

July 2023

## How Would The New Limits To Class Sizes Affect New York City Schools?

### Executive Summary

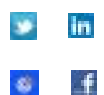
In September 2022 New York State Governor Kathy Hochul signed into law an education bill passed months earlier by the legislature that stipulates maximum class sizes for grades K through 12. Kindergarten through 3rd grade classes are limited to 20 students, 4th through 8th grade classes cannot exceed 23 students, and high school classes cannot exceed 25 students. Large instruction classes, such as physical education and music, are limited to 40 students.

Implementation of these new class sizes is to be phased in over five years starting in September 2023 and compliance across all classes must increase by 20 percent each year. The bill requires the New York City school district, in conjunction with collective bargaining units, to submit a class size reduction plan as part of the Contract for Excellence plan submitted to the New York State Education Department (NYSED) for the 2023-2024 school year. DOE released a draft plan in May and has begun engagement sessions with Community Education Councils. This plan should explain how compliance with the new rules will be achieved, list exemptions approved by the Chancellor and presidents of the collective bargaining units and prioritize schools with higher poverty levels for class size reduction. In following years, the DOE will have to submit annual reports on school progress towards the class size reduction goals established in the plan.

At the request of New York State Senator Robert Jackson, IBO used data from the 2021-2022 school year, the most recent data available to IBO, to assess how the new law could impact the NYC school system. IBO determined how many classes would have been over-enrolled based on the new class size limits among early childhood and elementary classes as well as middle, secondary, and high school classes. All 3-K, Pre-K and special education classes (which IBO interprets as classes only serving students with disabilities, also referred to as self-contained special education classes) have been excluded from this analysis as these classes cannot be counted towards compliance.

Among IBO's findings:

- About half of all schools IBO analyzed would have been over-enrolled. Among over-enrolled early childhood and elementary classes, half were over-enrolled by 3 or fewer students. Among over-enrolled sections in the middle, secondary, and high schools, almost half were over-enrolled by 5 or fewer students. Given these numbers it is unlikely that the city will have to expend funds to address class size for the first two years of the five-year compliance period. However, in order to achieve full compliance, there is a significant need for new teachers in the last three years—2025-2026 through 2027-2028.
- IBO found that higher poverty schools (regardless of school type) were more likely to have lower over-enrollment rates. However, there are schools with relatively higher over-enrollment rates



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that also have higher shares of students experiencing poverty. Given the high share of students experiencing poverty across all New York City schools, measures to decrease class size at any one school is likely to have an impact on students experiencing poverty in that school.

**Teacher need:**

- For the year IBO studied, New York City would have had to hire 17,700 additional teachers to cover the new classes needed, though some of the need could be covered by the existing 7,500 vacancies that are already budgeted. This could cost between \$1.6 to \$1.9 billion annually depending on whether we used the minimum or average salary for newly hired teachers, and when we additionally factor in the 3 percent raise for this year that was negotiated in the new United Federation of Teachers' contract with the City.
- Two thirds of the number and funds needed would be for middle and high school teachers. Although a similar share of middle and high school classes that were over-enrolled based on the new class size limits, the diversity of course offerings and the fact that students attend multiple classes during the day means these grade levels require more teachers when compared with early childhood and elementary schools.
- The significant need for additional new teachers comes at a time when the overall New York City budget seeks to reduce vacancies across agencies including the Department of Education (DOE), a move that likely will need to be reversed.
- The community school districts with the greatest shares of over-enrolled classes (elementary level) and over-enrolled sections (middle, secondary, and high school level) include most of the 7 districts in Queens, districts 20 and 21 in southwest Brooklyn, and district 31 (Staten Island).
- The School Construction Authority maintains its own five-year capital plan to make capital improvements in existing school buildings and build new school buildings and additions. This is a process that is independent of the new class size bill, but may help provide needed capacity. There are plans to add about 24,000 elementary and middle school seats and 4,100 high school seats with completion dates (subject to change) between 2026 and 2028. However, it is not possible to predict how the location and programming of these seats will affect over-enrollment in existing over-enrolled schools. Our cost estimates do not include capital costs.

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## Introduction

On September 8, 2022 Governor Hochul signed [Senate Bill 9460/Assembly Bill A10498](#), which established new, smaller class size limits for kindergarten through 12th grade. Under the new law, which only applies to New York City, class sizes will be limited to 20 students for kindergarten through third grade classes, 23 students for fourth through eighth grade classes, and 25 students for high school grade classes. Physical education and performing group classes will be limited to 40 students for all grade levels. The new law amends the Contracts for Excellence law, passed in 2007, following the resolution of the Campaign for Fiscal Equity case. In that law, class size reduction was one of six eligible uses of Contracts for Excellence funds, provided as a set-aside within Foundation Aid from the state to school districts. This legislation is specifically focused on class size reduction and does not provide additional funding to meet the new requirements.

The New York City Department of Education (DOE) has five years to implement these limits for all kindergarten through 12<sup>th</sup> grade classes. The law requires an additional 20 percent of classes be in compliance each year beginning September 2023 and excluded classes do not count towards this 20 percent completion rate. Some classes are excluded from the law because they already have smaller class size caps, for example 3-K and Pre-K classes and classes serving only students with disabilities (also known as self-contained special education classes), based on the city's contract with the United Federation of Teachers (or UFT), the city's teachers union or students' individualized education plans.<sup>1</sup> Full compliance is expected to be met by September 2028. The New York City Department of Education (DOE) is expected to work closely with the UFT and the principals' union (Council of School Supervisors and Administrators, CSA) to create a class size reduction plan for compliance. The DOE will then report on the city's compliance with the plan annually. The law additionally requires prioritization of high-poverty schools in the city's class size reduction plan.

At the request of New York State Senator Robert Jackson, IBO uses 2021-2022 data in this report to estimate the cost of implementing the class size law on the New York City education system. We examine the number of classrooms that already met the class size limits in that school year to provide an estimate of how many new classes would be needed as well as the potential number of teachers that will need to be hired. We also discuss some potential consequences of implementing the law,

both in terms of a prioritization of high poverty schools and in terms of the implications for course offerings at the middle and high school levels.

## Methodology

To examine how many classrooms would exceed new classroom capacity limits established in the state legislation, IBO first assessed the classroom enrollment across the city's schools, which are grouped into: early childhood (K-2), elementary (generally K-5 or K-6), middle (6-8), secondary (6-12) and high (9-12). Due to the complexities of accounting for grade levels at schools serving grades K-8 and K-12, we excluded these schools. In total, we included 90 percent of schools in District 1- 32 in our analysis.

For early childhood and elementary school students, IBO used student level data from the audited register for the 2021-2022 school year to aggregate students into their individual classes. IBO then grouped each class by the learning program of the students in the class to determine how many teachers would be needed. These programs were either: general education (GE), with one general education teacher, or Integrated Co-Teaching (ICT), which serve both general education and special education students, with one general education teacher and one special education teacher. All classes, regardless of the learning program, were assigned a cap based on the grade level. As mentioned, 3-K, pre-K and self-contained special education classes are not covered by the new regulations and were excluded from IBO's analysis. A class was categorized as over-enrolled if the classroom was above the new regulation standard. IBO then calculated an over-enrollment rate for each school by calculating the share of over-enrolled classrooms among all relevant classrooms in the school.

In addition, IBO completed a similar analysis with the assumption that early childhood and elementary school students from similar programs (for example GE or ICT) could be transferred between similar classes and grades in the same school to comply with new class size regulations.<sup>2</sup> Classes with two students or less were not included in this part of the analysis because a large part of them were either homeroom or hospital classes that students cannot be transferred into.

Evaluating the level of over-enrollment in middle schools and high schools was similar, although students in these higher grades do not stay in one classroom as they do in earlier grades. IBO analyzed 2021-2022 course section

data to determine which departments and sections would have been over-enrolled among these grades that year. Because middle and high school students have more choice over their curriculum and class selection by period, it is important to keep in mind that students enroll in multiple courses and some courses in the same school have multiple sections to accommodate students who enroll. Therefore, students may be in more than one over-enrolled section in their school. Also, because many classes for middle and high schools are course-specific within a subject area—for example a school’s science department may offer Biology, Chemistry, and Physics courses—IBO does not assume that students from sections classified as over-enrolled could be moved to under-enrolled sections as we do for elementary school grades, even within the same program type (GE or ICT), grade level, and subject. While combining students in this way is an option for principals to reduce the number of new sections required to comply with the legislation, that option may well reduce the variety of courses they can offer in a given subject area.<sup>3</sup> Additionally, our analysis likely provides an upper bound for new classes and teachers needed if enrollment continues to decline.

### Over Enrollment of Classes or Sections

**Early Childhood and Elementary Schools.** Overall, 53 percent, or 6,900 classes out of 13,000 GE and ICT classes in early childhood and elementary schools, were over-enrolled this school year based on the new class size limits. Of 661 early childhood and elementary schools studied, only 47 schools would have had no classes over-enrolled under the new regulations. Almost all early childhood and elementary schools, the remaining 614 schools, would have had classes that were over-enrolled, ranging from 4 percent of classes within a school to 12 schools in which all classes were over-enrolled. A quarter of the over-enrolled schools had 30 percent or lower of their classes over-enrolled; half had 51 percent or less and three quarters had 72 percent or less of their classes over-enrolled. Eight were early childhood schools and 606 were elementary schools. About one-tenth of early childhood and elementary school students (10 percent or 26,000 students) were over-enrolled in their classrooms.

Among all the early childhood and elementary classes that would have been classified as over-enrolled, just over half (52 percent), were over-enrolled by three or fewer students. Another quarter were over-enrolled by four or five students. The last quarter of classes were over-enrolled by six or more students. On average over-enrolled classes were over-enrolled by about four students. There were classes that would have

Grade	Total Classes	Classes Not Over-enrolled	Over-enrolled Classes	Share of Classes Over-enrolled
Kindergarten	2,299	1,165	1,134	49.3%
1	2,137	896	1,241	58.1%
2	2,142	853	1,289	60.2%
3	2,109	713	1,396	66.2%
4	2,125	1,268	857	40.3%
5	2,137	1,194	943	44.1%
6	23	13	10	43.5%
<b>Total</b>	<b>12,972</b>	<b>6,102</b>	<b>6,870</b>	<b>53.0%</b>

SOURCE: IBO analysis of grade and official class in Audited Register data.  
 NOTES: District 1-32 schools only. 3K, PreK and Self Contained Special Education classes are excluded.

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exceeded the new limits by as many as 16 students. These instances were rare, however, as only 3 percent of over-enrolled classes were over-enrolled by 10 or more students across 88 schools. Over-enrolled classes were more likely to be serving first grade through third grade and ICT classes.

Of the classes that would have been classified as over-enrolled under the new legislation, third grade classes represent the highest share, 20 percent, followed by second grade, 19 percent and first grade, 18 percent. Within these three grades, over 50 percent of the classes were over-enrolled. For third grade, 66 percent of GE and ICT classes were over-enrolled as were 60 percent of second grade classes and 58 percent of first grade classes. For these grades, ICT classes were more often over-enrolled, closely followed by GE classes. This trend remains for grades four and five, but not for kindergarten.

There are some considerable differences between the UFT contractual size limits and those of the current class size bill, except for kindergarten classes. For kindergarten the UFT contractual class size limit is 25 and represents a smaller difference (five students) from the new class size limits when compared with other grades. We found a slightly smaller share of kindergarten classes were over-enrolled (49 percent). For first through third grades, the UFT contractual class size limit is 32, which is a difference of 12 students compared with the new legal class size limit of 20. This is the largest difference between the UFT contractual limits and the new legal limits at any grade level. These grades had higher levels of enrollment over statutory limits in 2021-2022 when compared with fourth and fifth grades. For these latter grades, the UFT limit is 32, representing a

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difference of nine students with the new limits of 23.

After moving students between classes of the same type (for example, from one second grade ICT class to another second grade ICT class within the same school) the number of elementary schools with over-enrolled classes falls only slightly from 614 schools to 602 schools; the number of students in overenrolled classes falls from 26,000 to approximately 24,600 students or, 9 percent of all students, across all grades in GE and ICT programs. Based on class size caps for each grade, almost 4,000 new classes would be needed in the 2021-2022 school year to comply with the new regulations. About 2,000 would be GE classes and 1,900 would be ICT classes. On average, these new classes would accommodate between four to seven students depending on the class size limits and whether these classes were used to only accommodate over-enrolled students versus splitting the over-enrolled classes evenly using the new class.

**Middle and High Schools.** Among the 725 schools studied, only 33 schools would have had no sections over-enrolled under the new legislation in the 2021-2022 school year. The remaining 692 schools range from a low of less than one percent of over-enrolled sections to the one school that would have had over 90 percent of its sections over-enrolled. For more context, one quarter of these schools had about 25 percent or fewer over-enrolled sections, half of them had about 42 percent or fewer over-enrolled sections, and three-quarters of them had about 57 percent or fewer over-enrolled sections.

In total, almost 47 percent of the roughly 129,600 sections studied in these schools would be over-enrolled. Among the middle, secondary, and high school sections studied that would have been classified as over-enrolled, almost half (48 percent), were over-enrolled by five or fewer students, and almost 92 percent of those sections were over-enrolled by nine or fewer students. On average over-enrolled sections were over enrolled by about six students, with seven being the most common number of over-enrolled students.

Overall, secondary schools would have had the lowest over-enrollment rate of all school types at 41 percent. About 45 percent of sections in high schools would have been over-enrolled, while 52 percent of middle schools would have been over-enrolled. There is variation across grade levels in these schools with the lowest over-enrollment rate (39 percent) for twelfth grade ranging up to a maximum of about 56 percent for eighth grade sections. The number of over-enrolled sections ranged from almost 6,900 sections

in twelfth grade to almost 10,000 sections in 10th grade.

The degree to which sections in middle and high school were over-enrolled in the past based on the new statutory class size limits are likely due to the influence of student choice in picking their courses and specific course sections rather than the UFT contractual class size limits. However, it is worth noting that in grades six through eight, the UFT contractual size limits are 30 for title I schools, and 33 for non-title I schools—a difference of seven to ten students from the new class size caps. In grades 9 through 12, the limit is 34, a difference of nine students from the new cap. In 2021-2022, more high school sections would have been over-enrolled compared with middle school sections. Our estimates of over-enrolled courses likely capture the influence of student choice—over-enrolled courses are likely those where teachers or subjects are more popular than others, attracting a larger number of students.

IBO estimates that across 692 middle, secondary, and high school schools with over-enrolled sections, roughly 26,500 additional sections would be needed to accommodate all students under the new legislation. This does not translate into a one for one need for new classrooms as it does for early childhood and elementary schools. At the middle and high schools grades we assume a single teacher within a school can cover five sections in a day, and so an extra classroom covered by one teacher equates to five sections. The four core subjects of English, Math, Science, and Social Studies would need about 4,600 to 5,100 new sections each and Languages Other Than English (LOTE) would need almost 2,500. The need for other subjects would be almost 1,600 for physical education, over 1,300 for health (unless physical education and health can be taught by many of the same teachers, which would reduce this number), about 1,000 for technology, and under 250 each for all other subjects. GE sections would need to be expanded by roughly 14,400 while ICT less so, at about 12,100.

### Estimating Teacher Need

In order to comply with the new regulations, schools may have to hire new teachers for new classes. Schools may also have to find new physical space to accommodate the student population in more classrooms. It is also possible that enrollment at individual schools may be reduced to avoid hiring new teachers or finding new space, although exemptions are written into the new law to try to prevent this from happening as will be discussed below. IBO analyzed the new number of classes needed per school and the number of teachers needed to staff these new



**The Whole New York City Public School System May Need Approximately 17,700 Teachers to Meet the New Class Size Regulations**

	Total Teachers	
	General Education	Special Education
Early Childhood and Elementary School Teacher Need	3,900	1,900
Middle, Secondary and High School Teacher Need	7,500	4,400

SOURCE: IBO analysis of official class for early education and elementary schools and DOE course section, section and subject properties, and student grade code for middle, secondary and high schools.

NOTE: District 1-32 schools only.

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classes based on our analyses of over-enrolled classes and sections. Our estimates do not factor in scheduling constraints, nor a requirement to hire additional teachers for coverage reasons.<sup>4</sup> The total annual cost to hire 17,700 additional teachers needed to meet the class size caps for different grade levels could range from \$1.6 billion to \$1.9 billion, with two thirds of the cost going towards hiring at middle, secondary, and high schools. This estimate factors in salary (including the 3 percent increase for this year that was negotiated in the new United Federation of Teachers’ contract with the City), and a fringe rate for teachers of 44 percent, which includes costs such as health insurance and pension contributions.

As described above, in 2021-2022 the NYC school system would have needed 2,000 GE classes and 1,900 ICT classes to accommodate the new class sizes in early childhood and elementary schools. Because ICT classes require both a general education (GE) teacher and a special education (SE) teacher, the number of teachers required could potentially be 3,900 GE teachers – 2,000 GE teachers needed for the GE classes plus the 1,900 GE teachers for the ICT classes – and 1,900 SE teachers for ICT classes.

The total cost to add 3,900 GE teachers and 1,900 SE teachers at early childhood and elementary schools could range from \$526 million to \$621 million annually, depending on whether the minimum or average salary for newly hired teachers is used. The average salary at these schools for both GE and SE teachers with five or less years of experience was about \$74,200 this year (2022-2023), assuming a 3 percent increase for UFT employees. Similarly, the minimum salary for newly hired GE and SE teachers was \$62,800.

Similarly, for middle, secondary and high schools, 14,400 of the 26,500 sections that would have been needed under this legislation were GE classes and about 12,100 were ICT classes. Assuming any teacher can teach a maximum of five periods per day as per the UFT contract, and that none of these teachers can be shared across schools, the DOE would need 7,500 GE teachers and 4,400 SE teachers at these schools.

The total salary cost to add the roughly 7,500 GE teachers and 4,400 SE teachers needed in middle, secondary, and high schools, including fringe costs and the 3 percent increase for UFT employees, could range from \$1.1 billion to \$1.3 billion annually, again depending on whether the minimum or average salary for newly hired teachers is used. For select middle, secondary, and high school teachers with five or fewer years of teaching experience this year (2022-2023), the minimum salary for both types of teachers was about \$62,800, while the average salary was about \$73,100.

**Poverty Levels at Over-Enrolled Schools**

The new law specifies that schools serving a higher share of students experiencing poverty be prioritized for class size reduction. To examine the impact of this prioritization, IBO grouped schools based on their poverty rates and then assessed the degree of over-enrollment. The DOE classifies a student as experiencing poverty if they qualify either for services administered through the Human Resources Administration or for a free or reduced-price lunch, and the school poverty rate is the share of its students who are experiencing poverty.

IBO divided schools into three equal groups based on their poverty rate. IBO also calculated the share of classes that would have been over-enrolled in a particular school under the new regulations, referred to as the over-enrollment rate. Both metrics were calculated separately for early childhood and elementary schools and for middle, secondary, and high schools because of the different programming and effects of over enrollment.

IBO found that higher poverty schools (regardless of school type) were more likely to have lower over-enrollment rates when compared to lower poverty schools. However, there are schools with higher over-enrollment rates that also have higher shares of students experiencing poverty. As the legislation is written, schools with larger shares of students in poverty should be targeted for school class size reduction first. Schools with lower poverty rates but high over-enrollment rates may be

targeted for class size reduction towards the end of the five-year implementation period.

Among the entire early childhood and elementary school population, 72 percent of students were experiencing poverty in the 2021-2022 school year. Of the third of elementary schools with the highest relative poverty rates:

- 42 percent had low levels of over enrollment (defined as 4 percent to 36 percent of classes over-enrolled under the new law);
- 31 percent were somewhat over-enrolled (defined as 37 percent to 66 percent of classes over-enrolled under the new law);
- 17 percent had high levels of over enrollment (defined as 67 percent to 100 percent of classes over-enrolled under the new law); and
- the remaining 10 percent had no over-enrolled classes.

Approximately half, 49 percent, of the most over-enrolled early childhood and elementary schools were lower poverty schools. In contrast, 45 percent of schools with lower levels of over-enrollment were higher poverty schools. This is not to say that the most over-enrolled elementary schools do not have large populations of students experiencing poverty; the lower poverty group includes schools with 5 percent of students experiencing poverty up to 72 percent experiencing poverty.

When looking at middle, secondary, and high schools, IBO found that over-enrollment rates decreased as average poverty shares increased, like the trends in elementary and early childhood schools. The average poverty rate among students in these schools was 73.6 percent in 2021-2022. Of the third of middle, secondary and high schools with higher rates of students experiencing poverty:

- 43 percent had low levels of over enrollment (defined

<b>52 Percent of Higher Poverty Early Childhood and Elementary Schools Had Low or No Over Enrollment</b>					
Poverty Level	Not Over-enrolled	Over-enrollment Level			Total
		Low	Medium	High	
Lower (5.5%- 71.6%)	9	43	60	108	220
Medium (71.6%- 86.7%)	16	69	77	59	221
Higher (86.9%- 99.5%)	22	92	68	38	220
<b>Total</b>	<b>47</b>	<b>204</b>	<b>205</b>	<b>205</b>	<b>661</b>

SOURCE: IBO analysis of official class and student poverty in Audited Register data.  
NOTE: District 1-32 schools only.

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<b>Exactly 50 Percent of Higher Poverty Middle, Secondary, And High Schools Had Lower or No Over Enrollment</b>					
Poverty Level	Not Over-enrolled	Over-enrollment Level			Total
		Lower	Medium	Higher	
Lower (15.9%- 77.1%)	2	41	80	118	241
Medium (77.2%-86.3%)	14	85	77	66	242
Higher (86.4%- 99.2%)	17	104	74	47	242
<b>Total</b>	<b>33</b>	<b>230</b>	<b>231</b>	<b>231</b>	<b>725</b>

SOURCE: IBO analysis of DOE course section, section and subject properties, student grade code, and student poverty data.  
NOTE: District 1-32 schools only. See end note 3 for details of selection criteria and methodology.

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as 0.4 to 30.30 percent of sections over-enrolled under the new law);

- 31 percent were somewhat over-enrolled (defined as 30.34 to 51.15 percent of sections over-enrolled under the new law);
- 19 percent had high levels of over enrollment (defined as 51.22 to 90.38 percent of sections over-enrolled under the new law); and
- the remaining 7 percent had no over-enrolled classes.

Just over half, 51 percent, of the 231 schools with higher levels of over-enrolled classes (with 51.22 percent or more of their classes) were lower-poverty schools. In contrast, 45 percent of the 230 schools with lower levels of over enrollment were higher-poverty schools. Of the higher poverty schools, 19 percent also had higher levels of over enrollment.

As the New York City public school student population has a large number of students experiencing poverty, reducing class size will benefit large populations of these students. If funding is limited however, there are schools with high levels of over-enrollment that may have to wait longer for support in reducing class size due to their lower share of students experiencing poverty.

### Impact on School Districts

IBO also examined class size by geographic school district. For each district, IBO calculated the number of classes that would have been over-enrolled under the new law. For early childhood and elementary schools, IBO found that districts in Queens would have had the highest over-enrollment rates based on 2021-2022 school year class sizes. In 13 out of 32 school districts, more than 50 percent of classes would have exceeded the new class size limits. These

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districts included: all seven Queens districts (districts 24 through 30), districts 20 through 22 in Brooklyn, district 8 in the Bronx, district 2 in Manhattan and the Staten Island School district (district 31). District 24 in Queens would have had the highest share of over-enrolled classes. Their share of over-enrolled classes is 76 percent. Based on the 2021-2022 data, the number of new classes needed for early education and elementary schools would range from 370 in district 31 (Staten Island) to 19 in district 4 in Manhattan.

District 24 in Queens would have had the highest number and highest share (14 percent) of students in over-enrolled classrooms. Staten Island, districts 25 and 28 in Queens and district 20 in Brooklyn were the other districts with the greatest number of students in classrooms that would have exceeded the new size limits. Districts 1 and 4 in Manhattan and district 16 in Brooklyn had the lowest number of students over-enrolled in early education and elementary classes. For more information on district level over enrollment in early childhood and elementary schools please see the [Appendix](#).

For middle, secondary, and high schools, the over-enrollment rate of sections across all schools in each district would have been over 50 percent in nine of all 32 school districts, comprised of six of the seven Queens districts, districts 21 and 22 in Brooklyn, and Staten Island. Districts range from a high of just over 2,600 additional sections needed in district 2 in Manhattan down to a low of about 100 in district 23 in Brooklyn. It is important to note that district 2 is one of the largest districts in terms of enrollment and district 23 is among the smallest. The 16 districts (half of the 32 school districts) with the lowest over-enrollment rates range from 13.7 to 41.6 percent.

See the [Appendix](#) for tables of district-based statistics.

## Capital Needs

The construction of new schools could help reduce class sizes in school districts although it is unclear if new buildings would completely solve the problem given the concentration of over-enrollment in certain grades and programs. As a result, our cost estimate does not include any capital costs.

The School Construction Authority's most recent 2020-2024 capital plan released in February 2023 reports on the school building plans in progress. There are 59 school construction projects with dedicated sites. This means that their addresses, whether as annexes or additions to pre-existing schools or as new locations for new schools,

have been identified. These projects are expected to add about 24,000 elementary and middle school seats to 20 of 32 school districts and 4,100 seats to high schools in Brooklyn and Queens. They are currently scheduled to be completed over the next five years. There are also 27 elementary and middle school projects planned for 14 districts and a high school each in Queens and Staten Island. These projects will potentially add about 15,000 elementary and middle school seats and 1,700 high school seats. The sites for these locations have not yet been identified. These projects have projected completion dates between calendar years 2026 and 2028. These dates can change between plan amendments.

Most recently, five school projects funded by the previous capital plan are scheduled for completion in September 2023. They include two elementary schools in district 15, an addition to an elementary school in District 28 and a middle school in District 30. There is also an annex for a high school in Queens. Together these add 2,600 seats to the school system.

It is difficult to assess how new projects and seat additions will impact class size issues in the districts because there are no class, specific grade level, or programs assigned to the seats created. These projects include additions to existing buildings as well as brand new buildings. School location, number of seats available by grade and program along with student and parental choice will determine how students will be spread out across the district. Individual schools may still have to accommodate over-enrolled students despite increased capacity due to new construction. There are also 17 districts with no new elementary and middle school construction planned that have over-enrolled students within the district (districts 1 and 3-6 in Manhattan and districts 16-19, 23 and 32 in Brooklyn). In the most recent plan, the School Construction Authority dedicates \$605 million to class size reduction efforts—a category that pre-dates the State class size bill—out of a total of \$19.4 billion for the five-year plan (2020-2024).

## Compliance Plans and Exemptions Under the Class Size Law

The DOE, together with the teachers' and principals' unions, is required to formulate a class size reduction plan for all schools and submit this plan as part of the Contract for Excellence plan submitted to the New York State Education Department (NYSED). In May 2023, the DOE published a draft Class Size Reduction Plan and began a



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public engagement process. From the original 2007 law, the Contract for Excellence plan describes how the DOE intends to use these funds (a set-aside within the district's Foundation Aid amount) that are dedicated specifically to one of six eligible program areas: class size reduction, student time on task (including a lengthened school day), teacher and principal quality initiatives, middle school and high school restructuring, full-day pre-kindergarten, and model programs for multilingual language learners.<sup>5</sup> The new law is focused solely on class size reduction and the plan will detail the methods by which schools are reducing class size. This can include the construction of classrooms or school buildings and hiring new teachers. A school's plan can include reducing its student to teacher ratio within a classroom (adding an extra teacher), but only as a temporary measure as the emphasis is on reducing the number of students in a single class.

The plan will also list any exemptions to class size targets. Lack of space, an oversubscribed school, license area shortages and severe economic distress are acceptable reasons for requesting an exemption to lower class sizes. These exemptions must be approved by the presidents of the teacher and principal unions and the DOE chancellor. If these parties cannot come to an agreement on the exemptions over a period of thirty days an arbitrator will settle the dispute. Higher class sizes for elective and specialty classes can be negotiated by the teachers' union if a majority of school staff approve the exemption. Any reference to space constraints must be accompanied by information on the capital budget to ensure capital funding is targeted towards reducing class sizes where needed.

In the years following the Contracts for Excellence class size reduction plan, New York City will have to submit an annual report each in November on its progress towards implementing the plan. This report will: identify the schools receiving class size reduction funding; report the amount of Contracts for Excellence funds each school receives; describe the class size reduction plan at the school level; and report on a variety of class size related metrics for the year before funding was received, as well as during the years funding is received. These metrics include the number of new classes, the number of classroom teachers, and the student to teacher ratios. As of the publication of this report, the state has not added any funds to reduce class size. Funds distributed through the Contracts for Excellence were designed to be spent on class size reduction, among other options. Even if all Contracts for Excellence funds were to be used to reduce class size, it is unlikely they would cover all the costs associated with complying with the new law.

The DOE will also have to report on student enrollment and class sizes for the current school year as well as project these numbers for the following school year for each grade in each school. This annual report will include information from the capital budget that shows how many classrooms will be built and where to provide the classes needed as part of the class size reduction plan. Schools that are not making the progress outlined in the class size reduction plan will be identified and a plan for bringing them into compliance will be in the annual report.

In November 2024 the New York City school district will be required to provide a financial impact statement on class size reduction that can recommend a pause in the class size reduction plan. This will not, however, allow for an increase in class sizes.

New York City risks losing funds distributed through Contracts for Excellence if the state education commissioner determines that the annual reports show a lack of compliance with the class size reduction plan. In the year the class size reduction plan is submitted the state will only release one third of the Contract for Excellence funds. The last two thirds of these funds will be released upon approval of the annual report on class size reduction measures released in November the same year. In subsequent years the state can refuse to release any of the Contract for Excellence funds if the class size reduction measures mentioned in the previous year's reports are not fully implemented. For next school year, Contracts for Excellence funds amount to \$756 million for the City.

### **Potential Consequences of Class Size Implementation**

The DOE and unions will have to decide how to comply with the new class size regulations using a variety of options that range in expense and difficulty, and those decisions may have unintended consequences. School administrators may opt to hire more teachers to reduce class sizes. However, this is contingent upon having the funds to hire new teachers and the space to hold a new class. Administrators may also choose to restrict access to popular courses or classes to comply with the law. This impacts middle and high school programs since students have more control over their course choices at these grade levels. Exemptions are written into the law to prevent the reduction of course offerings, but they also create a bureaucratic burden that administrators may want to avoid—which essentially may lead to either limited course offerings or fewer students able to enroll in them. Schools, or DOE central administration, may also choose to reduce

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their enrollment overall. Given the inequitable access to highly coveted programs, the reduction in enrollment at these programs may have an inequitable impact on student access to these programs.<sup>6</sup> In general, the various implementation decisions made to lower class size will affect the benefits for students.

Research into the effect of smaller class sizes on student achievement does not have a clear conclusion as to the benefits on a general scale,<sup>7</sup> but there is some evidence that certain populations benefit under specific circumstances. Grade level, student demographics, income level, student achievement level, and teacher quality are some of the metrics that may contribute to the impact of class size. There is research that suggests students from lower income backgrounds and students of color benefit from lower class sizes, although these effects may be negligible if less experienced or unqualified teachers are hired to teach these new classes.<sup>8</sup> This latter finding is of particular concern given the number of teachers that the DOE will need to hire to comply with the class size bill. Hiring new teachers with less experience may undermine the impact.<sup>9</sup> It is also unclear if the DOE will be able to hire the numbers of teachers necessary to fulfill the class size requirements given national reports on teacher shortages, or that they have the experience necessary to meet the various needs of students across the city.

The need to hire significantly more teachers comes at a time when the Administration plans to reduce DOE's budgeted headcount over the next few years, a decision that will likely need to be reversed in order to comply with the law. Currently there are approximately 11,000 pedagogical vacancies. These vacancies encompass teachers along with other school educational staff such as principals and paraprofessionals. The current budget plan reduces the total pedagogical headcount by approximately 3,500 positions from 2023 to 2026. Accounting for this reduction in terms of existing vacancies and based on current total headcount levels, that could reduce vacancies to 7,500, constraining the DOE's ability to hire the 17,700 additional teachers IBO estimates will be needed. The city may have to find the funding in other areas to meet the teacher need required by the class size mandate.

The class size bill also prioritizes schools with high poverty levels. These schools may therefore see resources to fund class size reductions ahead of other schools throughout the five-year phase in period starting in September 2023. Some research suggests younger students from lower income backgrounds may benefit more from lower class

sizes than students from higher income backgrounds.<sup>10</sup> The impact these new class size bills have on lower income students in New York City may vary however as schools with higher shares of low-income students are less likely to be over-enrolled based on the new class size bill.

In some districts new schools may help alleviate overcrowding, but this also depends on the programs available and a family's decision to send their children to one school over another. The affect class size has on student choice at the higher grade levels is concerning if it leads to schools limiting the variety of course offerings. It may be less costly for some schools to reduce the number of students they accept to comply with the class size rules, despite the loss of funding that follows each additional student. This may make desirable schools even more difficult to access. Often, access to desirable schools affects under-resourced populations the most.

## Conclusion

While our analysis suggest that the City will likely be in compliance with the law in the first two years, administrators and union leaders at schools with over-enrolled classrooms will have to decide how to comply with the new class size regulations after that—beginning in the 2025-2026 school year. The significant need for additional teachers will likely require the Administration to reverse recent reductions to budgeted headcount and while the DOE will also be grappling with the exhaustion of federal COVID relief aid. Although a similar share of middle, secondary, and high schools are over-enrolled (47 percent) compared with early childhood and elementary schools (about half), the sheer number of course sections in middle, secondary, and high schools means that they contribute a disproportionate share of the total cost of new teachers (two thirds).

Schools experiencing lower levels of over-enrollment are more often schools with higher shares of students experiencing poverty. Since the law prioritizes high poverty schools, this could mean that schools with a larger number of over-enrolled classes will wait longer for the resources required to reduce class sizes.

Over the prior two school years, enrollment has been declining, which should lead to smaller class sizes. However, declines were most pronounced in the elementary grades (see IBO's recent analysis on enrollment changes in the past two years here) so the need for more teachers at middle, secondary, and high schools—which we find contribute to most of the teacher need—will likely remain a concern.

Appendix

District-Level Statistics for Early Childhood and Elementary Schools									
Borough	School District	Early Childhood and Elementary Schools	Total Classes	Over-Enrolled Classes	Over Enrollment Percent	Classes Needed	GE Teachers Needed	SE Teachers Needed	Total Teachers Needed
Manhattan	1	12	150	31	20.7%	22	22	12	34
	2	30	578	296	51.2%	171	171	75	246
	3	13	246	80	32.5%	52	52	26	78
	4	10	113	21	18.6%	19	19	13	32
	5	11	101	27	26.7%	25	25	12	37
	6	19	284	107	37.7%	78	78	39	117
The Bronx	7	14	210	54	25.7%	44	44	25	69
	8	21	393	205	52.2%	140	140	70	210
	9	28	491	171	34.8%	117	117	56	173
	10	34	742	355	47.8%	202	202	98	300
	11	25	510	257	50.4%	155	155	71	226
	12	19	334	137	41.0%	88	88	43	131
Brooklyn	13	16	235	100	42.6%	51	51	24	75
	14	18	274	69	25.2%	45	45	23	68
	15	26	689	330	47.9%	139	139	66	205
	16	12	134	31	23.1%	28	28	18	46
	17	18	250	77	30.8%	49	49	28	77
	18	11	178	43	24.2%	26	26	13	39
	19	22	355	149	42.0%	97	97	51	148
	20	25	767	496	64.7%	206	206	92	298
	21	14	332	224	67.5%	122	122	56	178
	22	24	506	279	55.1%	165	165	77	242
	23	10	111	36	32.4%	32	32	18	50
32	11	158	74	46.8%	55	55	22	77	
Queens	24	26	831	630	75.8%	284	284	128	412
	25	22	593	426	71.8%	217	217	94	311
	26	21	382	266	69.6%	170	170	77	247
	27	28	540	358	66.3%	212	212	98	310
	28	27	596	388	65.1%	226	226	105	331
	29	21	380	212	55.8%	129	129	55	184
	30	26	556	318	57.2%	172	172	78	250
Staten Island	31	47	953	623	65.4%	370	370	198	568
<b>Total</b>		<b>661</b>	<b>12,972</b>	<b>6,870</b>	<b>53.0%</b>	<b>3,908</b>	<b>3,908</b>	<b>1,861</b>	<b>5,769</b>

SOURCE: IBO analysis of official class in audited register data and school district in LCGMS.

NOTE: District 1-32 school only.

New York City Independent Budget Office

**District-Level Statistics for Middle, Secondary, and High Schools**

<b>Borough</b>	<b>School District</b>	<b>Middle, Secondary, and High Schools</b>	<b>Total Classes</b>	<b>Over-Enrolled Classes</b>	<b>Over Enrollment Percent</b>	<b>Classes Needed</b>	<b>GE Teachers Needed</b>	<b>SE Teachers Needed</b>	<b>Total Teachers Needed</b>
Manhattan	1	10	1,294	238	18.40%	138	52	30	82
	2	81	11,960	5,258	44.00%	2,613	777	456	1,233
	3	24	3,724	1,289	34.60%	664	189	124	313
	4	10	1,478	503	34.00%	277	88	58	146
	5	12	1,433	436	30.40%	261	85	57	142
	6	20	2,532	947	37.40%	509	157	95	252
The Bronx	7	23	2,723	852	31.30%	532	179	132	311
	8	29	3,524	1,425	40.40%	778	231	157	388
	9	39	4,537	1,457	32.10%	913	297	208	505
	10	42	7,086	2,691	38.00%	1,301	376	229	605
	11	31	4,315	1,993	46.20%	950	283	184	467
	12	25	2,780	995	35.80%	625	195	136	331
Brooklyn	13	22	3,549	1,770	49.90%	700	208	105	313
	14	18	2,598	1,194	46.00%	588	172	115	287
	15	22	3,830	1,823	47.60%	801	223	166	389
	16	10	851	268	31.50%	175	66	54	120
	17	27	3,240	1,291	39.80%	687	216	145	361
	18	20	1,904	471	24.70%	298	111	91	202
	19	29	3,091	1,287	41.60%	710	231	178	409
	20	13	6,229	3,028	48.60%	929	234	102	336
	21	18	5,657	3,056	54.00%	1,168	287	142	429
	22	13	4,047	2,295	56.70%	795	199	97	296
	23	13	1,157	158	13.70%	97	40	29	69
32	14	1,674	639	38.20%	370	115	75	190	
Queens	24	23	6,675	3,294	49.30%	1,220	317	145	462
	25	20	4,844	2,762	57.00%	1,046	271	134	405
	26	11	5,415	3,343	61.70%	1,143	264	112	376
	27	24	5,435	3,074	56.60%	1,254	331	206	537
	28	23	5,811	3,614	62.20%	1,490	370	184	554
	29	18	2,581	1,327	51.40%	686	200	123	323
	30	19	5,628	3,119	55.40%	1,119	287	147	434
Staten Island	31	22	8,013	4,721	58.90%	1,650	409	223	632
<b>Total</b>		<b>725</b>	<b>129,615</b>	<b>60,618</b>	<b>46.80%</b>	<b>26,487</b>	<b>7,460</b>	<b>4,439</b>	<b>11,899</b>

SOURCE: IBO analysis of DOE school district, course section and student grade code data.

NOTE: See end note 3 for details of selection criteria and methodology.

*New York City Independent Budget Office*





## Endnotes

<sup>1</sup>Prior to this bill, class sizes were regulated by the city's contract with the United Federation of Teachers (UFT), which are limited to 18 students for 3-K and pre-K classes. For general education and Integrated Co-Teaching (ICT, classes serving students with disabilities alongside their peers without disabilities) UFT class sizes are limited to 25 for Kindergarten, 32 for elementary grades, 33 for intermediate schools (or 30 for Title I schools); and 34 for high schools. Special education classes that only serve students with disabilities (self-contained classes) also have smaller class size caps of 6, 8, 12, or 15 students as prescribed in students' individual education plan (IEP).

<sup>2</sup>Classes with two students or less were not included in this part of the analysis because a large part of them were either homeroom or hospital classes that students cannot be transferred into. Homerooms are for marking students present. Hospital classes refer to programs for hospitalized students

<sup>3</sup>IBO limited the middle and high schools in the analysis to those District 1-32 schools the DOE classified as middle schools, high schools, and secondary schools, the latter of which serve grades 6-12, thus excluding K-8 and K-12 schools. Within those schools, IBO kept only general education and Integrated Co-Teaching (ICT) sections, removing Self-Contained Special Education sections from the analysis, as they will not be affected by the legislation. IBO also removed Guidance, Career Development, and "Functional Codes" sections, as well as those we believe would not be included in the DOE's Class Size reporting—generally classes that are too large or small and thus are probably data anomalies, as well as certain course delivery methods—specifically: research courses, science labs, independent study, extended day, and internship/work study.

<sup>4</sup>For this analysis, we are treating all teachers for 6<sup>th</sup> through 12<sup>th</sup> grades as equal regarding licensing, etc., which may not always be the case in practice. Note also that the teachers needed cannot be calculated by dividing the number of needed sections by five and rounding upwards, since that calculation needs to be done at the school, grade level, program type (GE or ICT) and department (e.g. English, math, science, etc.) level. Thus, in this case, the needed number of teachers totaled across middle and high schools is higher than would be calculated as mentioned. Teachers with titles of "Teacher" and "Teacher Special Education", with a "Regular" PMS Status, in a school community (vs. Office, etc.) are included, though excluding any license description including the term "COMMON BRANCH" to remove teachers normally teaching early childhood or elementary schools.

<sup>5</sup>See NYSED website for more details on eligible uses of funds under the 2007 law: [Office of Educational Management - NYSED: Contracts for Excellence: Research and Guidance](#).

<sup>6</sup>Cohen, Danielle. "NYC School Segregation Report Card: Still Last, Action Needed Now". UCLA Civil Rights Project. June 2021.

<sup>7</sup>Handel, Danielle V. and Eric A. Hanushek. "U.S. School Finance: Resources and Outcomes." NBER Working Paper No. 30769. December 2022.

<sup>8</sup>Krueger, A. B. (1999). Experimental Estimates of Education Production Functions. *The Quarterly Journal of Economics*, 114(2):497-532.

<sup>9</sup>Jepsen, C., & Rivkin, S. (2009). Class Size Reduction and Student Achievement: The Potential Trade-off Between Teacher Quality and Class Size. *Journal of Human Resources* 44(1): 223–50.

<sup>10</sup>Krueger, A. B. (1999). Experimental Estimates of Education Production Functions. *The Quarterly Journal of Economics*, 114(2):497-532.

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