

ASSESSMENT BRIEF

DEPARTMENT OF TEACHING AND LEARNING

DEPARTMENT OF PLANNING, INNOVATION, AND ACCOUNTABILITY – JANUARY 5, 2016

Advanced Placement Results for 2014-2015

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ABSTRACT

This brief summarizes the Virginia Beach City Public Schools (VBCPS) Advanced Placement (AP) program for the 2014-2015 academic year. Enrollment data and AP Exam results at the school, division, state, and national levels are included, as well as AP data and results from previous years. After relatively modest increases from 2012-2013 to 2013-2014 in AP enrollment and the number of AP Exams administered in Virginia Beach, the one-year growth from 2013-2014 to 2014-2015 was significant. The AP enrollment total of 12,110 courses represented an 8 percent increase from the previous year and a 30 percent increase in enrollment since the 2010-2011 school year. Forty percent of all high school sophomores, juniors, and seniors in VBCPS high schools and Green Run Collegiate were enrolled in at least one AP course during the 2014-2015 year. Approximately 76 percent of Virginia Beach AP course enrollees took the corresponding AP Exam, which is optional for all students. About 58 percent of the 9,316 AP Exams taken by VBCPS students received scores of 3, 4, or 5. This percentage was 2 points higher than the percentage for public school students at the national level and 3 points lower than the percentage for public school AP examinees across the state.

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BACKGROUND

For 50 years, the College Board’s Advanced Placement (AP) program has provided students with opportunities to take college-level courses and receive college credit while they are still in high school. Each of the 37 AP courses and end-of-course examinations were “designed with learning outcomes that correspond to an introductory-level college course.”¹ Every year more than 5,800 college and university faculty members participate in AP activities such as the developing courses and exams, reviewing course syllabi, scoring AP Exams, and conducting professional development sessions for AP instructors.²

During the 2014-2015 academic year, students from nearly 21,600 high schools across the nation took 4,478,936 AP Exams, and well over four thousand colleges received scores from AP Exam.³ The College Board has indicated that “[college] admission and enrollment officials recognize the achievement of AP students, who demonstrate through successful exam scores that they are ready for the challenge of higher education.”⁴

This report presents information about the AP program in Virginia Beach City Public Schools (VBCPS) and provides comparisons with AP students across the Commonwealth of Virginia and the nation. Most of the data were derived from the VBCPS Student Data Warehouse and AP summary reports for Virginia and the nation on the College Board’s website.

ENROLLMENT IN AP COURSES

Of the 37 AP courses offered by the College Board, VBCPS students were enrolled in 32 different courses during the 2014-2015 school year. This included AP courses offered online through Virtual Virginia (VVa), a Virginia Department of Education program. There were 6,441 Virginia Beach students enrolled in one or more AP courses in 2014-2015, which was an increase of over 350 students from 2013-2014. The number of AP course offerings in Virginia Beach was one more than the previous year.

¹ College Board, *AP Higher Education: AP Courses and Exams*, <https://aphighered.collegeboard.org/exams>, accessed on November 23, 2015.

² College Board, *AP Higher Education*, <https://collegereadiness.collegeboard.org/sat>, accessed on November 23, 2015.

³ College Board, *AP Data*, <http://research.collegeboard.org/programs/ap/data>, accessed on November 23, 2015.

⁴ College Board, *AP Higher Education*, <https://collegereadiness.collegeboard.org/sat>, accessed on November 23, 2015.

Table 1 shows the number of students by gender for each racial/ethnic group with 20 or more AP enrollees. The table also includes the percentage that each group represented among the total number of students enrolled in AP courses and the percentage that each group comprised among VBCPS high school membership as of September 30, 2014. The percentage of AP course takers was greater than the percentage of students in membership for the following groups: Asian/Pacific Islander males and females, Hispanic females, Multiracial females, and White females. Although there were over 26 percent more Hispanic males enrolled in AP courses in 2014-2015 than during 2013-2014, female students accounted for most of the one-year growth in AP enrollment in Virginia Beach. For each of the five racial/ethnic groups shown in Table 1, the number of female AP enrollees increased from the previous school year by a range of 5 percent to 11 percent.

Table 1
AP Course Enrollees and VBCPS High School Membership by Race/Ethnicity and Gender for 2014-2015

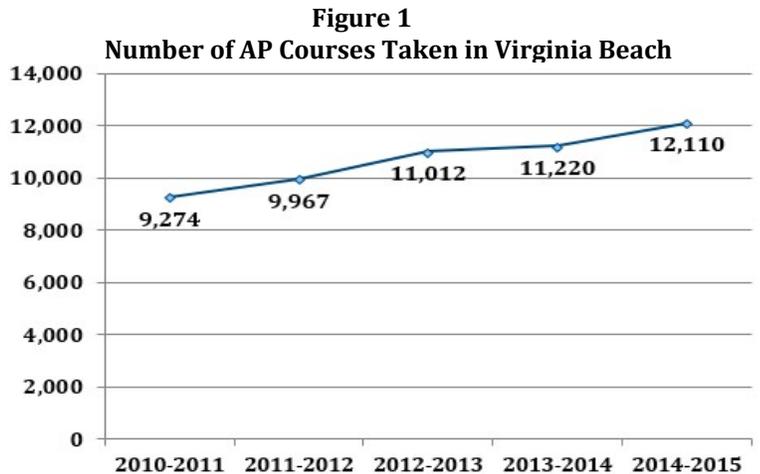
Group	African American/Black			Asian/Pacific Islander			Hispanic			Multiracial			White			All VBPCS		
	female	male	total	female	male	total	female	male	total	female	male	total	female	male	total	female	male	total
Unduplicated Student Count of AP Enrollees	538	304	842	415	294	709	324	243	567	292	207	499	2,117	1,686	3,803	3,697	2,744	6,441
Percentage of All AP Course Enrollees	8.4	4.7	13.1	6.4	4.6	11.0	5.0	3.8	8.8	4.5	3.2	7.7	32.9	26.2	59.0	57.4	42.6	100
Percentage of Students in Membership (HS)	11.9	12.7	24.6	3.5	3.1	6.6	4.7	4.8	9.5	3.6	3.6	7.2	25.4	26.3	51.7	49.2	50.8	100

Source: VBCPS Student Data Warehouse.

Because many VBCPS students take more than one AP course during a school year, the total number of AP course enrollments is greater than the number of AP enrollees. Figure 1 shows the AP course enrollment totals for the past five years in Virginia Beach, including online courses taken through VVa. After the number of VBCPS enrollments increased by less than 2 percent from 2012-2013 to 2013-2014, there was a surge of 890 additional enrollments—an increase of 8 percent—from 2013-2014 to 2014-2015. Enrollment in AP courses in Virginia Beach continues to grow each year. The five-year increase since the 2010-2011 school year was over 30 percent.

AP EXAM PARTICIPATION AND PERFORMANCE

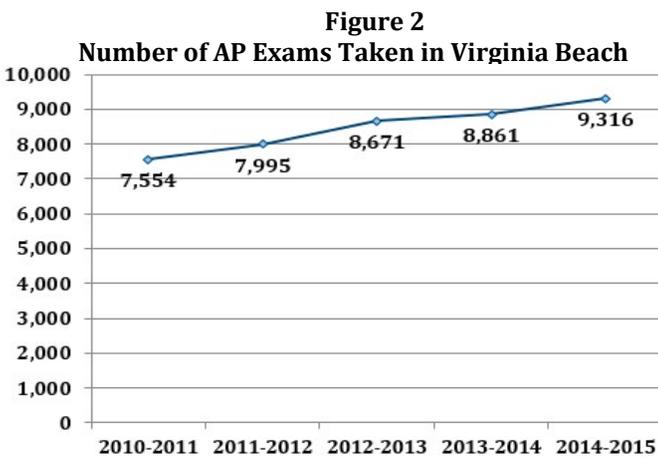
In May of each year, students enrolled in an AP course are allowed to take a rigorous, college-level assessment. The exams are optional for all course-takers and require a registration fee of \$92. The College Board offers a \$30 fee reduction to low-income students who qualify. Students may register for an AP Exam even if they were not enrolled in the corresponding course. Except for the studio art portfolio assessments, each AP Exam includes multiple-choice questions and a free-response section.⁵ Due to some AP course



Source: VBCPS Student Data Warehouse.

enrollees who opt out of AP Exams and non-enrollees who take AP Exams, there are no correlations between the number of AP enrollments and the number of AP Exams taken for a given course.

The total number of AP Exams administered in Virginia Beach for the past five school years is shown in Figure 2. There were 455 more exams taken by VBCPS students in 2014-2015 than during the previous year, which represented a 5 percent increase. The increase in the number of AP Exams administered in Virginia Beach since 2010-2011 has been 23 percent.



Source: VBCPS Student Data Warehouse.

⁵College Board, *About the Exams: Fast facts about AP Exams*, <https://professionals.collegeboard.com/testing/ap/about>, accessed on November 24, 2015.

Table 2 shows the number and percentages of AP examinees in 2014-2015 for the four largest racial/ethnic groups in Virginia Beach: African American/Black, Asian/Pacific Islander, Hispanic, and White students. There were 4,928 VBCPS students who took one or more AP Exams during 2014-2015. This was a 4.6 percent increase from 2013-2014, which is also shown on the table along with percentages for all public school AP examinees in the state and the nation for 2014-2015. It should be noted that some of the variance across rows is due to different racial/ethnic reporting categories used by the College Board and Virginia Beach.

Table 2
Public School AP Examinees by Race/Ethnicity – Division, State, and National Levels

Racial/Ethnic Group	2013-2014	2014-2015		
	Virginia Beach City Public Schools (n=4,710)	Virginia Beach City Public Schools (n=4,928)	Public Schools Virginia (n=70,689)	Public Schools National (n=2,136,968)
	Percent of Total	Percent of Total	Percent of Total	Percent of Total
African American/Black	10.7%	10.7%	11.8%	8.3%
Asian/Pacific Islander	11.9%	11.9%	14.1%	12.3%
Hispanic	7.5%	8.4%	8.1%	19.0%
White	61.6%	61.0%	58.4%	53.5%

Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2015, and AP National Summary Report 2015.
Notes: n = total number tested. Column percentages do not add up to 100 because some racial/ethnic groups were excluded.

Table 3 below lists the AP courses that VBCPS students took during the 2014-2015 school year. For each course, the table shows the number of enrollees, the percentage of students who earned an A or B in the course, the percentage of enrollees who chose to take the corresponding exam for the course, and the percentage of exams that were scored at 3, 4, or 5 on the

Table 3
AP Course Enrollment, Percentage of Enrollments With Grades of A or B, AP Exam Participation Rates, and Percentage of Exams With Scores of 3 or Higher for 2014-2015

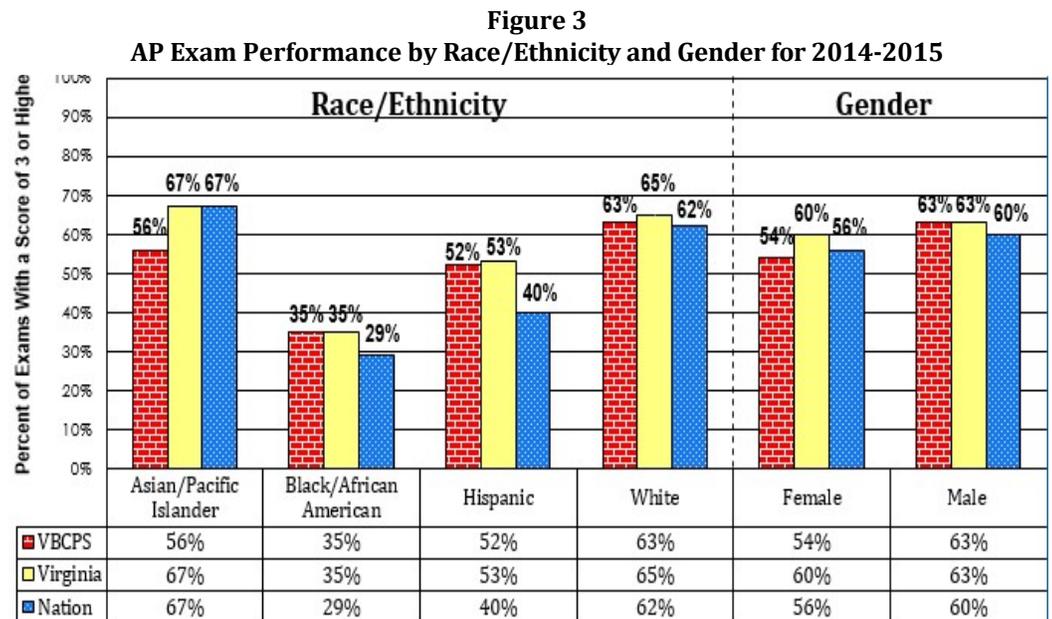
AP Course	Number of VBCPS Students Enrolled in the AP Course	Percent of VBCPS Enrollees Who Received a Grade of A or B	Percent of VBCPS Course Enrollees Who Took the Exam	Percent of Exams With Scores of 3-5: VBCPS	Percent of Exams With Scores of 3-5: Virginia	Percent of Exams With Scores of 3-5: Nation
Art History	53	94%	81%	72%	61%	55%
Biology	774	72%	76%	48%	65%	63%
Calculus AB	630	74%	86%	46%	58%	56%
Calculus BC	273	92%	95%	62%	79%	79%
Chemistry	398	73%	82%	37%	52%	51%
Chinese Language & Culture	1	100%	100%	100%	94%	93%
Comparative Government	75	91%	79%	83%	57%	56%
Computer Science A	180	77%	55%	52%	63%	63%
Economics: Macroeconomics	22	91%	95%	82%	60%	52%
Economics: Microeconomics	25	92%	92%	80%	68%	65%
English Language & Composition	1005	77%	83%	67%	61%	53%
English Literature & Composition	756	83%	74%	68%	62%	53%
Environmental Science	849	83%	60%	42%	45%	46%
European History	807	71%	76%	64%	63%	61%
French Language & Culture	25	84%	72%	90%	76%	71%
German Language & Culture	26	85%	54%	53%	69%	74%
Human Geography	1,157	74%	74%	58%	62%	53%
Japanese Language & Culture	8	88%	75%	88%	78%	74%
Latin	34	97%	97%	85%	63%	59%
Music Theory	36	75%	72%	50%	56%	61%
Physics I	413	85%	63%	39%	30%	37%
Physics C: Electricity & Magnetism	54	78%	50%	25%	65%	65%
Physics C: Mechanics				55%	73%	76%
Psychology	899	74%	82%	78%	72%	66%
Spanish Language & Culture	155	88%	83%	96%	91%	90%
Statistics	735	69%	70%	51%	55%	56%
Studio Art: 2-D Design	54	93%	78%	67%	80%	78%
Studio Art: 3-D Design	12	100%	50%	50%	81%	70%
Studio Art: Drawing	37	86%	49%	88%	78%	77%
US Government and Politics	1,301	90%	79%	60%	58%	47%
US History	1,241	75%	78%	49%	59%	49%
World History	77	95%	52%	41%	65%	51%
Total	12,110	78%	76%	58%	61%	56%

Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2015, and AP National Summary Report 2015.

College Board’s five-point scale for AP Exams. Scores of 3 or above are an indication that the examinee is qualified to receive college credit, placement in advanced college coursework, or both. According to research conducted by the College Board, “an AP Exam score of 5 is equivalent to grades of A+ and A in the corresponding college course; a score of 4 is equivalent to grades of A-, B+ and B; and a score of 3 is equivalent to grades of B-, C+ and C.”⁶

Out of the 12,110 AP course enrollees in Virginia Beach, 78 percent received a grade of A or B, and 76 percent chose to take the AP Exam at the end of the course. Approximately 58 percent of the VBCPS exams received qualifying scores of 3 or higher, which was lower than the state public school percentage of 61 but higher than the public school national percentage of 56. The percentages of AP Exams with scores of 3, 4 or 5 for all students (i.e., public and private) at the state and national levels were somewhat higher than the percentages for public schools students, at 61.5 percent and 57.5 percent, respectively.

Figure 3 shows the percentage of AP Exams with scores of 3, 4, or 5 for the four largest racial/ethnic groups of public school students in Virginia Beach, the state, and the nation. With one exception, the percentages of VBCPS exams with qualifying scores was higher than the percentages for the same racial and ethnic groups at the national level. Exam performance by Black students in Virginia Beach was on par with their counterparts across the state, while the qualifying exam score percentages for VBCPS Hispanic and White students were slightly lower than the percentages for Hispanic and White students in the Commonwealth of Virginia.



Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2015, and AP National Summary Report 2015.

Also shown in Figure 3 are the percentages of qualifying AP Exam scores of 3, 4, or 5, disaggregated by gender for Virginia Beach students and all examinees—both public and private—across the state and nation. Recall that female students comprised more than 57 percent of all AP enrollments in Virginia Beach; female students also took over 57 percent of the AP Exams administered in Virginia Beach. However, the percentage of qualifying scores for exams taken by VBCPS male students was higher compared with VBCPS females and more pronounced than the gender differences at the state and national levels.

AP ENROLLMENT AND EXAM RESULTS BY SCHOOL

Table 4 on the following page shows enrollment data for AP courses taken during the 2014-2015 school year at Green Run Collegiate (GRC) and each of the 11 comprehensive high schools in Virginia Beach. The total number of students is based on high school membership counts as of September 30, 2014. In addition, the table gives the total number of enrollments in AP courses (i.e., duplicated count) and the total number of students in each school who took at least one or more AP courses (i.e., unduplicated count). Courses taken through the VVa program are included in the Table 4 counts.

At the 12 schools in Virginia Beach that offered AP courses, the percentage of students who took at least one AP course during the 2014-2015 academic year ranged from 12 percent at GRC to 39 percent at Cox High School. The low percentage at GRC can be attributed to the fact that during 2014-2015, the GRC student body consisted exclusively of freshmen and sophomores. In all, approximately 31 percent of high school students across the division took one or more AP courses in 2014-2015.

Most of the students who enroll in AP courses are sophomores, juniors, and seniors. During the 2014-2015 school year, 40 percent of all VBCPS students in grades 10-12 were enrolled in at least one AP course, which was a 2 percent increase from the previous year. Not including GRC, the number of AP courses taken by students at each school ranged from 17 to 28. Students

⁶College Board, AP Program Facts: Overview of the AP Program, <http://apreport.collegeboard.org/ap-program-facts>, accessed on December 1, 2015.

Table 4
AP Course Enrollment in 2014-2015 for Virginia Beach High Schools

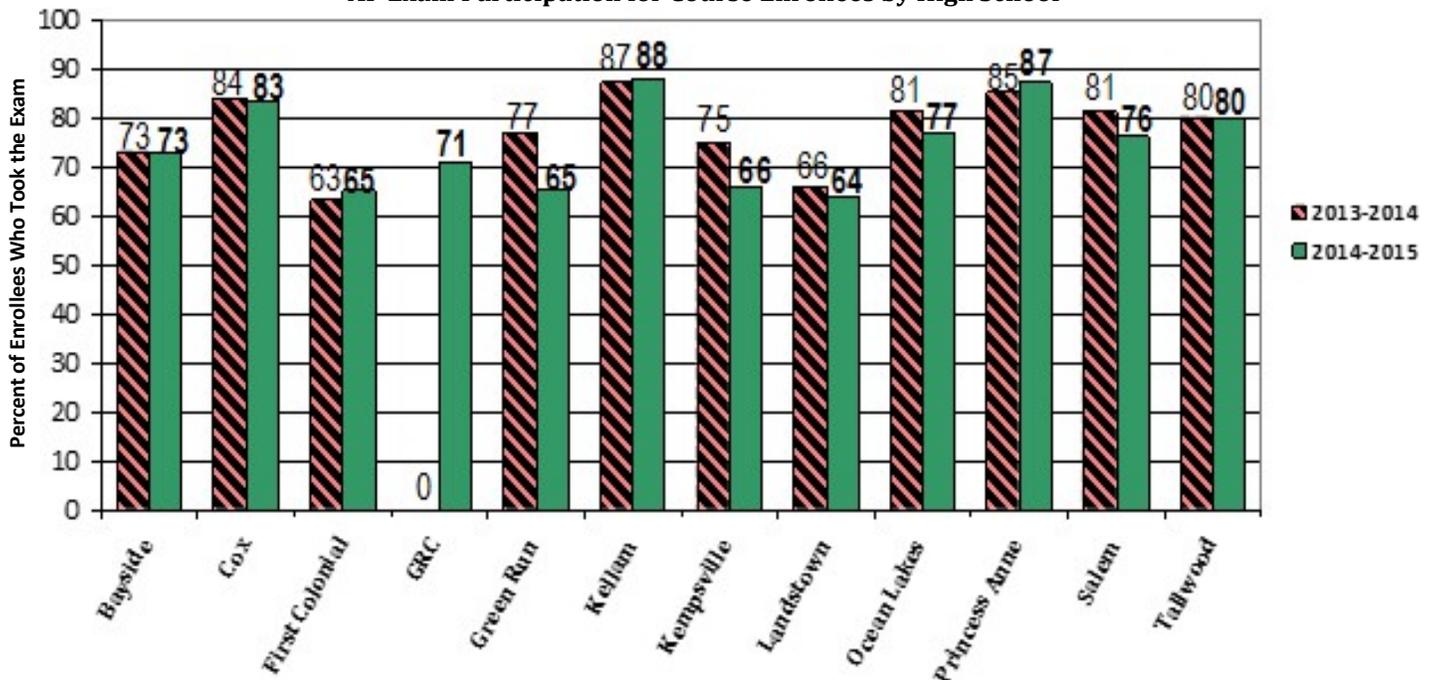
High School	Total Number of Students	Number of AP Enrollments (Duplicated Count)	Unduplicated Count of Students	Percent of Students Enrolled in AP Courses	Increase/Decrease From 2013-2014	Number of AP Courses Taught	Increase/Decrease From 2013-2014
Bayside	1,821	898	505	28%	- 3%	17	- 2
Cox	1,833	1,521	707	39%	+ 5%	25	- 2
First Colonial	1,984	1,313	677	34%	+ 1%	27	+ 6
Green Run Collegiate	221	35	26	12%	n/a	2	+ 2
Green Run	1,497	710	363	24%	+ 3%	18	no change
Kellam	1,971	1,305	655	33%	+ 1%	25	+ 2
Kempsville	1,520	529	302	20%	- 1%	16	- 5
Landstown	2,047	1,221	711	35%	+ 3%	23	- 4
Ocean Lakes	2,147	1,463	709	33%	+ 4%	24	- 4
Princess Anne	1,759	1,106	630	36%	+ 2%	28	+ 4
Salem	1,759	811	496	28%	- 2%	20	+ 1
Tallwood	1,935	1,198	660	34%	+ 5%	26	+ 1
Total	20,494	12,110	6,441	31%	+ 1%	average=21	- 2

Source: VBCPS Student Data Warehouse.

at Princess Anne High School took 28 different AP courses, while First Colonial High School students took 27, an increase from 2013-2014 to 2014-2015 of six AP courses. The highest one-year increases in the percentage of AP enrollees were at Cox, Ocean Lakes, and Tallwood high schools.

A comparison of the AP Exam participation rates for the 11 comprehensive VBCPS high schools and GRC for the 2013-2014 and 2014-2015 school years is displayed in Figure 4 below. Exam participation in 2014-2015 ranged from 64 percent at Landstown High School to 88 percent at Kellam High School. At least 80 percent of the AP course enrollees at Cox, Kellam, Princess Anne, and Tallwood high schools opted to take the corresponding AP Exam. First Colonial, Kellam, and Princess Anne were the only schools that saw increases in their AP Exam participation rates from the 2013-2014 year.

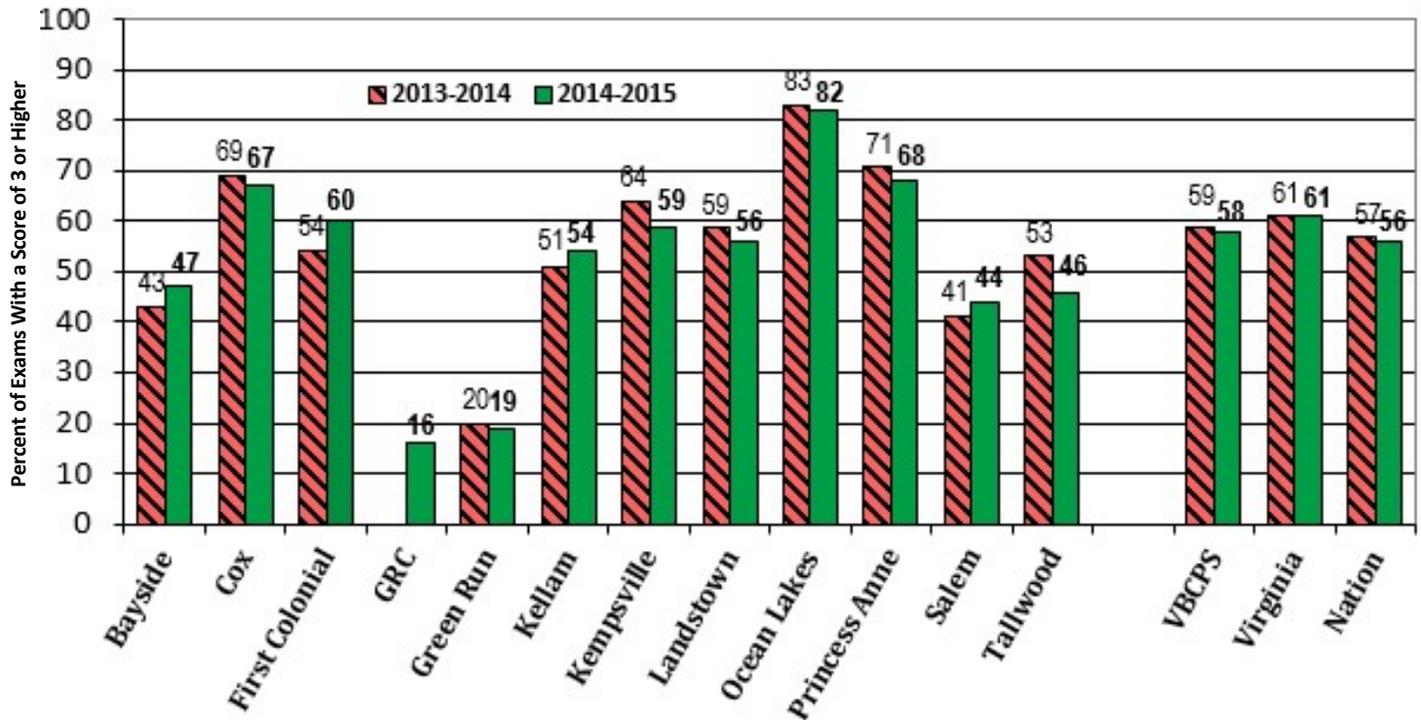
Figure 4
AP Exam Participation for Course Enrollees by High School



Source: VBCPS Student Data Warehouse.

It was mentioned earlier in this report that 58 percent of the 9,316 AP Exams administered to Virginia Beach students during the 2014-2015 school year received scores of 3, 4, or 5. This was a slight decrease in the percentage of VBCPS qualifying scores from the 2013-2014 year, as shown in Figure 5. Two-year comparisons of the percentage of AP Exams with scores of 3 or higher for VBCPS schools and public school students across the state and nation are also shown in Figure 5. Percentages ranged from 16 percent at GRC—whose student body comprised only freshmen and sophomores—to 82 percent at Ocean Lakes High School. The percentage of AP Exams with qualifying scores improved from the previous year at Bayside, First Colonial, Kellam, and Salem high schools, while the percentage of exams with qualifying scores at Cox, Ocean Lakes, and Princess Anne high schools exceeded the percentage with scores of 3-5 for AP Exams taken by public school students in the Commonwealth of Virginia.

Figure 5
AP Exam Performance at the High School, Division, State, and National Levels



Sources: VBCPS Student Data Warehouse, AP Virginia Summary Report 2015, and AP National Summary Report 2015.

SUMMARY

There was substantial growth in the Advanced Placement program in Virginia Beach City Public Schools from the 2013-2014 school year to the 2014-2015 school year. Enrollment in AP courses increased by 8 percent and the number of AP Exams taken increased by 5 percent from the previous year. A total of 6,441 students took 12,110 AP courses at the 11 comprehensive VBCPS high schools and Green Run Collegiate. This total included 40 percent of all high school sophomores, juniors, and seniors in Virginia Beach. Of the 37 AP courses offered by the College Board, VBCPS students took 32 courses. Of the 9,316 AP Exams administered in Virginia Beach, 58 percent received scores of 3 or higher, meaning that these examinees were qualified to receive college credit or advanced placement in college coursework.