



New York State Comptroller  
**THOMAS P. DiNAPOLI**

# Higher Education in New York

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Evaluating Competitiveness  
and Identifying Challenges

March 2024

# Message from the Comptroller

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March 2024

New York has long benefited from an outstanding network of colleges and universities – ranging from large public university systems, Ivy League institutions, smaller liberal arts schools and highly specialized community colleges. Across the State, our institutions of higher education serve as anchors of our communities: employing tens of thousands of people, conducting world-class research and development, attracting new residents to our State, training a highly-skilled workforce, and bringing vibrancy to neighborhoods.

A robust higher education sector is critical to our State and requires that our colleges and universities continue to attract both students and investment; however, our institutions of higher education face an increasingly competitive environment. The college-age population has been dropping as a share of the total population nationwide and enrollments have decreased over the last decade, primarily at public institutions. The impact of enrollment declines over the last decade has already been felt in the finances of several public and private institutions, with a handful downsizing and/or closing.

Escalating costs and mounting student debt also have led many to question the value of a college degree; however, it remains true that higher education provides value and higher earnings, benefits society, and support for public investment in higher education is growing. Keeping New York's higher education institutions competitive by ensuring their affordability, diversity and spirit of innovation and community is important for our State's future. To help guide policymakers as they consider support for higher education in this legislative session, this report provides critical indicators on the competitiveness of higher education institutions, explains their major challenges, and offers recommendations for consideration.

Thomas P. DiNapoli  
State Comptroller



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# Executive Summary

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## Background

New York's higher education institutions have played an essential role in postsecondary education in our nation, providing learning, knowledge and skills to New Yorkers, residents of other states and people from around the world. These institutions are diverse, ranging from large public universities to Ivy League institutions to smaller liberal arts schools to highly specialized community colleges. Higher education benefits individuals and communities and has helped to drive economic growth and promote New York's social and cultural life.

Higher education is an investment in human capital that has traditionally led to higher earnings and employment for graduates. Advanced knowledge, critical thinking and applied skills are particularly important in an information-based economy. On a broader level, an educated workforce provides capacity for growth in the economy as workers become productive and attractive to employers looking to maximize hiring and make business investment decisions. Communities of scholarship and practice can attract investment and lead to discoveries that have positive benefits for communities or allow for the creation of new enterprises, as well as providing the technical training to prepare the next generation of employees for these jobs. This not only drives increased economic output, it improves living standards.<sup>1</sup>

Throughout New York, colleges and universities serve as anchor institutions in many communities. Higher education related spending on and off campuses for staff wages, capital projects, research, medical facilities, arts and cultural events, equipment, food, and supplies produces direct and indirect benefits in local and regional economies and communities. In 2022, higher education provided 296,985 jobs and generated \$25.3 billion in wages in New York.<sup>2</sup> Beyond direct employment, students at these institutions stimulate economic activity in the areas around campuses by providing a predictable consumer base, demand for rental real estate, and by attracting businesses that cater to students, faculty and staff.

Because of the critical function played by the higher education sector, and the importance of its success to a thriving State economy, this report examines whether New York is competitive in two key aspects of success: Human Capital Development and Research and Development.

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## Human Capital Development

To thrive, institutions of higher education must attract students from all backgrounds and develop their potential through learning and the achievement of marketable skills. In Fall 2022, New York's institutions attracted 896,000 students. Shares of student enrollment are more diverse than the State's population. However, enrollment has fallen since Fall 2008, largely due to declines at the State and City University of New York systems.

New York's "market share" has decreased noticeably through the years as enrollment in higher education expanded nationally. In Fall 1970, New York's higher education institutions enrolled about 1 in 11 students; in Fall 2010, when enrollment peaked nationwide, it was 1 in 16. The share of national enrollment has remained stable at 6.2 percent between 2010 and 2020.

Attracting potential students has become even more competitive since 2010; the college-aged population has declined nationally, and a greater share of students are studying out-of-state. Nevertheless, the State's institutions have had some success in attracting out-of-state students. New York's share of enrollment is greater than its share of the college-aged population. New York ranked second after California as a destination for international students in Academic Year (AY) 2022-23. In addition, New York is successful in attracting recent graduates, as one of only nine states that imports more graduates than it produces.

Outcomes with respect to earning a degree and salaries after graduation are also more positive for New York's college students than in other states. Collectively, New York's institutions exceed the national performance in getting enrolled students to complete their degrees (69.1 percent compared to 62.3 percent).

Median earnings for degree holders in the State are higher than for those without a degree and higher than for peer states.<sup>3</sup> Overall, earnings in New York increased from 2010 to 2022 at a rate greater than nationwide, peer states and higher than the median.

While collectively the higher education sector appears to be producing positive outcomes, the performance of individual institutions varies, and some have faced enrollment and financial challenges. In particular, public community colleges have suffered steep enrollment declines since Fall 2008 and completion rates are lower than for four-year schools. Less than half of students in public two-year colleges who began in 2016 completed their coursework by June 2022; declining enrollment and low completion rates resulted in 3.4 percent fewer associate degrees awarded in 2020-21 than in 2009-10. There are a range of factors that affect completion of degrees including students' demographic and socioeconomic characteristics, their level of courseload, program of study and financial aid along with characteristics of and services provided by the higher education institution. Although significant, the relationship and impacts of these factors will not be analyzed in this report.

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## Research and Development

New York has consistently ranked second nationally for research and development (R&D) expenditures since Fiscal Year (FY) 2010. New York's share of all research and development spending by the higher education sector increased from 8.1 percent, or \$4.95 billion in 2010, to 8.5 percent, or \$7.58 billion in FY 2021.

In New York, private-sector institutions are responsible for 75 percent of the R&D expenditures and ranked 1<sup>st</sup> for such spending among private institutions nationwide. This contrasts with most peer states, where public institutions undertake most R&D expenditures. New York's public-sector institutions ranked 12<sup>th</sup> nationally for this activity. Higher education spending for research and development by the public sector as a proportion of all such spending in the State decreased by almost 3 percent in 2021 from 2010.

## Challenges

Declining enrollment has led to financial difficulties for several New York higher education institutions, with some downsizing or closing. Numerous factors affect enrollment decisions, including the costs of attendance. Total average undergraduate charges at private and public universities in New York are higher than the national average; in particular, costs for in-state students at public community colleges were 59 percent higher than the national average in AY 2020-21 and have grown more rapidly at public four-year institutions than the national average.

As college costs have grown, student debt burdens have also increased, leading some to question the returns from a college degree. Student debt per capita in 2023 was higher in New York (\$5,830) than the nationwide average, according to data from the Federal Reserve Bank of New York. In addition, universities may face challenges in ensuring diversity on campuses following the Supreme Court's decision that race may not be a factor in enrollment decisions, and in keeping up with emerging industries through attracting research and development dollars and providing relevant coursework and other offerings.

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## Additional Actions

Private institutions and the public university systems have already begun confronting the challenges. The pandemic forced innovation in the delivery of services, and some of these changes, such as “course-sharing,” presented opportunities to retain students and have been positive.<sup>4</sup> However, additional actions are needed to help facilitate growth and innovation in the higher education sector, particularly as institutions face a looming “enrollment cliff” with a projected decline in the college-aged population. Some approaches that may be considered include:

- Setting a strategic goal to increase the educational attainment of New York’s population, and creating a plan and investing resources to achieve it;
- Taking additional actions to spur applications and enrollment, particularly of historically under-represented students, and ensuring program completion is supported;
- Improving transparency on costs and financial aid, and considering increasing federal and State assistance to enhance affordable access;
- Continuing to work with business and community leaders to craft programs geared to the necessities of the future workforce; and
- Considering the establishment of a statewide entity to spur and coordinate research and development activity.

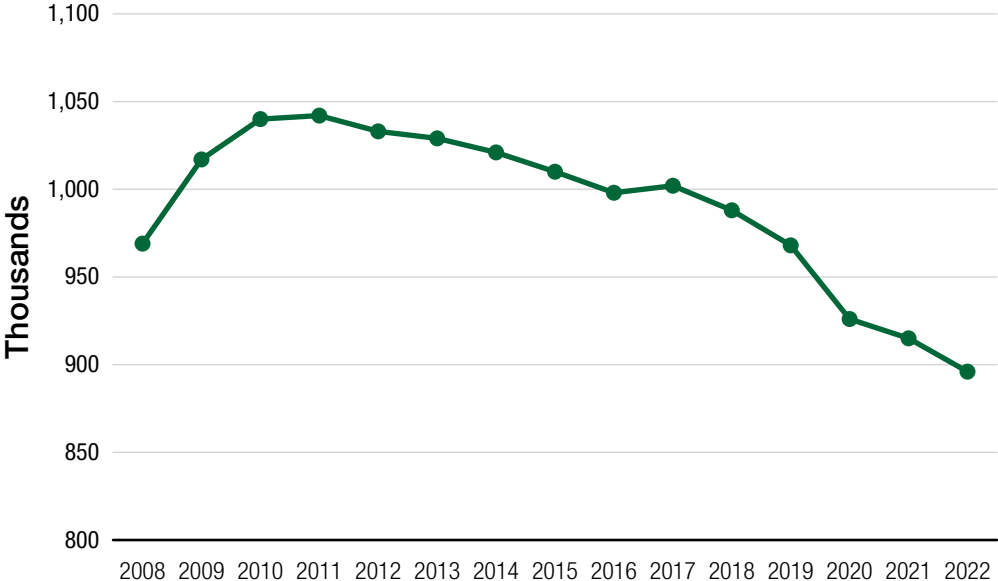
As this dynamic environment continues to evolve in the foreseeable future, it will be critical for New York policymakers to support the higher education sector in their efforts to implement innovative solutions to preserve the State’s existing competitive strengths and make improvements where opportunities emerge.

# The Higher Education Sector in New York State

Higher education has a long history in New York, beginning with King’s College, now known as Columbia University, founded in 1754. In the mid-20<sup>th</sup> century, publicly-funded postsecondary education was consolidated with The State University of New York (SUNY) and The City University of New York (CUNY) systems. Over the years, New York’s private institutions have thrived alongside the public systems, and New York’s share of enrollment in private schools is much higher than other states.<sup>5</sup> In Fall 2022, enrollment was almost evenly divided between public and private institutions in New York.

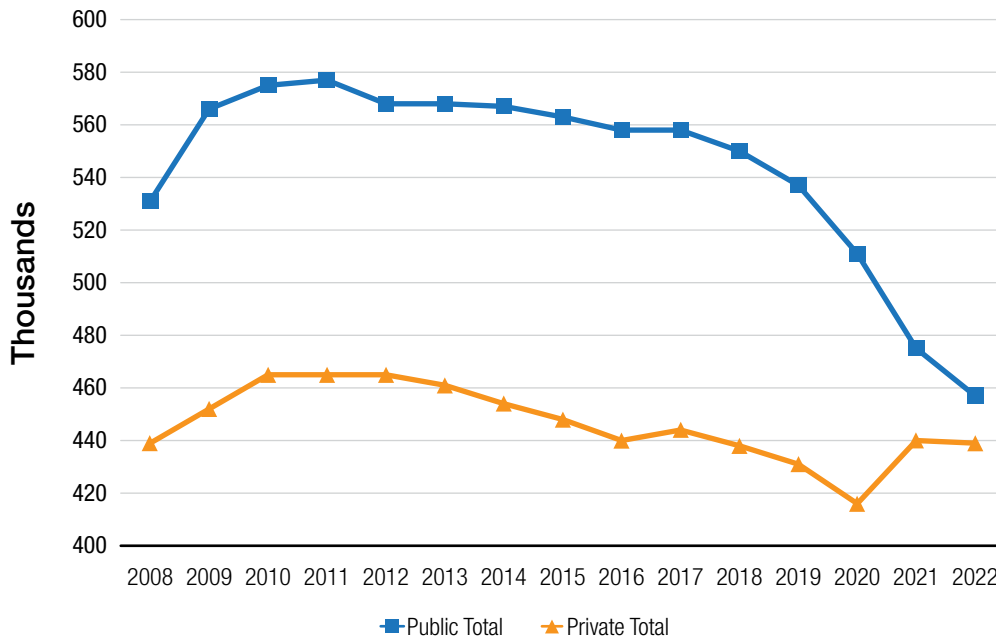
In 2022, there were 896,000 students enrolled across all postsecondary institutions in New York State. This was the lowest total enrollment over a 15-year period, a decline of approximately 73,000 full-time equivalent students or 7.6 percent since Fall 2008. The change has been driven by the nearly 14 percent decline in enrollment at public institutions, where enrollment has been falling since 2018. The COVID-19 pandemic yielded innovations to course delivery, but also a rise in student transfers and withdrawals, or “stop-outs”, and declines in the upward transfer of community college students to higher degree programs, particularly for disadvantaged students.<sup>6</sup> During the COVID-19 pandemic, private institutions also lost enrollment but have recovered since 2020.

**FIGURE 1**  
**Fall Full-time Equivalent (FTE) Enrollment: New York State (in thousands)**





**FIGURE 2**  
**Fall FTE Enrollment for the Public and Private Sectors: New York State**  
**(in thousands)**



Source: New York State Education Department, “Fall 2010 – Fall 2020 Enrollment Data” and “Fall 2021 – Fall 2022 Enrollment Data” (“Enrollment Data”) at <https://www.nysed.gov/information-reporting-services/higher-education-reports>.

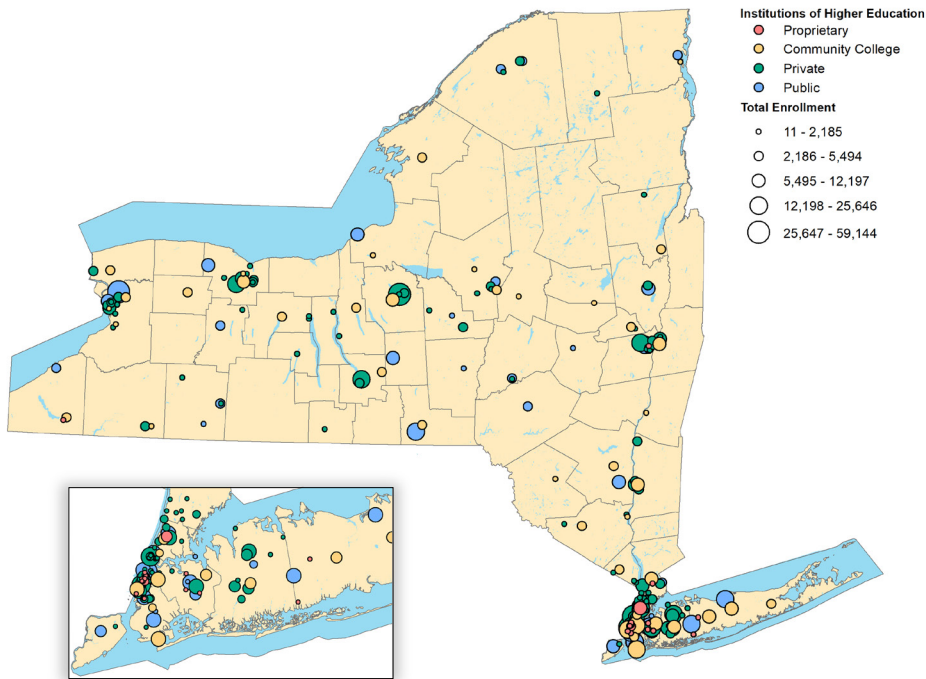
## Private Institutions

According to the New York State Education Department, there were 150 private colleges spanning 198 campuses in New York as of Fall 2022; 19 of these were proprietary or for-profit institutions and the remainder were non-profit entities. (See Figure 3.) Private sector institutions are very diverse in terms of longevity, resources, student body composition and size, credentials offered and control of institution. In 2022, over 59,000 undergraduate and graduate students (full-time and part-time) were enrolled at New York University (NYU) compared to 11 part-time graduate students at the City Seminary of the New York Graduate Center.

The financial resources of these institutions also range considerably. For example, some have significant endowments (more than \$11 billion in fiscal year 2020 at Columbia University<sup>7</sup>), while others have operated with deficits in recent years. Cazenovia College, Medaille University and Alliance University closed in 2023 and the College of St. Rose plans to close in 2024.<sup>8</sup>

The State provides financial support to private institutions through Unrestricted Aid to Independent Colleges and Universities, also known as “Bundy Aid”. For State Fiscal Year (SFY) 2024-25, \$21.8 million is proposed in the SFY 2025 Executive Budget.

**FIGURE 3**  
**New York Institutions of Higher Education by Location and Size of Enrollment: Fall 2022**



Source: New York State GIS Clearinghouse; New York State Education Department, "Enrollment Data" at <https://www.nysed.gov/information-reporting-services/higher-education-reports>.

## The State University of New York

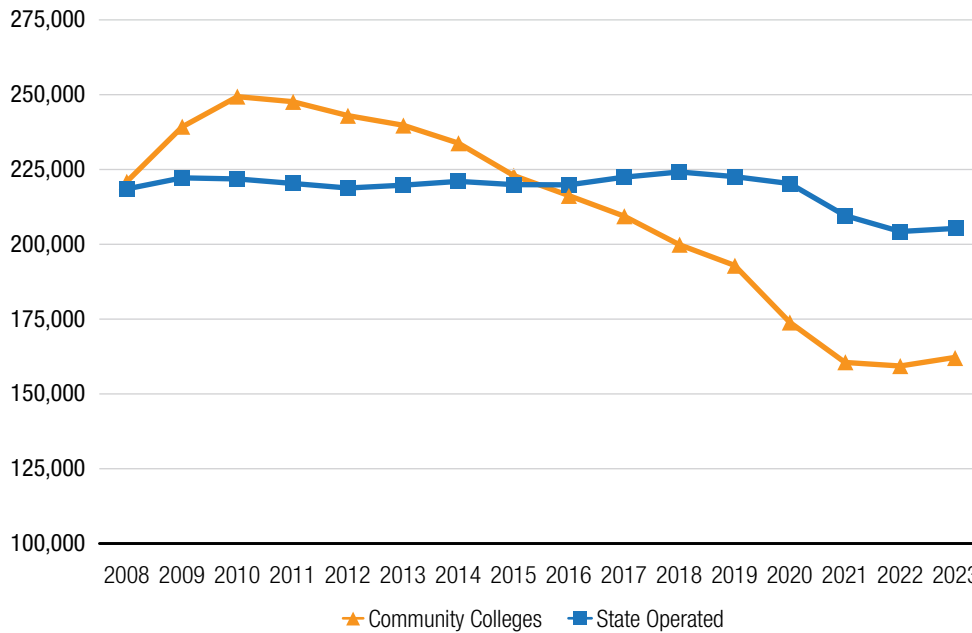
The State University of New York system was created in 1948, consolidating 29 unaffiliated institutions, including 11 teachers' colleges.<sup>9</sup> Today it is the largest comprehensive higher education system in the nation. Its 64 campuses located throughout the State comprise:

- 14 university centers and doctoral degree granting institutions, including medical centers and hospitals, and schools for veterinary, environmental and polytechnic sciences, law and arts education;
- 13 university colleges that provide education in liberal arts and sciences and professional areas resulting in bachelor's and master's degrees;
- 7 technology colleges with certificate through master's degree programs in technical and agricultural areas of study; and
- 30 community colleges that provide certificate and associate degree programs for a range of educational needs.<sup>10</sup>

In Fall 2023, there were 367,542 students enrolled at SUNY, 56 percent in comprehensive and technology colleges and doctoral degree granting institutions, and 44 percent in community colleges.<sup>11</sup> However, the total number of students remains lower than in Fall 2021 and increases were not experienced at all campuses; for example, over the past decade, enrollment at SUNY Potsdam has declined by 43 percent.

In the years surrounding and during the Great Recession, community college enrollment represented the majority of SUNY enrollment (52 to 53 percent); however, this enrollment began to drop starting in 2011, while undergraduate and graduate enrollment at four-year institutions has been relatively steady. Overall, declines in community college enrollment have driven most of the decrease in the SUNY system. See Figure 4.

**FIGURE 4**  
**Fall Headcount Enrollment: State University of New York**



Source: Data.ny.gov, "State University of New York Trends in Enrollment" at <https://data.ny.gov/Education/State-University-of-New-York-SUNY-Trends-in-Enroll/ms8i-dzsk/data> and The State University of New York, Chancellor's Report to the Board of Trustees, November 15, 2023 at [https://www.suny.edu/media/suny/content-assets/documents/boardoftrustees/SUNY-BOT\\_Enrollment-Presentation-11-15.pdf](https://www.suny.edu/media/suny/content-assets/documents/boardoftrustees/SUNY-BOT_Enrollment-Presentation-11-15.pdf).

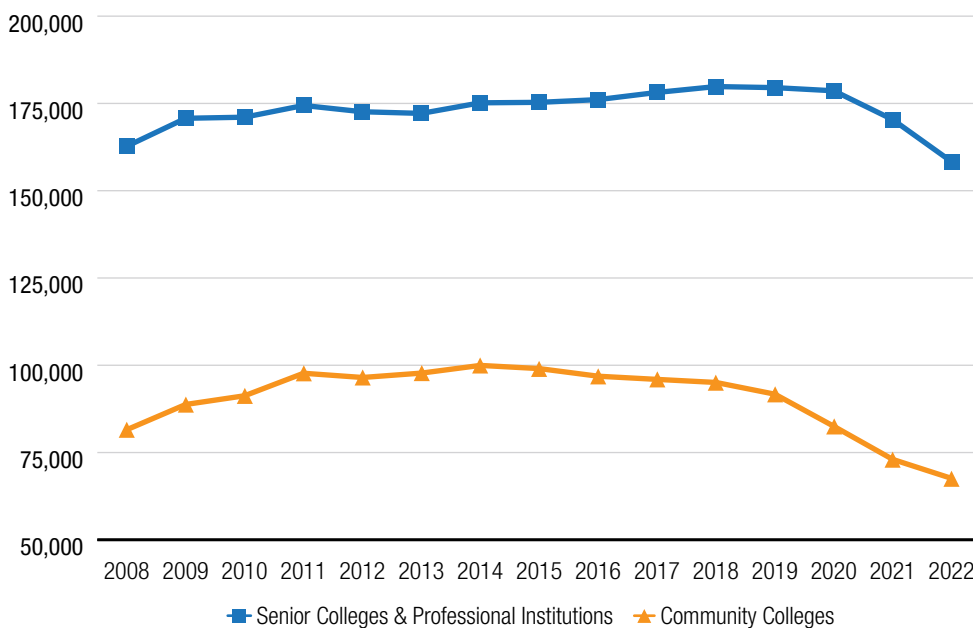
## The City University of New York

In 1961, seven colleges were merged to form the City University of New York through state legislation.<sup>12</sup> In 2023, there were 25 campuses offering a range of programs and degrees including continuing education:

- 7 graduate and professional institutions in journalism, law and criminal justice, labor and urban studies, humanities, social sciences, health sciences and professions;
- 11 senior colleges with certificate through graduate degree programs; and
- 7 community colleges offering certificates and associate degrees.<sup>13</sup>

In Fall 2022, there were 225,881 students enrolled at CUNY, over 70 percent in senior colleges and professional institutions and 30 percent in community colleges. Enrollments at community colleges have been declining since 2014 while enrollments at senior colleges and professional institutions have been declining since 2020. CUNY reported an enrollment increase for the first time in three years at both community and four-year colleges, including more first-time students in Fall 2023, although data have not yet been released.<sup>14</sup>

**FIGURE 5**  
**Fall Headcount Enrollment: City University of New York**



Source: The City University of New York, "Fall Enrollment, Headcount," Student Data Book, at <https://public.tableau.com/app/profile/oira.cuny/viz/StudentDataBook/Enrollment>.

# Human Capital Development

## Enrollment and Market Share

Higher education enrollment has expanded dramatically since 1970. In Fall 2010, there were nearly two and a half times more students enrolled across the U.S. at all post-secondary levels compared to Fall 1970, or 21 million compared to almost 8.6 million. However, New York’s market share, its proportion of national enrollment, has declined. New York’s growth in enrollment from 806,479 to 1.3 million in 2010 reflected a lower rate of increase than experienced by the nation and peer states as its share of national enrollment dropped from 9.4 percent in 1970 to 6.2 percent in 2010.

Enrollment peaked in 2010 following the Great Recession and has declined steadily since. The State’s decrease in 2020 from 2010 mirrored the drop for the U.S. and its share of enrollment remained at 6.2 percent. The State’s Fall 2020 share of nationwide private sector enrollment was more than twice its share in the public sector, 10.5 compared to 4.7 percent.<sup>15</sup>

The rate of enrollment decrease in public sector institutions of higher education (IHEs) was greater in New York than for the country, although New York’s share of national private sector enrollment has declined significantly since the 1970s.<sup>16</sup>

**FIGURE 6**  
**Fall Enrollment in Degree-Granting Postsecondary Institutions: 1970 – 2020**

	1970	1980	1990	2000	2010	2019	2020	Change in 2020 from:	
								1970	2010
<b>United States</b>	<b>8,580,887</b>	<b>12,096,895</b>	<b>13,818,637</b>	<b>15,312,289</b>	<b>21,019,438</b>	<b>19,630,178</b>	<b>18,991,798</b>	<b>121.3%</b>	<b>-9.6%</b>
New York	806,479	992,349	1,048,286	1,043,395	1,305,151	1,235,691	1,182,412	46.6%	-9.4%
California	1,257,245	1,791,088	1,808,740	2,256,708	2,714,699	2,714,753	2,579,991	105.2%	-5.0%
Florida	235,525	411,891	588,086	707,684	1,124,778	1,055,664	1,027,331	336.2%	-8.7%
Massachusetts	303,809	418,415	417,833	421,142	507,753	492,875	473,731	55.9%	-6.7%
New Jersey	216,121	321,610	324,286	335,945	444,092	413,175	392,343	81.5%	-11.7%
Texas	442,225	701,391	901,437	1,033,973	1,535,864	1,660,470	1,601,399	262.1%	4.3%
<b>As a Share of the United States</b>									
New York	9.4%	8.2%	7.6%	6.8%	6.2%	6.3%	6.2%		
California	14.7%	14.8%	13.1%	14.7%	12.9%	13.8%	13.6%		
Florida	2.7%	3.4%	4.3%	4.6%	5.4%	5.4%	5.4%		
Massachusetts	3.5%	3.5%	3.0%	2.8%	2.4%	2.5%	2.5%		
New Jersey	2.5%	2.7%	2.3%	2.2%	2.1%	2.1%	2.1%		
Texas	5.2%	5.8%	6.5%	6.8%	7.3%	8.5%	8.4%		

Note: Degree-granting institutions grant associate or higher degrees and participate in Title IV federal financial aid programs.

Source: U.S. Department of Education, National Center for Education Statistics, Table 304.10, *Digest of Education Statistics*; Higher Education General Information Survey (HEGIS), “Fall Enrollment in Colleges and Universities” surveys, 1970 and 1980; Integrated Postsecondary Education Data System (IPEDS), “Fall Enrollment Survey” (IPEDS-EF:90); and IPEDS Spring 2001 through Spring 2021, Fall Enrollment component (prepared April 2022) at [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_304.10.asp](https://nces.ed.gov/programs/digest/d21/tables/dt21_304.10.asp).

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Enrollment in Spring 2023 reflected a 12 percent drop from Spring 2019, ranking New York 37 out of the 50 states and D.C. for percentage point change over this period.<sup>17</sup> Trends vary by sector and campus. As noted earlier, SUNY's and CUNY's Fall 2023 enrollment increased compared to 2022, and some IHEs in western New York (for example, at Buffalo State University, Erie Community College and Niagara University) indicated their enrollment increased as well.

### **Enrollment: Great Recession and COVID-19 Pandemic Compared**

The pandemic-related economic shutdown and the Great Recession were characterized by acute negative economic conditions. During and following recessions, higher education enrollments tend to increase and then drop off as economic recovery takes place. After the Great Recession, Fall enrollment remained strong for the private sector through 2012 and peaked for CUNY in 2014.<sup>18</sup> Even though the drop in following years coincided with gradual economic recovery, it also overlapped population decreases among college-age adults in many states during this decade.

During the pandemic, enrollment decreased as social distancing requirements and fears of contracting COVID-19 altered the usual impact of economic conditions during a recession. National Student Clearinghouse Research Center Spring enrollment data indicate that only seven states experienced increases in 2021 and 2022 compared to the prior year. Many more states showed increases the next year but compared to Spring 2019, only five states and the District of Columbia exhibited enrollment increases.<sup>19</sup> Trends in employment, wages and tax revenues reflect a quicker economic recovery than after the Great Recession. Recent enrollment drops reflect the emergence of these conditions, along with the impact from the continuing fall in college-age populations for the nation and many states, and other factors addressed later in this report.

## **Enrolling Potential Students**

For all states and the nation, shares of total population that are 18 to 24 years old have decreased since 2010 – and most steeply in New York, California and Florida (1.5 percentage points each).<sup>20</sup> For the 2020-21 academic year, New York's share of national fall enrollment was higher than its shares of total and college-age populations, or 6.2 percent compared to 6.0 and 5.8 percent respectively, indicating New York is attracting students from outside the State.

**FIGURE 7**  
**Population and Enrollment Shares Compared**

	Share of 2021 National Population		Share of Fall 2020 National Enrollment
	Total	18 to 24 years old	
New York	6.0%	5.8%	6.2%
California	11.8%	11.8%	13.6%
Florida	6.6%	5.7%	5.4%
Massachusetts	2.1%	2.3%	2.5%
New Jersey	2.8%	2.6%	2.1%
Texas	8.9%	9.4%	8.4%

Note: Uses 2021 population estimates and Fall 2020 enrollment.

Source: U.S. Census Bureau, American Community Survey, Table S0101 at [https://data.census.gov/table/ACSST1Y2021.S0101?q=S0101:%20Age%20and%20Sex&g=010XX00US\\_040XX00US06,12,25,34,36,48](https://data.census.gov/table/ACSST1Y2021.S0101?q=S0101:%20Age%20and%20Sex&g=010XX00US_040XX00US06,12,25,34,36,48); and U.S. Department of Education, National Center for Education Statistics, Table 304.10 at [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_304.10.asp](https://nces.ed.gov/programs/digest/d21/tables/dt21_304.10.asp).

For the nation and New York, greater shares of resident first-time students left their home states for college between 2010 and 2020; this trend seems to have benefitted New York. As a proportion of total first-time students, New York’s Fall enrollment of out-of-state and international students increased almost 21 percent during this 10-year period. At SUNY, the proportion of out-of-state and international students grew in 2022 from 2017, to 4.7 percent out-of-state and 5.4 percent international.<sup>21</sup> The net effect was an increase in the State’s share of the Fall enrollment of first-time students since 2010. See Appendices A and B.

Postsecondary enrollment by international students is growing and reached 1.06 million in AY 2022-23, or 5.6 percent of total enrollment in the United States. New York is second in the nation as a destination for students, after California.<sup>22</sup> Many of these individuals studied in undergraduate and graduate programs in New York City. Of the 220 IHEs hosting 1,000 or more international students in 2022-23, 21 were located in the State, representing almost 105,000 students, 13 percent of the over 808,000 students at these campuses. This includes approximately 24,500 at New York University, 19,000 at Columbia University, 8,400 at Cornell University and 7,700 at SUNY Buffalo. The first two ranked first and third, respectively, for institutions that host international students in the United States.<sup>23</sup> See Appendix C.

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## Return on Investment in College Education

### Earning a Degree

A greater proportion of New York's undergraduate students who began study in Fall 2016 earned their degrees by June 2022 (69.1 percent) than the national average (62.3 percent). In New York, completion rates were lowest in public two-year colleges (44.7 percent) and highest in private nonprofit four-year institutions (83.6 percent). The pattern is similar nationally and in peer states.<sup>24</sup> See Appendix D.

Declining enrollment and low completion rates at public community colleges resulted in 3.4 percent fewer associate degrees awarded in AY 2020-21 than in AY 2009-10, dragging down the overall growth rate in degrees awarded to 11 percent. New York has lagged the rest of the nation; nationally, 24.3 percent more degrees were awarded in this period. See Appendix E.

Within New York, the share of bachelor's degrees awarded by the public sector has grown over the last decade to almost half of the total.<sup>25</sup> One benefit of this rise is the significant majority of SUNY and CUNY students that stay in New York well after graduation. For the period 2001-2002 to 2015-2016, depending on the degree earned, 82 to 92 percent of CUNY and SUNY graduates remained in New York one year after graduation and 72 to 84 percent remained 10 years after graduation. See Appendix F. A recent policy brief from the W.E. Upjohn Institute for Employment Research found variable patterns of mobility among graduates based on institution attended; however, New York was one of only 9 states that imported more graduates than its institutions of higher education produced.<sup>26</sup>

### Earnings of Graduates

Research has consistently demonstrated that individuals with a college degree earn more than those with only a high school diploma and tend to have lower unemployment rates, on average.<sup>27</sup> Census Bureau data indicate that, nationally, 2022 median earnings for those with a bachelor's degree were almost 175 percent higher than earnings for high school graduates. Individuals with a graduate or professional degree were paid over 225 percent more earnings on average than a high school graduate. These differences were moderately higher in New York but greater in California and New Jersey (this pertains to all population 25 years and over, not recent graduates; see "In 2022" section of Figure 8 for 2022 postsecondary degree earnings compared to high school graduate earnings).



Overall, earnings in New York increased from 2010 to 2022 at a rate greater than nationwide and for peer states. This differential was greater for those with baccalaureate, graduate and professional degrees. See second half of Figure 8 for this growth (percent change). Wages and salaries are influenced by field and location of work, among other factors.<sup>28</sup>

**FIGURE 8**  
**Median Earnings by Level of Education Attained: 2010 and 2022**

	High School Graduate (includes equivalency)		Bachelor's Degree		Graduate or Professional Degree	
	2010	2022	2010	2022	2010	2022
<b>United States</b>	<b>\$26,349</b>	<b>\$37,290</b>	<b>\$47,422</b>	<b>\$64,911</b>	<b>\$62,618</b>	<b>\$ 84,118</b>
New York	\$28,636	\$43,834	\$51,219	\$81,761	\$66,529	\$102,467
California	\$27,122	\$38,507	\$52,248	\$75,688	\$74,423	\$103,600
Florida	\$23,936	\$34,769	\$41,992	\$56,243	\$55,005	\$ 74,215
Massachusetts	\$31,030	\$42,196	\$52,457	\$77,137	\$68,607	\$ 95,136
New Jersey	\$31,295	\$40,193	\$57,081	\$76,725	\$80,417	\$ 98,247
Texas	\$25,536	\$36,217	\$49,322	\$64,905	\$61,591	\$ 82,824

	In 2022				
	High School Graduate (includes equivalency)	Bachelor's Degree		Graduate or Professional Degree	
	Percent Change, 2010 to 2022	Percent Change, 2010 to 2022	As a Percent of High School Graduate, 2022	Percent Change, 2010 to 2022	As a Percent of High School Graduate, 2022
<b>United States</b>	<b>41.5%</b>	<b>36.9%</b>	<b>174.1%</b>	<b>34.3%</b>	<b>225.6%</b>
New York	53.1%	59.6%	186.5%	54.0%	233.8%
California	42.0%	44.9%	196.6%	39.2%	269.0%
Florida	45.3%	33.9%	161.8%	34.9%	213.5%
Massachusetts	36.0%	47.0%	182.8%	38.7%	225.5%
New Jersey	28.4%	34.4%	190.9%	22.2%	244.4%
Texas	41.8%	31.6%	179.2%	34.5%	228.7%

Source: U.S. Census Bureau, American Community Survey, Table S1501 at [https://data.census.gov/table/ACSST1Y2010.S1501?q=s1501&g=010XX00US\\_040XX00US06,12,25,34,36,48](https://data.census.gov/table/ACSST1Y2010.S1501?q=s1501&g=010XX00US_040XX00US06,12,25,34,36,48) and [https://data.census.gov/table/ACSST1Y2022.S1501?q=s1501&g=010XX00US\\_040XX00US06,12,25,34,36,48](https://data.census.gov/table/ACSST1Y2022.S1501?q=s1501&g=010XX00US_040XX00US06,12,25,34,36,48).

# Research and Development

Research and development undertaken by postsecondary institutions contributes to economic and social activity on the local, regional and state levels. Through 2021, higher education institutions were the second-largest performers of research and development after private businesses, and performed the majority of basic research. Expenditures by the higher education sector in research and development have grown steadily since the 1990s.<sup>29</sup> The primary source of funding for such expenditures is the federal government with funding also provided by state and local governments, IHEs, businesses, and non-profit organizations. New York's share of all research and development spending by the higher education sector in the nation increased from 8.1 percent, or \$4.95 billion in 2010 to 8.5 percent, or \$7.58 billion in 2021, with a rank of second among the 50 states for both years.

**Figure 9**  
**Research and Development Expenditures by Higher Education:**  
**Fiscal Years 2010 and 2021 (dollars in thousands)**

	2010			2021		
	Dollars	Rank	Share	Dollars	Rank	Share
<b>United States</b>	\$61,123,582			\$89,566,028		
<b>New York</b>	\$4,948,442	2	8.1%	\$7,577,235	2	8.5%
<b>California</b>	\$7,832,767	1	12.8%	\$11,229,857	1	12.5%
<b>Florida</b>	\$1,994,860	11	3.3%	\$2,769,387	12	3.1%
<b>Massachusetts</b>	\$2,749,926	6	4.5%	\$4,568,999	6	5.1%
<b>New Jersey</b>	\$1,075,872	19	1.8%	\$1,352,770	22	1.5%
<b>Texas</b>	\$4,416,323	3	7.2%	\$6,849,522	3	7.6%

Note: Amounts for the United States represent spending in the 50 states and District of Columbia only. Amounts in New York and California include funding for federal military educational institutions.

Source: National Center for Science and Engineering Statistics, Higher Education Research and Development Survey at <https://nces.nsf.gov/surveys/higher-education-research-development/2021> and <https://www.nsf.gov/statistics/herd/>.

In New York, private sector IHEs undertake 75 percent of the R&D expenditures; in most peer states, public institutions are responsible for the majority of expenditures. See Appendix G.

In Fiscal Year 2021, New York ranked first in research and development spending by private sector institutions and 12<sup>th</sup> for such expenditures by public sector IHEs. New York ranked third for state and local government expenditures in the public sector and first for such spending in the private sector. (See Figure 10.)

Other National Science Foundation data that report R&D spending by institution indicate:

- New York private-sector institutions in the top 50 of 2021 nationwide expenditures were Cornell (14), Columbia (21), New York University (23), and Icahn School of Medicine at Mount Sinai (33).
- New York public sector institutions in the top 100 of 2021 nationwide expenditures were SUNY Polytechnic Institute (59), the University at Buffalo (65) and Stony Brook University (98).

**FIGURE 10**  
**Sources of Funds and Ranks for R&D Spending by Higher Education:**  
**Fiscal Year 2021 (dollars in thousands, and ranks)**

	Sources of Funds													
	All		Federal Government		State and Local Government		Institution Funds		Business		Nonprofit Organizations		All Other Sources	
	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank
<b>All IHEs</b>														
New York	\$ 7,577,235	2	\$4,065,091	2	\$425,225	3	\$1,744,191	3	\$498,361	2	\$ 541,516	2	\$302,851	2
California	\$11,229,857	1	\$5,770,381	1	\$435,763	2	\$2,371,758	1	\$732,081	1	\$1,171,672	1	\$748,202	1
Florida	\$ 2,769,387	12	\$1,333,317	12	\$273,283	4	\$ 894,472	7	\$104,512	15	\$ 104,369	18	\$ 59,434	10
Massachusetts	\$ 4,568,999	6	\$2,615,651	6	\$ 48,120	27	\$1,005,685	6	\$311,606	5	\$ 424,453	3	\$163,484	4
New Jersey	\$ 1,352,770	22	\$ 701,933	22	\$108,029	10	\$ 295,109	23	\$ 64,849	23	\$ 120,093	13	\$ 62,757	9
Texas	\$ 6,849,522	3	\$2,872,275	4	\$929,845	1	\$1,872,830	2	\$478,394	3	\$ 417,527	4	\$278,651	3
<b>Public IHEs</b>														
New York	\$ 1,716,336	12	\$ 672,259	16	\$286,009	3	\$ 491,261	11	\$189,382	3	\$ 52,006	18	\$ 25,419	16
California	\$ 7,945,304	1	\$3,763,887	1	\$388,782	2	\$1,813,410	1	\$512,662	1	\$ 820,546	1	\$646,017	1
Florida	\$ 2,326,008	5	\$1,064,022	11	\$252,744	4	\$ 807,515	4	\$ 67,239	15	\$ 78,300	13	\$ 56,188	6
Massachusetts	\$ 754,263	25	\$ 445,827	24	\$ 29,153	36	\$ 200,347	26	\$ 31,615	27	\$ 34,663	22	\$ 12,658	24
New Jersey	\$ 897,949	23	\$ 460,624	22	\$103,351	10	\$ 202,138	24	\$ 43,126	23	\$ 60,736	15	\$ 27,974	15
Texas	\$ 5,800,026	2	\$2,367,215	2	\$883,828	1	\$1,514,568	2	\$431,299	2	\$ 330,692	2	\$272,424	2
<b>Private IHEs</b>														
New York	\$ 5,860,899	1	\$3,392,832	1	\$139,216	1	\$1,252,930	1	\$308,979	1	\$ 489,510	1	\$277,432	1
California	\$ 3,284,553	3	\$2,006,494	4	\$ 46,981	2	\$ 558,348	4	\$219,419	4	\$ 351,126	3	\$102,185	3
Florida	\$ 443,379	16	\$ 269,295	15	\$ 20,539	5	\$ 86,957	17	\$ 37,273	13	\$ 26,069	16	\$ 3,246	19
Massachusetts	\$ 3,814,736	2	\$2,169,824	3	\$ 18,967	6	\$ 805,338	2	\$279,991	2	\$ 389,790	2	\$150,826	2
New Jersey	\$ 454,821	15	\$ 241,309	16	\$ 4,678	12	\$ 92,971	16	\$ 21,723	16	\$ 59,357	13	\$ 34,783	5
Texas	\$ 1,049,496	10	\$ 505,060	13	\$ 46,017	3	\$ 358,262	5	\$ 47,095	12	\$ 86,835	11	\$ 6,227	16

Note: Amounts for the United States represent spending in the 50 states and District of Columbia only. Amounts in New York and California include funding for federal military educational institutions.

Source: National Center for Science and Engineering Statistics, Higher Education Research and Development Survey at <https://nces.nsf.gov/surveys/higher-education-research-development/2021> and <https://www.nsf.gov/statistics/herd/>.

# Challenges Facing Higher Education

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## Addressing Financial Difficulties

Declining enrollments have caused faltering revenues and significant financial difficulties at several institutions. Recently, the College of Saint Rose announced it would close at the end of the Spring 2024 semester while Medaille University closed on August 31, 2023 and Cazenovia College which closed in Spring 2023. Other private schools that closed due to accreditation difficulties and financial conditions include Alliance University (former Nyack College) and The King's College, and ASA College in the proprietary sector. Each of these events greatly impacts the students attending these institutions, the faculty and the surrounding communities.

Public institutions have also faced challenges. SUNY campuses at Potsdam and Buffalo State University have indicated they would eliminate programs and undertake hiring freezes; SUNY Fredonia also recently announced actions including elimination of low enrollment programs to address a structural deficit. The SUNY Chancellor recently indicated that while there were no imminent plans to close campuses, a reexamination of all institutions, their size and course offerings would be necessary.

Recent State budgets have increased support to SUNY and CUNY in their response to significant demographic, financial and economic forces. The State Fiscal Year (SFY) 2023-24 Enacted State Budget included additional operating aid of \$163 million for State-operated and statutory colleges, and an additional \$54 million in operating aid in each of the next two years.<sup>30</sup> The State also funded a \$75 million Transformation Fund to adopt evidence-based interventions that improve student outcomes and provide greater operational efficiency (\$60 million), to address regional education in high-demand and emerging fields (\$10 million), and to increase and sustain enrollment (\$5 million). In addition, the budget included \$138 million in community college aid to maintain funding levels and avoid losses in formula aid due to enrollment declines.

A recent report from SUNY indicated the system would face \$1.1 billion in annual budget gaps at the end of the State's current financial plan – absent any additional “reasonable, predictable, ongoing increase in resources” consisting of tuition increases or increases in State support.<sup>31</sup> The report outlines steps to increase enrollment, “optimize” academic portfolios, pursue operational collaboration and efficiencies, and address structural imbalances at financially struggling campuses.

SUNY also administers a network of academic medical centers and hospitals throughout the State, including at the University at Buffalo, the College of Optometry, Stony Brook University, the Upstate Medical University and the Downstate Medical Center. The hospital systems face financial risks related to overall healthcare finance and service provision trends. For example, in February 2024, SUNY announced that Downstate Medical Center inpatient services would be “provided by Downstate staff at other facilities.” These challenges are not included in the scope of this report.

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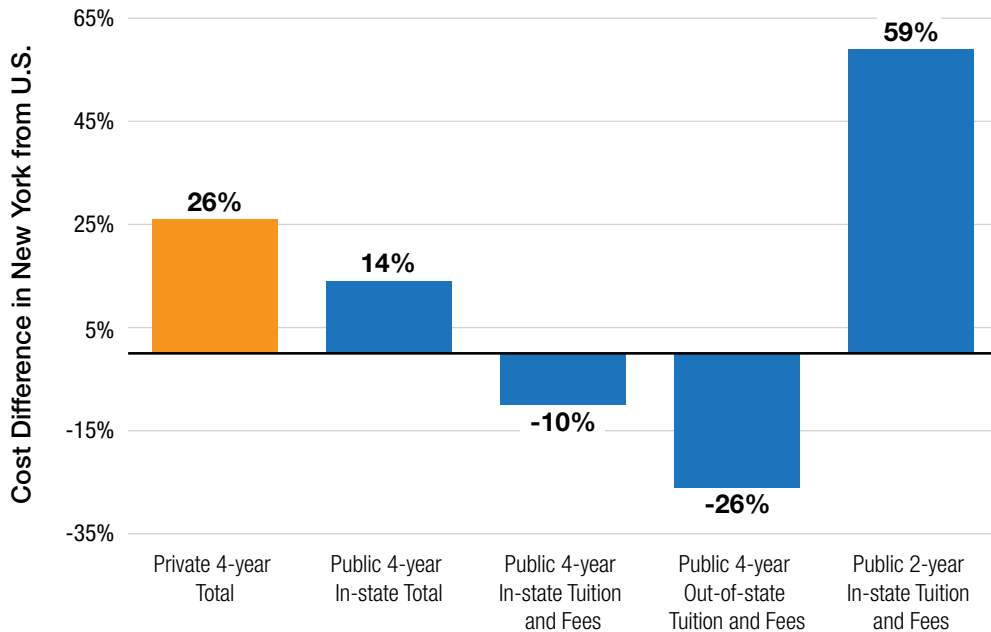
## Escalating Costs of Attendance and Student Debt

### Tuition

The cost of attending college or university is one of the most significant factors in deciding whether and where to go for a postsecondary education. For AY 2020-21, New York's public and private average undergraduate charges were both higher than the national average, particularly for in-state costs at two-year public institutions. Out-of-state costs, however, were very competitive for four-year public institutions:

- Private four-year tuition, fees, room and board of \$58,423 in New York was 26 percent higher than the national average of \$46,313. The difference was similar in 2010-11, when such charges were roughly \$15,000 lower.
- Public two-year, or community college, in-state tuition and fees of \$5,576 in New York were 59 percent higher than the national average of \$3,501 and the highest among peer states in this analysis. A comparison of these costs for 2010-11 shows a similar pattern and their rate of increase in 2020-21 was similar for the State and nation.
- Public four-year in-state tuition, fees, room and board of \$24,231 in New York were about 14 percent higher than the national average of \$21,337. Total costs have grown far more rapidly in New York than nationally – almost 46 percent compared to 34 percent. However, if room and board are not included, tuition and fees of \$8,416 were 10 percent lower than the national average of \$9,375.
- Public four-year out-of-state tuition and fees in New York of just over \$20,000 were 26 percent below the national average of \$27,091, much lower than most other peer states, with the exception of Florida. See Appendix H for costs.

**FIGURE 11**  
**Higher Education Costs: New York Compared to the United States,**  
**AY 2020-21**



Note: Average charges for the entire academic year. At degree-granting institutions; weighted by number of full-time equivalent undergraduates; out-of-state amounts were weighted by number of first-time freshmen attending from out-of-state.

Source: U.S. Department of Education, National Center for Education Statistics, Table 330.20 at [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_330.20.asp?current=yes](https://nces.ed.gov/programs/digest/d21/tables/dt21_330.20.asp?current=yes).

College Board data indicate that New York ranked 40th for AY 2022-23 public two-year in-district tuition and fees and eighth for such expenses at public four-year institutions (in these rankings, the most affordable state ranked first).<sup>32</sup> Some of these costs are defrayed by financial aid.<sup>33</sup> In 2023, two-thirds of SUNY students received financial aid and over half of CUNY undergraduates qualified for aid and many received enough to pay for their tuition.<sup>34</sup>

## Student Loan Debt

Growing college costs nationwide have led to unprecedented growth in student loan debt in New York and the nation. Federal Reserve Bank of New York data indicate that in New York, student loan debt per capita in the third quarter of 2023 was \$5,830, higher than the national average (\$5,370) and in peer states like Texas (\$5,170), Florida (\$4,960) and California (\$4,490).<sup>35</sup>

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Growing debt burdens have led to shifting perspectives on the value of a higher education degree that may also result in reduced future enrollments. A Wall Street Journal-NORC poll from March 2023 found “56% of Americans think earning a four-year degree is a bad bet compared with 42% who retain faith in the credential”.<sup>36</sup>

There is some research indicating the financial returns on a college degree have decreased. According to the Federal Reserve Bank (FRB) of New York, the 2019 average rate of return from 40 years of earnings for someone with a bachelor’s degree was 14 percent; due primarily to increasing college costs, this return was about two percentage points lower than in the early 2000s through the Great Recession.<sup>37</sup> Furthermore, due to escalating amounts of student debt, research findings from the FRB of St. Louis indicate, as successive generations attended postsecondary school, the gain from a college degree when considering assets and liabilities more fully was reduced, and sometimes eliminated, for certain individuals. While this shift emerged across all races and ethnicities, its impact was more pronounced for non-white families.<sup>38</sup>

SUNY’s recent expansion of State-funded aid through the Tuition Assistance Program (TAP) to undocumented students, part-time students, incarcerated students and those in non-degree programs has provided grant support to a greater range of individuals. In addition, the State established the Excelsior Scholarship program in 2017 to cover remaining tuition expenses at SUNY or CUNY after other federal and State grants and scholarships have been applied. This assistance is directed to middle-class households with incomes under \$125,000.

Available grants and scholarships must be applied to tuition costs before Excelsior funding is provided for this purpose; this varies from TAP which allows recipients to use federal Pell grants, and other scholarships, for non-tuition charges. Excelsior recipients are also required to stay in New York for as many years as they receive the scholarship. In AY 2021-22, an estimated 236,729 students received TAP, totaling \$719 million, and an estimated 29,610 students received Excelsior scholarships, totaling \$126.5 million.<sup>39</sup>

Private-sector grant assistance has also grown. In 2018, New York University’s Langone Health announced that it would offer tuition-free medical education to all current and future students; currently, 86 percent of Langone Health graduates remain in New York for their training.<sup>40</sup> As of January 2022, Amazon is providing tuition for its employees to pursue associate and bachelor’s degrees at eight CUNY schools.<sup>41</sup>

# Ensuring Diversity

As shown in Figure 12, the demographic compositions of students who attend and complete degrees at post-secondary institutions in New York reflect slightly more diverse populations.

**FIGURE 12**  
**Population and Fall Enrollment by Race/Ethnicity**

	Not Hispanic					
	Hispanic	American Indian and Alaska Native	Asian	Black	Pacific Islander	White
<b>United States</b>						
2022 Population	19.1%	0.5%	5.8%	11.9%	0.2%	57.7%
2021 Fall Enrollment	20.6%	0.7%	7.6%	13.1%	0.3%	53.4%
<i>Difference</i>	1.6%	0.2%	1.8%	1.2%	0.1%	-4.2%
<b>New York</b>						
2022 Population	19.7%	0.2%	9.0%	13.4%	0.0%	52.9%
2021 Fall Enrollment	20.5%	0.3%	12.3%	13.9%	0.1%	49.4%
<i>Difference</i>	0.8%	0.2%	3.3%	0.5%	0.1%	-3.5%

Note: Does not include non-residents.

Source: U.S. Census Bureau, American Community Survey, Table DP05 at <https://data.census.gov/table/ACSDP1Y2022.DP05?q=DP05>; U.S. Department of Education, National Center for Education Statistics, Table 306.60 at [https://nces.ed.gov/programs/digest/d22/tables/dt22\\_306.60.asp](https://nces.ed.gov/programs/digest/d22/tables/dt22_306.60.asp).

Diversity varies by system and campus. At SUNY, the proportion of “minority” students in Fall 2022 was 37.2 percent, up from 33.2 percent in Fall 2017. More specifically, historically under-represented minorities at SUNY, which do not include resident students with Asian backgrounds, grew to 28.1 percent in 2022 from 26.5 percent in 2017.<sup>42</sup> At CUNY, 76.1 percent of all students in Fall 2022 identified as a race or ethnicity other than white,<sup>43</sup> up more than six percentage points from 2010.

Many colleges have tried to address diversity, equity and inclusion. After specific recruitment, mentoring and support efforts, The University at Albany’s enrollment of minority students increased to almost 46.5 percent in 2022.<sup>44</sup> Canisius University adopted a test-optional and recently a test-free admissions policy; the former resulted in increased applications from students of color and their enrollment — to 33 and 32 percent of the student body in 2021 and 2022 respectively.<sup>45</sup>

The Supreme Court’s decision on June 29, 2023 declaring that race cannot be a factor in admissions decisions changes the options available for this purpose, and may pose a challenge to ensuring diversity on New York’s campuses.



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## Keeping Up with Emerging Industries

Trends in economic sectors from renewable energy products to supply-chain logistics and digital technologies to microelectronic advances have required innovation in postsecondary programs and facilities to enable increased capacity for research and workforce development opportunities. To be competitive, higher education institutions need to keep up with these developments.

New York's public and private sector IHEs have developed new curricula and partnerships with industry and other entities to increase credential, training and apprenticeship opportunities. New York State has provided support to SUNY and CUNY for hiring additional faculty and created a \$500 million state-funded matching endowment fund for SUNY's four university centers to encourage donations for scholarship, research and other uses.

In addition, on October 4, 2022, Governor Kathy Hochul announced that Micron Technology would be investing \$100 billion to build a semiconductor manufacturing facility in the Syracuse area. Micron followed this up in April 2023 with the launch of the Northeast University Semiconductor Network to collaborate with the National Science Foundation and 21 public and private sector founding university partners in seven states. Participating entities in New York include CUNY, SUNY, Clarkson University, Columbia University, Cornell University, Hofstra University, NYU, Rensselaer Polytechnic Institute (RPI), Rochester Institute of Technology, Syracuse University and the University of Rochester. This partnership is tasked with updating academic programs and student training and research opportunities to support workforce development in the microelectronics field. In his April 10, 2023 press release, U.S. Senator Chuck Schumer noted that this funding will support workforce training in other industries such as quantum computing, Artificial Intelligence (AI) and clean energy.

The emergence and ongoing rapid development of artificial intelligence has been challenging for the higher education sector. Not only are faculty and students assessing its role in academic work, AI is affecting campus operations and student support. The institution-wide AI Plus at the University at Albany that includes a hub supporting interdisciplinary research and expansion of supercomputing facilities is an example of SUNY's investments in this area.<sup>46</sup> In the CUNY system, John Jay College of Criminal Justice is working with Google and DataKind to use an AI model that identifies students in need of assistance. The model is attributed with increasing senior graduation rates at the school by 32 points in two years and has now been funded by Google for use at six other CUNY campuses.<sup>47</sup>

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The SFY 2024-25 Executive Budget proposes to establish the Empire Artificial Intelligence Consortium funded through a combination of public and private investment totaling over \$400 million: \$275 million from the State in grant and other funding, and more than \$125 million from other private partners. The consortium of educational institutions would include SUNY, CUNY, Cornell, Columbia, NYU, RPI, and the Flatiron Institute, and would build a “state-of-the-art” artificial intelligence computing center and infrastructure for research and development, workforce opportunities and ethical solutions to societal issues.<sup>48</sup> Governor Hochul has announced that the University at Buffalo will be the home of this consortium and will be the site of the AI computing center.<sup>49</sup>

# Additional Actions to Confront the Challenges

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New York's institutions of higher education face an increasingly competitive environment for attracting and retaining students. The college-age population that drives enrollments at postsecondary institutions has been dropping as a share of the total population nationally and is forecast to shrink absolutely beginning in 2025 – a looming “enrollment cliff.”<sup>50</sup> The impact of enrollment declines over the last decade has already been felt in the finances of several public and private institutions, with a handful of institutions downsizing and/or closing. Retention of students through the pandemic and ensuring they complete the coursework needed to earn their degrees, particularly at community colleges, has proved challenging. In-state costs at public institutions, particularly two-year schools, are relatively high, and escalating student debt loads have many questioning the value proposition of higher education. In addition, the pace of technological advancement has increased, making it more necessary than ever for colleges and universities to be poised to conduct the research and development that contributes to these innovations, as well as facilitate the coursework that trains future employees in these emerging industries.

Colleges and the public university systems have already begun confronting the challenges. The pandemic forced innovation in the delivery of services, and some of these changes have proved positive. For example, the public and private sector learned that “course-sharing” represented opportunities to retain students. Such sharing occurs between IHEs without degree programs that interest current and potential students and IHEs with programs that have capacity for on-line or hybrid delivery and more students. The former is often represented by schools that serve larger numbers of traditionally under-served students.<sup>51</sup> However, additional actions are needed to help facilitate growth and innovation in the higher education sector. The following section discusses options that may be considered.

## Setting a Strategic Goal

A transformational goal such as achieving a level of educational attainment in the population by a certain year could help frame policies that encourage application, enrollment, affordability, retention and completion. Currently, 40 percent of the population 25 years and older in New York have a bachelor's degree or higher. This percentage is 35.7 percent nationwide. For both, the proportion that has associate degrees is 8.8 percent.<sup>52</sup>

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California and Michigan have recently set such goals. In January 2022, Governor Gavin Newsom announced plans to increase postsecondary attainment to 70 percent by 2030 by increasing funding for the University of California and California State University systems, striving to eliminate equity gaps, streamline pathways and pipelines, provide more affordable student housing and expand grants and other kinds of financial support.<sup>53</sup> Similarly, Michigan aims to increase the number of working-age adults with a skill certificate or college degree to 60 percent by 2030. Michigan proposes to make postsecondary education more affordable, increase federal financial aid applications, support immigrants and international students and partner with employers to develop career options.<sup>54</sup>

## Spurring Applications and Enrollment

Some of the actions already undertaken by IHEs to increase applications and enrollment include:

- Waivers of application fees for select periods of time;<sup>55</sup>
- Automatic acceptance of high school seniors into CUNY and SUNY community colleges with direct outreach to households about this opportunity, and admission into alternative four-year campuses if first choices are not available (SUNY);<sup>56</sup>
- Reduction in tuition for some out-of-state students by SUNY IHEs;<sup>57</sup>
- Expansion of financial aid; and
- Strengthening pathways for students to transfer from credential and two-year programs to higher degree programs.<sup>58</sup>

Additional initiatives to support application, enrollment and program completion by historically and currently under-represented students could also guard against potential backslides to diversity in the wake of the Supreme Court decision, and ensure students are given the supports they need to compete degrees and access rewarding opportunities. SUNY's recent announcement of its plan to replicate CUNY's Accelerated Study in Associate Programs (ASAP) and use the Accelerate, Complete, and Engage (ACE) program to support students at the two and four-year degree levels is an example of such initiatives. SUNY is using funding made available in the SFY 2023-24 Enacted State Budget for this purpose.<sup>59</sup>

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## Addressing Costs and Financial Aid

Public opinion surveys indicate there was an increase in support from 2010 to 2019 for government's role in paying for higher education. The proportion of those surveyed that believed government should hold main responsibility increased to 43 percent and the proportion that believed government should play a key role rose to 60 percent.<sup>60</sup> This shift supports the provision of increased federal and state assistance to enhance affordable access to postsecondary studies. These actions could be considered:

1. The requirement for more transparency and clarity on published costs and financial aid processes including their impacts on the determination of net costs. IHEs' net price calculators, required by federal law, are often not easy to use due to the request for private information and use of tax and financial documentation, particularly in the information-gathering phase of the college application process.<sup>61</sup>
2. The creation of a new grant program for non-tuition expenses or the amendment or expansion of existing state grant programs – such as TAP and Excelsior— so these awards may be available to cover room, board and other non-tuition expenses with eligibility criteria for such expenses related to students' commuting/non-commuting status.
3. The reduction or elimination of public community college tuition and fees, which are far greater than the national average and have grown more rapidly than those at four-year institutions. Such action should be paired with initiatives to identify career or educational pathways and support degree completion.

## Keeping Up with Innovation

Developing programs geared to the necessities of the future workforce will help increase enrollment and improve the finances of many institutions. The input of industry and community leaders can help guide some of these initiatives to ensure graduates are meeting the knowledge and skills expectations of regional employers. Partnerships between institutions and industry for workforce development programs, including apprenticeships, lab placements and other applied work, can also strengthen the human capital pipeline. Such programs already exist at many schools, including public institutions; consideration should be given for how to scale up successful models at individual institutions, or where it makes sense, create regional consortiums with public and private institutions.

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The continued provision of funding, or strengthening of capacity, at SUNY and CUNY for research and development expenditures is integral to the State's public higher education sector becoming more competitive in this area. SUNY has recently taken relevant action both through its budget appropriation for a fund that matches \$1 for every \$2 contributed to endowed funds at its four university centers and specific actions such as reunifying the College of Nanoscale Science and Engineering with the University at Albany and expanding the Albany Nanotech Complex.<sup>62</sup> SUNY and CUNY will also be receiving industry resources for research and development, for example, through the Northeast University Semiconductor Network. Additional announcements have been made regarding biotechnology and sustainable energy.

More broadly, policymakers could consider the benefit of a statewide entity charged with spurring and coordinating research and development activity including through the higher education sector; such an entity might also play a role in developing coursework and applied internships or apprenticeships for students interested in pursuing careers in emerging industries. Other states have implemented similar initiatives.

For example, the Innovation Institute at the MassTech Collaborative in Massachusetts uses a stakeholder-led process to support the development of an innovation economy in the State. Massachusetts has made matching grants available to public and private universities for research and development through the entity.<sup>63</sup> In New Jersey, the Research, Innovation, and Talent (RIT) Working Group was created to identify and determine strategies to increase research, development and commercialization activity by research universities in the State including opportunities for students, with a focus on women and under-represented minorities. It recommended the establishment of a Statewide Collaborative Research Initiative to support research at non-research intensive IHEs for younger and mid-career faculty.<sup>64</sup>

New York's institutions of higher education contribute to the State's educated workforce, have helped to drive economic growth, and promote New York's social and cultural life, but face challenges brought on by demographic shifts, rising costs, and the lingering impacts of the pandemic. It is vital for New York policymakers to be attentive to factors that affect the higher education sector and their impacts on postsecondary outcomes in the State. Support of efforts to implement innovative solutions will help preserve the State's existing competitive strengths and make improvements where opportunities emerge.

# Appendix

## Appendix A Residence and Migration of First-time Undergraduate Students: Fall 2010 and 2020

	Total first-time enrollment in institutions located in the state [1]	Enrolled State Residents		Migration of Students			Percent of State Residents		Students coming into state as a portion of total first-time
		In any state [2]	In their home state	Out of state [3]	Into state [4]	Net [5]	In their home state	Out of state	
<b>Fall 2010</b>									
<b>United States</b>	3,156,949	3,083,703	2,568,244	515,459	588,705	73,246	83.3%	16.7%	18.6%
New York	198,504	194,186	160,275	33,911	38,229	4,318	82.5%	17.5%	19.3%
California	401,859	402,593	368,074	34,519	33,785	-734	91.4%	8.6%	8.4%
Florida	176,291	165,868	148,599	17,269	27,692	10,423	89.6%	10.4%	15.7%
Massachusetts	76,864	68,504	48,656	19,848	28,208	8,360	71.0%	29.0%	36.7%
New Jersey	71,234	100,778	65,783	34,995	5,451	-29,544	65.3%	34.7%	7.7%
Texas	229,483	237,852	211,895	25,957	17,588	-8,369	89.1%	10.9%	7.7%
<i>As a Share of the United States</i>									
New York	6.3%	6.3%	6.2%	6.6%	6.5%	5.9%			
California	12.7%	13.1%	14.3%	6.7%	5.7%	-1.0%			
Florida	5.6%	5.4%	5.8%	3.4%	4.7%	14.2%			
Massachusetts	2.4%	2.2%	1.9%	3.9%	4.8%	11.4%		NA	
New Jersey	2.3%	3.3%	2.6%	6.8%	0.9%	-40.3%			
Texas	7.3%	7.7%	8.3%	5.0%	3.0%	-11.4%			
<b>Fall 2020</b>									
<b>United States</b>	2,603,215	2,534,708	2,018,064	516,644	585,151	68,507	79.6%	20.4%	22.5%
New York	168,769	162,209	129,497	32,712	39,272	6,560	79.8%	20.2%	23.3%
California	332,126	339,183	296,514	42,669	35,612	-7,057	87.4%	12.6%	10.7%
<b>Florida</b>	141,207	136,773	116,860	19,913	24,347	4,434	85.4%	14.6%	17.2%
Massachusetts	63,403	57,669	37,430	20,239	25,973	5,734	64.9%	35.1%	41.0%
New Jersey	56,010	83,566	50,500	33,066	5,510	-27,556	60.4%	39.6%	9.8%
Texas	218,202	235,949	203,344	32,605	14,858	-17,747	86.2%	13.8%	6.8%
<i>As a Share of the United States</i>									
New York	6.5%	6.4%	6.4%	6.3%	6.7%	9.6%			
California	12.8%	13.4%	14.7%	8.3%	6.1%	-10.3%			
Florida	5.4%	5.4%	5.8%	3.9%	4.2%	6.5%			
Massachusetts	2.4%	2.3%	1.9%	3.9%	4.4%	8.4%		NA	
New Jersey	2.2%	3.3%	2.5%	6.4%	0.9%	-40.2%			
Texas	8.4%	9.3%	10.1%	6.3%	2.5%	-25.9%			

Note: Degree-seeking students at reporting degree-granting institutions. [1] Includes students coming to U.S. institutions from foreign countries and other jurisdictions. [2] Students residing in a particular state when admitted to an institution anywhere--either in their home state or another state. [3] Calculated by subtracting "state residents enrolled in institutions in their home state" from "state residents enrolled in institutions in any state." [4] Calculated by subtracting "state residents enrolled in institutions in their home state" from "total first-time enrollment in institutions located in the state." Includes students coming to U.S. institutions from foreign countries and other jurisdictions. [5] Calculated by subtracting "migration of students out of state" from "migration of students into state."

Source: U.S. Department of Education, National Center for Education Statistics, Table 232 at [https://nces.ed.gov/programs/digest/d11/tables/dt11\\_232.asp](https://nces.ed.gov/programs/digest/d11/tables/dt11_232.asp) and Table 309.10 at [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_309.10.asp](https://nces.ed.gov/programs/digest/d21/tables/dt21_309.10.asp).

## Appendix B

### Fall Enrollment of First-time Students: 2000 through 2020

	2000	2010	2017	2018	2019	2020
<b>United States</b>	<b>2,427,551</b>	<b>3,156,727</b>	<b>2,883,001</b>	<b>2,879,882</b>	<b>2,857,215</b>	<b>2,603,215</b>
New York	168,181	197,849	187,805	188,267	186,061	168,769
California	246,128	402,832	390,289	384,329	381,792	332,126
Florida	109,931	176,040	160,114	160,176	157,584	141,207
Massachusetts	66,044	76,857	73,366	71,853	70,742	63,403
New Jersey	52,233	71,296	65,109	65,246	65,325	56,010
Texas	181,813	228,503	242,984	243,893	246,478	218,202
<i>As a Share of the United States</i>						
New York	6.9%	6.3%	6.5%	6.5%	6.5%	6.5%
California	10.1%	12.8%	13.5%	13.3%	13.4%	12.8%
Florida	4.5%	5.6%	5.6%	5.6%	5.5%	5.4%
Massachusetts	2.7%	2.4%	2.5%	2.5%	2.5%	2.4%
New Jersey	2.2%	2.3%	2.3%	2.3%	2.3%	2.2%
Texas	7.5%	7.2%	8.4%	8.5%	8.6%	8.4%

Note: Students seeking certificates or degrees at degree-granting institutions; these institutions grant associate or higher degrees and participate in Title IV federal financial aid programs. Some data have been revised from previously published figures.

Source: U.S. Department of Education, National Center for Education Statistics, Table 305.20 at [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_305.20.asp](https://nces.ed.gov/programs/digest/d21/tables/dt21_305.20.asp).



**Appendix C**  
**New York Institutions Hosting 1,000 or More International Students:**  
**AY 2022-23**

Institution	City	Students
New York University	New York	24,496
Columbia University	New York	19,001
Cornell University	Ithaca	8,403
SUNY University at Buffalo	Buffalo	7,696
Syracuse University	Syracuse	5,570
University of Rochester	Rochester	4,974
The New School	New York	4,684
SUNY Stony Brook University	Stony Brook	4,452
Pace University - New York	New York	3,008
School of Visual Arts	New York	2,781
Rochester Institute of Technology	Rochester	2,721
SUNY Binghamton University	Binghamton	2,549
Pratt Institute	Brooklyn	2,401
Fordham University	Bronx	2,280
CUNY Baruch College	New York	1,710
SUNY University at Albany	Albany	1,620
Teachers College, Columbia University	New York	1,606
Rensselaer Polytechnic Institute - Troy	Troy	1,442
Monroe College	New Rochelle	1,238
SUNY Fashion Institute of Technology	New York	1,077
New York Institute of Technology - Old Westbury	Old Westbury	1,015
<b>Total</b>		<b>104,724</b>

Source: Open Doors, "Enrollment Trends," Open Doors International Students Data, November 13, 2023 at <https://opendoorsdata.org/data/international-students/enrollment-trends/>.

## Appendix D

### Six-Year Completion Rates of First-time Degree-Seeking Students by Sector (percent)

Sector	State	Total Completion	Completion at Same Institution	Completion at Different 4-Year	Completion at Different 2-Year	Still Enrolled Anywhere	No Longer Enrolled
June 2008							
All	National	55.0	42.1	9.8	3.2	14.7	30.3
	New York	NA	NA	NA	NA	NA	NA
Public 4-Yr	National	62.9	49.8	9.6	3.5	14.4	22.7
	New York	62.5	48.1	10.9	3.5	13.1	24.5
Private NonProfit 4-Yr	National	73.6	59.8	11.2	2.6	9.3	17.2
	New York	76.0	59.5	14.0	2.5	8.7	15.4
Public 2-Yr	National	39.1	26.1	9.8	3.2	17.9	42.9
	New York	42.2	30.7	8.8	2.6	13.6	44.3
June 2015							
All	National	62.2	50.9	8.4	2.8	9.3	28.5
	New York	68.4	57.3	8.7	2.4	6.6	25.0
Public 4-Yr	National	69.0	58.1	7.9	3.0	8.7	22.3
	New York	70.4	57.8	9.5	3.1	7.9	21.8
Private NonProfit 4-Yr	National	78.3	66.4	9.9	1.9	5.7	16.1
	New York	83.3	72.9	8.9	1.4	4.1	12.7
Public 2-Yr	National	42.2	30.8	8.2	3.2	12.6	45.2
	New York	44.9	34.2	7.5	3.2	9.2	46.0
June 2016							
All	National	62.3	51.1	8.4	2.8	8.9	28.8
	New York	69.1	57.9	8.8	2.4	6.2	24.7
Public 4-Yr	National	68.0	57.2	7.9	2.9	8.6	23.4
	New York	71.4	58.9	9.5	3.1	7.3	21.3
Private NonProfit 4-Yr	National	77.8	66.0	9.9	1.9	5.6	16.6
	New York	83.6	72.6	9.6	1.4	4.0	12.4
Public 2-Yr	National	43.1	31.9	8.1	3.1	11.5	45.4
	New York	44.7	34.5	7.1	3.1	8.4	46.9

Note: "All" includes completions in sectors shown and private for-profit institutions. Data represent 97 percent of postsecondary enrollments and are weighted to correct for coverage gaps.

Source: J. Causey et al., *Completing College: National and State Report with Longitudinal Data Dashboard on Six- and Eight-Year Completion Rates*. (Signature Report 21), National Student Clearinghouse Research Center, Herndon, VA, November 2022 at [https://nscresearchcenter.org/wp-content/uploads/Completions\\_Report\\_2022.pdf](https://nscresearchcenter.org/wp-content/uploads/Completions_Report_2022.pdf).

**Appendix E**  
**Degrees Conferred by Postsecondary Institutions by Level of Degree:**  
**AYs 2009-10 and 2020-21**

	Associate	Bachelor's	Master's	Doctor's	Total
<b>2009-10</b>					
United States	849,452	1,650,014	693,025	158,558	3,351,049
New York	61,618	123,703	68,258	14,155	267,734
As a share of the United States	7.3%	7.5%	9.8%	8.9%	8.0%
<b>2020-21</b>					
United States	1,036,431	2,066,445	866,894	194,059	4,163,829
New York	59,496	144,819	77,681	15,136	297,132
As a share of the United States	5.7%	7.0%	9.0%	7.8%	7.1%
<b>Percent Change, 2009-10 to 2020-21</b>					
United States	22.0%	25.2%	25.1%	22.4%	24.3%
New York	-3.4%	17.1%	13.8%	6.9%	11.0%

Note: Doctor's degrees include Ph.D., Ed.D., and comparable degrees at the doctoral level. Includes most degrees classified as first-professional prior to 2010-11, such as M.D., D.D.S., and law degrees. Data are for postsecondary institutions participating in Title IV federal financial aid programs. Some data have been revised from previously published figures.

Source: U.S. Department of Education, National Center for Education Statistics, Table 339 at [https://nces.ed.gov/programs/digest/d11/tables/dt11\\_339.asp](https://nces.ed.gov/programs/digest/d11/tables/dt11_339.asp) and Table 319.20 at [https://nces.ed.gov/programs/digest/d22/tables/dt22\\_319.20.asp](https://nces.ed.gov/programs/digest/d22/tables/dt22_319.20.asp).

## Appendix F Post Graduation Residence of CUNY and SUNY Graduates between 2001-2002 and 2015-2016

Period after Graduation	Middle Atlantic										
	Total	New York	Not New York	South Atlantic	New England	East Central	Mountain	West Central	Pacific	Total	
<b>CUNY Associate Degree</b>											
One Year	Number	67,972	66,532	1,440	1,930	597	750	129	618	669	72,665
	Percent	93.5	91.6	2.0	2.7	0.8	1.0	0.2	0.8	0.9	
Five Years	Number	51,701	49,906	1,795	2,250	567	673	125	589	644	56,549
	Percent	91.4	88.3	3.2	4.0	1.0	1.2	0.2	1.0	1.1	
Ten Years	Number	22,071	20,991	1,080	1,485	320	368	65	359	345	25,013
	Percent	88.2	83.9	4.3	5.9	1.3	1.4	0.3	1.5	1.4	
<b>SUNY Associate Degree</b>											
One Year	Number	205,639	199,570	6,069	8,957	3,040	3,764	772	3,085	3,196	228,453
	Percent	90.0	87.4	2.7	3.9	1.3	1.7	0.3	1.3	1.4	
Five Years	Number	158,036	152,027	6,009	10,751	3,197	3,569	1,049	3,129	3,458	183,189
	Percent	86.3	83.0	3.3	5.9	1.7	2.0	0.6	1.7	1.9	
Ten Years	National	59,198	56,242	2,956	5,716	1,670	1,887	563	1,541	1,866	72,441
	New	81.7	77.6	4.1	7.9	2.3	2.6	0.8	2.2	2.6	
<b>CUNY Bachelor's Degree</b>											
One Year	Number	194,294	187,424	6,870	6,289	2,387	2,761	532	2,317	2,799	211,379
	Percent	91.9	88.7	3.3	3.0	1.1	1.3	0.3	1.1	1.3	
Five Years	Number	122,773	116,777	5,996	6,283	1,963	2,287	442	2,023	2,506	138,277
	Percent	88.8	84.5	4.3	4.5	1.4	1.7	0.3	1.5	1.8	
Ten Years	Number	82,323	77,022	5,301	5,866	1,728	1,693	499	1,705	2,307	96,121
	Percent	85.6	80.1	5.5	6.1	1.8	1.8	0.5	1.8	2.4	
<b>SUNY Bachelor's Degree</b>											
One Year	Number	322,660	309,908	12,752	19,552	7,459	7,571	1,930	6,228	7,597	372,997
	Percent	86.5	83.1	3.4	5.2	2.0	2.1	0.5	1.7	2.0	
Five Years	Number	202,047	191,641	10,406	20,273	7,133	6,756	2,000	5,555	7,526	251,290
	Percent	80.4	76.3	4.1	8.1	2.8	2.7	0.8	2.2	3.0	
Ten Years	Number	129,495	121,445	8,050	16,340	5,476	5,393	1,892	4,497	6,335	169,428
	Percent	76.4	71.7	4.8	9.6	3.2	3.2	1.1	2.6	3.7	
<b>CUNY Master's Degree</b>											
One Year	Number	81,608	78,572	3,036	2,464	981	1,024	212	847	1,252	88,388
	Percent	92.3	88.9	3.4	2.8	1.1	1.2	0.2	1.0	1.4	
Five Years	Number	45,658	43,130	2,528	2,508	975	839	271	759	1,222	52,232
	Percent	87.4	82.6	4.8	4.8	1.9	1.6	0.5	1.5	2.3	
Ten Years	Number	18,272	16,980	1,292	1,344	514	436	120	383	592	21,661
	Percent	84.4	78.4	6.0	6.2	2.4	2.0	0.6	1.8	2.7	
<b>SUNY Master's Degree</b>											
One Year	Number	76,477	73,907	2,570	5,500	1,938	2,197	610	1,651	2,306	90,679
	Percent	84.3	81.5	2.8	6.1	2.1	2.4	0.7	1.8	2.5	
Five Years	Number	45,818	43,940	1,878	4,290	1,484	1,512	459	1,098	1,903	56,564
	Percent	81.0	77.7	3.3	7.6	2.6	2.7	0.8	1.9	3.4	
Ten Years	Number	18,636	17,887	749	1,987	594	688	196	559	814	23,474
	Percent	79.4	76.2	3.2	8.5	2.5	2.9	0.8	2.3	3.5	

Note: One year of residence reflects the pooled outcomes of graduates between 2001-2002 and 2015-2016; five years of residence reflects graduates between 2001-2002 and 2010-2011; ten years of residence between 2001-2002 and 2005-2006.

Source: The City University of New York and CUNY's use of U.S. Census Bureau, Post-secondary Employment Outcomes (PSEO) data (submitted as *CUNY Post Grad Resid Flow Follow up to 2023-24 Executive Budget on Higher Education*, Joint Legislative Hearing, on February 27, 2023; see [https://www.assembly.state.ny.us/testimony/?ph\\_id=1348](https://www.assembly.state.ny.us/testimony/?ph_id=1348)).

**Appendix G**  
**Research and Development Spending by Sector: Fiscal Years 2010 and 2021**  
**(dollars in thousands)**

	2010		2021		Percentage Point Change, 2010 to 2021
	Dollars	Share	Dollars	Share	
<b>New York</b>					
Public	\$1,257,855	25.5%	\$ 1,716,336	22.7%	-2.9%
Private	\$3,666,746	74.5%	\$ 5,860,899	77.3%	2.9%
Total	\$4,924,601		\$ 7,577,235		
<b>California</b>					
Public	\$5,537,440	70.7%	\$ 7,945,304	70.8%	0.0%
Private	\$2,292,249	29.3%	\$ 3,284,553	29.2%	0.0%
Total	\$7,829,689		\$11,229,857		
<b>Florida</b>					
Public	\$1,671,812	84.1%	\$ 2,326,008	84.0%	-0.2%
Private	\$ 315,030	15.9%	\$ 443,379	16.0%	0.2%
Total	\$1,986,842		\$ 2,769,387		
<b>Massachusetts</b>					
Public	\$ 542,666	19.8%	\$ 754,263	16.5%	-3.2%
Private	\$2,203,983	80.2%	\$ 3,814,736	83.5%	3.2%
Total	\$2,746,649		\$ 4,568,999		
<b>New Jersey</b>					
Public	\$ 559,212	66.3%	\$ 897,949	66.4%	0.1%
Private	\$ 284,312	33.7%	\$ 454,821	33.6%	-0.1%
Total	\$ 843,524		\$ 1,352,770		
<b>Texas</b>					
Public	\$3,732,776	86.5%	\$ 5,800,026	84.7%	-1.8%
Private	\$ 582,858	13.5%	\$ 1,049,496	15.3%	1.8%
Total	\$4,315,634		\$ 6,849,522		

Note: Amounts in New York and California include funding for federal military educational institutions.

Source: National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, Table 68 at <https://nces.nsf.gov/surveys/higher-education-research-development/2021> and <https://www.nsf.gov/statistics/herd/>.

## Appendix H

### Average Undergraduate Tuition, Fees, Room and Board Charges for Full-time Students: AYs 2010-11 and 2020-21

	Public 4-year					Private 4-year				Public 2-year	
	In-state				Out-of-state Tuition and Fees	Total	Tuition and Fees	Room	Board	Tuition and Fees	
	Total	Tuition and Fees	Room	Board						In-state	Out-of- state
<b>2010-11</b>											
<b>United States</b>	<b>\$15,918</b>	<b>\$ 7,136</b>	<b>\$ 4,824</b>	<b>\$3,958</b>	<b>\$19,622</b>	<b>\$32,617</b>	<b>\$22,771</b>	<b>\$5,413</b>	<b>\$4,433</b>	<b>\$2,439</b>	<b>\$ 6,183</b>
New York	\$16,606	\$ 5,764	\$ 6,732	\$4,110	\$13,772	\$41,626	\$29,742	\$7,135	\$4,750	\$3,848	\$ 6,890
California	\$18,933	\$ 7,357	\$ 6,000	\$5,576	\$26,509	\$38,047	\$26,519	\$6,520	\$5,008	\$ 723	\$ 5,521
Florida	\$12,774	\$ 3,720	\$ 5,420	\$3,634	\$16,327	\$28,533	\$19,242	\$5,133	\$4,157	\$2,497	\$ 9,560
Massachusetts	\$19,164	\$ 9,444	\$ 5,821	\$3,899	\$21,778	\$46,632	\$34,315	\$6,980	\$5,337	\$3,759	\$ 8,430
New Jersey	\$22,592	\$11,197	\$ 7,331	\$4,063	\$22,304	\$39,707	\$28,226	\$6,277	\$5,204	\$3,553	\$ 6,108
Texas	\$14,585	\$ 6,742	\$ 4,189	\$3,654	\$18,280	\$31,674	\$22,832	\$4,816	\$4,025	\$1,585	\$ 4,275
<b>2020-21</b>											
<b>United States</b>	<b>\$21,337</b>	<b>\$ 9,375</b>	<b>\$ 6,774</b>	<b>\$5,189</b>	<b>\$27,091</b>	<b>\$46,313</b>	<b>\$32,825</b>	<b>\$7,581</b>	<b>\$5,907</b>	<b>\$3,501</b>	<b>\$ 8,256</b>
New York	\$24,231	\$ 8,416	\$10,380	\$5,435	\$20,113	\$58,423	\$42,631	\$9,457	\$6,335	\$5,576	\$ 8,874
California	\$24,015	\$ 8,401	\$ 8,744	\$6,870	\$34,398	\$53,680	\$38,477	\$8,477	\$6,726	\$1,285	\$ 8,491
Florida	\$15,543	\$ 4,541	\$ 6,464	\$4,538	\$18,322	\$41,843	\$28,860	\$7,473	\$5,509	\$2,506	\$ 9,111
Massachusetts	\$28,317	\$13,939	\$ 8,721	\$5,657	\$32,019	\$65,784	\$49,152	\$9,582	\$7,050	\$5,529	\$10,680
New Jersey	\$28,335	\$14,184	\$ 8,371	\$5,780	\$28,682	\$52,442	\$38,586	\$8,196	\$5,660	\$4,919	\$ 8,136
Texas	\$18,325	\$ 8,016	\$ 5,608	\$4,702	\$25,471	\$49,884	\$37,450	\$6,851	\$5,583	\$2,828	\$ 7,764
<b>Percent Change, 2010-11 to 2020-21</b>											
<b>United States</b>	34.0%	31.4%	40.4%	31.1%	38.1%	42.0%	44.2%	40.1%	33.2%	43.5%	33.5%
New York	45.9%	46.0%	54.2%	32.2%	46.0%	40.4%	43.3%	32.6%	33.4%	44.9%	28.8%
California	26.8%	14.2%	45.7%	23.2%	29.8%	41.1%	45.1%	30.0%	34.3%	77.7%	53.8%
Florida	21.7%	22.1%	19.3%	24.9%	12.2%	46.6%	50.0%	45.6%	32.5%	0.4%	-4.7%
Massachusetts	47.8%	47.6%	49.8%	45.1%	47.0%	41.1%	43.2%	37.3%	32.1%	47.1%	26.7%
New Jersey	25.4%	26.7%	14.2%	42.3%	28.6%	32.1%	36.7%	30.6%	8.8%	38.4%	33.2%
Texas	25.6%	18.9%	33.9%	28.7%	39.3%	57.5%	64.0%	42.3%	38.7%	78.4%	81.6%

Note: For the entire academic year as defined by the institution. At degree-granting postsecondary institutions. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding.

Source: U.S. Department of Education, National Center for Education Statistics, Table 350 at [https://nces.ed.gov/programs/digest/d11/tables/dt11\\_350.asp](https://nces.ed.gov/programs/digest/d11/tables/dt11_350.asp) and Table 330.20 at [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_330.20.asp?current=yes](https://nces.ed.gov/programs/digest/d21/tables/dt21_330.20.asp?current=yes).

# Endnotes

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## Contact

Office of the New York State Comptroller  
110 State Street  
Albany, New York 12236  
(518) 474-4044  
[www.osc.ny.gov](http://www.osc.ny.gov)

Prepared by the Office of Budget Policy and Analysis

Maria Doulis, Deputy Comptroller  
Pasquale Reale, Assistant Deputy Comptroller  
Todd Scheuermann, Assistant Deputy Comptroller  
Joshua Simons, Policy Director  
Carolyn Boldiston, Principal Analyst

