

THE NEW YORK EQUITY COALITION











































"Across New York State today, our education system denies students of color access to rigorous instruction in a range of courses that will prepare them for success in college, careers, and civic life.

But it does not have to be this way."

WITHIN OUR REACH

An agenda for ensuring all New York students are prepared for college, careers, and active citizenship

Toyia* always considered herself fortunate to attend the Rochester City School District's highest-performing high school—one that offers an array of advanced courses to choose from.¹

But it was not until she started taking Advanced Placement (AP) courses that she realized not all students at her school benefited from those options. Even at a school where about 70 percent of students are Black or Latino, most of the students enrolled in her AP classes were White.

"When I started taking AP classes in the 11th grade, I met a whole new group of kids," she said. "It was like I was going to a new school. There were not many Black and Hispanic kids."

She wondered whether she herself had missed out on other opportunities.

It is a question that equity-focused educators confront in their professional lives, as well.

"When I started at my school, there was no Physics," said John,* a teacher at a high-poverty school in the Bronx. "I requested to add Physics to my coursework. I just thought it was really important for students to have that.... And my students don't always understand that if they want to go into a science field, any science field, they will need to take it."

Even after taking the initiative to start the class, John

continued to face barriers to ensuring his students have equitable opportunities.

"There are definitely not a lot of resources available to teachers at this level to support their teaching," he said.

In fact, what Toyia and John encountered is common in schools across New York State, where all too often students—particularly students of color and those who are low-income—are held to lower expectations and denied opportunities to experience rigorous instruction across a robust set of course offerings.

Addressing these challenges is integral to achieving equity in New York's education system. From an educational justice perspective, systemically denying historically under-served students the chance to access and succeed in high-quality coursework across the curriculum is a root cause of achievement and opportunity gaps. Likewise, from an economic perspective, New York's future success as a state depends on better preparing all groups of students for Science, Technology, Engineering, and Math (STEM) fields, Computer Science careers, and other emerging and high-demand industry clusters.

In this report, The New York Equity Coalition of civil rights, education, parent, and business organizations reviews the data on access to instructional opportunities in middle and high school and offers a vision for college, career, and civic readiness for <u>all</u> New York students.

ACCESS DENIED: A LOOK AT THE DATA

Throughout this report, we have chosen to focus on a small set of middle and high school classes (see Figure 1).² We call them "gatekeeper courses" because taking them at certain points in a student's school experience provides the opportunity to advance to higher-level courses, to develop critical skills, or to explore new passions and abilities. In different ways, all of these courses can contribute to college, career, and civic readiness—which are rooted in a shared set of knowledge and skills. While there are far more courses that make up a rich and robust curriculum, this report primarily draws on enrollment data for:

- Middle School Algebra I: If students take Algebra I in middle school, they have the opportunity to pursue higher-level math in high school. Sixtynine percent of New York middle schools offer Algebra I. Algebra is a foundational course for success in college and careers.
- Middle School Earth Science: Earth Science is an important component of the Next Generation Learning Standards for middle school science. It is offered as a standalone course in 29 percent of middle schools, and—like Algebra I—completing it in middle school enables students to pursue advanced science in high school.
- Calculus and Physics: Calculus and Physics are advanced courses that prepare students for STEM careers and competitive colleges. Sixty-eight percent of New York high schools offer Calculus and 74 percent offer Physics.
- Advanced Placement (AP) and International
 Baccalaureate (IB): AP courses and IB programs
 provide students with a structured pathway to
 develop and demonstrate deep content knowledge
 and critical thinking and problem-solving skills
 while earning college credit. Sixty-six percent

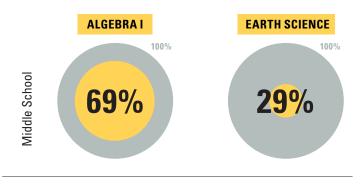
of high schools offer at least one AP or IB Math or Science course, and 78 percent offer at least one AP or IB course in another subject. Dual enrollment—which are courses that enable students to simultaneously earn high school and college credit—can play a similar role and is discussed in greater detail below; however, the state does not currently collect data on dual enrollment course-taking. Having a strong foundation in middle school (and earlier) is important to preparing students for AP, IB, and dual enrollment courses.

- Computer Science: Computer Science courses enable students to develop a deep connection with a high-demand skillset and provide a pathway to diversify an attractive profession. Computer Science is offered in 34 percent of high schools, and includes computer programming courses and all AP/IB information technology courses.
- Advanced Foreign Language Courses:
 Biliteracy is highly valued in our society and economy and is an important component of a rich and robust academic experience. Seventy-nine percent of high schools offer at least one level three or higher foreign language class, which we use as the definition of advanced foreign language courses.
- Music: Students are required to complete at least 1 credit unit in the Arts prior to graduation, and our analysis looked specifically at high school Music as an example of a valuable element of a rich and robust academic experience. Music is offered in 78 percent of high schools.

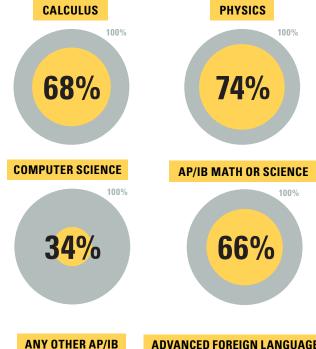
When we look across this range of courses, the results of our equity analysis provide clear cause for alarm.

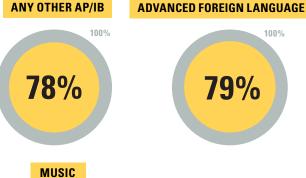
Figure 1: The percent of all schools offering gatekeeper and advanced courses varies widely





High School





100%

78%

Source: New York State Education Department, Buffalo Public Schools, and Rochester City School District. Unpublished 2016-17 data.

FINDING 1:

Students of color are under-represented across the board in gatekeeper courses that prepare students for college and career opportunities



I thought I was taking Algebra, but it really was this pre-Algebra. So it took two years to finish one class. I wanted to take Geometry and then pre-Cal. Now I have to double up when I'm a senior if I want to take all of the classes I want."—Quinton,* high school student

Compared to their share of middle and high school enrollment, Latino, Black, and American Indian students³ are under-enrolled in critical courses across the entire curriculum (see Figure 2):

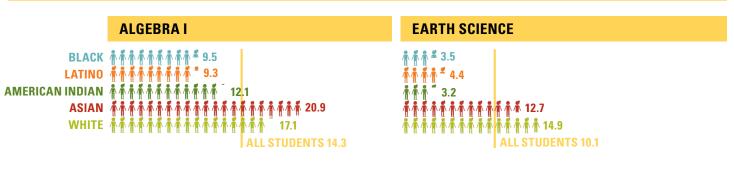
- **In middle school:** Algebra I and Earth Science.
- In high school: Calculus; Physics, Computer Science, Advanced Placement (AP) and International Baccalaureate (IB) Math and Science courses, AP and IB courses in all other subjects, advanced foreign language courses, high-demand Career and Technical Education (CTE) programs such as Manufacturing and Engineering & Technology, and Music.

If Latino and Black students had access to these important classes at the same rate as all students in the schools with the greatest access across New York State, the additional number of course completions for Latino and Black students would be 34,126 in Algebra I in middle school, 29,570 in Calculus, 61,386 in Physics, and 143,542 in all AP and IB classes (see Figure 3).⁵

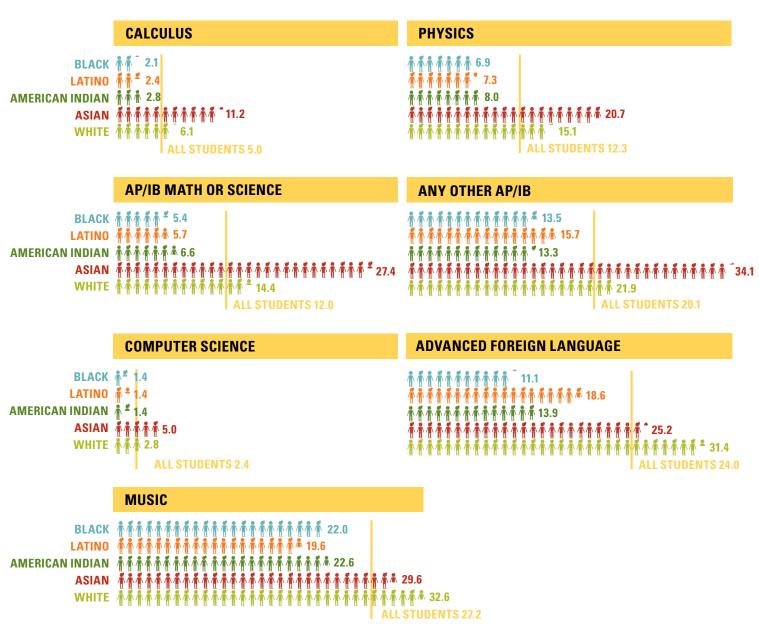
These inequities are important because racial and ethnic disparities in course access translate into gaps in postsecondary opportunity. For example, in 2017, White high school students completed 89,506 AP exams where they earned a score of 3 or higher—which is generally accepted for college credit. During the same year, Latino and Black students completed just 27,100 AP exams where they earned a score of 3 or higher. That means White students had 230 percent more opportunities to earn college credit than their Latino and Black peers, despite representing only 8 percent more high school enrollees.⁶

Figure 2: Latino, Black, and American Indian students are under-represented in a wide range of important gatekeeper and advanced courses

ENROLLMENT FOR EVERY 100 STUDENTS IN GRADES 7-8...

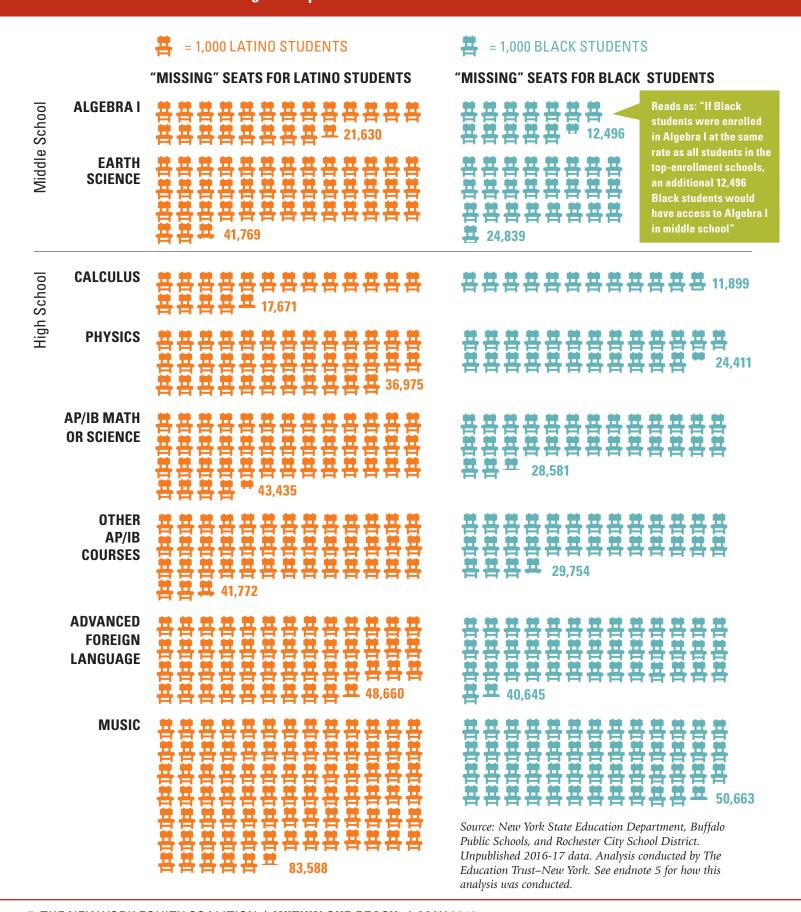


ENROLLMENT FOR EVERY 100 STUDENTS IN GRADES 9-12...



Source: New York State Education Department, Buffalo Public Schools, and Rochester City School District. Unpublished 2016-17 data. Analysis conducted by The Education Trust-New York.

Figure 3: If Latino and Black students were enrolled at the same rate as all students in the schools with the greatest enrollment in these courses statewide, tens of thousands of additional students of color would receive access to gatekeeper and advanced courses



FINDING 2:

Latino and Black students are less likely than their White peers to attend schools where gatekeeper college- and careerprep courses are offered



That's not fair. Every school in [my district] should have equal opportunities for students to take AP classes. It does help with your college applications."—Donyelle,* high school student

One of the reasons that Latino and Black students are under-enrolled in gatekeeper courses is that they disproportionately attend schools where these classes are not offered (see Figure 4).

For example, 41,451 Latino and Black 7th and 8th graders representing 30 percent of Latino students and 34 percent of Black students—attend middle schools that do not offer Algebra I, more than three times the rate of their White peers. At the high school level, 83,441 Latino and Black students (24 percent of Latino students and 30 percent of Black students in grades 9-12) attend schools that do not offer AP or IB math or science, compared to just 11 percent of White students.

Part of the explanation for this disparity is that Latino and Black students are concentrated in high-need school districts, which generally offer less robust

Figure 4: Latino and Black students are less likely than their White peers to attend schools where important gatekeeper and advanced courses are offered

	Middle	Number of Black students in grades 7-8 attending a school with	Share of Black students in grades 7-8 attending a school with	Number of Latino students in grades 7-8 attending a school with	Share of Latino students in grades 7-8 attending a school with	Number of White students in grades 7-8 attending a school with	Share of White students in grades 7-8 attending a school with
	No Algebra I course	16,402	34%	25,049	30%	13,522	9%
	No Earth Science course	37,651	78%	57,067	69%	75,544	50%
	High school	Number of Black students in grades 9-12 attending a school with	Share of Black students in grades 9-12 attending a school with	Number of Latino students in grades 9-12 attending a school with	Share of Latino students in grades 9-12 attending a school with	Number of White students in grades 9-12 attending a school with	Share of White students in grades 9-12 attending a school with
	No Calculus courses	47,445	36%	53,280	28%	18,748	5%
	No Physics courses	39,067	30%	43,961	23%	11,807	3%
	No Computer Science courses	80,910	62%	112,231	60%	130,583	36%
	No AP/IB Math or Science courses	38,727	30%	44,714	24%	38,518	11%
	No AP/IB courses in any subject	14,932	11%	16,619	9%	20,553	6%
	No advanced foreign language courses	31,980	25%	37,624	20%	11,159	3%
	No music courses	33,215	26%	44,781	24%	8,483	2%

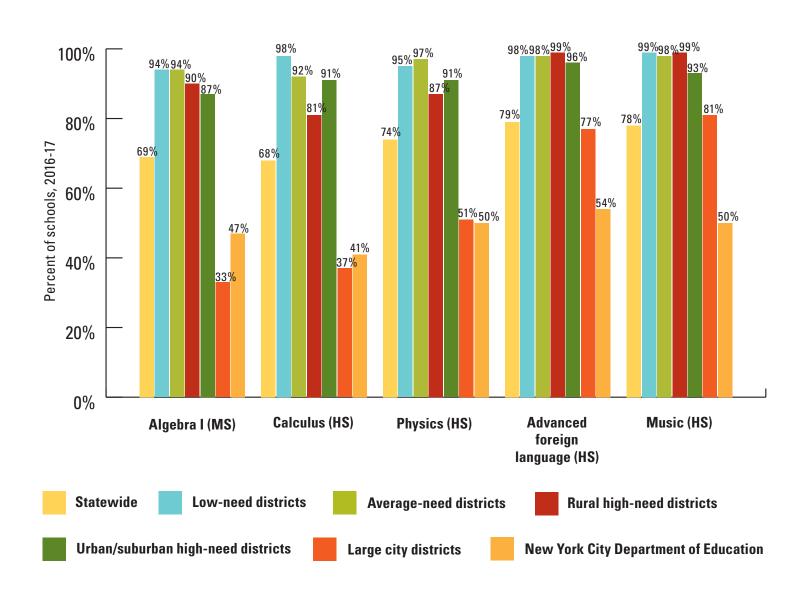
Source: New York State Education Department, Buffalo Public Schools, and Rochester City School District. Unpublished 2016-17 data. Analysis conducted by The Education Trust-New York.

advanced course opportunities (see Figure 5). Seventyeight percent of Latino students and 84 percent of Black students are enrolled in the Big 5 (made up of New York City and the four large city school districts—Buffalo, Rochester, Syracuse, and Yonkers) and other high-need school districts—which offer key gatekeeper courses at lower rates than low- and average-need districts.

An especially striking pattern of disparity appears for students' access to AP and IB courses. Ninety-one percent of high schools in low-need school districts

Figure 5: Schools in high-need districts are less likely to offer a range of important gatekeeper and advanced courses

SHARE OF SCHOOLS OFFERING...



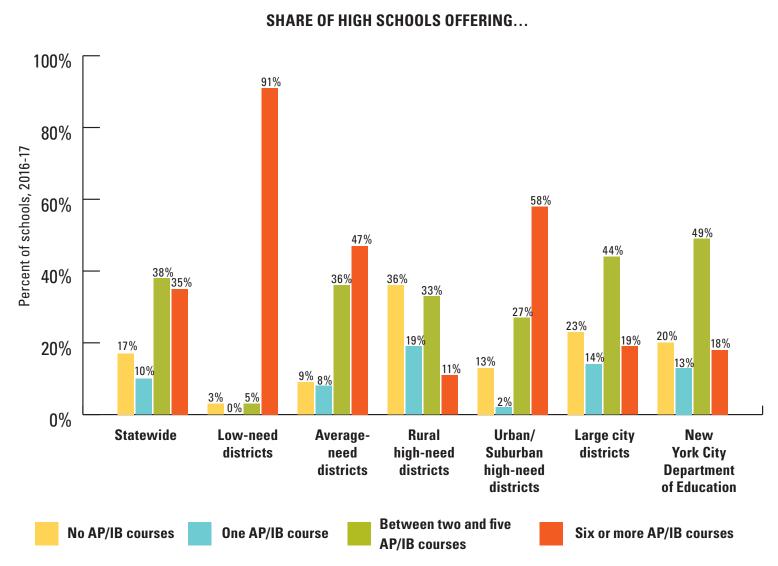
Source: New York State Education Department, Buffalo Public Schools, and Rochester City School District. Unpublished 2016-17 data. Analysis conducted by The Education Trust—New York.

offer six or more AP and IB courses, compared to just 18 percent of high schools in New York City, 19 percent of high schools in the large city school districts, and 11 percent of high schools in rural high-need school districts (see Figure 6).

The distribution of Computer Science—a subject area that is receiving national attention because it engages many students' passion for technology and prepares

them for high-demand careers—similarly generates cause for concern. Statewide, only 34 percent of high schools offer a Computer Science course. However, fully 80 percent of high schools in low-need school districts offer Computer Science. As a result, only 36 percent of White high school students attend a school where a Computer Science course is not offered compared to 60 percent of Latino students and 62 percent of Black students.

Figure 6: Schools in high-need districts often offer fewer AP and IB courses



Source: New York State Education Department, Buffalo Public Schools, and Rochester City School District. Unpublished 2016-17 data. Analysis conducted by The Education Trust-New York.

FINDING 3:

Even in schools that offer gatekeeper collegeand career-prep courses, Latino and Black students are under-enrolled in these courses



I don't think there's a point in me taking a local course when I could be taking a Regents course."—Shayna,* high school student

The second major reason that students of color are under-enrolled in gatekeeper courses is that even when they attend schools that *offer* these classes, they are disproportionately denied access.

There are two components to these within-school disparities.

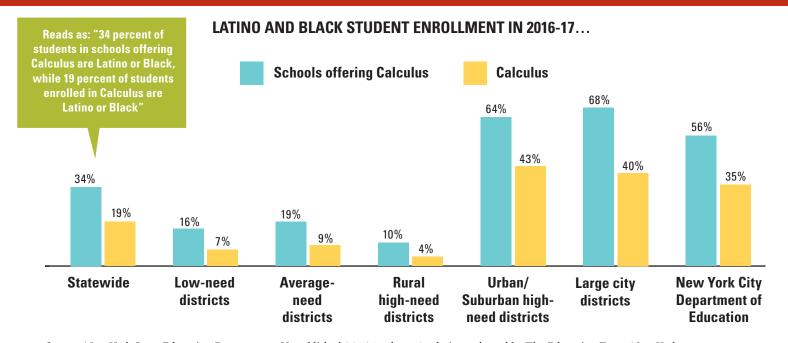
First, in schools that offer gatekeeper courses, Latino and Black students are still less likely than their White peers to be enrolled. Take, for example, high school Calculus (see Figure 7). In high schools that offer Calculus, Latino students represent 21 percent of all students but only 12 percent of students enrolled in Calculus; Black students

represent 13 percent of all students but only 7 percent of students enrolled in Calculus. These disparities can be found across all school district need/resource capacity categories—from low-need school districts to the Big 5.

Because they are not given a share of seats in advanced courses proportionate to their share of the student population, students of color pay a penalty in lost opportunity:

- An additional 5,732 Latino and Black students would be enrolled in Calculus if they were given proportionate access in high schools that already offer Calculus;
- An additional 10,525 Latino and Black students would be enrolled in Physics if they were given proportionate access in high schools that already offer Physics;
- An additional 18,373 Latino and Black students would be enrolled in advanced foreign language courses if they were given proportionate access in high schools that already offer advanced foreign language courses;

Figure 7. Even in schools that offer Calculus, Latino and Black students are still less likely than their White peers to be given access

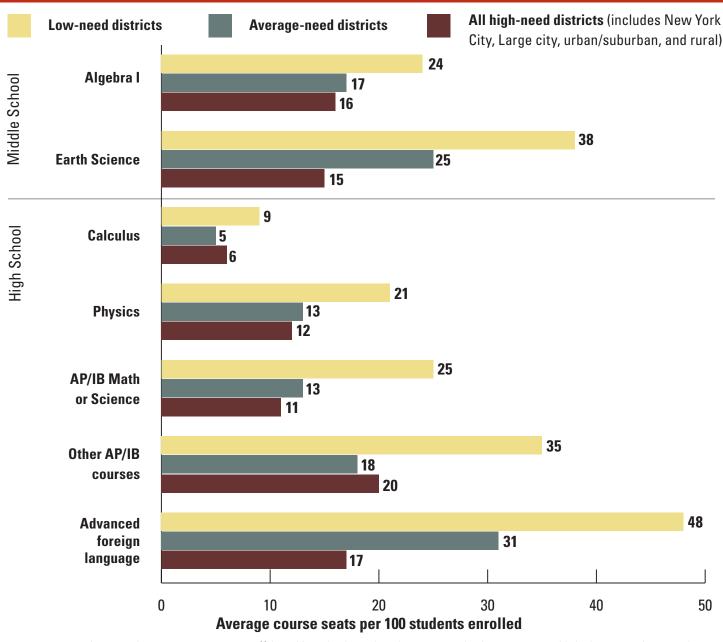


Source: New York State Education Department. Unpublished 2016-17 data. Analysis conducted by The Education Trust-New York.

- An additional 16,444 Latino and Black students would be enrolled in AP and IB Math and Science if they were given proportionate access in high schools that already offer AP and IB Math and Science; and
- An additional 15,492 Latino and Black students would be enrolled in other AP and IB courses if they were given proportionate access in high schools that already offer these AP and IB courses.⁷

Second, in high-need school districts that offer the gatekeeper courses we examined, there are on average fewer total seats available per school than in schools in low-need districts that offer the same courses (see Figure 8). This means, for example, that in middle schools where Algebra I is offered, schools in low-need districts have an average of 24 Algebra I seats per 100 students enrolled while schools in high-need districts have an average of just 16. As noted earlier, the large majority of Latino and Black students attend school in high-need school districts.

Figure 8: In schools that offer gatekeeper and advanced courses, low-need districts have more course seats on average than high-need districts



Source: New York State Education Department, Buffalo Public Schools, and Rochester City School District. Unpublished 2016-17 data. Analysis conducted by The Education Trust-New York.

FINDING 4:

Students of color are disproportionately enrolled in schools with no or too few school counselors, who could help them navigate course enrollment to prepare for college and careers



[Our counselors] choose for us and we don't have much say in it."—Darren,* high school student

School counselors play an important role in helping students navigate the course sequences that can prepare them for a range of college and career pathways. Yet Latino and Black students are often denied access to sufficient school counselors at the middle and, especially, high school levels (see Figure 9).8

In middle school, Latino and Black students are twice as likely as their White peers to attend a school without a single school counselor.

By high school, a far greater problem is having far too few school counselors to serve the student body. Forty-two percent of Latino students and 40 percent of Black students—131,420 students—attend high schools with more than 250 students for each school counselor, compared to 27 percent of White students.

Figure 9: Latino and Black students have less access to guidance counselors than their White peers

	Middle School	Number of Black students in grades 7-8 attending a school with	Share Black students in grades 7-8 attending a school with	Number of Latino students in grades 7-8 attending a school with	Share Latino students in grades 7-8 attending a school with	Number of White students in grades 7-8 attending a school with	Share of White students in grades 7-8 attending a school with
	No guidance counselors	3,785	8%	6,612	8%	6,732	4%
	A ratio of more than 250 students in grades 7-8 to one counselor	12,464	26%	30,141	36%	41,579	27%
		Number of	Share of Black	Number of Latino	Share of Latino	Number of	Share of White
	High School	Black students in grades 9-12 attending a school with	students in grades 9-12 attending a school with	students in grades 9-12 attending a school with	students in grades 9-12 attending a school with	White students in grades 9-12 attending a school with	students in grades 9-12 attending a school with
		in grades 9-12 attending a	grades 9-12 attending a	in grades 9-12 attending a	grades 9-12 attending a	in grades 9-12 attending a	grades 9-12 attending a

OUR CALL TO ACTION: THE 5X25 COMMITMENT TO NEW YORK

In order to achieve equitable outcomes—better graduation rates, college matriculation and completion rates, career placement and earnings, and greater civic engagement—New Yorkers must insist on equitable access to rigorous instruction, support from strong educators, and enrollment in the full range of courses that lead to college and career preparedness for all students.

To achieve this goal, we call on New York's leaders across state government—the Board of Regents, the New York State Education Department (NYSED), Executive, and Legislature—to fulfill 5 Commitments to every student in the **Graduating Class of 2025**—a 5x25 agenda for success starting with the cohort of students who are entering sixth grade in fall 2018.

COMMITMENT 1

All students, families, and educators will have accurate and timely information, support, and help to access a rich and robust course experience in their school



Leverage the state's new accountability system to enhance transparency and implement school improvement strategies that support equitable access to rigorous courses

New York State's new accountability system under the Every Student Succeeds Act (ESSA) includes several features—including a College, Career & Civic Readiness indicator—that can help schools expand equitable access to college- and career-prep coursework. The next step is to transform that information into action that advances college and career readiness for all students:

We recommend that NYSED provide schools and school districts with data that reveal whether schools have rich and robust course offerings and whether historically under-served groups of students have equitable access to the courses when they are offered. This information should also be

- made publicly available as part of the state's new dashboards and school report cards.
- One important element that is missing from the state's College, Career & Civic Readiness accountability indicator is attainment of college credit through dual enrollment, which has not been previously collected at the state level. The state should commit to collecting this data now and including it in the accountability system by 2019-20. Students should also have confidence that they will receive college credit for successfully completed dual enrollment courses, and SUNY and CUNY should agree to financial arrangements that promote student access and recognize the potential cost savings to postsecondary institutions from expanded use of dual enrollment in high schools.
- In addition, New York's education leaders have emphasized the importance of a robust and meaningful school improvement process so that educators receive the support they need to address challenges that are identified in the new accountability system. This is vital, and we recommend that the school improvement process include tools to ensure that courses such as the ones mentioned in this report are of sufficient rigor, with quality assignments and alignment to the state's new standards. A course-in-name-only is a disservice to the students who are relying on it.
- We also recognize that while our recommendations focus on middle and high schools, they must be aligned with school improvement strategies for elementary schools. For example, equity is not simply a matter of enrolling more eighth graders in Algebra I. Rather, it also points to the need for strategies to ensure that all students receive quality instruction in the elementary grades that prepares them for more rigorous coursework in middle school, along with the supports and resources to succeed.

COMMITMENT 2

All students and families will have the information and support to pursue rigorous college- and career-prep pathways



Require that families receive better information and expand access to school counselors and other resources

Especially for children yearning to be the firstgeneration college students in their families, the state must ensure that resources are in place to help families navigate college and career readiness.

We recommend that the state **require that every parent be given easy-to-understand information (in multiple languages)** beginning in late elementary grades on the courses their child should be taking to prepare for college and careers.

The role of school counselors is also critical and, as noted above, access to their support is subject to significant racial and ethnic disparities. **State funding targeted to school counseling services**, including innovative strategies focused on college preparedness and partnerships with non-profits that have expertise in this area, should be increased. In addition, the new school dashboards should include whether there are a sufficient number of school counselors who can help students plan for their future.

Counselors must also have the skills and training to engage families cross-culturally so that they can connect with families and students of all backgrounds. School districts, with guidance and support from the state, should ensure that high school counselors help students develop college and career aspirations and take rigorous courses to prepare for their future, apply to colleges and other postsecondary pathways that have a record of student success, and—for students who hope to attend college—pursue financial aid, address affordability challenges, and successfully matriculate after graduating high school.

COMMITMENT 3

Every student will receive rich and rigorous instruction that prepares them for success after high school graduation



Establish a default course sequence that all students are automatically enrolled in, backed by high expectations and support for educators and students

We recommend that New York State establish a default middle and high school course sequence—starting with a year-long course of Algebra I in middle school and advancing through robust and rigorous college- and career-prep pathways in high school. These should include options to take advanced coursework (including AP, IB, and dual enrollment) and/or to complete an industry-recognized CTE credential. Parents would have the right to remove their children from the default course sequence after receiving information and signing a waiver.

Successful implementation will require having high expectations for all students, including English Language Learners (ELLs) and students with disabilities, and intentionally focusing on how to support all students and the educators who teach them. This includes providing ELLs with accommodations to fully participate in collegeand career-prep courses and access assessments, translations of course materials and assessments, bilingual courses and/or support from bilingual teaching assistants, and professional development for teachers and leaders on how to support ELLs enrolled in advanced coursework. For students with disabilities, this includes offering college- and career-prep courses in integrated settings, providing students with the accommodations mandated in their Individualized Education Programs (IEPs) in order to fully participate and ensuring that school districts provide students with access to mandated accommodations on all state tests. Where students

with disabilities are taking AP or IB courses, schools should take a more active role in helping families apply for accommodations on those exams. Finally, all teachers and school leaders must be provided with professional development on how to support students with disabilities.

This recommendation is rooted in parents' clear aspirations for their children. Our coalition commissioned a scientifically valid telephone poll of public school parents in November 2016 to seek their input as the state was beginning its implementation of ESSA. Parents overwhelmingly supported the idea of "expanding access to courses that prepare students for college, such as AP courses and advanced math and science." Sixty-one percent of parents rated the proposal a 9 or 10 (on a scale of 1-10), including 74 percent of Latino parents and 78 percent of Black parents.9

A default course sequence has been in place in Indiana, where the state enacted a "Core 40" default course sequence for students who entered high school in the fall of 2007. All students are automatically enrolled in the college- and careerprep course sequence, and their parents can opt them out. Indiana now has more students completing a college- and career-prep course sequence than any other state, and the state has smaller disparities by race/ethnicity and income. Approximately 89 percent of Indiana's graduates completed the Core 40 or Core 40 with Honors, and the rate is nearly consistent across racial/ethnic groups: Black students (86 percent), Latino students (88 percent), and White students (89 percent). 10 This is far superior to states with an "opt-in" approach, which have lower completion rates and far larger gaps. Since implementing its default course sequence, Indiana has seen a decrease in college remediation rates.11

The Board of Regents should convene a body that includes NYSED, SUNY, CUNY, the Commission on Independent Colleges and Universities (CICU), and leading employers to inform the creation of New York's default course sequence.

COMMITMENT 4

Every student will be able to earn college credit and/or participate in work-based learning opportunities before they graduate from high school



Expand access to AP, IB, dual enrollment courses, proven programs like P-TECH, and employer-based internships and other connections to colleges and employers

As we describe above, Latino and Black students are less likely than their peers to be enrolled in AP, IB, and other advanced courses, and schools that serve the greatest proportion of students of color are far less likely to offer these classes. At the same time, we know that earning college credit while in high school improves students' on-time college completion rates.¹² Access to advanced coursework helps to keep students engaged in school, especially once they complete the basic course requirements for graduation. And real, sustained experience with employers can help students explore a range of highdemand career opportunities and see the relevance of their schoolwork.

We recommend additional state funding and targeting of federal funding to sustain and expand access to AP, IB, dual enrollment courses, Pathways in **Technology Early College High School (P-TECH)** programs (a proven CTE model that results in a high school diploma, Associate's degree, and path to a career over six years), and specific emerging fields like Computer Science. The state should not only increase the number of these courses (across all disciplines in the case of AP, IB, and dual enrollment), but also ensure that teachers receive the support they need to deliver high-quality instruction.

To ensure that all students have access to AP, IB, dual enrollment, and similar opportunities for coursework that can result in college credit, these classes cannot be regarded as only appropriate for a select group of "advanced" students. A recent report by the Education Commission of the States on best practices for dual enrollment describes this principle as setting out to "broaden dual enrollment access to middle-achieving students, including students who are college-ready but uncertain about their post-high school plans, and students who are not college-ready but would succeed in a dual enrollment course with some support."

The same holds true for AP and IB courses. To further this goal, the coalition recommends that the state call on school districts to eliminate unnecessary barriers to enrollment, such as a GPA threshold or teacher recommendation, which serve as filters that often penalize students of color.

Students should also be able to complete work-based internships and similar experiences to prepare for high-demand careers, which requires strong partnerships between schools and employers. To prepare students for success in the workplace, New York should expand access to paid apprenticeships and internships and structured and sustained job shadowing throughout the high school experience.

COMMITMENT 5

High school graduation requirements will match modern-day expectations for college, career, and civic readiness



Update New York's course requirements for high school graduation, including by adding a fourth year of math

New York currently requires students to complete 22 units of credit for high school graduation: 4 in English Language Arts, 4 in Social Studies, 3 in Science, 3 in Mathematics, ½ in Health, 1 in Arts, 1 in just one a Language Other Than English (LOTE), 2 in Physical Education, and 3½ electives.

We recommend that the Board of Regents and NYSED work with SUNY, CUNY, CICU, and employers to

modernize the graduation requirements to better reflect expectations for college-level work and success in high-skill careers.

Changes should **include ensuring that all high school graduates beginning with the Class of 2025 complete four years of math.** Recognizing the importance of multiple pathways for students, the four years of math could culminate with Algebra II or another college-prep pathway, a transition course to fill in gaps so that students are ready for credit-bearing work instead of remediation, or a math-dependent course (such as Physics) for students who have already completed Algebra II or its equivalent.

For students in the graduating Class of 2017, 17 states and Washington, D.C., already require students to complete four units of math prior to graduation and 19 states expect all students to complete Algebra II or its equivalent.¹⁴

In addition, to **increase the use of Computer Science for math or science credit,** the state should continue to consider teacher certification pathways that expand the pipeline to mid-career professionals while ensuring strong preparation and support.¹⁵

CONCLUSION

Across New York State today, our education system denies students of color access to rigorous instruction in a range of courses that will prepare them for success in college, careers, and civic life.

But it does not have to be this way.

Better, more equitable outcomes—for our society and our economy—are within our reach, and we call on state leaders to fulfill these five vital commitments to our students and our future.

A NOTE ON DATA

Unless otherwise noted, all data findings in this report are based on The Education Trust-New York's analysis of unpublished 2016-17 course completion data provided by the New York State Education Department, Buffalo Public Schools, and the Rochester City School District.

The middle school data analysis includes 954 of 999 middle schools (95 percent). The universe is made up of 989 schools with a grade organization code of "1," "2," or "3" in the NYSED school directory and grades 7-8 enrollment, and 10 additional schools that were assigned a grade organization code of "2" or "3" in unpublished course enrollment data shared by NYSED. The following schools were excluded from the analysis:

- **15** District 75 schools in New York City
- 15 schools where grades 7-8 enrollment was less than 25 students
- 9 schools where no course enrollment data was provided
- 6 schools with a grade organization code of "4" in the unpublished course enrollment data provided by NYSED; these schools were included in the high school analysis

High schools with grades 7-8 enrollment, which account for 12 percent of statewide enrollment in grades 7-8 in district-run schools, were excluded from the middle school analysis because the analysis is focused on course access in the middle school grades and course enrollment data is not disaggregated by grade.

In total, the 954 schools in our grades 7-8 analysis capture 86 percent of grades 7-8 enrollment in districtrun schools (including 90 percent of Latino student

enrollment, 86 percent of Black student enrollment, and 84 percent of White student enrollment).

The high school data analysis includes 1,164 of 1,270 high schools (92 percent of schools and 98 percent of grades 9-12 enrollment in district-run schools). The universe is made up of 1,264 schools with a grade organization code of "4," "5," or "6" in the NYSED school directory and grades 9-12 enrollment, and 6 additional schools that were assigned a grade organization code of "4" in unpublished course enrollment data shared by NYSED. The following schools were excluded from the analysis:

- **37** District 75 schools in New York City
- 21 Special Act schools
- 24 schools where 9-12 grade enrollment was less than 50 students
- 24 schools where no course enrollment data was provided

Charter schools are excluded from all analyses in this report.

Data on student enrollment by race/ethnicity and grade level are from the New York State Education Department 2016-17 FINAL school level data by grade, available at: http://www.p12.nysed.gov/irs/statistics/ enroll-n-staff/home.html.

Data on guidance counselors are from New York State Education Department 2016-17 Non-Teaching Professional Statistical Runs, available at: http://www. p12.nysed.gov/irs/pmf/.

Course and student enrollment data was not provided at the statewide or need resource capacity level. The data analysis at both of these levels is derived from the sum of school level data.

ENDNOTES

- ¹We offered anonymity to interview subjects in order to preserve their ability to speak openly and candidly. Where an individual's name has been changed to respect her or his wishes, we have marked the name with an asterisk (*).
- ² Unless otherwise noted, all data in this report are from: New York State Education Department, Buffalo Public Schools and Rochester City School District, unpublished 2016-17 enrollment data. Analysis conducted by The Education Trust–New York. See "A Note on Data" for additional information.
- ³ Because American Indian students represent less than 1 percent of all students in New York State public schools, the remaining data findings do not incorporate their enrollment numbers. However, they are explicitly recognized in this finding because equitable access to college- and career-prep instruction must include all groups of students.
- ⁴ We selected these courses for analysis because they are generally regarded as preparing students for high-demand occupations that pay a family-sustaining wage. We do not have data on whether students completed CTE programs and received industry-recognized credentials, which would provide an even better perspective on equitable access to college- and career-prep coursework in CTE.
- ⁵ For the purpose of this analysis for high schools, we identify the 25 percent of high schools with the highest ratio of course enrollment to total high school students. We then calculate the unweighted average ratio of course enrollment to high school enrollment for these schools. We then multiply statewide Latino grade 9-12 student enrollment by the unweighted average ratio and subtract existing Latino student course enrollment. This process is repeated for Black students and the analysis is the same for middle school courses, except grade 9-12 student enrollment is replaced by grade 7-8 student enrollment.
- ⁶ The College Board, "AP Program Participation and Performance Data 2017," New York State datafile for Public Schools, available at: https://secure-media.collegeboard.org/digitalServices/misc/ap/new-york-summary-2017.xlsx.
- ⁷ For the purpose of this analysis for high schools, we calculate the share of students enrolled in grades 9-12 that are Latino in schools that offer the course of interest. We then multiply total course enrollment by the share of Latino students in grades 9-12 and subtract existing Latino student course enrollment; the result is the number of seats Latino students would need to have proportionate access to the course. This process is repeated for

- Black students and the analysis is the same for middle school courses, except grades 9-12 student enrollment is replaced by grades 7-8 student enrollment.
- ⁸ For the purpose of this analysis, we determined whether a school has a "sufficient" number of counselors using a ratio of 250 students per counselor, consistent with the recommendations of the American School Counselor Association. See: https://www.schoolcounselor.org/asca/media/asca/home/Ratios14-15_1.pdf.
- ⁹ The poll was conducted by Kiley & Company, a Boston-based opinion-research firm, and had a margin of error of plus or minus 3.2 percentage points. It polled public school parents by telephone from across New York State and was conducted in English from November 17-23, 2016, with a demographic selection that closely mirrors the current demographics of New York State public school students. Additional details are available at: https://luxzg93r9wfm26lrln198mbd-wpengine.netdna-ssl.com/wp-content/uploads/sites/5/2016/12/Memo_NY-ESSA-Parent-Poll.pdf.
- ¹⁰ Achieve, Inc., "State Expectations for Graduation Matter—And Differ—More Than You Think," (forthcoming).
- ¹¹ Indiana Commission for Higher Education, "College Readiness Dashboard," available at: http://www.in.gov/che/4553.htm.
- ¹² See, for example: John Fink, Davis Jenkins and Tekeshi Yanagiura, "What Happens to Students Who Take Community College 'Dual Enrollment' Courses in High School?" (New York, NY: Community College Research Center, Teachers College, Columbia University, 2017), https://ccrc.tc.columbia.edu/ media/k2/attachments/what-happens-community-college-dualenrollment-students.pdf.
- ¹³ Jennifer Zinth and Elisabeth Barnett, "Rethinking Dual Enrollment to Reach More Students" (Denver, CO: Education Commission of the States, 2018), https://www.ecs.org/wp-content/uploads/Rethinking_Dual_Enrollment_to_Reach_More_Students.pdf.
- ¹⁴Achieve, Inc. Unpublished analysis based on each state's default graduation requirements (e.g., the Regents diploma in the case of New York State).
- ¹⁵ For state policies on Computer Science credit, see: Jennifer Dounay Zinth, "Computer Science in High School Graduation Requirements" (Denver, CO: Education Commission of the States, 2015), http://www.ecs.org/clearinghouse/01/18/29/11829.pdf.

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