



The State University
of New York

SUNY Graduates Post-Completion Wages

Wages by Award Level

Reports Series
Issue No. 1



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Executive Summary

As part of SUNY's long standing commitment to accountability, transparency, and informed decision making SUNY System's Office of Institutional Research and Data Analytics (OIRDA) embarked on the initiative of obtaining information to assess the post-completion labor market outcomes for SUNY graduates and making this information publicly available. As part of this initiative, SUNY has launched a publicly available interactive tool —[gradwages](#)—with detailed wages information aimed at providing students and their families valuable information about employment and wages of SUNY graduates across majors, award levels and campuses. In combination with the release of the interactive tool, OIRDA is starting a series of reports exploring the post-completion wages of SUNY graduates. This is the first report in the series and explores the short and long term employment outcomes of SUNY graduates by award level. Overall, the post-graduation employment data reveals that— while there is some variation between award levels— around 80% of SUNY graduates are working in New York State two years after graduation and earn good wages. In addition, wages are generally higher and increase faster over time for graduates that earn awards requiring more years of education.

Introduction

Information about the wages of students after graduating from college is of great interest to students and their families, university leaders, and policy makers.

Students have a need to know about their employment outlook once they graduate from college. They are interested in knowing about what types of jobs their major leads to and what their salary potential is. College is a large investment and having information about the employment outcomes of the different degrees and certifications can help students make better choices for their particular circumstances.

Students and their families can also look for some assurance that future wages will provide a return to their investments in higher education. Students with debt need to earn enough after graduation to cover basic needs and repay their education loans. Deciding whether or not to continue with higher education and deciding which academic program to pursue are decisions that have lifelong economic consequences to students who need better information to make these critical decisions.

Developing and offering programs that prepare students to succeed in the workforce is of utmost importance to college and university leaders. Policy makers face the challenge of designing and implementing public policies that lead to a well-educated workforce and contribute economic growth and prosperity to the region. All of these stakeholders need information to support investments in higher education and making wage information of college graduates—a key measure of student success—publicly available increases transparency and accountability of higher education institutions.

This report explores the labor market returns of awards granted by colleges and universities that are part of the State University of New York (SUNY). SUNY is the largest comprehensive system of higher education in the United States, with 64 college and university campuses located within 30 miles of every home, school, and business in the state. In 2017–18, SUNY served nearly 1.4 million students, including approximately 550,000 in credit-bearing courses and programs and over 850,000 through continuing education and community outreach programs. SUNY students and faculty across the state make significant contributions to research and discovery, resulting in \$1 billion of externally sponsored activity each year. There are 3 million SUNY alumni worldwide, and one in three New Yorkers with a college degree is a SUNY alum.

SUNY's 64 unique, individual campuses include University Centers and Doctoral Degree Institutions, University Colleges, Technology Colleges, and Community Colleges and range from urban to rural, small to large, and span from Buffalo to Long Island. These campuses offer degrees and awards at the undergraduate and graduate level. At the undergraduate level, SUNY campuses offer associate and baccalaureate degrees and undergraduate certificates. At the graduate level, SUNY campuses offer master's, doctoral, and first professional degrees as well as graduate certificates.

The pressure on higher education institutions to ensure not only that their students graduate, but that their graduates are prepared with the skills and competencies required to be gainfully employed continues to increase. As a response, SUNY System Administration has taken the steps necessary to obtain information to assess the post-completion labor market outcomes for SUNY graduates. This report is part of a broader effort by SUNY to increase transparency and accountability by assessing the completion and

post-completion outcomes of SUNY students and graduates.

Research about the labor market returns to higher education consistently show that education matters and that the wages of college graduates are significantly higher than those who do not continue with their education. Median wages by educational attainment from the American Community Survey (ACS) available through the U.S. Census Bureau show that individual wages increase with more education. Table 1 displays wages by educational attainment for the USA and New York State. Median wages for the New York population 25 years and over with some college or an associate degree are 22% higher than the median wages of those who complete high school and do not pursue higher education. Additionally, the median wages for the New York population 25 years and over with a baccalaureate degree and a graduate or professional degree are 85% and 141% higher than the median wages of those with only a high school degree.

Attending and graduating from college is not only about earning a paycheck. Abundant research also shows that the individual and societal benefits of higher education go far

beyond the wages that graduates earn. For example, some of the other benefits of higher education that go beyond the wages include improvements in health status, increased citizen participation, crime reduction, increases in social mobility, and reductions on welfare reliance.¹ This report focuses on the employment outcomes of SUNY graduates in New York State. Recognizing that many considerations are involved in the interpretation of wages, the information presented in this report should not lead to conclusions and/or judgements about the relative level of value between certain degrees and majors.

The wage numbers of SUNY graduates presented on this report were derived from the New York State Department of Labor (DOL) Unemployment Insurance (UI) System. In 2016, SUNY System Administration signed a Memorandum of Understanding with the Department of Labor providing SUNY access to wage data of SUNY students for the general assessment of student success and outcomes. The [Data Sources and Methodology](#) document contains details about the data sources used for this report, data handling decisions, and definitions of key terms.

Table 1 – MEDIAN WAGES BY EDUCATIONAL ATTAINMENT FOR THE POPULATION: AGES 25 YEARS AND OVER

Educational Attainment	USA	New York
Less than high school graduate	\$21,738	\$21,233
High school graduate (includes equivalency)	\$29,815	\$30,803
Some college or associate degree	\$35,394	\$37,419
Baccalaureate degree	\$52,019	\$56,910
Graduate or professional degree	\$69,903	\$74,155

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates (2017 Constant Dollars)

¹ Ma, J., Pender, M., & Welch, M. (2016). Education Pays 2016: The Benefits of Higher Education for Individuals and Society. Trends in Higher Education Series. College Board.

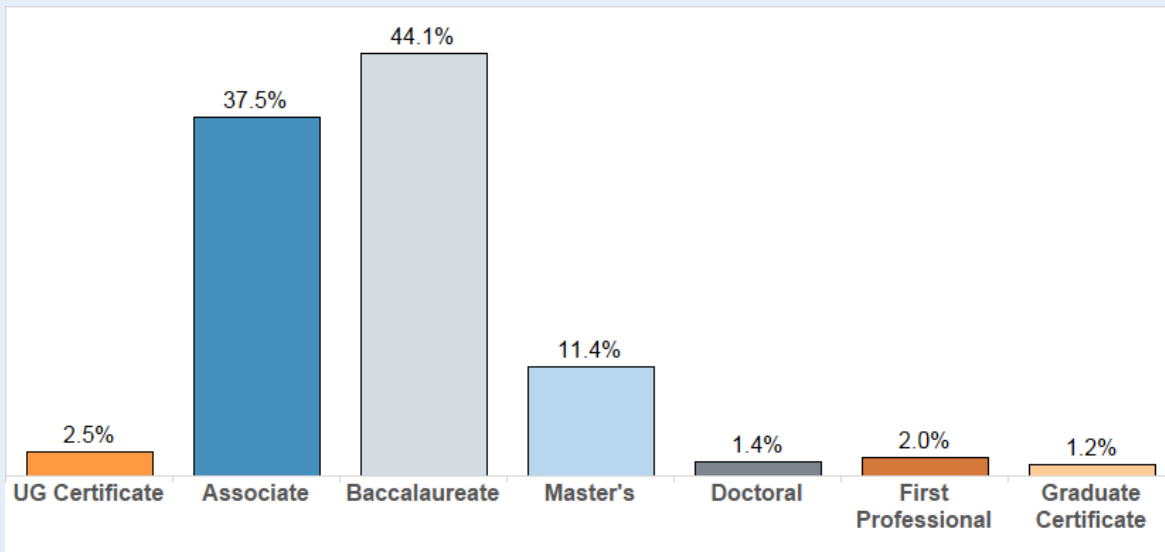
This report explores the economic outcomes of SUNY certificates and degree holders by award level. This is the first in a series of planned reports exploring the short and long-term employment and wages information of SUNY graduates employed in New York State by different categories such as award level, field of study, industry of employment, and location of employment. Overall, the report shows that around 8 out of 10 SUNY graduates stay in New York State after graduating and that more education is generally associated with higher wages.

SUNY Graduates Two Years After Graduation

As part of the data exchange with NYS Department of Labor, SUNY System Administration requested historical and current wages information for graduates from 60 SUNY campuses² for years 2012-13, 2013-14, and

2014-15.³ Chart 1 displays the percentages of SUNY graduates by award level included in the two years after graduation numbers. The analyses only include the most recent award of each graduate. That is, if a student earns an associate degree and then earns a baccalaureate degree, we only include the bachelors in the calculations. The overwhelming majority of the awards were baccalaureate and associate degrees, which represented 44.1% and 37.5% of total awards, respectively. Note that these do not match the total percentages of SUNY degrees because – as noted above – the analyses presented only include the latest award earned by a graduate.

Chart 1 – GRADUATES INCLUDED BY AWARD LEVEL



² Cornell statutory colleges do not report sufficient student information to System Administration to be included in this project.

³ This represents around 90% of SUNY graduates for those years. The approximately 10% of graduates missing from this analysis

because we did not have a valid SSN and therefore could not request wages data from DOL. Note that many of the graduates missing SSN were international students.

The UI wages information obtained from the NYS DOL can be used to estimate the rate of in-state employment of SUNY graduates. The in-state match rate is the number of graduates with wages information in the UI system divided by the total number of graduates that were part of the data exchange. While the UI system does not include wage information for everyone working in New York State, the Department of Labor estimates that UI law covers around 97% of nonfarm employment. The in-state match rate is useful for policy-makers to identify institutions and programs with more graduates that stay in New York State helping generate human capital, feeding the local labor markets, and paying state and local taxes. In addition, information from the National Student Clearinghouse was used to determine whether graduates continued with their higher education anywhere in the United States upon graduation from SUNY.

Chart 2 displays whether SUNY graduates were working in NYS and/or studying two years after graduation. Around 78% of the SUNY graduates were working in New York State two years after graduation. Of these, 59.2% were only working in New York and 18.7% were working in New York while also studying. The remaining 22% of graduates were not found working in New York nor studying two years after graduating from SUNY. Around 23.3% of graduates were studying two years after graduation. Of these, 18.7% were working and 4.6% were not working in NYS while studying.

Chart 2 – WORKING AND/OR STUDYING IN NEW YORK TWO YEARS AFTER GRADUATION

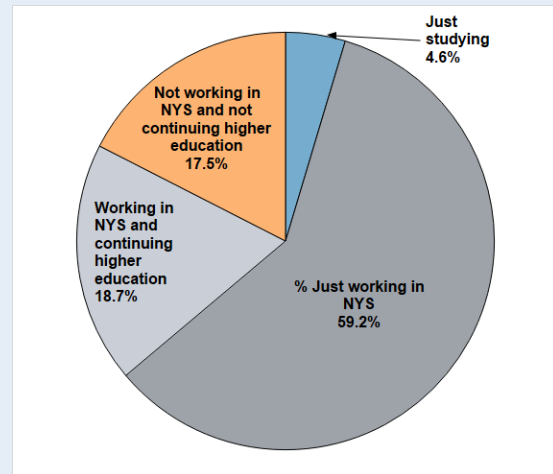


Table 2 shows how the percentage of graduates working and/or studying in New York two years after graduation varies across the different types of SUNY campuses. While 81.5% of graduates from Community Colleges work in New York two years after graduation, 71.6% of graduates from Doctoral Degree Granting Institutions work in New York two years after graduation. These differences are due in part to the fact that doctoral degree granting institutions attract more out of state students than do community colleges; these students from other states or other countries are less likely to stay in New York upon graduation. Nevertheless, overall in our study, a meaningful 35.1% of students from other states and 27.1% students from outside of the United States are found to be working in New York State two years after graduating from SUNY.

Table 2 – WORKING OR STUDYING IN NEW YORK TWO YEARS AFTER GRADUATION BY COLLEGE TYPE

Employment and Completing Education	Doctoral Degree Granting Institutions	Comprehensive Colleges	Technology Colleges	Community Colleges
Total Working in NYS	71.6%	78.8%	80.1%	81.5%
Just Working in NYS	59.5%	65.1%	63.9%	54.0%
Working in NYS and Continuing Higher Education	12.1%	13.7%	16.2%	27.5%
Just Studying	4.3%	3.3%	3.1%	6.1%
Not Working in NYS and not Continuing Education	24.1%	17.9%	16.8%	12.4%

Table 3 – WORKING OR STUDYING IN NEW YORK TWO YEARS AFTER GRADUATION BY AWARD LEVEL

Employment and Completing Education	UG Certificates	Associate	Baccalaureate	Master's	Doctoral	First Prof	Grad Cert
Total Working in NYS	81.7%	81.8%	77.3%	72.9%	38.8%	64.8%	83.8%
Just Working in NYS	64.3%	52.6%	63.1%	65.7%	38.1%	63.9%	73.5%
Working in NYS and Continuing Higher Education	17.4%	29.2%	14.3%	7.2%	0.8%	0.8%	10.3%
Just Studying	3.3%	6.4%	4.1%	2.5%	1.4%	0.6%	2.3%
Not Working in NYS and not Continuing Education	15.0%	11.8%	18.6%	24.6%	59.8%	34.6%	14.0%

Similarly, Table 3 shows that there are important variations between award levels in terms of the percentage of graduates working in New York two years after graduation. Almost 82% of certificate and associate graduates are working in New York two years after finishing their degree compared to only around 38.8% of doctoral degrees graduates. Out of all SUNY graduates, those that obtained their associate are the most likely to be working in NYS and continuing their higher education.

Median Wages by Award Level

The median wages earned by SUNY graduates vary depending on whether the graduate continued their higher education upon graduation or not. Continuing higher education requires additional time and commitment, and

graduates often work part-time or outside their field of study while they are continuing with their education. Chart 3 compares the median wages of graduates enrolled at a higher education institution two years after graduation with those who were not enrolled. Notice that graduates who continue studying have lower median wages at all award levels except for first professional. The chart displays the difference in median wages between graduates who were not enrolled at a higher education institution two years after graduation and those who were enrolled. Because the median wages of those not continuing with their higher education are generally greater, the median wages presented in the rest of this report are only of students who did not continue their education because they represent a better assessment of the wages that graduates with a specific award can earn.⁴

⁴ There are around 5 times more students included for the medians of those graduates who were not continuing with their

education two years after graduation than those who were continuing with their higher education.

Chart 3 – MEDIAN WAGES OF GRADUATES NOT CONTINUING HIGHER EDUCATION VS MEDIAN WAGES OF STUDENTS CONTINUING HIGHER EDUCATION (BY AWARD LEVEL, TWO YEARS AFTER GRADUATION)

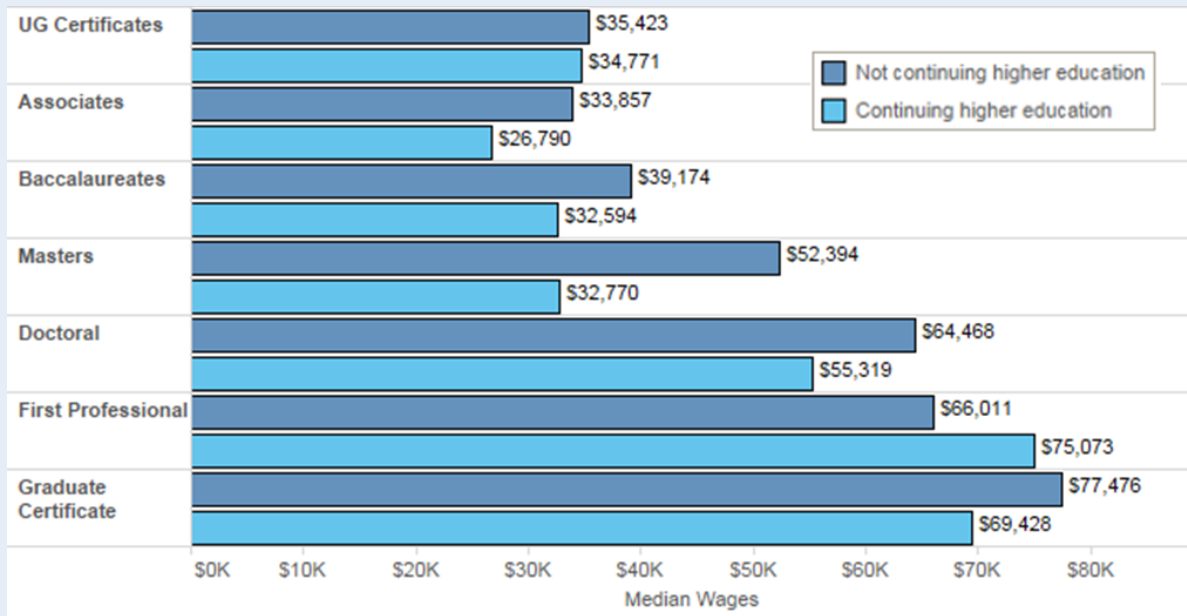


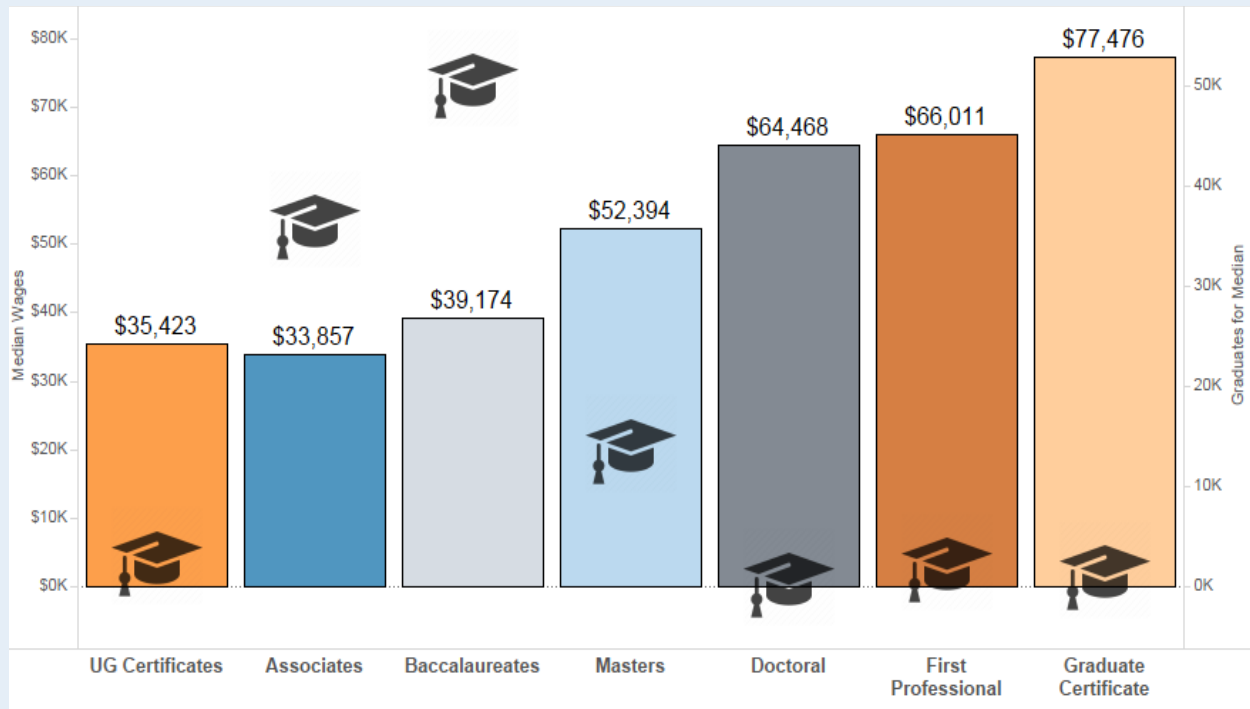
Chart 4 displays the median wages and number of graduates included in the median calculation by award level. Note that the numbers presented in this table are not comparable to the numbers in Table 1 because they display median wages for different populations. While the median wages displayed on Table 1 are for all US and NYS population 25 years and older, the numbers displayed on Chart 4 are for SUNY graduates two years after graduation, which is overall a younger sample.

The mortarboards on Chart 4 represent the number of graduates included in the analyses by award level. The number of graduates used for the median is a subset of the total graduates. As discussed in the [Data Sources and Methodology](#) document, the median calculation excludes: (1) graduates found studying two years after graduation; (2) graduates who worked less than three quarters during the year; and (3) graduates with wages below federal minimum wage. That is, the median wages by award displayed in Chart 4 correspond to the median wages by award displayed in Chart 3 for those graduates not

continuing with their higher education. While the total number of associate and baccalaureate graduates are similar, there are substantially more graduates included for the baccalaureate median calculation than those included in the associate median calculation, as represented by the mortarboards. The main reason for this difference is that more Associate graduates continue with their education – generally to pursue bachelor’s degree – and therefore are not included for the median calculation.

Chart 4 also displays the median wages of SUNY graduates by award level. As a general rule, median wages of SUNY graduates working in New York increase with higher levels of education. For example, two years after graduation the wage difference between associate and baccalaureate is over \$5,000 and between baccalaureate and master’s is over \$13,000.

Chart 4 – MEDIAN WAGES BY AWARD LEVEL, TWO YEARS AFTER GRADUATION



The exception is for certificate recipients. For example, the median wages for undergraduate certificate recipients two years after graduation were slightly higher than that of associate degree recipients. There are two main reasons for this difference. First, undergraduate certificate programs tend to be in disciplines that are associated with higher wages, such as health-related disciplines. The other reason is that undergraduate certificate graduates are, on average, around five years older than associate graduates are and therefore have been in the workforce longer.

Similarly, graduate certificate recipients have higher median wages than other graduate awards because a large proportion of the graduates are educational leadership professionals who were already earning comparatively higher wages before obtaining the certificate. The wage differences between disciplines in award levels is the subject of the second issue of this post-graduation wages reports series.

Distribution of Wages by Award Level

Statistics on the distribution of the wages provide a more complete picture of the graduates’ wages by award level. Statistics such as the average, first quartile (point of the distribution where 25% of graduates wages are below), third quartile (75% of graduates wages are below), and standard deviation of wages present a more comprehensive depiction of the wage distribution. Chart 5 and Chart 6 display the histograms of wages for undergraduate awards and graduate awards respectively while Table 4 and Table 5 includes statistics of the wage distributions. The histograms display the frequencies of graduates’ wages bins for intervals of \$2,500.

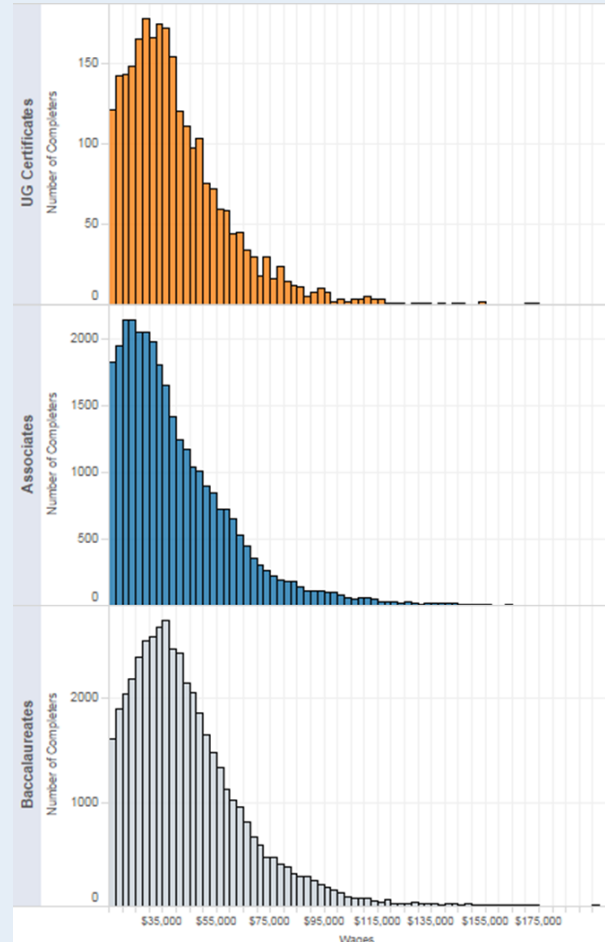
Overall, Chart 5 shows that the distributions of wages for the undergraduate certificate, associate and baccalaureate degrees are very similar. The three distributions have a similar curved shape with a long right tail. The latter

means that there are graduates that earn wages that are substantially above the median. In fact, due to this characteristic of the distribution, the average wages for graduates in these three award levels are higher than the median by around \$4,000 (see Table 4) and the standard deviations are around half the average wages. The main difference between the three distributions is that the baccalaureate wages are higher.

The wages distribution of students who completed graduate programs is notably different from that of the undergraduate wages distribution. Chart 6 shows that in general, the wage distributions for the graduate awards are more disperse as reflected by the fact that the standard deviations of the master’s and doctoral wage distributions are around double the standard deviations of the associate and baccalaureates wage distributions (compare Table 4 with Table 5). The wages are also generally higher as evidenced by the peaks of the distributions being more towards the center of the chart at higher wage bins. In addition, there are more graduates in the right tails of the distributions. There are also noteworthy differences between the wage distributions of the different types of graduate awards. For instance, the distribution of the first professional degrees has a peak at around \$65,000 that

stands out and is comprised mainly of medical degree recipients.

Chart 5 – DISTRIBUTION OF UNDERGRADUATE WAGES (BY AWARD LEVEL, TWO YEARS AFTER GRADUATION)

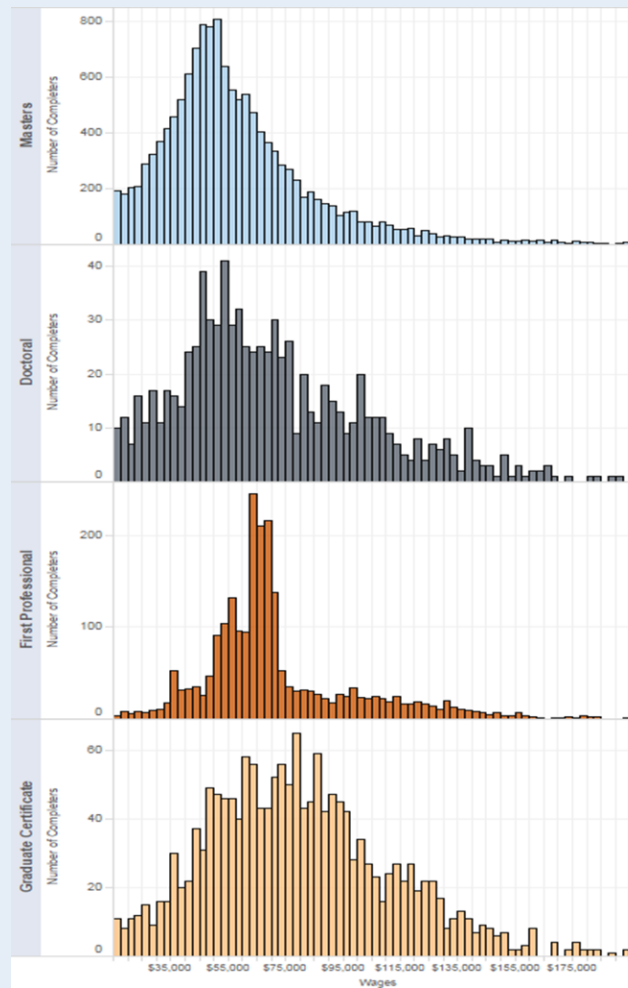


Note: Truncated at \$200,000 for presentation purposes

Table 4 – DISTRIBUTION STATISTICS OF WAGES TWO YEARS AFTER GRADUATION BY AWARD LEVEL (UNDERGRADUATE)

Award Level	25 Percentile	Median Wages	75 Percentile	Average	Standard Deviation
UG Certificate	\$25,699	\$35,423	\$48,499	\$39,546	\$19,940
Associate	\$23,763	\$33,857	\$49,590	\$39,635	\$22,617
Baccalaureate	\$28,027	\$39,174	\$53,794	\$43,951	\$25,132

Chart 6 – DISTRIBUTION OF GRADUATE WAGES (BY AWARD LEVEL, TWO YEARS AFTER GRADUATION)



Note: Truncated at \$150,000 for presentation purposes

SUNY Graduates’ Long Term Wages by Award Level

Chart 7 displays the median wages of SUNY graduates one, two, three, five and ten years after graduation by award level.⁵ Notice that the rate at which the median wages of SUNY graduates increase after graduation varies by award level. For instance, while the median wages of undergraduate certificate recipients are higher than the median wages of associate recipients for the first five years after graduation, the median wages of the associate recipients are higher than the median wages of the undergraduate certificate recipients ten years after graduation. That is because during the same period the median wages of the associate recipients increased 65% while the median wages of the undergraduate certificate recipients increased 42%, as displayed in Table 6. The median wages of baccalaureate graduates are only slightly higher than the median wages of other undergraduate awards the first three years after graduation and notably higher five and ten years after graduation. In fact, the median wages of baccalaureate recipients increases 92% between year one and ten after graduation.

Table 5- DISTRIBUTION STATISTICS OF WAGES TWO YEARS AFTER GRADUATION BY AWARD LEVEL (GRADUATE)

Award Level	25 Percentile	Median Wages	75 Percentile	Average	Standard Deviation
Master’s	\$40,990	\$52,394	\$69,431	\$59,453	\$37,741
Doctoral	\$46,251	\$64,468	\$91,543	\$73,499	\$50,588
First Professional	\$56,497	\$66,011	\$79,186	\$72,761	\$31,322
Graduate Certificate	\$56,521	\$77,476	\$99,469	\$81,105	\$35,444

⁵ Refer to the [Data Sources and Methodology](#) document for a description of the SUNY graduates included in the different median wage numbers.

Table 6 - MEDIAN WAGE INCREASE SINCE FIRST YEAR AFTER GRADUATION BY AWARD LEVEL

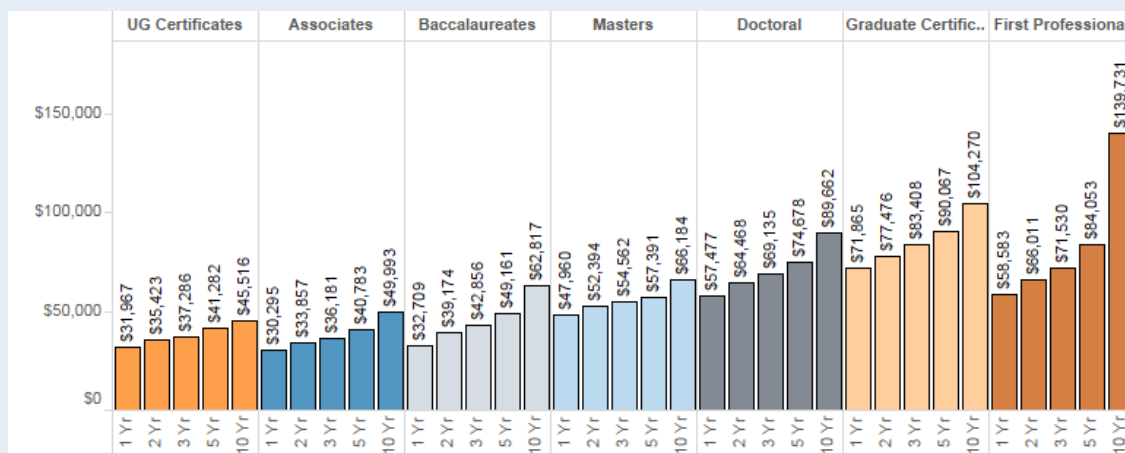
Award Level	2 Yr.	3 Yr.	5 Yr.	10 Yr.
UG Certificate	10.8%	16.6%	29.1%	42.4%
Associate	11.8%	19.4%	34.6%	65.0%
Baccalaureate	19.8%	31.0%	50.3%	92.1%
Master's	9.2%	13.8%	19.7%	38.0%
Doctoral	12.2%	20.3%	29.9%	56.0%
Graduate Certificate	7.8%	16.1%	25.3%	45.1%
First Professional	12.7%	22.1%	43.5%	138.5%

There are also differences in growth rates within award levels. For example, the median wages of the first professional graduates increased 139% between year one and year ten after graduation. Within the first professional degrees, the median wages increase of medicine graduates during the same period was 325%. This increase is explained primarily by medical doctors finishing with their residency/fellowship programs and obtaining their physician’s license. As mentioned before, future reports of this series will explore the differences between disciplines within award levels.

Conclusion

SUNY has a long standing commitment to accountability, transparency, and informed decision making. This is the first of a series of reports aimed at fulfilling this commitment by making available to the public relevant information about post graduation employment and wages. In addition, SUNY has launched a publicly available interactive tool —[gradwages](#)— with detailed wages information aimed at providing students and their families valuable information about employment and wages of SUNY graduates across majors, award levels and campuses. Overall, the post-graduation employment data reveals that around 80% of SUNY graduates stay working in New York State after graduation and earn good wages.⁶ As expected, wages generally increase faster over time with award levels that require more years of education. However, further analysis is needed to understand how wages also vary by discipline area, demographic characteristics of graduates, location of employment, and industry of employment, and number of years after graduation. We will explore these factors and others in forthcoming reports of our SUNY Post-Graduation Wages series.

Chart 7 – SUNY GRADUATES’ WAGES 1, 2, 3, 5 and 10 YEARS AFTER GRADUATION BY AWARD LEVEL



⁶ The [Center on Education and the Workforce \(CEW\)](#) defines good jobs “as jobs paying a minimum of \$35,000 for workers between

the ages of 25 and 44 and at least \$45,000 for workers between the ages of 45 and 64.