



2023-2024 P-TECH Schools Report

Pathways to Technology Early College (P-TECH) High
School

ED § 7-1806(a)



MARYLAND STATE DEPARTMENT OF EDUCATION

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Maryland Pathways in Technology Early College High Schools Overview

Pathways in Technology Early College High (P-TECH) Schools were developed by IBM to create clear pathways from high school to college and careers for students. In six years or less, students graduate with a high school diploma and a no-cost, two-year Associate of Applied Science (AAS) Degree. Each P-TECH program requires a partnership among an LEA, a local institution of higher education, and a local employer. P-TECH school system staff collaborate with the Maryland State Department of Education (MSDE), industry partners, and a local community college to implement an academically rigorous and economically relevant curriculum aligned to workforce needs. The program includes one-on-one mentoring, workplace visits, skills instruction, paid summer internships, and first-in-line consideration for job openings with the school's partnering company.

Currently, P-TECH is implemented in nine high schools in six local education agencies (LEAs). With continued support from the Governor and General Assembly, Maryland is building a strong statewide network of P-TECH stakeholders working together to prepare Maryland students for high-wage, in-demand career opportunities. Table 1 identifies the LEA, community college, school, career pathway, and industry partner for each P-TECH school.

Table 1: P-TECH LEAs, Community Colleges, Career Pathways, and Industry Partners

LEA / Community College	School	Career Pathways	Industry Partner(s)
Allegany County Public Schools / Allegany College of Maryland	Center for Career and Technical Education	Information Technology Cybersecurity	Western MD Health Systems Exclamation Labs Willets Systems, Inc. First United Bank and Trust Northrop Grumman
Baltimore City Public Schools / Baltimore City Community College	Carver Vocational-Technical High School	Cybersecurity Assurance Computer Information Systems	No industry partner
	Digital Harbor High School	Supply Chain Management	No industry partner
	Paul Laurence Dunbar High School	Nursing Respiratory Care Physical Therapy Assistant Health and Information Technology General Science	Johns Hopkins Hospital University of Maryland, Baltimore

LEA / Community College	School	Career Pathways	Industry Partner(s)
Baltimore County Public Schools / Community College of Baltimore County	Dundalk High School	Engineering Technology	Whiting-Turner Contracting KCI Technologies Stanley Black and Decker Johnson Controls RK & K
	Owings Mills High School	Design, Fabrication, and Advanced Manufacturing	Becton Dickinson Direct Dimensions McCormick & Company North American Millwright Northrop Grumman Potomac Photonics Strategic Factory
Harford County Public Schools / Harford Community College	Joppatowne High School	Computer Information Systems Cybersecurity	U.S. Army Communications-Electronics Command (CECOM) at Aberdeen Proving Ground
Montgomery County Public Schools / Montgomery College	Clarksburg High School	Network and Information Technology	Daly Computers, Inc. Information Technology Foundation
Prince George's County Public Schools / Prince George's Community College	Frederick Douglass High School	Health Information Management Hospitality Services Management	MedStar (Southern Maryland Hospital Center) Six Flags

P-TECH Enrollment, Attrition, and Completion Data

MSDE is required to report annually to the Governor and General Assembly on P-TECH implementation as defined in the P-TECH Act of 2017. This report contains data on the progress and outcomes of the P-TECH programs in Maryland.

P-TECH ENROLLMENT

MSDE is required to report annually to the Governor and General Assembly on P-TECH implementation as defined in the P-TECH Act of 2017. This report contains data on the progress and outcomes of the P-TECH programs in Maryland. Table 2 identifies the LEA, school, and enrollment for the 2024-2025 school year. Most P-TECH students enter the program in grade nine and matriculate through the program based on successful completion of college courses. LEAs submit P-TECH enrollment data to the MSDE P-TECH Fall Enrollment Validation File by October 30th of each year.

The Pathways in Technology Early College High School Act of 2017 only requires collection of student enrollment in a LEA, which is displayed in Table 2. Community colleges submit student enrollment by course to MSDE. This is because the amount of P-TECH Supplemental College Grants awarded to community colleges are determined by the number of courses that students enroll in and not the total number of P-TECH students enrolled in college. P-TECH students take multiple postsecondary courses each year. An aggregate enrollment count of P-TECH students in community colleges would not be sufficient to determine the amount of funds required to cover per-credit tuition costs and fees.

Table 2: P-TECH Enrollment

Local Education Agency	School	2024-2025 Enrollment		
		Grade or Year	Enrollment by Grade	Total Enrollment
Allegany County	Center for Career and Technical Education	Grade 9	17	69
		Grade 10	18	
		Grade 11	8	
		Grade 12	17	
		Year 5	*	
		Year 6	*	
Baltimore City	Carver Vocational-Technical High School	Grade 9	25	122

Local Education Agency	School	2024-2025 Enrollment		
		Grade 10	34	
		Grade 11	23	
		Grade 12	14	
		Year 5	10	
		Year 6	16	
	Digital Harbor High School	Grade 9	16	72
		Grade 10	18	
		Grade 11	14	
		Grade 12	*	
		Year 5	*	
		Year 6	15	
	Paul Laurence Dunbar High School	Grade 9	*	111
		Grade 10	42	
		Grade 11	40	
		Grade 12	26	
		Year 5	*	
		Year 6	*	
	Baltimore County	Dundalk High School	Grade 9	51
Grade 10			48	
Grade 11			29	
Grade 12			23	
Year 5			16	
Year 6			*	

Local Education Agency	School	2024-2025 Enrollment		
	Owings Mills High School	Grade 9	29	121
		Grade 10	28	
		Grade 11	26	
		Grade 12	26	
		Year 5	12	
		Year 6	N/A	
Harford County	Joppatowne High School	Grade 9	36	116
		Grade 10	28	
		Grade 11	27	
		Grade 12	24	
		Year 5	*	
		Year 6	N/A	
Montgomery County	Clarksburg High School	Grade 9	66	182
		Grade 10	50	
		Grade 11	39	
		Grade 12	26	
		Year 5	*	
		Year 6	*	
Prince George's County	Frederick Douglass High School	Grade 9	56	207
		Grade 10	48	
		Grade 11	46	
		Grade 12	56	
		Year 5	*	

Local Education Agency	School	2024-2025 Enrollment		
			Year 6	*

* Data are suppressed with an asterisk (*) when the number of students in the group is less than 10.
 N/A- P-TECH site did not have Year 6 students this school year.

P-TECH ATTRITION

ED § 7-1806(a) requires MSDE to report the attrition rate from each P-TECH school by grade and cohort. Attrition is the number of students who exit P-TECH pathways before earning their associate degree. LEAs submit attrition data through the MSDE P-TECH Outcome File by October 30th of each year. Table 3 identifies Fall 2024 P-TECH attrition rates by grade.

Table 3: P-TECH Attrition for the Fall 2024 School Year

P-TECH Reporting Requirements	Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George’s
	Center for CTE	Carver	Digital Harbor	Dunbar	Dundalk	Owings Mills	Joppatowne	Clarksburg	Frederick Douglass
Total Number of students Enrolled in Each P-TECH School	69	150	79	111	174	121	116	182	207
Grade 9 Attrition Rate	+6%	27%	25%	32%	17%	6%	15%	19%	20%
Grade 10 Attrition Rate	33%	+*%	+75%	*%	37%	+63%	18%	22%	13%
Grade 11 Attrition Rate	*%	13%	10%	7%	23%	64%	20%	10%	*%

* Data are suppressed when the number of students tested is less than 10 and/or proficiency levels are less than or equal to 5% or greater than or equal to 95%.

P-TECH COMPLETION DATA

ED § 7-1806(a) requires MSDE to report the total number of students who have graduated from the program and the percentage of completion rates. Table 4 identifies P-TECH completion data for the 2023-2024 school year. The 2023-2024 school year is the 1st year Owings Mills High School in Baltimore County and Joppatowne High School in Harford County had grade 12 students. These programs did not have 5th and 6th-year students enrolled during the 2023-2024 school year. As a result, no enrollment data is reported on 5th and 6th-year students for Owings Mills and Joppatowne for the 2023-2024 school year.

Table 4: P-TECH Completion Data for the 2023-2024 School Year

P-TECH Reporting Requirements	Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George's
	Center for CTE	Carver	Digital Harbor	Dunbar	Dundalk	Owings Mills	Joppatowne	Clarksburg	Frederick Douglass
Total Number of students Enrolled in Each P-TECH School at end of school year	70	137	70	204	227	116	124	182	208
High School 4-year Graduation Rate: <i>Diploma Only</i>	*	40	20	56	*	14	*	*	*
Number of P-TECH students on track for P-TECH completion (associate degree and high school diploma) in 4 years	15	*	*	*	11	20	10	149	207
Number of P-TECH students on track for a P-TECH completion in 5 years	40	*	*	*	56	12	*	*	*
Number of P-TECH students on track for P-TECH completion in 6 years	15	137	70	204	59	77	*	*	*
Number of P-TECH student internships	22	*	*	157	25	*	10	33	92
Number of P-TECH students in each school who receive paid internships	22	*	*	26	25	*	10	28	88
Number of Post-graduates Employed	11	*	*	68	*	*	*	*	*
Number of Post-graduates Employed by Industry Partner	*	*	*	*	*	*	*	*	*
Number of Post-graduates	*	*	*	45	*	*	14	35	39

P-TECH Reporting Requirements	Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George's
enrolled in 4-year institution of higher education									

**Data are suppressed with an asterisk (*) when the number of students in the group is less than 10.*

¹ Students continued to years 5 and 6, therefore, there were no graduates for this P-TECH site during the 2023-2024 school year.

P-TECH Performance and Support Services

ED § 7-1806(a) requires MSDE to report student performance on federal and state assessments. The Every Student Succeeds Act (ESSA) requires that states administer annual statewide assessments to all students in English Language Arts/Literacy and Mathematics in grades 3-8 and once in high school, as well as in science once in each grade span (3-5, 6-8 and high school), and annual English language proficiency assessments in grades K-12 for all English learners. In addition to these federally mandated assessments, Maryland State law (Md. Ed. Art §7-203) requires a social studies assessment once in the middle school grade band (which will be administered in Grade 8) and the High School Assessment in American Government.

Maryland administers all required state assessments as part of the Maryland Comprehensive Assessment Program (MCAP). Table 5 identifies how P-TECH students performed on federal and state assessments for the 2023-2024 academic year. Table 6 identifies the number of students at each P-TECH school who have an IEP plan, 504 plan or are English language learners for the 2023-2024 academic year, as well as the percentage of P-TECH students who meet the free and reduced meal plan income criteria in each P-TECH school.

Table 5: Student Performance of Federal and State Assessments for the 2023-2024 School Year

P-TECH Reporting Requirements	Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George's
	Center for CTE	Carver	Digital Harbor	Dunbar	Dundalk	Owings Mills	Joppatowne	Clarksburg	Frederick Douglass
Number of Students who took <u>English Language Arts</u> Assessment	13	29	*	35	114	32	43	48	53
How P-TECH students performed on federal and state assessments (Percent Proficient)- <u>English Language Arts</u>	69%	38%	67%	54%	28%	25%	60%	81%	70%
Number of students who took <u>Mathematics</u> Assessment	25	43	24	41	121	40	96	13	35
How P-TECH students performed on federal and state assessments (Percent Proficient)- <u>Mathematics</u>	32%	*%	*%	12%	*%	*%	*%	31%	6%

P-TECH Reporting Requirements	Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George's
Number of students who took <u>High School Life Science Assessment</u>	12	43	25	62	36	30	36	62	55
How P-TECH students performed on federal and state assessments (Percent Proficient)- <u>High School Life Science</u>	33%	7%	*%	39%	25%	23%	28%	81%	27%
Number of students who took <u>(American Government) Assessment</u>	12	29	*	41	*	33	34	19	53
How P-TECH students performed on federal and state assessments (Percent Proficient)- <u>American Government</u>	75%	28%	17%	49%	43%	33%	44%	68%	77%

* Data are suppressed when the number of students tested is less than 10 and/or proficiency levels are less than or equal to 5% or greater than or equal to 95%.

Table 6: Number of students at each P-TECH school who have an IEP Plan, 504 Plan, or are English Language Learners for the 2023-2024 School Year

P-TECH Reporting Requirements	Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George's
	Center for CTE	Carver	Digital Harbor	Dunbar	Dundalk	Owings Mills	Joppatowne	Clarksburg	Frederick Douglass
Total Number of Students Enrolled in each P-TECH School	70	138	63	197	180	112	113	182	211
Number of P-TECH students who have an IEP plan	*	32	19	*	11	11	*	*	*

P-TECH Reporting Requirements		Allegany County	Baltimore City			Baltimore County		Harford County	Montgomery County	Prince George's
Number of P-TECH students who have a 504 Plan	*	*	*	*	*	14	*	*	13	*
Number of P-TECH students who are English Language Learners	*	*	*	*	*	28	*	*	*	*
Percentage of P-TECH students who meet the Free and Reduced Meal Plan Income criteria	49%	80%	83%	71%	81%	59%	56%	20%	33%	

*Data are suppressed when the number of students in the group is less than 10 and/or the group percentage is less than or equal to 5% or greater than or equal to 95%.

P-TECH Funding

ED § 7-1806(a) require MSDE to report the total amount of funds distributed to each P-TECH school, an accounting of each P-TECH school's expenditures, whether all funds distributed were spent, and the base and supplemental costs of operating a P-TECH school. P-TECH supplemental school grants are provided annually from MSDE to LEAs with P-TECH programs. LEAs are awarded \$750 per student based on data submitted in the October P-TECH Fall Validation Enrollment File. LEAs must match 100% of supplemental school grant funds. MSDE awards P-TECH supplemental college grants to IHEs. The supplemental college grant equals a percentage of tuition and mandatory fees for courses enrolled by P-TECH students, who often enroll in multiple college courses.

- Table 7 identifies the disbursed P-TECH supplemental school and college grants, and the percentage of funds spent during the 2023-2024 academic year.
- Table 8 identifies the total costs per student, including locally matched funds for the 2023-2024 academic year.

Table 7: School Year 2023-2024 P-TECH Supplemental School and College Grants

P-TECH District	High School/Community College	Enrollment	Supplemental Grant Award	Total Expenditures	Percentage of Funds Spent
Allegany County	Center for Career and Technical Education	70	\$52,500	\$51,855	99%
	Allegany College of Maryland	--	\$55,412	\$55,412	100%
	Total		\$107,912		100%
Baltimore City	Carver Vocational-Technical High School	138	\$103,500	\$51,845	50%
	Digital Harbor High School	63	\$47,250	\$21,422	45%
	Paul Laurence Dunbar High School	197	\$147,750	\$93,556	63%
	Baltimore City Community College	--	\$219,285	\$0	0%
	Total		\$517,785		40%
Baltimore County	Dundalk High School	180	\$135,000	\$54,952	41%
	Owings Mills High School	112	\$84,000	\$47,380	56%

P-TECH District	High School/Community College	Enrollment	Supplemental Grant Award	Total Expenditures	Percentage of Funds Spent
	Community College of Baltimore County	--	\$96,184	\$96,184	100%
	Total		\$315,184		66%
Harford County	Joppatowne High School	113	\$84,750	\$84,750	100%
	Harford Community College	--	\$49,982	\$49,982	100%
	Total		\$134,732		100%
Montgomery County	Clarksburg High School	182	\$136,500	\$136,500	100%
	Montgomery College	--	\$98,387	\$98,387	100%
	Total		\$234,887		100%
Prince George's County	Frederick Douglass High School	211	\$158,250	\$158,250	100%
	Prince George's Community College	--	\$230,848	\$180,487	78%
	Total		\$389,098		89%
Statewide P-TECH Enrollment and Supplemental Grants		1,266	\$1,699,596		83%

Table 8: School Year 2023-2024 P-TECH Base Costs per Student

P-TECH District	FY 2024 Student Enrollment	Supplemental School Grants	LEA Local Funding Match	Supplemental College Grants	Total Cost Per Student (includes local and state funds)
Allegany County	70	\$52,500	\$52,500	\$55,412	\$2,292
Baltimore City	398	\$298,500	\$298,500	\$219,285	\$2,051
Baltimore County	292	\$219,000	\$219,000	\$96,184	\$1,829
Harford County	113	\$84,750	\$84,750	\$49,982	\$1,942

P-TECH District	FY 2024 Student Enrollment	Supplemental School Grants	LEA Local Funding Match	Supplemental College Grants	Total Cost Per Student (includes local and state funds)
Montgomery County	182	\$136,500	\$136,500	\$98,387	\$2,041
Prince George's County	211	\$158,250	\$158,250	\$230,848	\$2,594
Statewide	1,266	\$949,500	\$949,500	\$750,096	\$2,092