	76.3	86.3	70.7	79.7
Psychology	# of Students	13	47	71	47	145	167	196
	% at or above 3	84.6	72.3	74.6	91.5	82.8	85.0	76.5
Statistics	# of Students	135	203	288	290	310	364	347
	% at or above 3	90.4	85.7	88.9	69.0	82.9	78.0	83.0
U.S. History	# of Students	470	487	523	644	691	724	729
	% at or above 3	74.0	68.6	66.5	67.5	64.0	70.4	71.9

AP RESULTS BY GENDER

As in previous years, more female students than male students took AP exams in 2002-03. A total of 1,536 female students and 1,230 male students in WCPSS took an AP exam. While female students represented 50.3% of all 11th- and 12th-grade students, they accounted for 55.5% of all students taking an AP exam. However, the average score across all AP exams was slightly higher for male students (3.53) than for female students (3.32). Also, 82.5% of male students scored a 3 or higher on their exams compared to 76.7% of female students.

Figure 9 presents data on participation and performance in AP exams by gender for WCPSS in 2002-03.

Figure 9
Participation and Performance on AP Exams
by Gender (2002-03)

Participation and Performance		Female	Male
H.S. Membership (11th and 12th Grade)	Number of Students	6,221	6,147
	Percent of Students	50.3%	49.7%
11th and 12th Grade Students Taking AP Exams	Number of Students Taking AP Exams	1,413	1,133
	Percent Taking Exam	55.5%	44.5%
AP Exam Results*	Number of Exams	2,900	2,568
	Mean Score	3.32	3.53
	Percent of Scores ≥ 3	76.7%	82.5%

*Note: The number of AP exams includes those taken by 9th and 10th grade students in addition to 11th- and 12th-grade students.

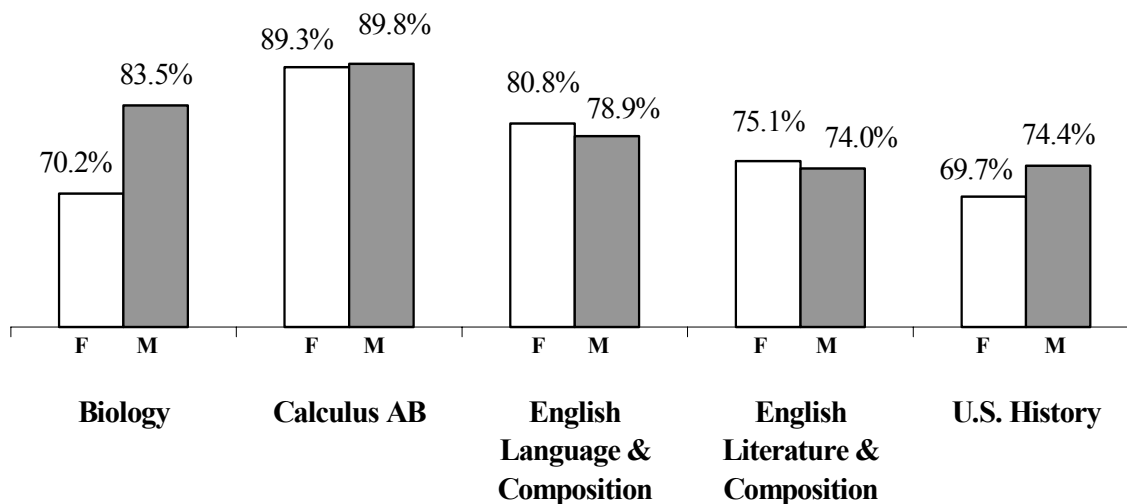
Figures 10 and 11 show data by gender for five common AP courses offered in WCPSS high schools in 2002-03. Participation and performance by female and male students varied widely depending on the exam. For example, more female students took English Language and Composition, English Literature and Composition, Biology, and Psychology exams. On the other hand, more male students took Calculus, Computer Science, U.S. Government and Politics, and Physics exams.

Male students performed substantially higher than female students on the Biology and U.S. History exams. Female students, on the other hand, performed slightly better on the English Language & Composition, and English Literature & Composition exams. Results on the Calculus AB exam were similar for both groups of students.

Figure 10
AP Results by Gender for Five Common AP Exams (2002-03)

AP Exam	Females			Males		
	Number of AP Exams	Average Score	Scores of 3 or Higher	Number of AP Exams	Average Score	Scores of 3 or Higher
Biology	121	3.36	70.2%	85	3.48	83.5%
Calculus AB	233	3.95	89.3%	266	4.06	89.8%
English Language & Composition	515	3.20	80.8%	279	3.22	78.9%
English Literature & Composition	333	3.19	75.1%	177	3.19	74.0%
U.S. History	389	3.15	69.7%	340	3.22	74.4%

Figure 11
Percent of Exams with Scores of 3 or Higher by Gender (2002-03)



AP RESULTS BY RACE

Figures 12 and 13 show student participation in AP courses and AP testing by race in WCPSS. To assess AP participation by race, the racial groups for students who were enrolled in AP courses (WCPSS data) and who took AP exams (*College Board Report APPC 2200*) were compared to the population of racial groups at high schools in 2002-03 (WCPSS data).

Compared to their proportion of all 11th- and 12th-grade students, Asian students were much more likely than students of other racial backgrounds to take AP exams. Although they represented only 4.4% of all students, they accounted for 10.6% of all AP exam takers. Almost one-half of all Asian juniors and seniors (46.9%) took an AP exam in 2002-03, compared to 23.7% of White students, 15.9% of Hispanic/Latino students, and 4.1% of Black students. Asian students also took more AP exams, on average, than students from other racial groups (2.46 exams per student compared to 1.94 for White students, 1.86 for Hispanic/Latino students, and 1.65 for Black students); consequently, their share of all AP exams (13.1%) was even higher than their percentage of all exam takers (see the last column of Figure 12).

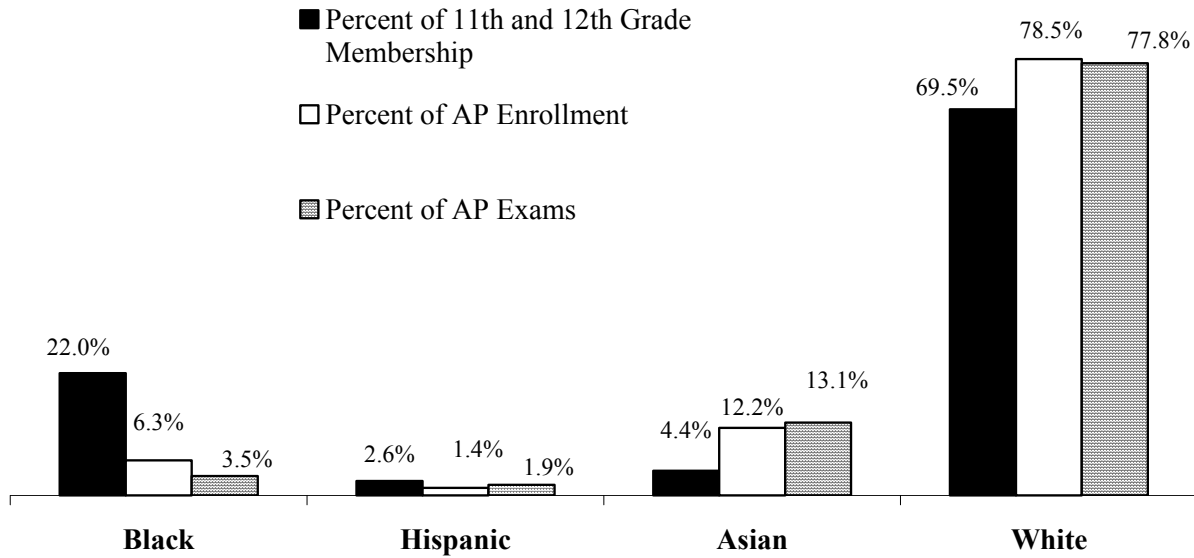
Black students were the most under-represented racial group among AP exam takers. Although they comprised 22.0% of 11th- and 12th-grade students, they accounted for only 4.4% of students taking an AP exam, and their share of exams taken was 3.5%.

Figure 12
WCPSS High School Enrollment and Participation in AP Exams by Race (2002-03)

Race	Number of 11 th and 12 th Grade Students	Percentage of Students	Number of Students Taking AP Exams	Percent of AP Exam Takers	Number of AP Exams Taken*	Percent of AP Exams Taken*
Not Stated	N/A	N/A	20	0.8%	58	1.1%
Native American	23	0.2%	7	0.3%	16	0.3%
Black	2,723	22.0%	113	4.4%	191	3.5%
Hispanic/Latino	321	2.6%	51	2.0%	106	1.9%
Asian	546	4.4%	256	10.1%	717	13.1%
White	8,591	69.5%	2,040	80.1%	4,254	77.8%
Other	164	1.3%	59	2.3%	126	2.3%
Total	12,368	100.0%	2,546	100.0%	5,468	100.0%

Note: The number of exams taken and percent of exams taken includes exams taken by 9th and 10th grade students.

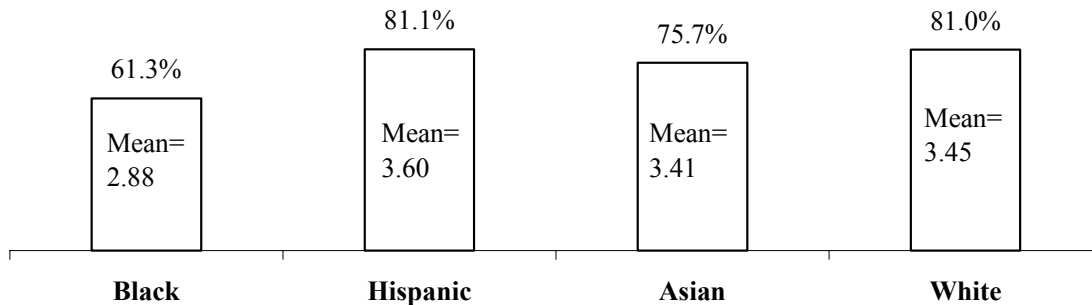
Figure 13
Student Membership, Enrollment in AP Courses,
and Students Taking AP Exams in 2002-03 by Ethnicity



PERFORMANCE ON AP EXAMS BY RACE

Performance on AP exams as measured by the overall mean score and the percentage of exams with scores of 3 or higher also differed by race. As illustrated in Figure 14, Hispanic/Latino and White students had almost the same percentage of exams with scores of 3 or higher (81%). The success rate for Asian students (75.7%) was slightly lower, and the percentage for Black students (61.3%) was substantially lower than other racial groups

Figure 14
Percentage of AP Exams with Scores of 3 or above and Mean Scores by Race (2002-03)

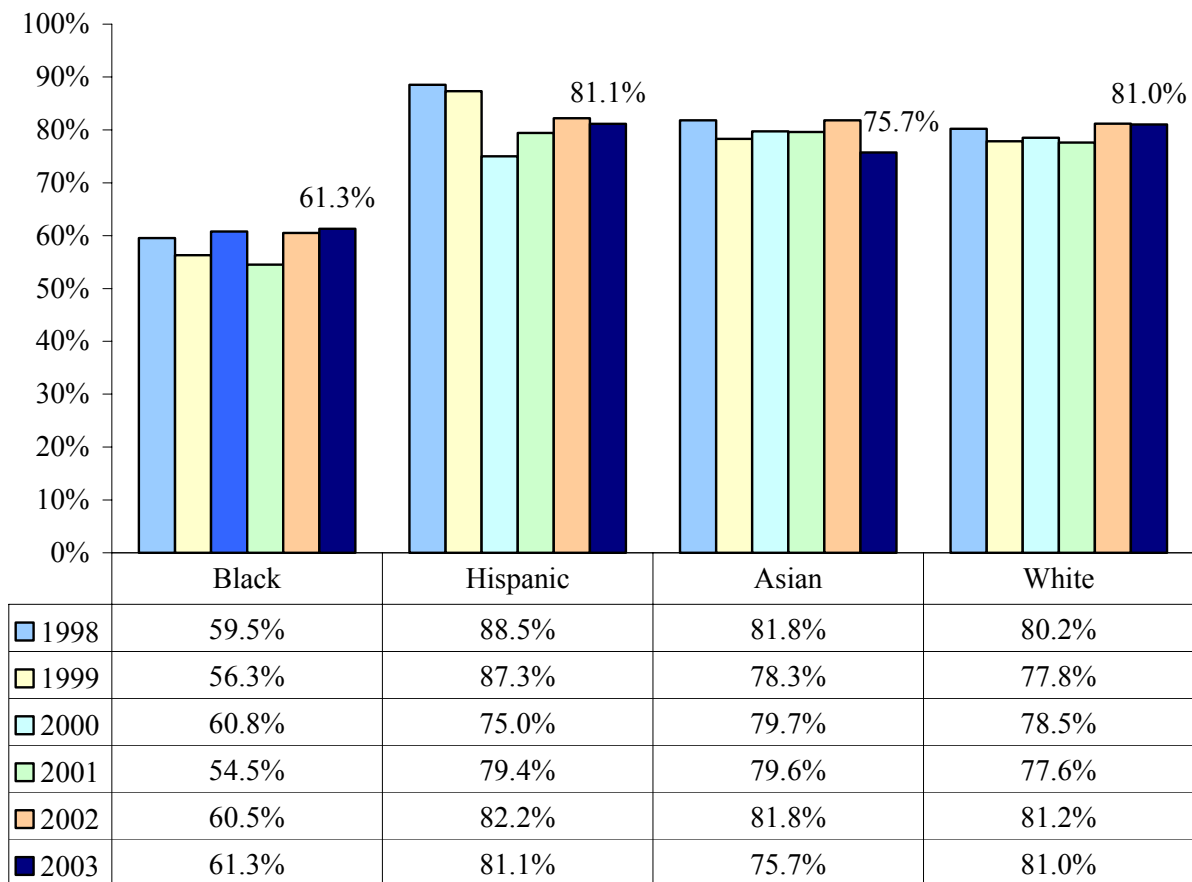


OVERALL AP PERFORMANCE BY RACE OVER TIME

Compared to the previous year, all racial groups, except Black students, performed worse in 2002-03. For Black students, the proportion of exams with scores of 3 or higher rose .8 percentage points from 60.5% to 61.3%. The percentage for Asian students declined fairly sharply, from 81.8% to 75.7%. Overall declines for White students (down .2 percentage points) and Hispanic/Latino students (down 1.1 percentage points) were more modest.

As shown in Figure 15, over the past six years, the success rate on AP exams has been fairly stable for White and Asian students, with the exception of 2002-03 results for Asian students. The percentage of scores at 3 or higher for Hispanic/Latino and Black students have been less consistent; this fluctuation is related to the smaller number of students in the Hispanic/Latino and Black student groups.

Figure 15
Percentage of AP Exams with Scores of 3 or Higher by Race (1998-2003)



RESULTS ON FOUR AP EXAMS BY RACE

Figure 16 shows the percentage of exams with scores of 3 or higher on four common AP exams disaggregated by race in 2001-02 and 2002-03. The figure also shows the number of students from each racial group who took the exams. Biology was not included because of the very small number of Black and Hispanic students who have taken this exam over the past five years.

Most racial groups performed worse on most of the four exams than they did the previous year. The exceptions were on the U. S. History exam, with all racial groups except Asians having a higher percentage of scores at or above 3. Black students also increased their success rate in English Language and Composition (from 47.1% to 66.7%), but their success rate in English Literature & Composition declined by 43 percentage points and in the Calculus by 16 points.

For Hispanic/Latino students, the percentage of exams with scores of 3 or higher declined in two of the subjects (down 25 percentage points in Calculus AB, and down 20 points in English Language and Composition), but increased in two subjects (up 16 points in English Literature and Composition, and up 6 points in U.S. History). It is important to note the small number of Black and Hispanic/Latino students who took AP exams in particular subjects. Given the small numbers, large fluctuations in percentages should be expected.

Success rates for Asian students fell on all four exams, with the percentage of scores of 3 or higher declining by 5 percentage points on average. The biggest drop occurred in Calculus AB, where the success rate decreased from 91.8% to 81.0%.

For White students, the percentage of scores of 3 or higher declined slightly in Calculus AB, English Language and Composition, and English Literature and Composition. Their success rate increased in U.S. History from 70.4% to 73.4%.

Figure 16
Percent of Exams with Scores of 3 or Higher for
Five Common AP Exams by Race (2002 and 2003)

Race		Calculus AB		English Lang. & Comp.		English Lit. & Comp.		U.S. History	
		2002	2003	2002	2003	2002	2003	2002	2003
Black	% 3+	80.0%	64.3%	47.1%	66.7%	76.5%	33.3%	43.5%	57.1%
	N	15	14	34	36	17	27	23	28
Asian	% 3+	91.8%	81.0%	82.5%	80.7%	80.0%	76.7%	69.0%	66.3%
	N	73	63	80	83	40	43	71	86
Hispanic/ Latino	% 3+	100%	75.0%	92.3%	72.7%	61.5%	77.8%	69.2%	75.0%
	N	7	8	13	11	13	9	13	12
White	% 3+	93.5%	92.2%	83.1%	81.0%	79.7%	76.8%	70.4%	73.4%
	N	307	398	614	630	442	414	572	582

AP RESULTS BY HIGH SCHOOL

OVERALL RESULTS

Figure 17 presents data on each high school's AP participation and performance over a five-year period. The table shows the number of students taking AP exams in 2002-03, the percentage of juniors and seniors taking exams each year, and the percentage of exams with a score of 3 or higher for all 15 high schools for the period 1998-99 to 2002-03.

Participation

- The percentage of 11th- and 12th-grade students who took at least one AP exam in 2002-03 averaged 19.9% across all 15 WCPSS high schools. However, the participation rate varied considerably, from around 10% at Fuquay-Varina and Garner high to 43.9% at Enloe High School. Enloe's high participation rate is related to the school's status as a magnet high school with a program for gifted and talented students. Excluding Enloe, participation in AP exams ranged from approximately 10% to 32% of juniors and seniors.
- Compared to the previous year, participation in AP exams among 11th- and 12th-grade students increased at six high schools and decreased at nine in 2002-03. Wakefield High School had the largest increase in participation (+9.4 percentage points). For schools experiencing a decline in their participation rate, the average decrease was approximately 1.4 percentage points.

Performance

- The percentage of AP exams with a score of 3 or higher also varied widely from school to school, from 56.5% at Fuquay-Varina High School to 88.3% at Athens Drive and Green Hope high schools. The average passing percentage for all 15 high schools was 76.3%.
- Thirteen of the 15 schools exceeded the national rate of 61.5% for the percentage of scores 3 or higher.
- Compared to the previous year, performance on AP exams improved at only four schools and declined at eleven in 2002-03. East Wake High School had the largest increase in the percentage of exams with scores of 3 or higher (+19.1 percentage points), while Fuquay-Varina High School had the largest decrease (-13 percentage points). For schools experiencing a decline, the average decrease was 5.4 percentage points.

FIGURE 17**Advanced Placement Overall Results for WCPSS High Schools
Over a Five-Year Period**

High School	Number of 11 th and 12 th grade students taking exams	<u>Participation</u>					<u>Performance</u>				
		Percent of Juniors and Seniors Taking AP Exams					Percent of Exams with a Score of 3 or Higher				
		98-99	99-00	00-01	01-02	02-03	98-99	99-00	00-01	01-02	02-03
Apex	157	14.3	16.9	16.8	13.8	17.0	90.0	89.9	88.4	91.0	82.0
Athens Drive	136	12.5	18.9	15.1	19.0	16.6	80.9	64.8	79.0	79.8	88.3
Broughton	231	22.1	24.1	26.2	26.3	32.1	75.9	74.0	70.4	80.7	80.4
Cary	159	16.4	17.7	18.8	17.0	20.6	76.3	78.3	78.5	77.4	70.3
East Wake	91	12.2	15.6	12.7	12.3	11.8	52.9	63.3	51.1	45.8	64.9
Enloe	480	40.8	41.1	47.3	45.0	43.9	81.5	82.7	82.4	85.3	79.4
Fuquay-Varina	75	8.9	8.9	9.4	10.4	10.1	57.6	56.8	62.2	69.5	56.5
Garner	97	9.6	8.9	10.7	12.8	10.4	68.2	68.0	55.3	66.0	60.6
Green Hope	306	N/A	N/A	24.8	33.0	32.0	N/A	N/A	85.2	78.4	88.3
Leesville	156	13.1	18.6	18.7	15.4	16.6	94.2	91.3	86.6	88.8	86.7
Millbrook	161	19.9	21.3	17.1	18.4	17.3	80.4	75.2	74.7	84.1	79.7
Sanderson	115	15.9	17.5	17.3	17.7	16.7	79.8	75.8	82.1	86.0	77.3
SE Raleigh	133	14.6	15.4	19.1	18.9	16.1	67.3	75.4	66.6	77.5	74.5
WF-Rolesville	68	19.2	11.6	12.8	11.8	13.7	53.9	68.8	76.8	70.7	70.3
Wakefield	181	N/A	N/A	19.9	14.7	24.1	N/A	N/A	63.5	80.5	85.1

Note: Middle Creek High School opened in 2002-03 with students in grade 9 and 10

HIGH SCHOOL RESULTS ON FIVE AP EXAMS

Figure 18 shows results for five common exams (Biology, Calculus AB, English Language and Composition, English Literature and Composition and U.S. History) by high school.

Participation (percent of juniors and seniors taking the exam) and performance (percent of exams receiving a score of 3 or higher) are shown for each school.

- Participation was highest in the English Language and Composition exam, with 6.4% of WCPSS juniors and seniors taking the exam. Participation was lowest in Biology (1.7%).
- Performance was highest in Calculus AB (89.6% of scores 3 or higher), and lowest in U.S. History (71.9%).

Figure 18
Participation and Performance by WCPSS High Schools:
Results for Common Advanced Placement Courses (2002-03)

School	Number of 11 th and 12 th Grade Students	Biology		Calculus AB		English Lang. & Comp.		English Liter. & Comp.		U.S. History	
		% of Jrs/Srs Taking Exam	% of Exams Scored ≥ 3	% of Jrs/Srs Taking Exam	% of Exams Scored ≥ 3	% of Jrs/Srs Taking Exam	% of Exams Scored ≥ 3	% of Jrs/Srs Taking Exam	% of Exams Scored ≥ 3	% of Jrs/Srs Taking Exam	% of Exams Scored ≥ 3
Apex	925	1.1	90.0	4.0	100.0	4.8	65.9	0.6	100.0	4.6	67.4
Athens Drive	819	1.0	75.0	5.4	100.0	3.2	88.5	3.8	87.1	1.8	60.0
Broughton	719	3.2	91.3	0.6	100.0	10.0	87.5	4.6	72.7	9.5	80.9
Cary	773	1.6	83.3	3.4	96.2	5.2	75.0	3.0	82.6	12.9	58.0
East Wake	773	2.7	42.9	2.5	73.7	3.2	64.0	5.0	72.4	3.0	69.6
Enloe	1093	2.9	75.0	8.9	72.2	20.1	79.1	11.8	79.8	15.5	78.1
Fuquay-Varina	742	0.0	N/A	0.1	100.0	1.3	30.0	1.9	21.4	2.7	65.0
Garner	934	0.6	66.7	2.1	75.0	4.4	58.5	3.7	54.3	2.9	74.1
Green Hope	956	3.7	82.9	8.6	96.3	9.0	91.9	6.6	76.2	9.9	83.2
Leesville	938	0.4	75.0	4.2	97.4	6.1	89.5	1.5	85.7	4.1	84.2
Millbrook	928	1.2	72.7	2.8	92.3	3.3	80.6	7.2	70.1	3.2	66.7
Sanderson	690	2.9	70.0	6.4	100.0	3.9	88.9	0.9	100.0	3.9	29.6
SE Raleigh	827	0.8	85.7	3.4	78.6	4.0	84.8	1.7	100.0	0.0	N/A
WF-Rolesville	498	1.4	71.4	0.2	100.0	6.0	66.7	5.4	88.9	4.0	45.0
Wakefield	750	1.3	80.0	4.1	93.5	6.9	90.4	1.2	88.9	7.2	81.5

Note: N/A indicates schools where no students took that particular AP exam.

Figure 19
AP Exams in WCPSS, 1998-2003

TEST	Number of Schools Administering						Number of Exams Taken						Percent of Exams With Scores of 3 or Higher					
	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003
All Exams	13	13	13	15	15	15	3197	3471	3806	4320	4878	5468	79.9	77.8	78.1	77.2	80.5	79.4
Art History	2	2	2	3	3	3	21	24	13	16	16	11	90.5	87.5	84.6	93.8	75.0	72.7
Art: Drawing	3	1	1	1	6	4	3	4	4	8	9	9	66.7	50.0	75.0	87.5	100.0	88.9
Art:2-D Design	3	4	5	3	3	4	7	12	24	6	11	10	85.7	66.7	83.3	83.3	81.8	50.0
Art: 3-D Design	0	0	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Biology	11	13	13	15	13	14	185	211	248	227	238	206	81.6	75.4	72.6	73.1	85.7	75.7
Calculus AB	13	13	13	15	14	15	404	354	374	336	418	499	85.9	84.5	86.6	83.9	92.6	89.6
Calculus BC	10	10	10	11	11	11	117	150	152	192	202	226	93.2	81.3	90.1	95.3	89.1	84.5
Chemistry	11	10	10	14	15	12	147	133	197	185	206	146	81.0	74.4	81.7	73.5	72.8	82.2
Computer Science A	2	3	3	6	5	6	8	12	12	17	38	14	62.5	75.0	91.7	88.2	84.2	85.7
Computer Science AB	4	2	2	4	5	8	12	11	13	31	20	56	33.3	72.7	69.2	96.8	75.0	71.4
Economics: Micro	3	1	1	2	4	2	11	22	15	6	12	8	63.6	50.0	86.7	66.7	66.7	87.5

TEST	Number of Schools Administering						Number of Exams Taken						Percent of Exams With Scores of 3 or Higher					
	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003
Economics: Macro	2	2	2	2	4	1	10	23	15	10	28	7	60.0	82.6	86.7	50.0	71.4	85.7
English Lang. & Comp.	12	13	13	15	15	15	536	558	651	824	788	794	77.4	78.3	80.6	72.8	81.5	80.1
English Lit. & Comp.	12	13	13	13	15	15	373	355	364	462	537	510	81.3	78.3	77.5	74.2	79.7	74.7
Environmental Science	2	5	5	7	11	13	38	87	115	177	299	690	81.6	55.2	76.5	82.5	75.3	79.4
European History	11	11	11	11	14	13	154	189	194	178	197	204	89.0	88.4	88.7	82.6	86.8	85.3
French Language	6	6	6	6	9	7	39	36	25	28	48	43	56.4	69.4	68.0	82.1	85.4	76.7
French Literature	2	2	2	2	2	2	4	11	8	6	9	6	50.0	81.8	87.5	66.7	100.0	100.0
German Language	5	4	4	3	5	7	18	11	10	7	7	13	61.1	90.9	80.0	85.7	100.0	69.2
Govt. & Politics Comp.	0	1	1	2	2	4	0	1	1	5	20	24	N/A	0.0	100.0	40.0	100.0	79.2
Govt. & Politics U.S.	4	6	6	4	4	8	21	25	37	49	100	216	81.0	88.0	86.5	98.0	94.0	87.0
Human Geography	0	0	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
International English Lang.	0	0	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Latin Literature	0	1	1	1	0	0	0	5	0	2	0	0	N/A	40.0	N/A	50.0	N/A	N/A
Latin: Vergil	4	2	2	0	0	2	15	15	7	0	0	9	46.7	33.3	42.9	N/A	N/A	66.7

TEST	Number of Schools Administering						Number of Exams Taken						Percent of Exams With Scores of 3 or Higher					
	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003	1998	1999	2000	2001	2002	2003
Music Theory	2	3	3	3	4	4	13	17	14	17	18	11	76.9	94.1	92.9	88.2	88.9	90.9
Physics B	9	10	10	8	12	11	107	150	118	131	140	153	87.9	86.7	76.3	86.3	70.7	79.7
Physics C: Elec. & Magnet	2	2	2	3	4	4	60	45	42	53	84	65	81.7	68.9	76.2	79.2	82.1	72.3
Physics C: Mechanics	3	4	4	3	3	4	63	54	60	59	19	79	92.1	90.7	85.0	93.2	100.0	73.4
Psychology	2	3	3	4	3	5	47	71	47	145	167	196	72.3	74.6	91.5	82.8	85.0	76.5
Spanish Language	8	10	10	10	13	12	74	55	103	83	93	90	85.1	78.2	81.6	88.0	81.7	74.4
Spanish Literature	3	4	4	3	3	5	20	19	9	29	11	20	85.0	78.9	77.8	86.2	90.9	85.0
Statistics	12	12	12	11	13	13	203	288	290	310	364	347	85.7	88.9	69.0	82.9	78.0	83.0
U.S. History	13	13	13	15	15	14	487	523	644	691	724	729	68.6	66.5	67.5	64.0	70.4	71.9
World History	0	0	0	0	2	1	0	0	0	0	55	77	N/A	N/A	N/A	N/A	74.5	77.9

Note: N/A indicates no students took that particular exam.