

Data & Accountability Department

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WCPSS ADVANCED PLACEMENT (AP) RESULTS, 2010-11

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One method of delivering college-level coursework to high school students is through the Advanced Placement (AP) program. Many colleges and universities provide credit to students who earn a qualifying score on any of the 34 available AP exams¹ offered by the College Board. All qualified comprehensive high schools in the Wake County Public School System (WCPSS) offer AP courses and exams, although the availability of specific courses varies from school to school. Many students take more than one AP course, but not all AP students take the corresponding exams, administered once per year in the spring. The cost to take each AP exam is currently \$87² with fee reductions for students with financial need.

AP Exam scores are used to determine whether a student is qualified to receive college credit and advanced placement into a higher level course in college. The scores are reported on a 5-point scale as follows:

- 5 = Extremely well qualified
- 4 = Well qualified
- 3 = Qualified
- 2 = Possibly qualified
- 1 = No recommendation

Analysis of 2010-11 AP reports from the College Board reveals the following:

1. The number of WCPSS students taking AP exams continues to grow. Between 1996-97 and 2010-11, the number of students taking AP exams increased by 249%, and the number of exams taken increased 281% (Figure 1). AP course enrollment counts showed an overall 12.6% increase from 2008-09 to 2010-11³ (Table 5).
2. WCPSS students returned their highest overall exam average (3.41) since the 2003-04 school year, while the percentage of exams with scores of 3 or higher surpassed 77% for the first time since 2004-05 (Table 1). U.S. exam averages have been on a steady decline since the mid-1990s, but the 2010-11 N.C. average (2.94) is at its highest level during that same time period (Table 2; Figure 2).
3. The exams with the largest number of test-takers in WCPSS in 2010-11 were Environmental Science, English Language/Composition, Psychology, and U.S. History, all in excess of 1,000 exams (Table 3). Since 1996-97, the number of Environmental Science exams has increased from 0 to 1,448; English Language/Composition, 497 to 1,409; Psychology, 13 to 1,302; and U.S. History, 470 to 1,189. Additionally, Calculus BC increased from 77 to 814;

¹ Retrieved from <http://www.collegeboard.com/student/testing/ap/subjects.html> on 11/1/11.

² Retrieved from http://www.collegeboard.com/student/testing/ap/cal_fees.html on 11/1/11.

³ Based on course enrollment data from the NCWise database membership files.



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and Statistics, from 135 to 896 (Table 3). Fifteen subjects had fewer than 65 test-takers district-wide in 2010-11 (Table 4).

4. All subjects with five or more test-takers, except for French Language, had score averages above 3. Fifty-one percent of exams taken in 2010-11 resulted in scores of 4 or 5 (Table 4).
5. More than 43% of seniors, 37% of juniors, almost 10% of sophomores, and less than 1% of freshmen in WCPSS enrolled in at least one AP course in 2010-11 (Table 9).
6. The number of AP courses offered varies by school, with Enloe High School accounting for the largest number of courses in 2010-11. Half of WCPSS high schools offer at least 15 of the 34 AP courses available from College Board (Table 5).
7. Overall enrollments in AP courses have risen almost 13% since 2008-09. During that time, all ethnicities have shown increased AP course enrollment. Hispanic/Latino enrollments have seen the largest percentage increase at 97%, followed by Multiracial and Black/African American enrollments at 71% and 27%, respectively (Table 6). Enrollments by Economically Disadvantaged students have increased almost 83% (Table 7). While females have consistently accounted for more AP course enrollments, enrollments for male students have risen faster than for female students, 20% compared to 7%, over the past three years (Table 8).

Figure 1
Total Number of AP Exams Taken by WCPSS Students

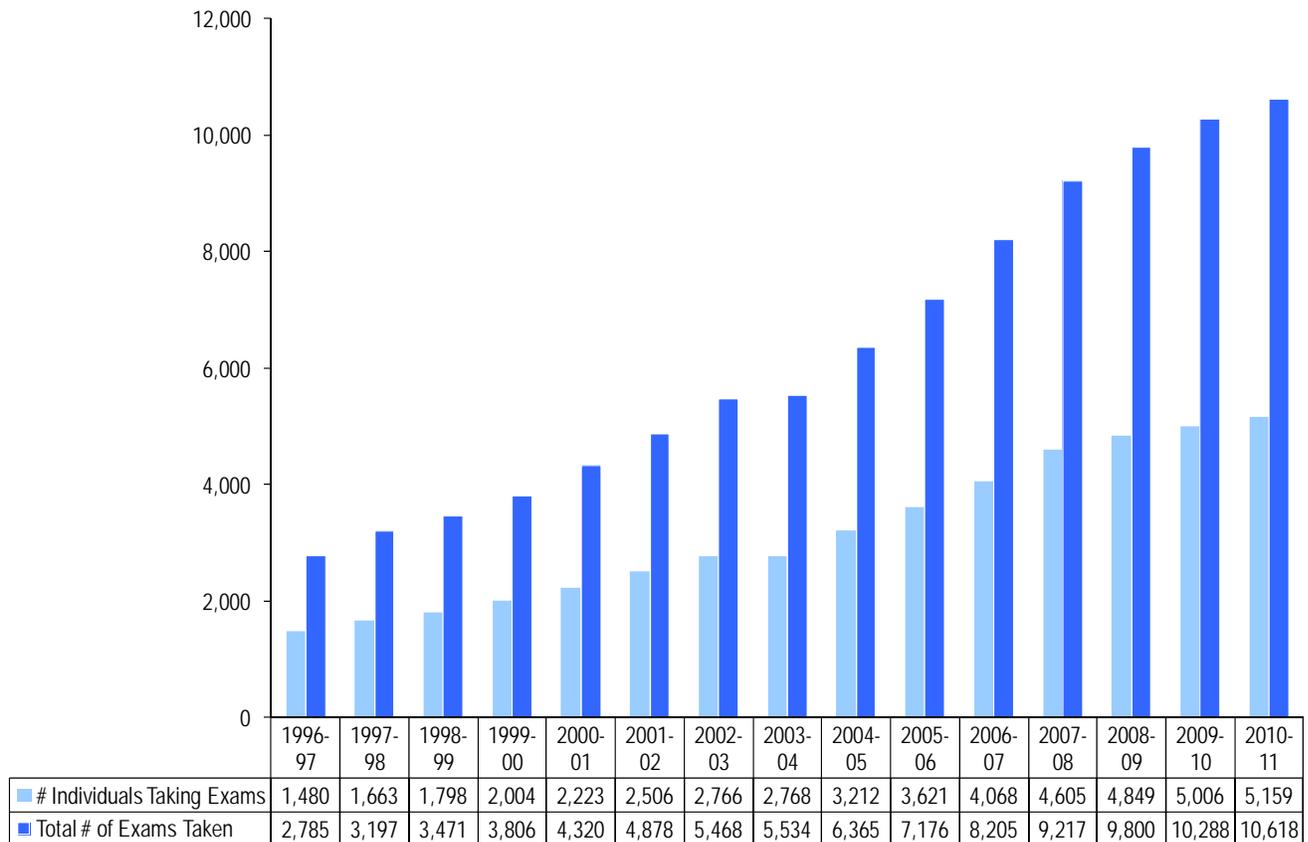


Table 1
WCPSS Participation and Performance in AP Exams

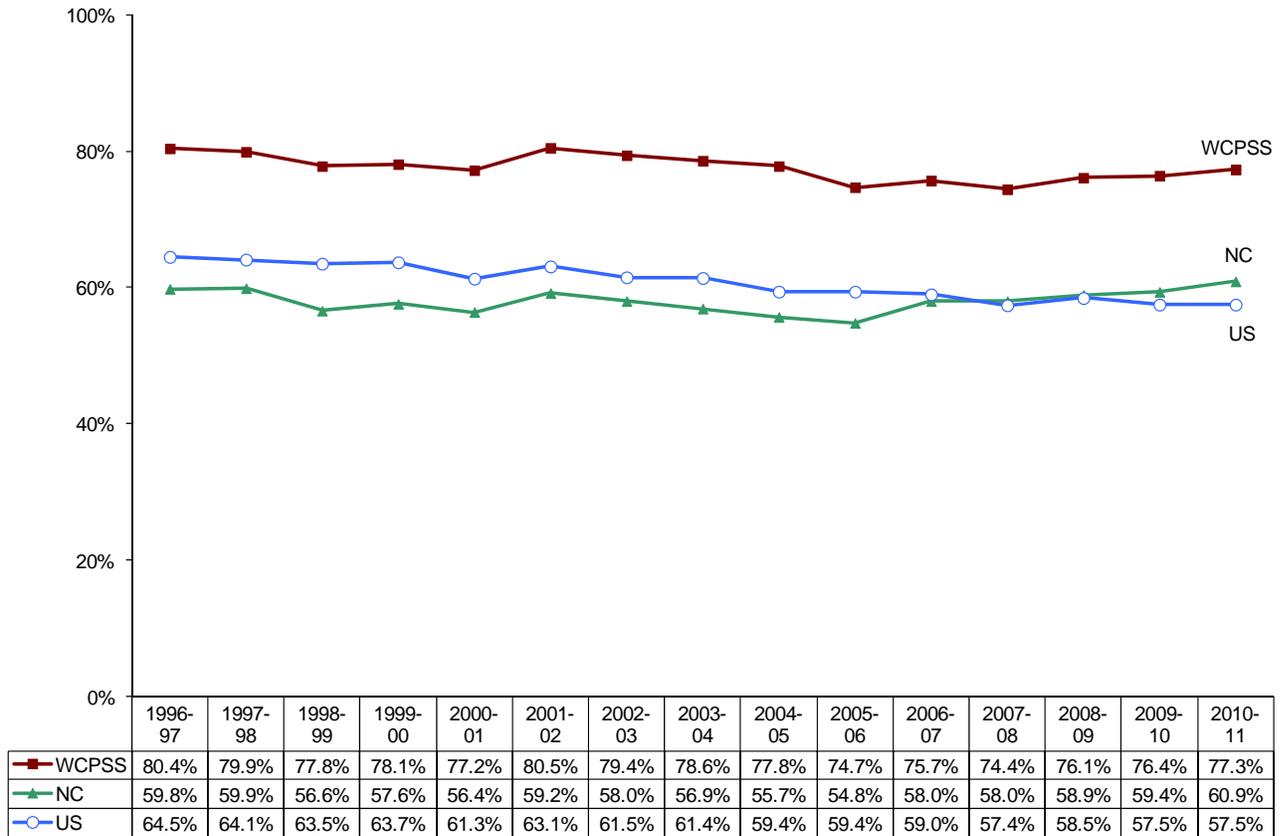
	# Individuals Taking Exams	Total # of Exams Taken	% of Exams with Scores of 3 or Higher	Average Exam Score
1996-97	1,480	2,785	80.4%	3.42
1997-98	1,663	3,197	79.9%	3.44
1998-99	1,798	3,471	77.8%	3.41
1999-00	2,004	3,806	78.1%	3.38
2000-01	2,223	4,320	77.2%	3.38
2001-02	2,506	4,878	80.5%	3.48
2002-03	2,766	5,468	79.4%	3.42
2003-04	2,768	5,534	78.6%	3.46
2004-05	3,212	6,365	77.8%	3.40
2005-06	3,621	7,176	74.7%	3.30
2006-07	4,068	8,205	75.7%	3.35
2007-08	4,605	9,217	74.4%	3.30
2008-09	4,849	9,800	76.1%	3.36
2009-10	5,006	10,288	76.4%	3.39
2010-11	5,159	10,618	77.2%	3.41

Table 2
Average AP Exam Scores for WCPSS, N.C., and the U.S.

	WCPSS	N.C.	U.S.
1996-97	3.42	2.87	3.02
1997-98	3.44	2.89	3.02
1998-99	3.41	2.81	3.02
1999-00	3.38	2.82	3.01
2000-01	3.38	2.81	2.95
2001-02	3.48	2.87	2.99
2002-03	3.42	2.83	2.95
2003-04	3.46	2.81	2.95
2004-05	3.40	2.78	2.89
2005-06	3.30	2.76	2.89
2006-07	3.35	2.84	2.88
2007-08	3.30	2.84	2.83
2008-09	3.36	2.88	2.88
2009-10	3.39	2.89	2.84
2010-11	3.41	2.94	2.84

Note: Comparison data for U.S. and N.C. include public and non-public school students.

Figure 2
Percentage of AP Exams with Scores of 3 or Higher in WCPSS, N.C., and U.S.



Notes: A score of 3 is a passing score on college level material. Some colleges award credit for scores of 3 or higher. Comparison data for U.S. and N.C. include public and non-public school students.

Table 3
WCPSS AP Exams Taken and Performance by Subject, 2011

AP Exam		1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Biology	# Exams	254	185	211	248	227	238	206	135	188	250	260	315	348	349	483
	% 3 or Higher	76.8	81.6	75.4	72.6	73.1	85.7	75.7	83.0	81.9	82.4	77.7	67.6	73.9	72.2	75.2
Calculus AB	# Exams	349	404	354	374	336	418	499	188	198	229	269	313	277	268	219
	% 3 or Higher	77.4	85.9	84.5	86.6	83.9	92.6	89.6	66.5	69.2	59.0	68.4	73.5	66.4	55.6	62.6
Calculus BC	# Exams	77	117	150	152	192	202	226	526	532	555	672	604	702	833	814
	% 3 or Higher	93.5	93.2	81.3	90.1	95.3	89.1	84.5	89.7	87.2	90.5	84.7	86.6	91.0	89.7	81.8
Chemistry	# Exams	138	147	133	197	185	206	146	120	148	178	203	213	219	219	302
	% 3 or Higher	76.1	81.0	74.4	81.7	73.5	72.8	82.2	79.2	68.9	70.2	79.3	73.7	67.1	74.9	67.2
English Lang. & Comp.	# Exams	497	536	558	651	824	788	794	870	857	1,034	1,056	1,306	1,200	1,350	1,409
	% 3 or Higher	85.5	77.4	78.3	80.6	72.8	81.5	80.1	74.7	72.9	66.2	75.9	73.7	78.8	79.3	81.2
English Lit. & Comp.	# Exams	301	373	355	364	462	537	510	380	437	529	471	638	667	595	581
	% 3 or Higher	79.4	81.3	78.3	77.5	74.2	79.7	74.7	80.3	79.6	76.9	77.3	74.0	78.0	76.5	80.2
Environmental Science	# Exams	0	38	87	115	177	299	690	787	836	939	1,084	1,253	1,383	1,530	1,448
	% 3 or Higher	---	81.6	55.2	76.5	82.5	75.3	79.4	76.4	71.5	73.6	74.8	75.7	69.4	68.0	71.7
European History	# Exams	115	154	189	194	178	197	204	200	231	234	218	274	254	181	181
	% 3 or Higher	87.8	89.0	88.4	88.7	82.6	86.8	85.3	80.5	84.0	84.2	73.4	73.4	77.2	80.1	74.6
Govt. & Politics U.S.	# Exams	15	21	25	37	49	100	216	164	245	223	286	303	366	383	426
	% 3 or Higher	93.3	81.0	88.0	86.5	98.0	94.0	87.0	84.1	82.0	78.9	79.7	77.9	80.9	81.7	81.7
Human Geography	# Exams	N/A	N/A	N/A	N/A	0	0	0	2	13	77	60	145	257	218	243
	% 3 or Higher	N/A	N/A	N/A	N/A	---	---	---	50.0	100.0	92.2	75.0	73.8	67.7	67.0	74.9
Physics B	# Exams	85	107	150	118	131	140	153	149	118	86	117	166	138	115	136
	% 3 or Higher	82.4	87.9	86.7	76.3	86.3	70.7	79.7	86.6	85.6	67.4	73.5	76.5	71.0	83.5	84.6
Psychology	# Exams	13	47	71	47	145	167	196	315	447	477	759	810	1,021	1,176	1,302
	% 3 or Higher	84.6	72.3	74.6	91.5	82.8	85.0	76.5	83.8	81.0	81.3	75.0	75.1	80.4	77.7	78.1
Spanish Language	# Exams	77	74	55	103	83	93	90	110	183	208	182	134	154	177	210
	% 3 or Higher	75.3	85.1	78.2	81.6	88.0	81.7	74.4	90.9	82.0	73.6	65.9	78.4	73.4	79.7	80.5
Statistics	# Exams	135	203	288	290	310	364	347	379	565	583	760	755	857	909	896
	% 3 or Higher	90.4	85.7	88.9	69.0	82.9	78.0	83.0	81.5	80.2	71.7	74.7	73.2	77.2	79.8	79.8
U.S. History	# Exams	470	487	523	644	691	724	729	696	652	794	955	1,050	1,005	1,159	1,189
	% 3 or Higher	74.0	68.6	66.5	67.5	64.0	70.4	71.9	74.4	74.8	70.0	71.0	66.7	72.7	74.6	76.3
World History	# Exams	N/A	N/A	N/A	N/A	N/A	55	77	48	242	272	281	339	340	237	217
	% 3 or Higher	N/A	N/A	N/A	N/A	N/A	74.5	77.9	83.3	79.8	80.1	87.5	78.8	82.1	84.4	82.9

Notes: Table lists the most commonly taken exams. AP Human Geography exam was not offered nationally prior to 2000-01. AP World History exam was not offered nationally prior to 2001-02.

Table 4
Frequency Distribution and Averages of WCPSS Exam Scores by AP Subject
Spring 2011

		Scores					Total Exams	Total AP Exam Students
		5	4	3	2	1		
	Number of Exams	2,203	3,137	2,872	1,660	746	10,618	5,159
	Percentage of Total (percentages are rounded)	21%	30%	27%	16%	7%	100%	
	Subjects	5	4	3	2	1	Total Exams	Average Score
Art	Art History	4	8	4	4		20	3.6
	Music Theory	28	31	24	13	4	100	3.7
	Studio Art: 2-D Design Portfolio	5	7	8	3		23	3.6
	Studio Art: 3-D Design Portfolio	*	*	*	*	*	*	*
	Studio Art: Drawing Portfolio	2	2	3	1		8	3.6
English	English Language and Composition	220	422	502	234	31	1,409	3.4
	English Literature and Composition	78	171	217	103	12	581	3.3
Social Studies	Comparative Government and Politics	10	12	10	9		41	3.6
	European History	24	36	75	32	14	181	3.1
	Human Geography	41	79	62	36	25	243	3.3
	Macroeconomics	14	24	25	32	11	106	3.0
	Microeconomics	4	2	3	4	2	15	3.1
	Psychology	302	402	313	162	123	1,302	3.5
	United States Government and Politics	99	95	154	63	15	426	3.5
	United States History	192	387	328	237	45	1,189	3.4
World History	48	72	60	33	4	217	3.6	
Math	Calculus AB	42	45	50	33	49	219	3.0
	Calculus BC	369	133	164	59	89	814	3.8
	Computer Science A	12	13	5		3	33	3.9
	Statistics	145	285	285	120	61	896	3.4
Science	Biology	139	119	105	59	61	483	3.4
	Chemistry	59	77	67	42	57	302	3.1
	Environmental Science	219	559	260	305	105	1,448	3.3
	Physics B	31	40	44	19	2	136	3.6
	Physics C: Electricity and Magnetism	10	7	15	12	4	48	3.1
Physics C: Mechanics	16	24	15	5	3	63	3.7	
Language	Chinese Language and Culture	20	5	1			26	4.7
	French Language	3	5	8	5	6	27	2.8
	German Language	4	4	9	2	2	21	3.3
	Japanese Language and Culture	*	*	*	*	*	*	*
	Latin: Vergil	3	4	2	4	2	15	3.1
	Spanish Language	59	61	49	25	16	210	3.6
	Spanish Literature	1	4	3	3		11	3.3

Note: Subjects with fewer than 5 total test-takers have been replaced with asterisks to preserve confidentiality. Table derived from proprietary district data download from www.collegeboard.com. Blank cells indicate there were no exams with that score.

The following table includes the number of AP courses which have recorded enrollments for each high school. There may be additional AP course offerings at each high school for which there are no enrollments. Following Table 5 are AP course enrollments by ethnicity, economically disadvantaged (ED) students, and gender.

Table 5
Number of AP Courses with Enrollment and Total Enrollments
By School

School	2010-11 # AP Courses	2010-11 Total AP Enrollments	2009-10 Total AP Enrollments	2008-09 Total AP Enrollments
Apex HS	16	1,061	878	749
Athens Drive HS	15	991	854	801
Broughton HS	15	1,136	1,075	1,067
Cary HS	17	930	645	749
Enloe HS	26	2,413	2,993	3,019
EW Art Ed Global	4	57	41	51
EW Engineering	3	80	51	35
EW Health Sciences	3	114	46	74
EW Int Technology	3	56	77	0
Fuquay-Varina HS	16	484	388	356
Garner HS	12	450	328	357
Green Hope HS	17	1,717	1,660	1,560
Heritage HS*	1	34	-	-
Holly Springs HS	14	658	688	593
Knightdale HS	14	441	230	221
Leesville HS	16	894	934	849
Middle Creek HS	12	891	918	695
Millbrook HS	18	1,233	931	627
Panther Creek HS	17	1,454	1,373	1,093
Sanderson HS	13	604	525	714
SE Raleigh HS	16	501	545	460
Wake Early College**	-	-	-	-
Wakefield HS	23	1,409	1,207	1,238
WF-Rolesville HS	14	599	511	860
Totals		18,207	16,898	16,168

*Heritage High School did not have 11th or 12th grade in 2010-11.

**Wake Early College does not enroll students in AP courses because its students enroll in college classes at Wake Technical Community College.

Table 6
WCPSS AP Course Enrollments by Ethnicity

	2010-11		2009-10		2008-09	
	Total	%	Total	%	Total	%
American Indian	35	0%	34	0%	31	0%
Asian	2,676	15%	2,680	16%	2,346	15%
Black	1,507	8%	1,313	8%	1,184	7%
Hispanic/Latino	1,069	6%	563	3%	544	3%
Multiracial	647	4%	467	3%	379	2%
White	12,273	67%	11,841	70%	11,684	72%
Total	18,207		16,898		16,168	

Note: Percentages are rounded.

Table 7
WCPSS AP Course Enrollments by Economically Disadvantaged (E.D)

	2010-11		2009-10		2008-09	
	Total	%	Total	%	Total	%
Not E.D.	16,898	93%	16,021	95%	15,452	96%
E.D.	1309	7%	877	5%	716	4%
Total	18,207		16,898		16,168	

Note: Percentages are rounded.

Table 8
WCPSS AP Course Enrollments by Gender

	2010-11		2009-10		2008-09	
	Total	%	Total	%	Total	%
Female	9,551	52%	9,052	54%	8,972	55%
Male	8,656	48%	7,846	46%	7,196	45%
Total	18,207		16,898		16,168	

Note: Percentages are rounded.

Table 9
Counts of Students Taking at Least One AP Course and 20th-Day Membership
By School by Grade, 2010-11

School	9 th		10 th		11 th		12 th		Total AP Students	Total 20 th -Day Membership
	AP	Membership	AP	Membership	AP	Membership	AP	Membership		
Apex HS	0	599	26	621	211	568	275	553	512	2,341
Athens Drive HS	0	611	10	467	205	426	229	423	444	1,927
Broughton HS	1	610	177	566	235	512	243	486	656	2,174
Cary HS	0	654	17	601	214	564	196	431	427	2,250
Enloe HS	7	832	149	627	361	564	388	646	905	2,669
EW Art Ed Global	0	126	1	92	9	90	19	93	29	401
EW Engineering	0	122	0	80	10	95	8	77	18	374
EW Health Sciences	0	106	0	101	64	85	42	77	106	369
EW Int Technology	0	106	0	73	2	76	20	71	22	326
Fuquay-Varina HS	0	566	56	501	100	502	143	399	299	2,348
Garner HS	0	716	8	631	107	486	160	464	275	2,297
Green Hope HS	0	525	39	503	308	515	314	486	661	2,029
Heritage HS*	0	501	34	313	-	-	-	-	34	814
Holly Springs HS	0	616	63	522	154	434	147	428	364	2,000
Knightdale HS	0	493	5	441	125	466	85	363	215	1,763
Leesville HS	0	684	15	598	187	553	223	573	425	2,408
Middle Creek HS	0	570	3	448	171	426	198	370	372	1,814
Millbrook HS	0	785	53	517	193	574	241	567	487	2,443
Panther Creek HS	0	661	121	571	255	574	269	542	645	2,348
Sanderson HS	1	598	6	473	153	418	140	416	300	1,905
SE Raleigh HS	0	554	11	375	91	364	150	370	252	1,663
Wake Early College**	-	73	-	49	-	55	-	60	-	273
Wakefield HS	0	604	135	629	266	702	252	638	653	2,573
WF-Rolesville HS	13	579	10	527	135	513	160	458	318	2,077
WCPSS Total	22	12,291	939	10,326	3,556	9,562	3,902	8,991	8,419	41,170

*Heritage High School did not have 11th or 12th grade in 2010-11.

**Wake Early College does not enroll students in AP courses because its students enroll in college classes at Wake Technical Community College.

Note: 20th-Day Membership from Office of Student Assignment, WCPSS.