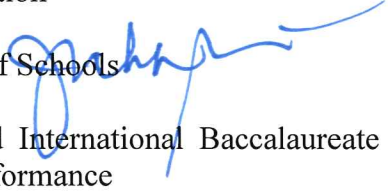


Office of the Superintendent of Schools
MONTGOMERY COUNTY PUBLIC SCHOOLS
Rockville, Maryland

February 13, 2019

MEMORANDUM

To: Members of the Board of Education

From: Jack R. Smith, Superintendent of Schools 

Subject: 2018 Advanced Placement and International Baccalaureate Course Enrollment and Exam Participation and Performance

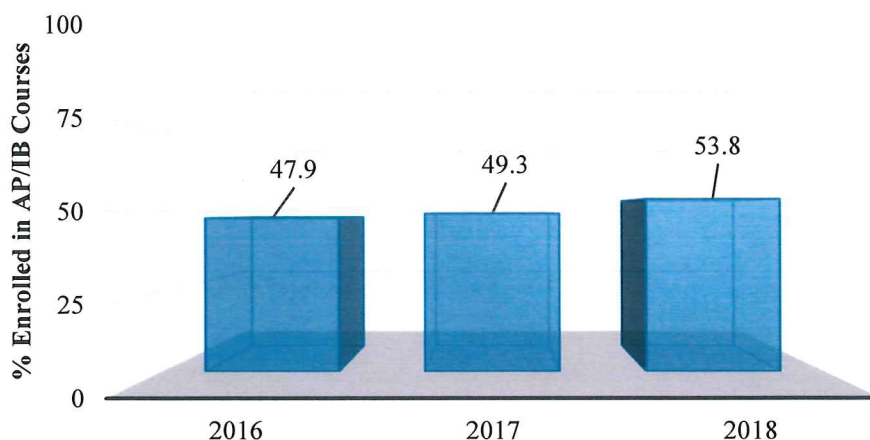
This memorandum provides you with the information related to Advanced Placement (AP) and International Baccalaureate (IB) courses enrollment and exam participation and performance during the 2017–2018 school year. Furthermore, AP/IB exam participation and performance of Montgomery County Public Schools (MCPS) students is benchmarked with the results of public school students in Maryland and the nation.

Advanced Placement and International Baccalaureate Course Enrollment in MCPS

MCPS is committed to ensuring access and opportunity of all students to advanced-level courses. AP and IB courses serve as key components for a rigorous instructional program as well as experiences for college-level courses. Students who take AP or IB courses may participate in exams related to the course content. An AP exam score of 3 or higher or an IB exam score of 4 or higher is considered college ready. In 2018, all 25 MCPS comprehensive high schools offered AP courses and 8 schools provided IB programs (Attachment). Of all 25 high schools, 16 schools offered 30 or more AP/IB courses. Richard Montgomery (72), Bethesda-Chevy Chase (64), Albert Einstein (55), and Springbrook (55) high schools were the 4 high schools offering the most AP/IB courses.

Districtwide, nearly 54.0 percent of MCPS high school students enrolled in at least one AP or IB course in 2018 (Figure 1). In the past three years, AP/IB course enrollment increased 5.9 percentage points. Given the number and course offerings of AP/IB content differ by high school, it is prudent to compare the AP/IB course enrollment across schools with caution.

Figure 1. Percentage of MCPS High School Students Enrolled in at Least One Advanced Placement/International Baccalaureate Course from 2016 to 2018



In 2018, nearly 49.0 percent of male students in MCPS high schools enrolled in at least one AP/IB course, while slightly more than 59.0 percent of female students enrolled in one or more courses (Table 1). Among racial/ethnic groups, 74.4 percent of Asian, 67.1 percent of White, and 63.4 percent of Two or More Races students enrolled in one or more AP/IB courses. The AP/IB course enrollment rates for Black or African American and Hispanic/Latino students were 43.4 and 36.2 percent, respectively. Approximately 34.0 percent of high school students who received Free and Reduced-price Meals System (FARMS) services enrolled in at least one AP/IB course. The AP/IB course enrollment rates were 14.0 percent for those receiving Special Education and 18.5 percent for Limited English Proficiency (LEP) services. From 2016 to 2018, all student groups demonstrated increases in enrollment in AP/IB courses; Asian, Black or African American, Two or More Races students, and students receiving FARMS services increased more than 7.0 percentage points.

Table 1. Percentage of MCPS High School Students Enrolled in at Least One Advanced Placement or International Baccalaureate Course in 2016 and 2018 by Gender, Race/Ethnicity, and Services			
	% Enrolled in AP/IB Courses		3-year Rate Change
	2016	2018	
Male	43.0	48.8	5.8 ↑
Female	53.1	59.1	6.0 ↑
Asian	65.9	74.4	8.5 ↑
Black or African American	35.7	43.4	7.6 ↑
Hispanic/Latino	30.7	36.2	5.5 ↑
White	62.1	67.1	5.0 ↑
Two or More Races	55.2	63.4	8.2 ↑
Free and Reduced-price Meals System	26.9	34.1	7.2 ↑
Special Education	11.4	14.0	2.6 ↑
Limited English Proficiency	14.2	18.5	4.3 ↑

Further analysis by minority and poverty investigated one monitoring group, Non-FARMS All Other Student Groups, and five focus groups, Non-FARMS Black or African American, Non-FARMS Hispanic/Latino, FARMS All Other Student Groups, FARMS Black or African American, FARMS Hispanic/Latino. All focus groups increased their access to AP/IB courses from 2016 to 2018; FARMS All Other Student Groups made the largest gain in AP/IB course enrollment rate by 11.0 percentage points (Table 2).

Table 2. Percentage of MCPS High School Students Enrolled in at Least One Advanced Placement or International Baccalaureate Course in 2016 and 2018 by Focus Group

	% Enrolled in AP/IB Courses		3-year Rate Change
	2016	2018	
Non-FARMS All Other Student Groups	64.9	70.8	5.9 ↑
Non-FARMS Black or African American	41.9	50.2	8.3 ↑
Non-FARMS Hispanic/Latino	41.0	44.4	3.4 ↑
FARMS All Other Student Groups	38.5	49.5	11.0 ↑
FARMS Black or African American	28.5	35.0	6.5 ↑
FARMS Hispanic/Latino	22.3	29.4	7.1 ↑

Note. All Other Student Groups includes American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, White, and Two or More Races students.

Advanced Placement Exam Participation and Performance: MCPS, Maryland, and the Nation

The continued emphasis on rigorous course-taking resulted in 40,404 AP exams taken by MCPS students in 2018 with 28,604 of those tests having a score of 3 or higher (Table 3). The number of AP exams taken by MCPS students in 2018 accounted for 36.9 percent of all those taken by Maryland public school students, and the number of AP exams with scores of 3 or higher taken by MCPS students accounted for 39.9 percent of all those in Maryland.

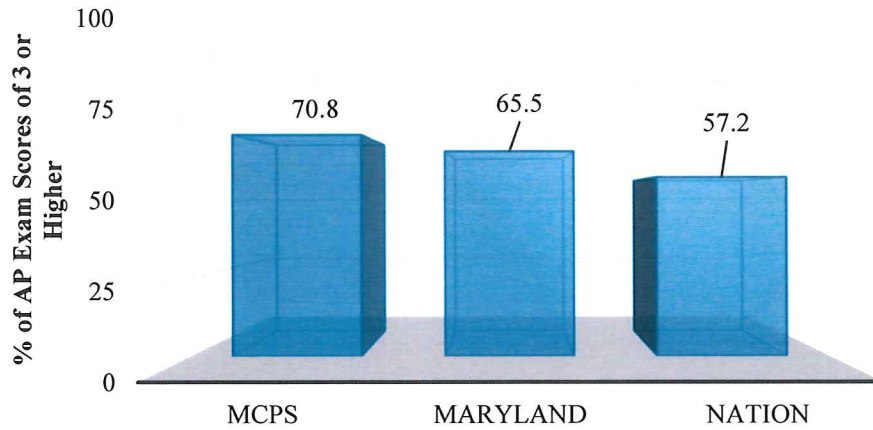
Table 3. Number of Advanced Placement Exams and Number of Advanced Placement Exam Scores of 3 or Higher Taken by Public School Students in MCPS, Maryland and the Nation in 2018 by Race/Ethnicity

	Number of AP Exams Taken			Number of AP Exams 3 or Higher		
	MCPS	Maryland	Nation	MCPS	Maryland	Nation
All Students	40,404	109,563	4,354,784	28,604	71,733	2,490,937
Asian	10,911	19,383	654,359	8,435	14,528	462,381
Black or African American	5,060	14,694	284,732	2,382	6,056	85,163
Hispanic/Latino	5,509	11,762	1,008,507	3,042	6,479	428,815
White	16,689	54,000	2,108,040	13,049	38,209	1,346,450
Two or More Races	2,177	6,173	197,318	1,666	4,123	117,834

Note. AP = Advanced Placement. Results for MCPS American Indian or Alaskan Native and Native Hawaiian or Other Pacific Islander students are included with all students but are not reported separately. AP exam results are based on data reported by the College Board as of September 2018.

The percentage of AP exams taken by MCPS students who attained scores of 3 or higher (70.8 percent) was 5.3 and 13.6 percentage points greater than those for public school students in the state of Maryland (65.5 percent) and the nation (57.2 percent), respectively (Figure 2).

Figure 2. Percentage of Advanced Placement Exams with a Score of 3 or Higher Taken by Public School Students in MCPS, Maryland and the Nation in 2018



MCPS students of all racial/ethnic groups exceeded the percentage of AP exams with scores of 3 or higher compared with the public school students in the state of Maryland and the nation. Among all racial/ethnic groups, the percentage of AP exams taken by MCPS Two or More Races students had the greatest difference (9.7 percentage points) compared to those in Maryland public schools (Table 4). Particularly noteworthy was the percentage of AP exams taken by MCPS Black or African American students earning scores of 3 or higher (47.1 percent), which was 17.2 percentage points greater than those in the nation (29.9 percent).

Table 4. Percentage of Advanced Placement Exams with a Score of 3 or Higher Taken by Public School Students in MCPS, Maryland and the Nation in 2018 by Race/Ethnicity			
	% AP Exams 3 or Higher		
	MCPS	Maryland	Nation
Asian	77.3	75.0	70.7
Black or African American	47.1	41.2	29.9
Hispanic/Latino	55.2	55.1	42.5
White	78.2	70.8	63.9
Two or More Races	76.5	66.8	59.7

Note. AP = Advanced Placement. AP exam results are based on data reported by the College Board as of September 2018.

Advanced Placement Exam Participation and Performance Trends: MCPS, Maryland, and the Nation

From 2016 to 2018, the number of AP exams taken by MCPS students increased by 5,644 tests (Table 5). A similar upward trend was observed in Maryland (1,171 more tests) and the nation (336,768 more tests). Likewise, the number of AP exams taken by each racial/ethnic group in MCPS and the nation increased. In Maryland, the number of AP exams taken by Asian (2,002 more tests), Hispanic/Latino (1,203 more tests), and Two or More Races (587 more tests) public school students increased; however, the number of exams taken by Black or African American (1,517 less tests) and White (2,688 less tests) students decreased.

The percentage of AP exams with scores of 3 or greater taken by public school students in the state of Maryland and the nation increased 3.4 and 1.2 percentage points, respectively, while MCPS AP scores decreased 3.3 percentage points from 2016 to 2018 (Table 5). There were decreases among all racial/ethnic groups in MCPS, while the percentage of AP exam performance increased for all racial/ethnic groups in Maryland and the nation.

Table 5. Differences for Number of AP Exams Taken by Public School Students in MCPS, Maryland and the Nation and Percentage Points of Advanced Placement Exam with a Score of 3 or Higher from 2016 to 2018 by Race/Ethnicity

	Difference for Number of AP Exams Taken from 2016 to 2018			Percentage Points of AP Exams with a Score of 3+ from 2016 to 2018		
	MCPS	Maryland	Nation	MCPS	Maryland	Nation
All Students	5,644	1,171	336,768	-3.3 ↓	3.4 ↑	1.2 ↑
Asian	2,193	2,002	82,220	-1.9 ↓	0.6 ↑	2.0 ↑
Black or African American	958	-1,517	15,933	-3.0 ↓	7.0 ↑	1.8 ↑
Hispanic/Latino	1,213	1,203	119,377	-4.8 ↓	1.5 ↑	1.4 ↑
White	864	-2,688	59,677	-2.4 ↓	2.6 ↑	1.0 ↑
Two or More Races	400	598	29,971	-3.6 ↓	5.7 ↑	11.5 ↑

Note. AP = Advanced Placement. Results for MCPS American Indian or Alaskan Native and Native Hawaiian or Other Pacific Islander students are included with all students but are not reported separately. AP exam results are based on data reported by the College Board as of September 2018.

Advanced Placement Exam Participation and Performance: MCPS High Schools

MCPS high schools continued to support AP exam participation and performance of minority students. Between 2016 and 2018, 19 of the 25 high schools observed an increase in the number of AP exams taken by Black or African American students and 23 of the 25 high schools experienced an increase in the number of AP exams taken by Hispanic/Latino students (Table 6). In 12 of the 25 high schools, there was an increase in the percentage of AP exams with a score of 3 or higher taken by Black or African American students and in 9 of the 25 high schools, gains in the percentage of AP exams with a score of 3 or higher taken by Hispanic/Latino students. Ten of the 25 high schools noted increases for both AP exam participation and performance for Black or African American students; of those, Northwood High School demonstrated the greatest improvement (14.7 percentage points) in these students earning AP exam scores of 3 or higher. Eight of the 25 high schools exhibited increases for both AP exam participation and performance for Hispanic/Latino students; among these schools, Seneca Valley High School recorded the largest increase (34.4 percentage points) in these students earning AP exam scores of 3 or higher.

Table 6. Number of High Schools with Increases in Advanced Placement Exam Participation and Performance from 2016 to 2018 by Minority

	N of AP Exams Taken	% AP Exams 3 or Higher	Both
Black or African American	19	12	10
Hispanic/Latino	23	9	8

Among all focus groups that had the greatest number of high schools improving in AP exam participation, performance, or both, 21 high schools demonstrated an increase in the number of AP exams taken by Non-FARMS Hispanic/Latino from 2016 to 2018 and 13 high schools experienced an increase in the percentage of AP exams with scores of 3 or greater taken by Non-FARMS Black or African American students (Table 7). Eleven of the 25 high schools exhibited an increase in both AP exam participation and performance by Non-FARMS Black or African American students.

Table 7. Number of High Schools with Increases in Advanced Placement Exam Participation and Performance from 2016 to 2018 by Focus Group

	<i>N</i> of AP Exams Taken	% AP Exams 3 or Higher	Both
Non-FARMS All Other Student Groups	21	4	3
Non-FARMS Black or African American	20	13	11
Non-FARMS Hispanic/Latino	21	11	9
FARMS All Other Student Groups	14	11	5
FARMS Black or African American	13	12	5
FARMS Hispanic/Latino	20	6	4

Note. All Other Student Groups includes American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, White, and Two or More Races students.

In 2018, the 20 AP exams most frequently taken by students in MCPS were: U.S. Government and Politics, English Language and Composition, World History, Psychology, English Literature and Composition, U.S. History, Calculus AB, Statistics, Biology, Calculus BC, Spanish Language, Environmental Science, Chemistry, Physics 1, Computer Science Principles, Microeconomics, Macroeconomics, Computer Science A, Physics C: Mechanics, and Human Geography.

At least 3 student groups experienced gains from 2016 to 2018 in both the number of exams taken and the percentage of AP exam scores of 3 or higher for Statistics, Physics C: Mechanics, and Spanish Language. The number of exams taken and the percentage of AP exam scores of 3 or higher increased for Calculus BC, Biology, Physics 1, Physics C: Mechanics, and Spanish Language for Black or African American students. Among Hispanic/Latino students, the number of exams taken and the percentage of AP exam scores of 3 or higher improved for Statistics, Physics C: Mechanics, and World History.

International Baccalaureate Exam Participation and Performance Trends: MCPS

In addition to AP courses, MCPS offers IB programs at eight high schools. The number of IB exams taken by MCPS students increased from 3,404 in 2016 to 4,127 in 2018 (Table 8). The same upward trend was evidenced among all racial/ethnic groups. The number of IB exams taken by Black or African American and Hispanic/Latino students increased by 332 and 227 tests, respectively. The percentage of IB exams with scores of 4 or higher taken by MCPS students decreased 8.6 percentage points in the last three years. The trend of IB performance for racial/ethnic groups declined as well. Among the racial/ethnic groups, the percentage of IB exams with a score of 4 or higher taken by Hispanic/Latino students noted the greatest decline (16.5 percentage points).

Table 8. Number of International Baccalaureate Exams Taken by MCPS Students and Percentage of International Baccalaureate Exam Scores of 4 or Higher in 2016 and 2018 by Race/Ethnicity

	N IB Exams Taken			% IB Exams 4 or Higher		
	2016	2018	Difference	2016	2018	Difference
All Students	3,404	4,127	723	76.4	67.8	-8.6 ↓
Asian	775	837	62	79.7	77.2	-2.5 ↓
Black or African American	561	883	322	55.3	50.1	-5.2 ↓
Hispanic/Latino	588	815	227	66.8	50.3	-16.5 ↓
White	1,290	1,353	63	87.6	82.7	-4.9 ↓
Two or More Races	190	230	40	79.5	74.8	-4.7 ↓

Note. IB = International Baccalaureate. Results for MCPS American Indian or Alaskan Native and Native Hawaiian or Other Pacific Islander students are included with all students but are not reported separately. IB exam results are based on data reported by the International Baccalaureate Organization as of September 2018.

All focus groups realized gains in the number of IB exams from 2016 to 2018; Non-FARMS Black or African American (176), FARMS Black or African American (146), and FARMS Hispanic/Latino (144) had an increase of more than 140 tests (Table 9). Of all focus groups, the percentage of IB exams with scores of 4 or higher declined for all focus groups except FARMS Black or African American students (1.0 percentage point increase).

Table 9. Number of International Baccalaureate Exams Taken by MCPS Students and Percentage of International Baccalaureate Exam Scores of 4 or Higher in 2016 and 2018 by Focus Group

	N IB Exams Taken			% IB Exams 4 or Higher		
	2016	2018	Difference	2016	2018	Difference
Non-FARMS All Other Student Groups	2,081	2,229	148	85.9	82.0	-3.9 ↓
Non-FARMS Black or African American	386	562	176	59.8	52.3	-7.5 ↓
Non-FARMS Hispanic/Latino	403	486	83	73.9	58.8	-15.1 ↓
FARMS All Other Student Groups	174	200	26	64.4	58.5	-5.9 ↓
FARMS Black or African American	175	321	146	45.1	46.1	1.0 ↑
FARMS Hispanic/Latino	185	329	144	51.4	37.7	-13.7 ↓

Note. IB = International Baccalaureate. All Other Student Groups includes American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, White, and Two or More Races students.

The positive trends in AP and IB course enrollment provide evidence of MCPS' continuing efforts to engage students in challenging and college-level contents for all students. The notable increases of participation in AP and IB exams indicate our commitment to close opportunity gaps. The results of AP and IB exam performance reveal that there is more work to do to support students' college readiness.

Detailed information on AP/IB course enrollment and AP/IB exam participation and performance can be accessed on the MCPS Data Dashboards.

- [AP/IB Course Enrollment](#)
- [AP/IB Exams Taken by High School Students](#)
- [AP Exam Participation and Performance for Test Takers](#)
- [AP Exam by Subject](#)
- [IB Exam Participation and Performance for Test Takers](#)
- [IB Exam by Subject](#)

If you have any questions about AP/IB course enrollment, AP/IB exam participation and performance data, please contact Dr. Janet S. Wilson, associate superintendent, Office of Shared Accountability, at 240-740-2930.

JRS:JSW:sl

Attachment

Copy to:

Executive Staff

Ms. Webb

Table 1. Number of Advanced Placement and International Baccalaureate Courses Offered from 2016 to 2018 by High School

High School	Number of AP Courses Offered			Number of IB Courses Offered			Number of AP/IB Courses Offered		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
MCPS	45	50	49	54	61	60	99	111	109
Bethesda-Chevy Chase	24	23	26	37	37	38	61	60	64
Montgomery Blair	28	28	31	0	0	0	28	28	31
James Hubert Blake	27	29	28	0	0	0	27	29	28
Winston Churchill	30	32	32	0	0	0	30	32	32
Clarksburg	23	28	28	0	0	0	23	28	28
Damascus	22	26	30	0	0	0	22	26	30
Albert Einstein	22	20	23	26	28	32	48	48	55
Gaithersburg	24	25	27	0	0	0	24	25	27
Walter Johnson	37	36	38	0	0	0	37	36	38
John F. Kennedy	13	14	11	26	32	37	39	46	48
Col. Zadok Magruder	24	24	25	0	0	0	24	24	25
Richard Montgomery	26	25	29	41	43	43	67	68	72
Northwest	26	26	26	0	0	0	26	26	26
Northwood	20	21	21	0	0	0	20	21	21
Paint Branch	19	19	20	0	0	0	19	19	20
Poolesville	27	28	31	0	0	0	27	28	31
Quince Orchard	30	33	35	0	0	0	30	33	35
Rockville	18	21	20	26	25	25	44	46	45
Seneca Valley	9	11	9	30	33	34	39	44	43
Sherwood	25	28	26	0	0	0	25	28	26
Springbrook	18	20	22	32	34	33	50	54	55
Watkins Mill	11	9	10	32	32	32	43	41	42
Wheaton	19	20	21	0	0	0	19	20	21
Walt Whitman	33	35	36	0	0	0	33	35	36
Thomas S. Wootton	33	33	33	0	0	0	33	33	33

Note. AP = Advanced Placement; IB = International Baccalaureate.