

# Employment Outcomes for South Carolina Post-Secondary Graduates

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# Employment Outcomes for South Carolina Post-Secondary Graduates

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## Introduction

In light of the continuing “tight” labor market where demand for workers exceeds supply, it is vital to understand the employment outcomes of those graduating from the state’s post-secondary institutions. Understanding the difference in employment and wage rates across fields and degree types can help to inform higher education and economic development policy makers as the state strives to ensure an appropriate workforce talent pipeline.

This report uses college completion data from the South Carolina Commission on Higher Education (CHE) and matches it with Unemployment Insurance (UI) Wage Records collected by the South Carolina Department of Employment and Workforce (DEW) to examine several research questions:

1. What are the characteristics of students found in the DEW wage records compared to those who are not found? Are there certain types of students who are more likely to remain in the state and find employment one, five, and ten years post-graduation?
2. What are the median earnings for students one, five, and ten years post-graduation and how do those earnings vary based on degree level, college major, and other demographic characteristics? How have wages changed for FY2009-10 & FY2014-15 graduates one year and five years post-graduation? How have wages changed for FY2009-10 graduates ten years post-graduation? Which college majors appear to have the highest wage growth potential during an individual’s early career?
3. In what industries are SC college graduates most likely to be employed ten years post-graduation? How does the industry composition vary based on the student’s college degree level?
4. How have median wages changed one year post-graduation for those students who graduated in FY2009-10 (during the height of the Great Recession) vs. students who graduated in FY2014-15 (during more “normal” economic times) vs. those students who graduated FY2019-20 (during the COVID-19 pandemic)? Can these wage changes provide insight into majors in high or low demand in the workforce?

This report is organized as follows: Section II describes the data sources and data limitations; Section III reports the percentage of students found in the wage records across a number of demographic and degree-specific variables; Section IV explores the median annual earnings of graduates across demographics, degree levels, and major; Section V determines which industries employ SC graduates; Section VI examines the change in median earnings between the cohorts; Section VII concludes.

## **Section II: Data and Limitations**

Through the Revenue and Fiscal Affairs (RFA) Office, three cohorts of college graduates from CHE data were matched with wage records from DEW to determine employment and wage outcomes for students.

The program and graduation data used in this report were provided by colleges and universities to CHE. Records were limited to students who completed undergraduate or graduate programs at a public or independent institution in FY2009-10, FY2014-15, or FY2019-20.<sup>1</sup> The employment and earnings data are derived from the UI wage records in South Carolina provided by DEW. They do not include students who work outside of the state, work as independent contractors, are self-employed, or work for the federal government or military.

Employment and earnings for each graduate were determined by examining the wage records for the four quarters following their graduation date. For example, students who graduated in the spring semester of 2010 (2010-2) were matched to earnings data for quarters 3 and 4 of the same calendar year and quarters 1 and 2 of the following year (2010-3, 2010-4, 2011-1, 2011-2).<sup>2</sup> First-year earnings are the sum of all wages earned by the graduate in South Carolina. If an individual had less than four quarters of wages, the wages reported in the available quarters were annualized. For example, if the graduate had two quarters of wages, their total wages were divided by two and multiplied by four. The data provided for the cohorts include only graduates with valid Social Security Numbers, and the earnings represent graduates who met a wage threshold.<sup>3</sup>

It is important to note that graduates' earnings are not the only measure of how well a program is performing. Individual students' success reflects a variety of factors such as each student's background, the local job market, and personal career goal preferences. Nevertheless, students who enter the job market within one year of completing their education represent an important segment of the labor force, and the information presented here can assist students, families, and policy makers as they make decisions regarding higher education.

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<sup>1</sup> See Appendix A for a full list of institutions.

<sup>2</sup> See Appendix B for additional information on graduation dates and quarters used for each cohort.

<sup>3</sup> Only students whose annualized earnings equal or exceeded \$14,500 were included in the wage progression analysis. This represents the earnings of someone working 40 hours per week 50 weeks per year at a minimum wage of \$7.25. This was done in an attempt to eliminate as many people working part-time hours as possible.

## Section III: Graduates Employed in South Carolina

### Background

A total of 41,195 unique students<sup>4</sup> graduated from South Carolina institutions of higher education in FY2009-10. In order to accurately assess their wages and wage growth from the period 2010 to 2021, any student who re-enrolled in or completed a degree at one of the state's colleges after their FY2009-10 completion was removed from analysis.

This left a total of 27,036 students in the final data set to be matched with the Department of Employment and Workforce's Unemployment Insurance (UI) wage records. Similarly for the graduates in FY2014-15, there were 45,944 unique students in the original cohort. Any student who continued to be enrolled or completed another degree in South Carolina higher education was removed. This left 33,165 unique students to be matched with the wage records.<sup>5</sup> Finally, for the FY2019-2020 graduates, there were 48,692 unique students who graduated with 39,191 to be matched with the wage records.<sup>6</sup>

It is important to reiterate that even if an individual is not found in the South Carolina wage records, it does not mean that they are not employed. They may have moved to another state to continue their higher education, taken a job in another state, become employed by the federal government or military, or may have employment that is not covered by the UI wage records, such as self-employment or work as an independent contractor. DEW is actively pursuing opportunities to match records with other state agencies as well as other states. Future analyses will be improved by being able to identify graduates working in locations currently unavailable in solely the DEW in-state wage records.

### One Year Post-Graduation

#### FY2009-10

For the graduates of FY2009-10, 63.9 percent were found with wages in at least one quarter in the first four quarters after their graduation date. Table 1 provides a more detailed demographic breakout of those found in the wage records one year post-graduation.<sup>7</sup>

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<sup>4</sup> If a student completed more than one degree during the year, the highest degree obtained was used in the analysis.

<sup>5</sup> This number will likely be lower if analysis is replicated in future years since some of these students may ultimately re-enroll in higher education after completing their FY2014-15 degree. Only five years of "re-enrollees" have been removed in the second cohort of students compared to more than 10 years for the FY2009-10 graduates.

<sup>6</sup> This number will be lower if analysis is replicated in future years since some students may ultimately re-enroll in higher education after completing their FY2019-20 degree.

<sup>7</sup> For detailed information on degree level, see Appendix C

Table 1: Percentage of Students Found in Wage Records One Year Post-Graduation, FY2009-10

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Total	27,036	17,271	63.9%
Female	15,769	10,493	66.5%
Male	11,267	6,778	60.2%
White	18,943	12,087	63.8%
African-American	4,993	3,583	71.8%
Hispanic	528	297	56.3%
Other Race <sup>8</sup>	1,209	415	34.3%
Two or More Races	174	109	62.6%
Race Unknown	1,189	780	65.6%
In-State Student <sup>9</sup>	16,484	12,772	77.5%
Out-of-State Student	10,552	4,499	42.6%
Certificate/Diploma	1,987	1,542	77.6%
Associate	4,170	3,415	81.9%
Bachelor	15,466	9,100	58.8%
Masters/Specialist	4,222	2,619	62.0%
Doctorate/First-Professional	1,191	595	50.0%
Research University	8,929	5,044	56.5%
Comprehensive Teaching	6,762	4,333	64.1%
Two-Year Regional Campus USC	74	50	67.6%
Technical College	5,959	4,838	81.2%
Independent Institutions	5,312	3,006	56.6%

In general female graduates are more likely to be found in the South Carolina wage records one year post-graduation compared to men. African-American graduates are the most likely racial group to be found in the state’s wage records followed by unknown race and white students. The “other races” includes foreign individuals studying in South Carolina, which accounts for the low percentage found in the wage records post-graduation.

<sup>8</sup> Includes Asian, Native Hawaiian/Pacific Islander, Native American/Alaskan Native, and Non-Resident Alien

<sup>9</sup> See Appendix D for detailed information on retention by institution sector.

Those students pursuing an associate’s degree are the most likely to be employed in SC one year post-graduation. Students pursuing a doctorate or first professional degree are least likely to be found in the wage records. It is likely that these students are employed in another state. Data from the Census Bureau’s American Community Survey suggests that those with higher levels of educational attainment tend to be more geographically mobile than those with less schooling.

Similar to those findings, students graduating from the state’s research institutions are least likely to be found in the wage records while those completing at one of the state’s 16 technical colleges are most likely to be found.

### **FY2014-15**

The percentage of students found in wage records one year post-graduation are similar when examining the cohort of graduates from FY2014-15.<sup>10</sup>

*Table 2: Percentage of Students Found in Wage Records One Year Post-Graduation, FY2014-15*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Total	33,165	20,857	62.9%
Female	19,050	12,380	65.0%
Male	14,115	8,477	60.1%
White	22,813	14,421	63.2%
African-American	5,958	4,367	73.3%
Hispanic	1,145	635	55.5%
Other Race	1,734	502	29.0%
Two or More Races	669	406	60.7%
Race Unknown	846	526	62.2%
In-State Student	23,078	17,967	77.9%
Out-of-State Student	10,087	2,890	28.7%
Certificate/Diploma	2,426	2,001	82.5%
Associate	5,731	4,621	80.6%
Bachelor	18,820	10,930	58.1%
Masters/Specialist	4,667	2,585	55.4%
Doctorate/First-Professional	1,521	720	47.3%
Research University	11,198	5,743	51.3%
Comprehensive Teaching	7,781	5,060	65.0%

<sup>10</sup> It is important to note that these two cohorts may contain different types of students. Since any student who re-enrolled in South Carolina for additional education is removed between FY2010-11 and FY2020-21, there may be some students in the FY2014-15 graduating cohort who may ultimately be dropped from the analysis if this research were repeated in the future. More years and thus more opportunities for re-enrollment have passed for the FY2009-10 graduates compared to FY2014-15.



	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Two-Year Regional Campus USC	101	73	72.3%
Technical College	7,863	6,462	82.2%
Independent Institutions	6,222	3,519	56.6%

While 63.9 percent of graduates in FY2009-10 were found in the state’s wage records one year post-graduation 62.9 percent of graduates in FY2014-15 were found. While rates were slightly lower in the second cohort, the demographic characteristics are fairly similar between the two periods. Women are more likely to be found in the wage records as are African-American graduates. African-American graduates had a higher match rate in the FY2014-15 cohort compared to the FY2009-10 cohort.

In terms of degree level, graduates in FY2014-15 with less than an associate’s degree (certificates of one or two years) had higher match rates than they did in FY2009-10 while most other degree levels were slightly less likely to be found in the wage records. Although there are many explanations that could account for these changes, one possible explanation is that the better economic landscape nationwide enticed graduates to move to other states for jobs or educational opportunities or more individuals could be employed in activities not reflected in the wage records (e.g., federal employment, independent contractor, self-employed).

This pattern also holds for graduates of Research Institutions compared to all other types of schools. Their graduates were least likely to be found in the wage records in both periods but even fewer were matched in the FY2014-15 cohort.

**FY2019-20**

Overall, the percentage of graduates found in the South Carolina wage records one year post-graduation is similar for the FY2019-20 cohort compared to the two previous groups. Approximately 62.9 percent of graduates were found working in a at least one quarter in the four quarters post-graduation.

While most of the demographic trends are similar between all three cohorts, a higher percentage of Hispanic graduates were found in the wage records for FY2019-20 (62.9%) compared to the FY2009-10 (56.3%) and FY2014-15 (55.5%).

In terms of type of degree, there was a fairly large increase in the percentage of master’s/specialist degree graduates found in the wage records in this cohort compared to previous groups. There was a notable decline in the Doctorate/First-Professional degree graduates.

Table 3: Percentage of Students Found in Wage Records One Year Post-Graduation, FY2019-20

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Total	39,191	24,665	62.9%
Female	22,906	15,039	65.7%
Male	16,285	9,626	59.1%
White	26,912	16,981	63.1%
African-American	6,353	4,643	73.1%
Hispanic	1,783	1,121	62.9%
Other Race	2,174	721	33.2%
Two or More Races	1,160	726	62.6%
Race Unknown	809	473	58.5%
In-State Student	27,100	21,288	78.6%
Out-of-State Student	12,091	3,377	27.9%
Certificate/Diploma	2,540	2,093	82.4%
Associate	6,590	5,346	81.1%
Bachelor	23,029	13,419	58.3%
Masters/Specialist	5,351	3,071	57.4%
Doctorate/First-Professional	1,681	736	43.8%
Research University	14,226	7,098	49.9%
Comprehensive Teaching	9,334	6,215	66.6%
Two-Year Regional Campus USC	144	96	66.7%
Technical College	8,794	7,209	82.0%
Independent Institutions	6,693	4,047	60.5%

Table 4 provides side by side comparisons across all three cohorts.

*Table 4: Percentage of Students Found in Wage Records One Year Post-Graduation*

	<b>FY2009-10</b>	<b>FY2014-15</b>	<b>FY2019-20</b>
Total	63.9%	62.9%	62.9%
Female	66.5%	65.0%	65.7%
Male	60.2%	60.1%	59.1%
White	63.8%	63.2%	63.1%
African-American	71.8%	73.3%	73.1%
Hispanic	56.3%	55.5%	62.9%
Other Race	34.3%	29.0%	33.2%
Two or More Races	62.6%	60.7%	62.6%
Race Unknown	65.6%	62.2%	58.5%
In-State Student	77.5%	77.9%	78.6%
Out-of-State Student	42.6%	28.7%	27.9%
Certificate/Diploma	77.6%	82.5%	82.4%
Associate	81.9%	80.6%	81.1%
Bachelor	58.8%	58.1%	58.3%
Masters/Specialist	62.0%	55.4%	57.4%
Doctorate/First-Professional	50.0%	47.3%	43.8%
Research University	56.5%	51.3%	49.9%
Comprehensive Teaching	64.1%	65.0%	66.6%
Two-Year Regional Campus USC	67.6%	72.3%	66.7%
Technical College	81.2%	82.2%	82.0%
Independent Institutions	56.6%	56.6%	60.5%

## Disciplines

It is also possible to examine which college majors tend to be found most often in the wage records one year post-graduation. For a full listing of wage matches by college major, see Appendix E. Table 5 provides information on the number of students completing by discipline<sup>11</sup> as well as the percentage that were found in the SC wage records.

<sup>11</sup> See Appendix F for details on which majors are included in which discipline.

*Table 5: Percentage of Students Found in Wage Records One Year Post-Graduation, by Discipline*

Discipline	FY2009-10		FY2014-15		FY2019-20	
	Students	% in WR	Students	% in WR	Students	% in WR
Arts and Humanities	3,953	54.9%	4,839	61.8%	5,430	64.2%
Business and Communication	7,061	62.4%	7,898	57.7%	9,141	54.8%
Education	2,207	71.4%	2,133	75.7%	2,650	79.5%
Health	4,339	77.3%	5,293	73.6%	7,015	71.3%
Social and Behavioral	4,128	58.7%	4,948	58.9%	5,240	60.1%
STEM	3,640	55.8%	5,667	53.3%	7,445	55.3%
Trades	1,708	76.7%	2,387	78.3%	2,270	79.0%
<b>Grand Total</b>	27,036	63.9%	33,165	62.9%	39,191	62.9%

There is some inconsistency among the disciplines in terms of students found in and not found in the wage records one year post-graduation. For the FY2009-10 cohort, those graduating in Health, Trades, and Education were most likely to be found in the wage records. For the FY2014-15 cohort it was the same three disciplines with the order changing slightly to Trades, Education, and Health. For the FY2019-20 cohort, the top three were Education, Trades, and Health. Those graduating in STEM fields were among the least likely to be found in the wage records which may indicate a large degree of out-of-state migration upon completion of their degrees.

## Five Years Post-Graduation

### FY2009-10

While around 63 percent of students completing degrees in South Carolina are found in the state's wage records one year post-graduation, that percentage falls to less than 50 percent four years later. Only 13,123 FY2009-10 graduates were found in the wage records 17 to 20 quarters after graduation.

*Table 6: Percentage of Students Found in Wage Records Five Years Post-Graduation, FY2009-10*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Total	27,036	13,123	48.5%
Female	15,769	7,906	50.1%
Male	11,267	5,217	46.3%
White	18,943	9,089	48.0%
African-American	4,993	2,966	59.4%
Hispanic	528	183	34.7%
Other Race	1,209	223	18.4%
Two or More Races	174	75	43.1%
Race Unknown	1,189	587	49.4%
In-State Student	16,484	10,195	61.8%
Out-of-State Student	10,552	2,928	27.7%
Certificate/Diploma	1,987	1,317	66.3%
Associate	4,170	2,967	71.2%
Bachelor	15,466	6,399	41.4%
Masters/Specialist	4,222	1,952	46.2%
Doctorate/First-Professional	1,191	488	41.0%
Research University	8,929	3,630	40.7%
Comprehensive Teaching	6,762	2,959	43.8%
Two-Year Regional Campus USC	74	42	56.8%
Technical College	5,959	4,184	70.2%
Independent Institutions	5,312	2,308	43.4%

The results five years post-graduation are similar to those one year post-graduation although at even lower rates. Women and African-American students continued as most likely to be in the wage records five years post-graduation. The percentage of men found in the wage records drops below 50 percent after five years. In terms of degree level, bachelor's degree and higher graduates show less than 50 percent in the employment records five years post-graduation.

Less than 30 percent of out-of-state students remain in South Carolina and are employed five years after graduation. Only the two-year regional campuses of USC and the Technical Colleges have greater than 50 percent match rates five years post-graduation.

## FY2014-15

Five years after graduation for the FY2014-15 cohort of graduates includes the period of the COVID-19 mandatory shutdowns. This may have depressed the match rates with the wage records compared to the five-year outcomes for those in the FY2009-10 cohort. Overall, only 47.2 percent of FY2014-15 graduates were found in South Carolina wage records five years post-graduation. Only two groups experienced an increase between FY2009-10 and FY2014-15: Hispanic students and those students graduating from Two-Year Regional Campuses of USC.

*Table 7: Percentage of Students Found in Wage Records Five Years Post-Graduation, FY2014-15*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Total	33,165	15,642	47.2%
Female	19,050	9,245	48.5%
Male	14,115	6,397	45.3%
White	22,813	10,903	47.8%
African-American	5,958	3,304	55.5%
Hispanic	1,145	424	37.0%
Other Race	1,734	319	18.4%
Two or More Races	669	281	42.0%
Race Unknown	846	411	48.6%
In-State Student	23,078	14,174	61.4%
Out-of-State Student	10,087	1,468	14.6%
Certificate/Diploma	2,426	1,571	64.8%
Associate	5,731	3,900	68.1%
Bachelor	18,820	7,618	40.5%
Masters/Specialist	4,667	1,953	41.8%
Doctorate/First-Professional	1,521	600	39.4%
Research University	11,198	4,054	36.2%
Comprehensive Teaching	7,781	3,460	44.5%
Two-Year Regional Campus USC	101	59	58.4%
Technical College	7,863	5,337	67.9%
Independent Institutions	6,222	2,732	43.9%

Table 8 provides side by side comparisons across both cohorts.

*Table 8: Percentage of Students Found in Wage Records Five Years Post-Graduation*

	<b>FY2009-10</b>	<b>FY2014-15</b>
Total	48.5%	47.2%
Female	50.1%	48.5%
Male	46.3%	45.3%
White	48.0%	47.8%
African-American	59.4%	55.5%
Hispanic	34.7%	37.0%
Other Race	18.4%	18.4%
Two or More Races	43.1%	42.0%
Race Unknown	49.4%	48.6%
In-State Student	61.8%	61.4%
Out-of-State Student	27.7%	14.6%
Certificate/Diploma	66.3%	64.8%
Associate	71.2%	68.1%
Bachelor	41.4%	40.5%
Masters/Specialist	46.2%	41.8%
Doctorate/First-Professional	41.0%	39.4%
Research University	40.7%	36.2%
Comprehensive Teaching	43.8%	44.5%
Two-Year Regional Campus USC	56.8%	58.4%
Technical College	70.2%	67.9%
Independent Institutions	43.4%	43.9%

Table 9 provides a more detailed look at the disciplines of graduates and their outcomes five years after degree completion. A full description at the two-digit CIP code level is provided in Appendix E.

*Table 9: Percentage of Students Found in Wage Records Five Years Post-Graduation, by Discipline*

Discipline	FY2009-10		FY2014-15	
	Students	% in WR	Students	% in WR
Arts and Humanities	3,953	36.9%	4,839	43.5%
Business and Communication	7,061	46.6%	7,898	42.1%
Education	2,207	55.1%	2,133	59.3%
Health	4,339	64.4%	5,293	59.6%
Social and Behavioral	4,128	42.0%	4,948	42.2%
STEM	3,640	40.7%	5,667	38.9%
Trades	1,708	67.3%	2,387	62.8%
<b>Grand Total</b>	<b>27,036</b>	<b>48.5%</b>	<b>33,165</b>	<b>47.2%</b>

Those graduating with credentials in the Trades disciplines saw the least change in the percentage of graduates in the wage records for the FY2009-10 cohort while students graduating in the Arts and Humanities disciplines experienced the largest decline, 18.0 percentage points. STEM majors, while already the least likely to be found in the wage records one year post-graduation continued to have the lowest percentage five years post. Similarly for the FY2014-15 graduates, the biggest drop in students found in the wage records five years post-graduation was for Arts and Humanities graduates (-18.2 percentage points) while those graduating in Health fields only dropped 14.0 percentage points.

## Ten Years Post-Graduation

### FY2009-10

While there was a substantial drop in the percentage of graduates found in the wage records between one year and five years post-graduation, the decline was somewhat smaller between years five and ten. Overall, 43.4 percent of the FY2009-10 cohort was found working in the South Carolina wage records 10 years post-graduation. This is a drop of 5.2 percentage points between year five and ten compared to a 15.3 percentage point drop between year one and five. As individuals establish their careers, there may be a decline in the percentage relocating for jobs in other states.



Table 10 provides the percentage of graduates found by various demographic and institutional characteristic.

*Table 10: Percentage of Students Found in Wage Records Ten Years Post-Graduation, FY2009-10*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Total	27,036	11,724	43.4%
Female	15,769	6,992	44.3%
Male	11,267	4,732	42.0%
White	18,943	8,157	43.1%
African-American	4,933	2,613	53.0%
Hispanic	528	165	31.3%
Other Race	1,209	197	16.3%
Two or More Races	174	56	32.2%
Race Unknown	1,189	536	45.1%
In-State Student	16,484	9,116	55.3%
Out-of-State Student	10,552	2,608	24.7%
Certificate/Diploma	1,987	1,168	58.8%
Associate	4,170	2,706	64.9%
Bachelor	15,466	5,666	36.6%
Masters/Specialist	4,222	1,723	40.8%
Doctorate/First-Professional	1,191	461	38.7%
Research University	8,929	3,236	36.2%
Comprehensive Teaching	6,762	2,640	39.0%
Two-Year Regional Campus USC	74	42	56.8%
Technical College	5,959	3,780	63.4%
Independent Institutions	5,312	2,026	38.1%

In general, the differences are consistent with previous check points. Female graduates continue to have a higher match rate ten years post-graduation compared to male graduates. African-American students are the only racial group with greater than 50 percent of graduates to be found in wage records ten years post-graduation. Other groups with higher likelihoods of being in the state's wage records include in-state students, those earning an associate's degree or less, and those graduating from the two-year institutions including the Technical Colleges and the USC regional campuses.

Ten years post-graduation, the percentage of Education majors found in the wage records dropped the most, over 24 percentage points from 71.4 percent one year post-graduation to just 47.1 percent ten years post. As Table 11 shows, those graduating in the Trade fields had the smallest drop between year one and ten, 17.4 percentage points, and were the most likely of all disciplines to have graduates found in the wage records at 59.3 percent.

*Table 11: Percentage of Students Found in Wage Records Ten Years Post-Graduation, by Discipline*

Discipline	FY2009-10	
	Students	% in WR
Arts and Humanities	3,953	32.6%
Business and Communication	7,061	41.9%
Education	2,207	47.1%
Health	4,339	58.7%
Social and Behavioral	4,128	36.8%
STEM	3,640	37.2%
Trades	1,708	59.3%
<b>Grand Total</b>	<b>27,036</b>	<b>43.4%</b>

## Section IV: Graduates Median Earnings in South Carolina

This section explores the median earnings<sup>12</sup> for those individuals who are found to be employed in South Carolina one, five, and ten years post-graduation. In order to create valid wage comparisons over time, only individuals meeting a wage threshold<sup>13</sup> are included in this analysis. This reduces the number of students from the numbers shown in the previous section. A sizeable number of students appear to be working part-time during their first year after graduation since they were in the wage records but failed to meet the wage threshold of \$14,500 per year.

For the FY2009-10 cohort a total of 7,130 met the wage threshold in all three periods: one, five, and ten years post-graduation. For the FY2014-15 cohort, a total of 11,350 met the wage threshold in both periods: one and five years post-graduation. These will be the groups of students examined most closely in this section to determine median wages by demographics, degree level, and college major. Including a student who potentially worked part-time in one period and full-time in another period would provide an inaccurate picture of the true wage progression associated with their degree and major.<sup>14</sup>

<sup>12</sup> All wages were inflation-adjusted to 2022 dollars using the Bureau of Labor Statistics' Annual Average Consumer Price Index for All Items, US City Average, Non-Seasonally Adjusted

<sup>13</sup> See footnote 3

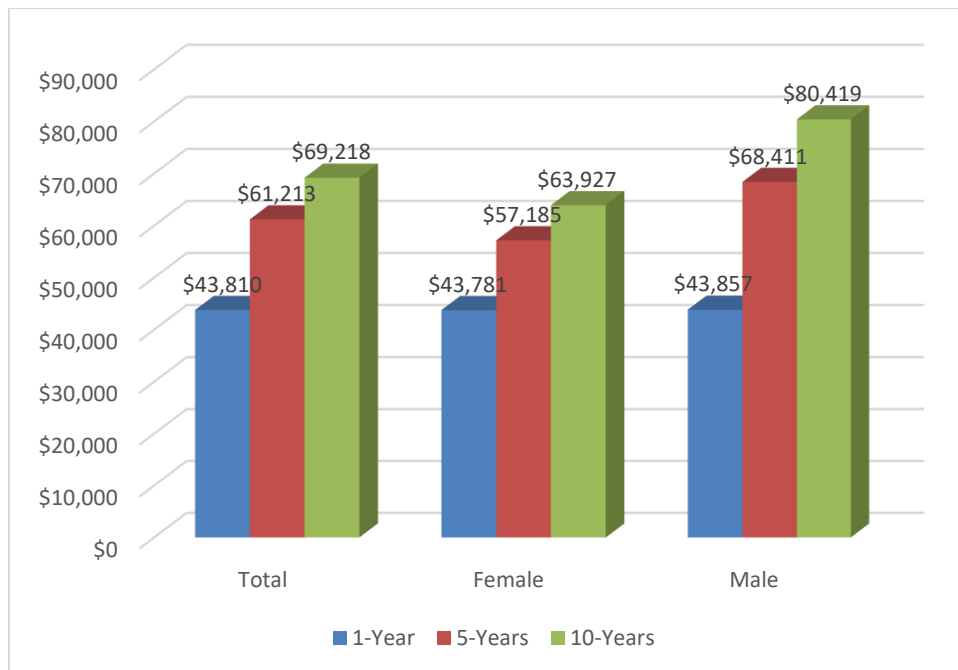
<sup>14</sup> Note that this analysis looks at total wages of the individual. It is possible for the person to have multiple part-time jobs and meet the wage threshold. The UI wage records do not currently require information on the number of hours an individual worked. Collecting that information from all businesses in the future would make more detailed analysis of full- vs. part-time employment feasible.

## FY2009-10

### Demographics

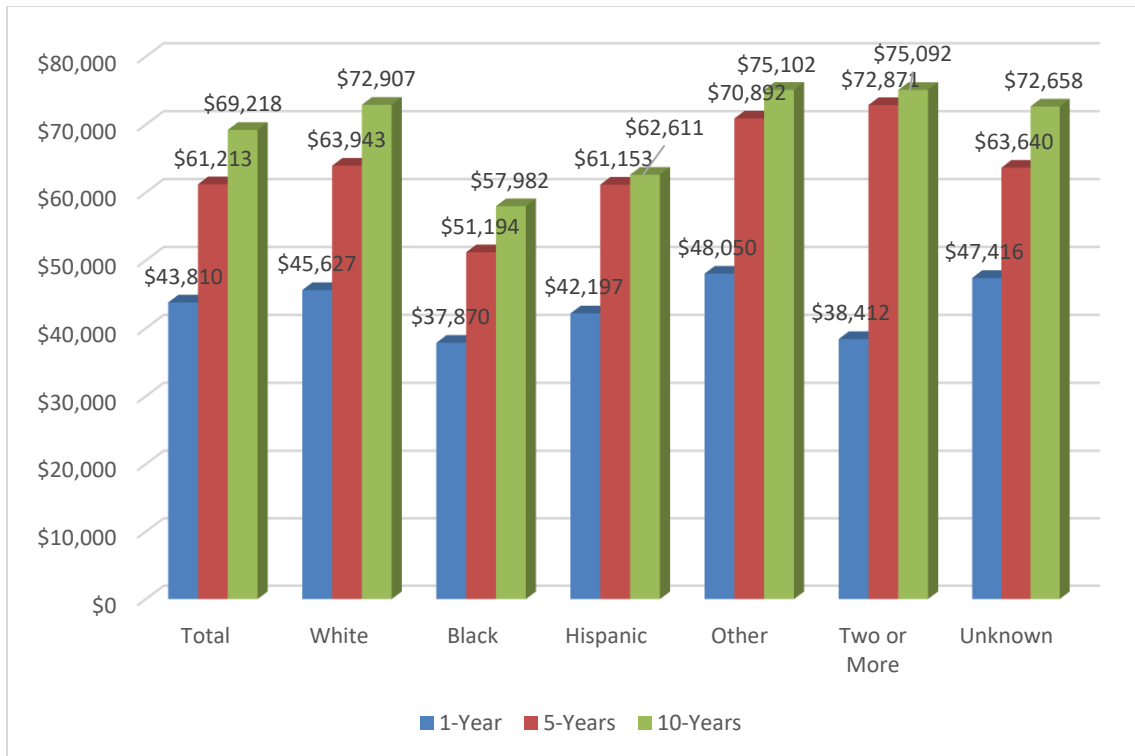
The median earnings for all FY2009-10 graduates meeting the wage threshold was \$43,810 one year post-graduation, \$61,213 five years post-graduation, and \$69,218 ten years post-graduation, a 5.2 percent annualized growth rate. According to the Quarterly Census of Employment and Wages (QCEW), inflation-adjusted wages for private sector workers grew at an annualized rate of 2.9 percent between 2010 and 2020. The relatively high annualized wage growth of the FY09-10 graduates represents a combination of an improving economy and the rapid wage growth that typically occurs at the beginning of one's career.

Figure 1: Median Earnings by Gender, FY2009-10



Male student's wages grew significantly faster than female graduate's wages during this time period. Although male and female median earnings were comparable the first year post graduation, female wages had slipped to about 84 percent of their male counterparts by the fifth year and 79 percent by the tenth year. This result is consistent with findings from Pew Research that shows that the gender pay gap between median male and median female earnings has remained around 80 percent since 2002. They also find that the wage gap is smaller for workers ages 25 to 34 than for all workers 16 and older.

Figure 2: Median Earnings by Race, FY2009-10



Between the first and tenth year those in the “two or more races” category experienced the fastest wage growth while those with a Hispanic background had the slowest growth. The wage gap between white graduates and Black graduates grew slightly between the first and tenth year. In the first year post-graduation, Black graduates meeting the wage threshold earned 83 percent of their white counterparts. This dropped to 80 percent in both the fifth and tenth year post-graduation.

### Degree Level and Institution Type

While wages will vary dramatically based on the student’s field of study, it is also interesting to examine median wages based on degree level. Table 12 provides information on the median wages of students one, five, and ten years post-graduation based on their degree level for the FY2009-10 cohort. It also provides the average annual growth rate of wages over that time.

Table 12: Median Wages One, Five, and Ten Years Post-Graduation, by Degree Level FY2009-10

<b>Degree Level</b>	<b>Students</b>	<b>1-Year Median</b>	<b>5-Year Median</b>	<b>10-Year Median</b>	<b>Annualized Growth</b>
Certificate/Diploma	652	\$34,972	\$47,706	\$51,002	4.3%
Associate	1,882	\$45,583	\$60,758	\$66,059	4.2%
Bachelor	2,939	\$37,126	\$58,408	\$69,414	7.2%
Masters/Specialist	1,339	\$58,759	\$70,079	\$76,869	3.0%
Doctorate/First-Professional	318	\$73,973	\$121,568	\$128,341	6.3%

For this cohort of students those graduating with their Bachelor's (+7.2%) degrees saw the fastest rates of wage growth while those receiving their Master's/Specialist (+3.0%) degrees experienced the slowest wage growth. Education majors accounted for nearly 40 percent of students graduating with a Master's or Specialist degree from this cohort which may help explain their relatively slow wage growth.

Table 12 indicates that Associate degree earners tend to have higher median earnings than Bachelor degree earners both one and five years post-graduation. One of the main difficulties comparing wages between degree levels is that students typically major in very different subjects depending on the degree. The next section will explore this finding in more detail.

Median wages and wage growth also differ based on the institution type attended. Wages tend to be highest for those graduating from a research university due to the higher concentration of post-baccalaureate degrees earned. Again the differences in the fields of study at the different institution types tends to make aggregate comparisons less informative. A closer look at the fields of study and average wages by degree level and institution type will be presented in the following section.

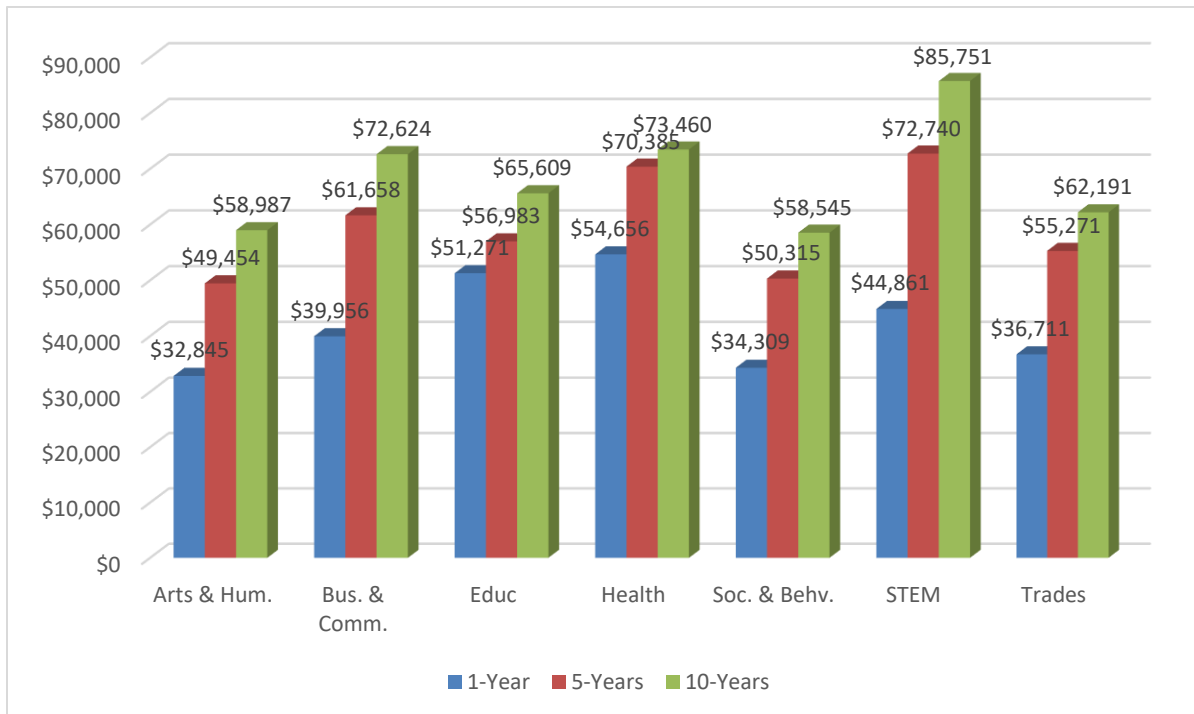
Table 13: Median Wages One, Five, and Ten Years Post-Graduation, by Institution Type FY2009-10

Degree Level	Students	1-Year Median	5-Year Median	10-Year Median	Annualized Growth
<b>PUBLIC</b>					
Research University	2,016	\$51,149	\$76,124	\$87,840	6.2%
Comprehensive Teaching	1,447	\$39,558	\$57,194	\$69,112	6.4%
Two-Year Regional Campus USC	27 <sup>15</sup>	\$30,529	\$56,080	\$49,538	5.5%
Technical College	2,477	\$42,209	\$57,243	\$61,636	4.3%
<b>INDEPENDENT</b>					
Senior and Junior	1,163	\$44,687	\$57,030	\$64,903	4.2%

### Discipline

Using the disciplines defined in Appendix F, median wages based on college major can be examined.

Figure 3: Median Wages One, Five, and Ten Years Post-Graduation, by Discipline FY2009-10



<sup>15</sup> Small sample size.

Wage growth was highest for those graduating in STEM disciplines. Their wages typically grew 7.5 percent per year between the first and tenth year. Education majors experienced the slowest growth in their wages at 2.8 percent per year.

In the first year post-graduation, students completing a degree in Health had the highest median wages while five and ten years post-graduation, students in STEM fields had the highest. In the first and fifth year post-graduation, students graduating in Arts and Humanities tended to have the lowest median wages. By year ten, Social and Behavioral Sciences and Human Services graduates had the lowest median wages.

Looking more closely at median wages by CIP code, the degrees with the highest annualized wage growth over the period included: Architecture (11.6%); Natural Resources & Conservation (9.2%); Parks, Recreation, Leisure, and Fitness (8.8%); Communication, Journalism (8.8%); and Biology and Biomedical (8.8%). Those majors with the slowest wage growth were Philosophy and Religious Studies (4.1%); Health (3.3%); Family and Consumer Sciences (3.2%); Education (2.8%); and Library Science (2.7%).

*Table 14: Median Wages by CIP Code One, Five, and Ten Years Post-Graduation, FY2009-10*

	<b>Graduates</b>	<b>Wages 1 Year</b>	<b>Wages 5 Year</b>	<b>Wages 10 Year</b>	<b>Annualized Growth</b>
Agriculture (1)	43	\$36,946	\$53,672	\$65,395	6.5%
Natural Resources & Conservation (3)	33	\$32,121	\$54,407	\$71,030	9.2%
Architecture (4)	20	\$33,303	\$67,343	\$89,290	11.6%
Area, Ethnic, Cultural, Gender Studies (5)	N/D	N/D	N/D	N/D	N/D
Communication, Journalism (9)	144	\$31,021	\$49,745	\$66,268	8.8%
Communications Technologies (10)	N/D	N/D	N/D	N/D	N/D
Information Technology (11)	196	\$41,544	\$66,156	\$78,227	7.3%
Personal and Culinary Services (12)	40	\$25,144	\$44,319	\$51,045	8.2%
Education (13)	739	\$51,271	\$56,983	\$65,609	2.8%
Engineering (14)	228	\$58,041	\$89,807	\$107,684	7.1%
Engineering Technologies (15)	136	\$44,224	\$67,571	\$74,955	6.0%
Foreign Languages, Literatures, and Linguistics (16)	20	\$33,737	\$51,374	\$51,558	4.8%
Family and Consumer Sciences (19)	64	\$25,856	\$31,991	\$34,336	3.2%
Legal Professions and Studies (22)	122	\$40,962	\$67,072	\$81,066	7.9%
English Language and Literature (23)	59	\$31,569	\$52,098	\$63,952	8.2%

	<b>Graduates</b>	<b>Wages 1 Year</b>	<b>Wages 5 Year</b>	<b>Wages 10 Year</b>	<b>Annualized Growth</b>
Liberal Arts (24)	175	\$34,433	\$47,995	\$55,212	5.4%
Library Science (25)	32	\$47,594	\$53,415	\$60,640	2.7%
Biology and Biomedical (26)	87	\$30,843	\$53,537	\$65,837	8.8%
Mathematics and Statistics (27)	24	\$47,651	\$78,268	\$96,316	8.1%
Military Technologies (29)					
Multi-Interdisciplinary Studies (30)	88	\$39,651	\$59,509	\$66,859	6.0%
Parks, Recreation, Leisure, and Fitness (31)	74	\$30,691	\$51,149	\$65,714	8.8%
Philosophy and Religious Studies (38)	11	\$32,605	\$36,528	\$46,951	4.1%
Theology and Religious Vocation (39)	21	\$37,356	\$54,845	\$64,647	6.3%
Physical Sciences (40)	40	\$43,548	\$61,478	\$73,340	6.0%
Science Technologies (41)	N/D	N/D	N/D	N/D	N/D
Psychology (42)	126	\$32,402	\$48,573	\$56,050	6.3%
Security and Protective Services (43)	179	\$34,896	\$49,748	\$58,572	5.9%
Public Administration and Social Service (44)	135	\$37,839	\$48,480	\$55,584	4.4%
Social Science (45)	165	\$31,462	\$50,319	\$64,026	8.2%
Construction Trades (46)	13	\$34,942	\$55,807	\$66,715	7.5%
Mechanic and Repair Technologies (47)	249	\$42,336	\$64,624	\$68,461	5.5%
Precision Production (48)	119	\$35,847	\$57,374	\$61,636	6.2%
Transportation and Material Moving (49)	41	\$37,054	\$55,870	\$60,654	5.6%
Visual and Performing Arts (50)	109	\$29,802	\$47,537	\$56,983	7.5%
Health (51)	1,912	\$54,656	\$70,385	\$73,460	3.3%
Business (52)	1,631	\$41,134	\$62,797	\$73,411	6.6%
History (54)	50	\$32,036	\$46,521	\$55,507	6.3%

These findings of rapid wage growth early in an individual’s career align with findings from The Hamilton Project’s “Major Decisions: Graduates’ Earnings Growth and Debt Repayment,” which used data from the U.S. Census Bureau’s American Community Survey. The Hamilton Project study found that majors with the lowest initial earnings were more likely to see faster wage growth in their early-career years than those with higher initial earnings. The authors assert that this is likely the result of graduates achieving full-time employment and switching between jobs looking for better employment matches.

The finding that health majors tend to have lower wage growth rates also aligns with the findings in the Hamilton Project report. Nearly every college major fits this pattern. If the initial one year post-graduation wages were higher than the overall cohort median (\$43,810) then the growth rate

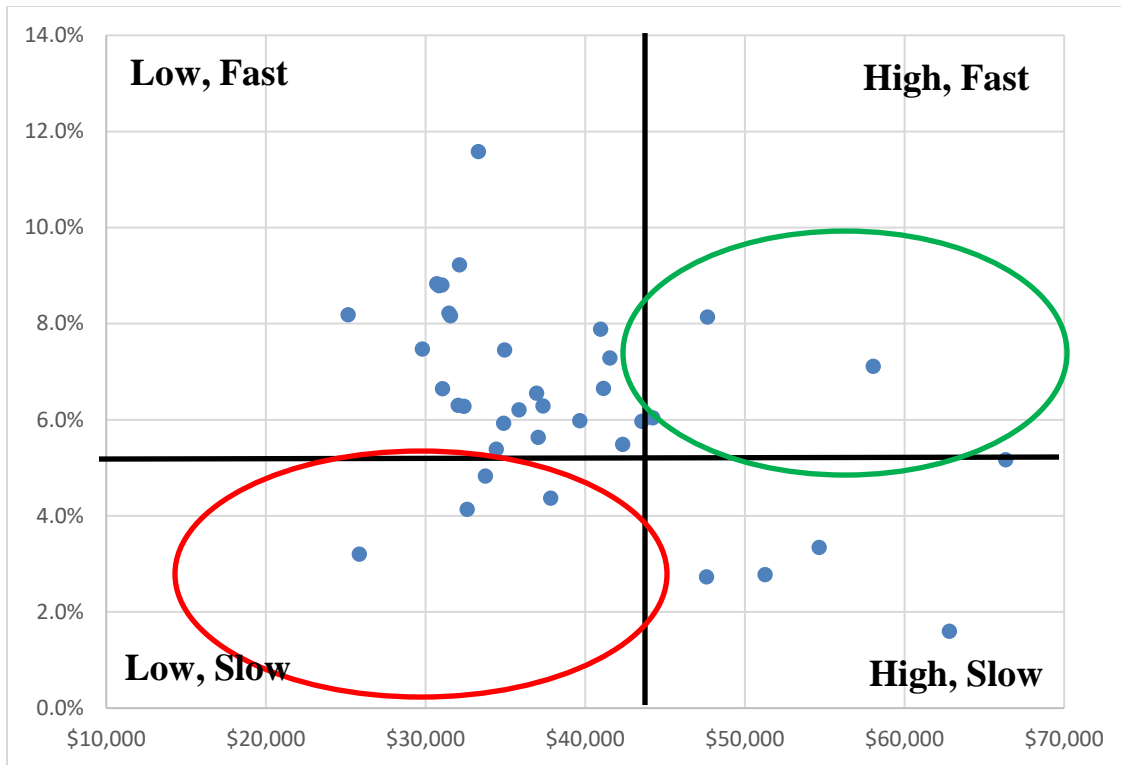


in wages by the tenth year post-graduation tended to be lower than average (5.2 percent). Conversely, if the major had median wages less than the total median, then their wage growth rates tended to be higher than average. There were seven majors that did not follow this pattern. These are highlighted in both Table 15 and Figure 4.

*Table 15: Median Wages and Growth Rates, FY2009-10*

<b>CIP Code</b>	<b>Median Wages 1-Year</b>	<b>Median Wages 5- Years</b>	<b>Median Wages 10- Years</b>	<b>Annual Growth Rate</b>
<b>Low Initial Wages; Slow Growth Rate</b>				
Foreign Languages, Literatures, and Linguistics (16)	\$33,737	\$51,374	\$51,558	4.8%
Family and Consumer Sciences (19)	\$25,856	\$31,991	\$34,336	3.2%
Philosophy and Religious Studies (38)	\$32,605	\$36,528	\$46,951	4.1%
Public Administration and Social Services (44)	\$37,839	\$48,480	\$55,584	4.4%
<b>High Initial Wages; High Growth Rate</b>				
Engineering (14)	\$58,041	\$89,807	\$107,684	7.1%
Engineering Technologies (15)	\$44,224	\$67,571	\$74,955	6.0%
Mathematics and Statistics (27)	\$47,651	\$78,268	\$96,316	8.1%

Figure 4: Median Wages and Growth Rates Year One to year Ten by CIP, FY2009-10



The Engineering; Engineering Technologies; and Mathematics/Statistics majors stood out from all other majors as having both high initial wages and high wage growth in South Carolina between the first and tenth years post-graduation. Majors with both low starting wages and slower wage growth include Foreign Languages, Literatures, and Linguistics; Family and Consumer Sciences; Philosophy and Religious Studies; and Public Administration and Social Service.

#### *Bachelor's vs. Associate Degrees by Major*

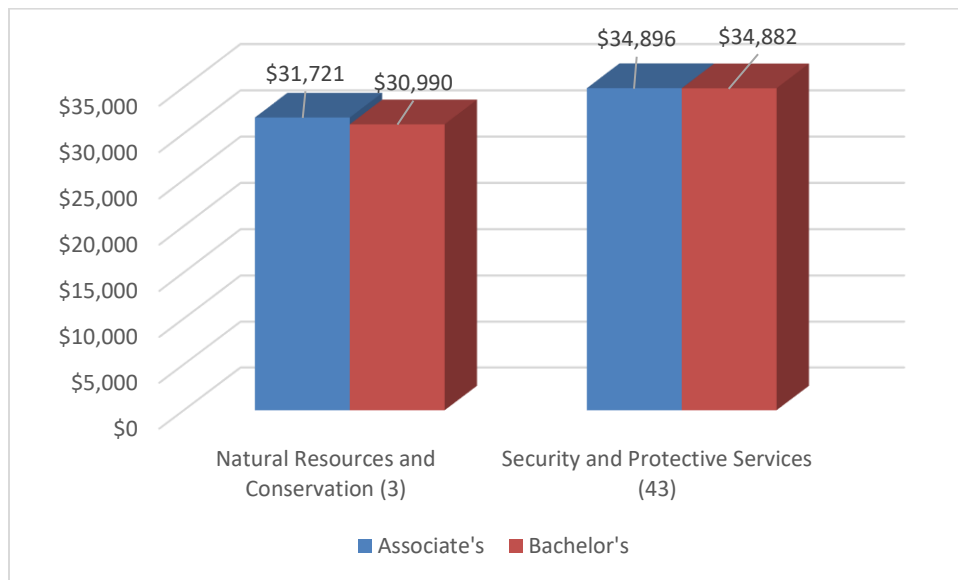
One interesting finding thus far is that, in aggregate, those students graduating with an associate's degree earned more than those graduating with a bachelor's degree both one and five years into the student's career although this pattern reversed by year ten. One of the main reasons for this finding is that 45.1 percent of all graduates with Associate degrees in FY2009-10 majored in a Health field (predominantly nursing), one of the initially highest paying fields. In contrast, those graduating with Bachelor's degrees tended to be spread out over a variety of majors including Business (33.5%), Health (13.2%), Education (7.0%), and Engineering (6.3%). When comparing associate and bachelor degree graduates there were only nine majors where there were a sufficient number of students to make valid wage comparisons across fields and degree levels.

Table 16: Graduates by Major and Degree Level, FY2009-10

CIP Code	Associate's	Bachelor's
Natural Resources and Conservation (3)	10	16
Information Technology (11)	98	74
Engineering Technologies (15)	87	27
Family and Consumer Sciences (19)	38	18
Liberal Arts (24)	115	52
Security and Protective Services (43)	61	110
Public Administration and Social Services (44)	17	40
Health (51)	849	387
Business (52)	259	983

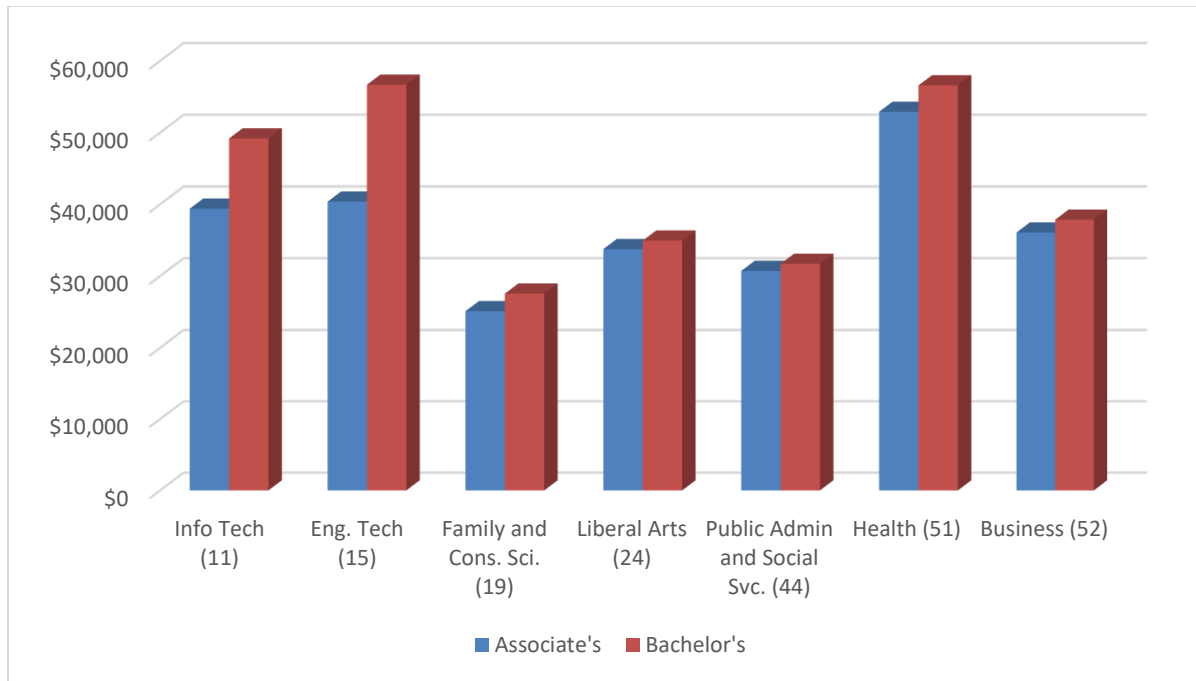
In two of these nine majors associate's degree earners had median wages one year post-graduation only marginally higher than bachelor's degree earners. As shown in Figure 5, these included Natural Resources and Conservation and Security and Protective Services.

Figure 5: Median Wages by Major and Degree Level One Year Post-Graduation, FY2009-10



In the remaining seven majors, bachelor's degree completers earned more than their associate degree counterparts one year post-graduation. These majors included Information Technology; Engineering Technologies; Family and Consumer Sciences; Liberal Arts; Public Administration and Social Services; Health; and Business.

Figure 6: Median Wages by Major and Degree Level One Year Post-Graduation, FY2009-10



This picture changes slightly when looking at wages five and ten years post-graduation for the same nine fields of study. Now, bachelor's degree recipients typically earn more than their associate degree counterparts in eight of the nine fields. Only in Liberal Arts do Associate degree recipients typically earn more than their Bachelor degree counterparts five years post-graduation; only in Natural Resources and Conservation do Associate degree recipients typically earn more than their Bachelor degree counterparts ten years post-graduation.

Table 17: Graduates by Major and Degree Level Post-Graduation, FY2009-10

CIP Code	1 Year		5 Years		10 Years	
	Associate	Bachelor	Associate	Bachelor	Associate	Bachelor
Natural Resources and Conservation (3)	\$31,721	\$30,990	\$52,443	\$56,798	\$83,994	\$74,324
Info Tech (11)	\$39,384	\$49,182	\$57,918	\$75,156	\$68,596	\$94,402
Eng. Tech (15)	\$40,368	\$56,666	\$66,050	\$78,788	\$74,042	\$99,953
Family and Cons. Sci. (19)	\$25,096	\$27,551	\$30,503	\$34,111	\$32,120	\$43,659
Liberal Arts (24)	\$33,761	\$34,942	\$50,490	\$45,661	\$54,112	\$59,657
Security and Protective Services (43)	\$34,896	\$34,882	\$48,458	\$50,216	\$57,835	\$59,182
Public Admin and Social Svc. (44)	\$30,707	\$31,696	\$36,364	\$44,099	\$45,070	\$47,489
Health (51)	\$52,897	\$56,576	\$68,181	\$71,548	\$71,981	\$79,130
Business (52)	\$36,058	\$37,844	\$48,940	\$60,144	\$53,579	\$72,583

This section makes clear that the field of study as well as the student's own initiative and career goals make a clear difference in their employment outcomes and should be an important consideration when making decisions regarding paying and/or borrowing for post-secondary education.

Several quotes from the Georgetown University Center on Education and the Workforce's "The Economic Value of College Majors" echo these findings:

*Today, 35 percent of jobs require a Bachelor's degree or higher. On average, these jobs pay \$33,000 annually at the entry level and \$61,000 at prime age. But averages are deceiving. The economic risks and returns to Bachelor's degrees vary greatly among different majors.*

*Over a lifetime, the average difference between a high school and college graduate's wages is \$1 million, but the difference between the lowest- and the highest-paying majors is \$3.4 million. The importance of major is so powerful that Bachelor's degree holders in some majors earn more than many graduate degree holders.*

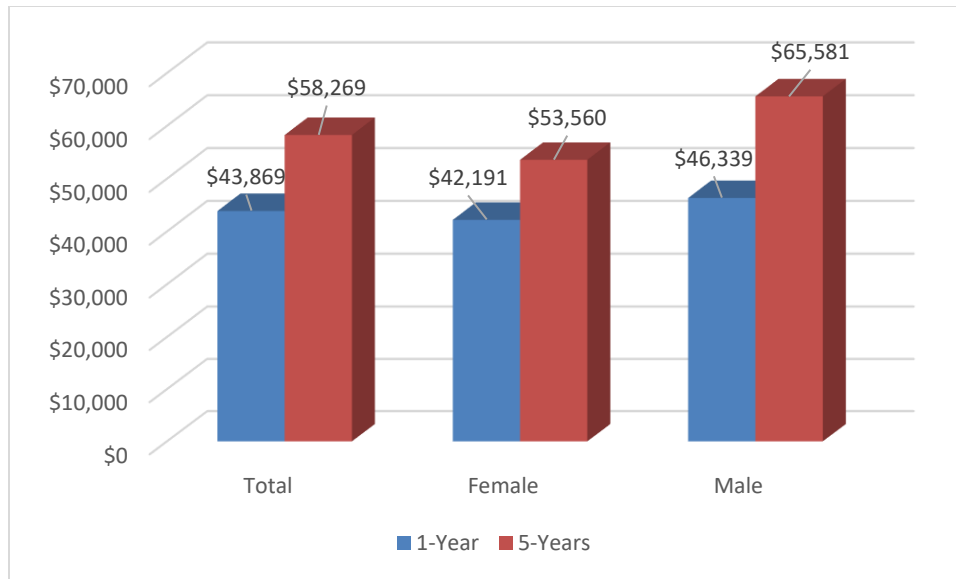
These national findings seem to hold as well for graduates of South Carolina's colleges and universities.

## **FY2014-15**

### **Demographics**

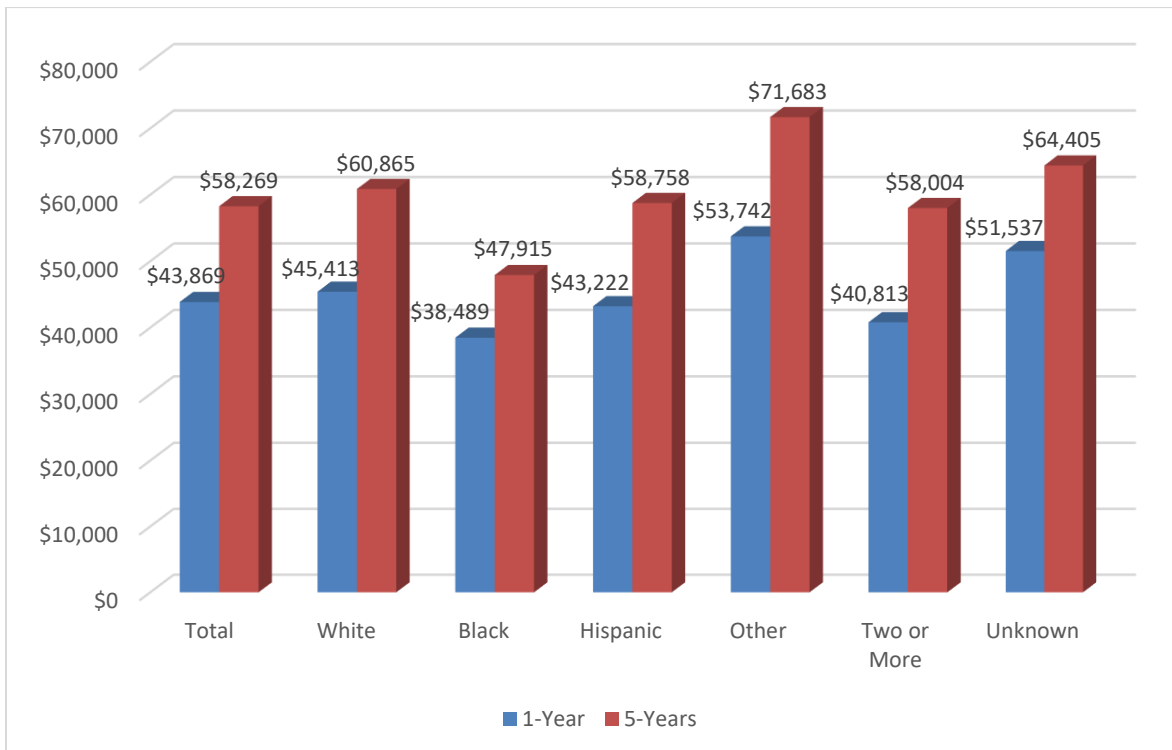
The median earnings for all FY2014-15 graduates meeting the wage threshold was \$43,869 one year post-graduation and \$58,269 five years post-graduation, a 7.4 percent annualized growth rate. According to the Quarterly Census of Employment and Wages (QCEW), inflation-adjusted wages for private sector workers grew at an annualized rate of 2.9 percent between 2010 and 2020. The relatively high annualized wage growth of the FY14-15 graduates represents the rapid wage growth that typically occurs at the beginning of one's career.

Figure 7: Median Earnings by Gender, FY2014-15



Male student's wages grew significantly faster than female graduate's wages during this time period. Female graduates had median earnings about 91 percent of male graduate earnings one year post-graduation. This percentage had dropped to less than 82 percent by year five, similar to findings for the FY2009-10 graduates.

Figure 8: Median Earnings by Race, FY2014-15



Between the first and fifth year those in the “two or more races” category experienced the fastest wage growth while African-American/Black graduates had the slowest growth. The wage gap between white graduates and Black graduates grew moderately between the first and fifth year. In the first year post-graduation, Black graduates meeting the wage threshold earned 85 percent of their white counterparts. This dropped to 79 percent in the fifth year post-graduation. These trends were similar to those observed in the FY2009-10 cohort.

### Degree Level and Institution Type

While wages will vary dramatically based on the student’s field of study, it is also interesting to examine median wages based on degree level. Table 18 provides information on the median wages of students one and five years post-graduation based on their degree level for the FY2014-15 cohort. It also provides the average annual growth rate of wages over that time.

*Table 18: Median Wages One, Five, and Ten Years Post-Graduation, by Degree Level FY2014-15*

Degree Level	Students	1-Year Median	5-Year Median	Annualized Growth
Certificate/Diploma	1,096	\$36,813	\$45,769	5.6%
Associate	2,956	\$44,620	\$56,706	6.2%
Bachelor	5,172	\$39,359	\$55,467	9.0%
Masters/Specialist	1,662	\$59,022	\$70,196	4.4%
Doctorate/First-Professional	464	\$84,805	\$113,859	7.6%

For this cohort of students those graduating with their Bachelor’s (+9.0%) degrees saw the fastest rates of wage growth while those receiving their Master’s/Specialist (+4.4%) degrees experienced the slowest wage growth. Education majors accounted for nearly 40 percent of students graduating with a Master’s or Specialist degree from this cohort which may help explain their relatively slow wage growth. These results are fairly consistent with the FY2009-10 cohort except for Doctorate/First Professional degrees. There was a sizeable jump in the first year median earnings for the FY2014-15 (\$84,805) graduates compared to the FY2009-10 graduates (\$73,973).

Table 12 indicates that Associate degree earners tend to have higher median earnings than Bachelor degree earners both one and five years post-graduation. One of the main difficulties comparing wages between degree levels is that students typically major in very different subjects depending on the degree. The next section will explore this finding in more detail for this cohort.

Median wages and wage growth also differ based on the institution type attended. Wages tend to be highest for those graduating from a research university due to the higher concentration of post-baccalaureate degrees earned. Again the differences in the fields of study at the different institution types tends to make aggregate comparisons less informative. A closer look at the

fields of study and average wages by degree level and institution type will be presented in the following section.

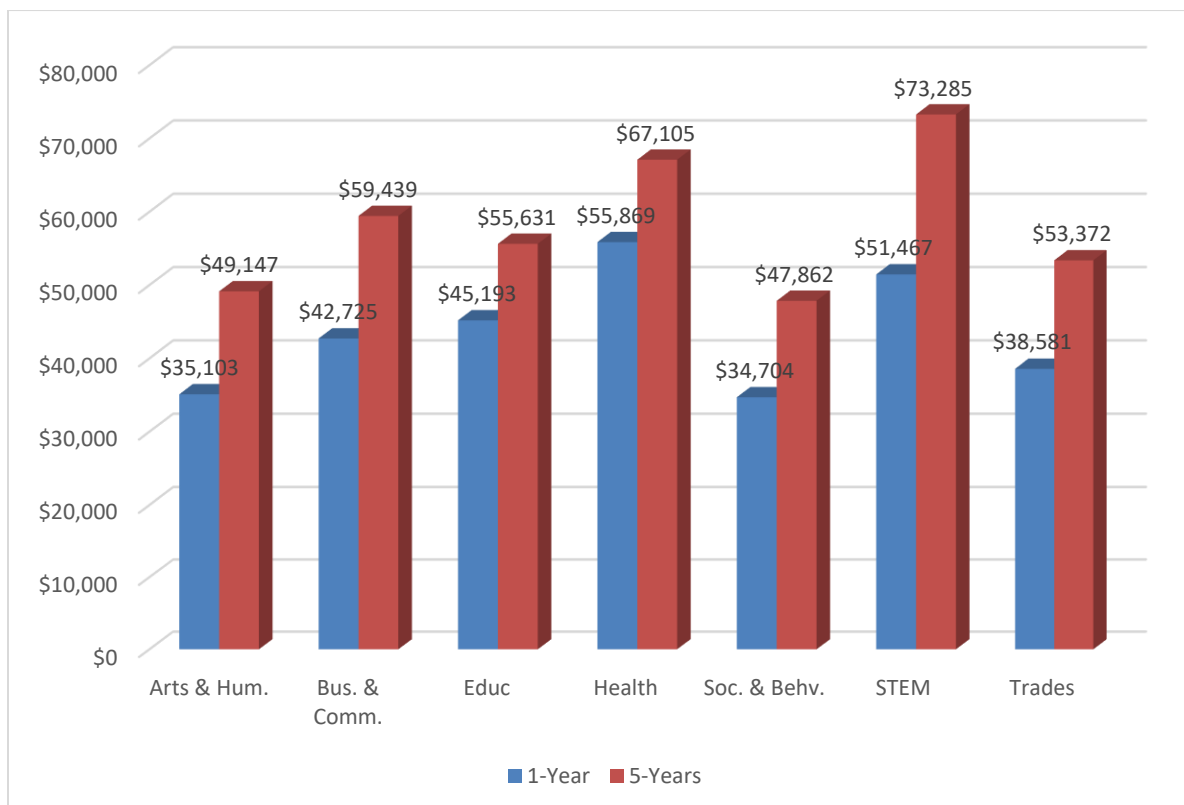
Table 19: Median Wages One and Five Years Post-Graduation, by Institution Type FY2014-15

Degree Level	Students	1-Year Median	5-Year Median	Annualized Growth
<b>Public</b>				
Research University	2,967	\$51,594	\$71,083	8.3%
Comprehensive Teaching	2,482	\$40,861	\$56,274	8.3%
Two-Year Regional Campus USC	32	\$34,089	\$41,125	4.8%
Technical College	3,967	\$42,282	\$53,509	6.1%
<b>Independent</b>				
Senior and Junior	1,902	\$42,466	\$54,781	6.6%

### Discipline

Using the disciplines defined in Appendix F, median wages based on college major can be examined.

Figure 9: Median Wages One and Five Years Post-Graduation, by Discipline FY2014-15





Wage growth was highest for those graduating in STEM disciplines. Their wages typically grew 9.2 percent per year between the first and fifth year. Health majors experienced the slowest growth in their wages at 4.7 percent per year.

In the first year post-graduation, students completing a degree in Health had the highest median wages while five years post-graduation, students in STEM fields had the highest. In the first and fifth year post-graduation, students graduating in Social and Behavioral Sciences and Human Services tended to have the lowest median wages.

Looking more closely at median wages by CIP code, the degrees with the highest annualized wage growth over the period included: Construction (15.1%); Biology & Biomedical (13.4%); Physical Sciences (12.9%); Visual and Performing Arts (11.8%); and History (11.5%). Those majors with the slowest wage growth were Library Science (5.2%); Health (4.7%); Theology and Religious Vocation (4.6%); Public Administration and Social Service (4.3%); and Precision Production (4.0%).

*Table 20: Median Wages by CIP Code One and Five Post-Graduation, FY2014-15*

	<b>Graduates</b>	<b>Wages 1 Year</b>	<b>Wages 5 Year</b>	<b>Annualized Growth</b>
Agriculture (1)	70	\$37,403	\$52,264	8.7%
Natural Resources & Conservation (3)	39	\$34,044	\$49,031	9.5%
Architecture (4)	18	\$53,473	\$66,393	5.6%
Area, Ethnic, Cultural, Gender Studies (5)	N/D	N/D	N/D	N/D
Communication, Journalism (9)	236	\$33,990	\$52,109	11.3%
Communications Technologies (10)	N/D	N/D	N/D	N/D
Information Technology (11)	429	\$48,931	\$70,089	9.4%
Personal and Culinary Services (12)	83	\$28,693	\$40,641	9.1%
Education (13)	1,097	\$45,193	\$55,631	5.3%
Engineering (14)	376	\$72,168	\$90,218	5.7%
Engineering Technologies (15)	261	\$57,424	\$75,407	7.0%
Foreign Languages, Literatures, and Linguistics (16)	31	\$37,486	\$52,191	8.6%
Family and Consumer Sciences (19)	107	\$29,139	\$37,913	6.8%
Legal Professions and Studies (22)	153	\$43,363	\$64,066	10.2%
English Language and Literature (23)	108	\$31,986	\$47,850	10.6%
Liberal Arts (24)	453	\$33,431	\$44,568	7.5%
Library Science (25)	31	\$48,373	\$59,344	5.2%
Biology and Biomedical (26)	272	\$33,375	\$55,163	13.4%
Mathematics and Statistics (27)	47	\$46,958	\$68,786	10.0%
Military Technologies (29)	N/D	N/D	N/D	N/D

	<b>Graduates</b>	<b>Wages 1 Year</b>	<b>Wages 5 Year</b>	<b>Annualized Growth</b>
Multi-Interdisciplinary Studies (30)	306	\$44,009	\$58,540	7.4%
Parks, Recreation, Leisure, and Fitness (31)	186	\$31,146	\$46,299	10.4%
Philosophy and Religious Studies (38)	19	\$30,995	\$46,666	10.8%
Theology and Religious Vocation (39)	36	\$43,403	\$51,903	4.6%
Physical Sciences (40)	68	\$43,115	\$70,002	12.9%
Science Technologies (41)	N/D	N/D	N/D	N/D
Psychology (42)	270	\$32,456	\$47,500	10.0%
Security and Protective Services (43)	353	\$35,634	\$50,885	9.3%
Public Administration and Social Service (44)	251	\$38,903	\$46,036	4.3%
Social Science (45)	300	\$33,763	\$49,276	9.9%
Construction Trades (46)	27	\$32,670	\$57,243	15.1%
Mechanic and Repair Technologies (47)	337	\$43,381	\$62,088	9.4%
Precision Production (48)	225	\$45,200	\$52,844	4.0%
Transportation and Material Moving (49)	81	\$41,030	\$51,093	5.6%
Visual and Performing Arts (50)	191	\$30,299	\$47,253	11.8%
Health (51)	2,592	\$55,869	\$67,105	4.7%
Business (52)	2,180	\$43,870	\$60,545	8.4%
History (54)	98	\$30,665	\$47,438	11.5%

These findings of rapid wage growth early in an individual’s career align with findings from The Hamilton Project’s “Major Decisions: Graduates’ Earnings Growth and Debt Repayment,” which used data from the U.S. Census Bureau’s American Community Survey. The Hamilton Project study found that majors with the lowest initial earnings were more likely to see faster wage growth in their early-career years than those with higher initial earnings. The authors assert that this is likely the result of graduates achieving full-time employment and switching between jobs looking for better employment matches.

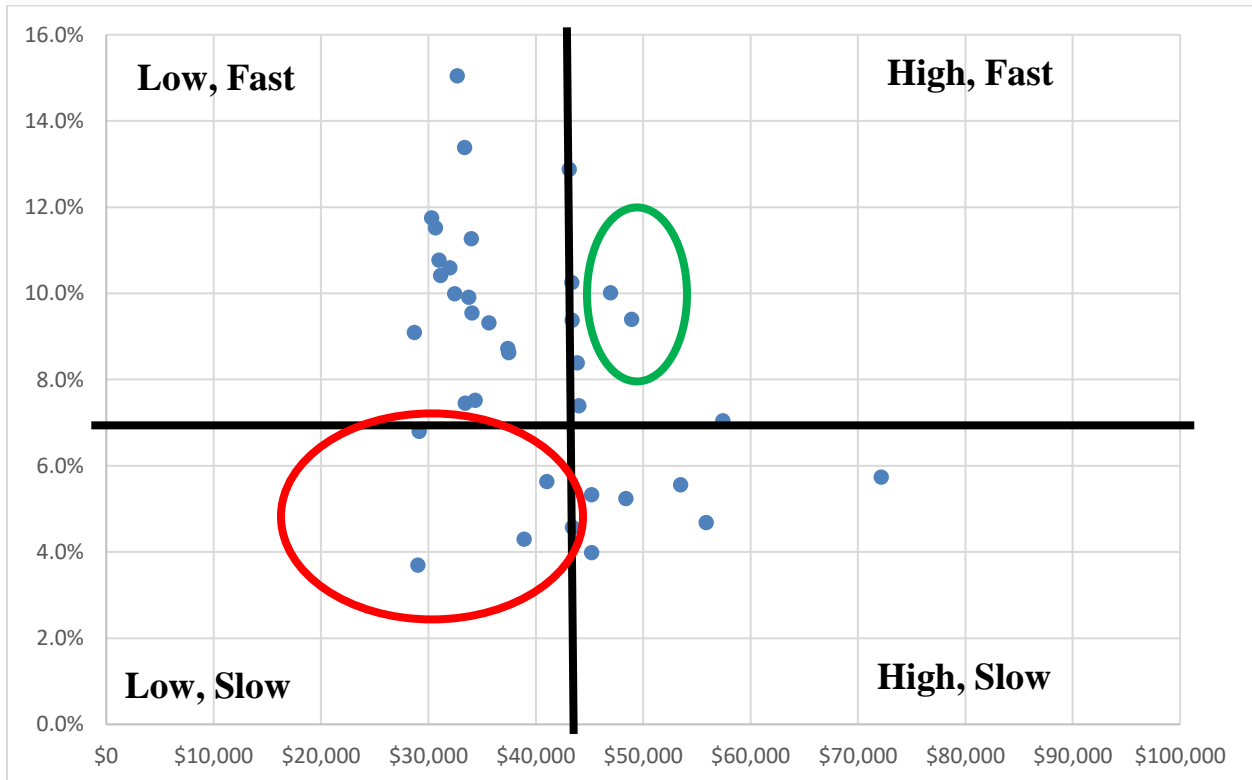
The finding that health majors tend to have lower wage growth rates also aligns with the findings in the Hamilton Project report. Nearly every college major fits this pattern. If the initial one year post-graduation wages were higher than the overall cohort median (\$43,869) then the growth rate in wages by the fifth year post-graduation tended to be lower than average (7.4 percent).

Conversely, if the major had median wages less than the total median, then their wage growth rates tended to be higher than average. There were six majors that did not follow this pattern. These are highlighted in both Table 21 and Figure 10.

Table 21: Median Wages and Growth Rates, FY2014-15

CIP Code	Median Wages 1-Year	Median Wages 5-Years	Annual Growth Rate
<b>Low Initial Wages; Slow Growth Rate</b>			
Family and Consumer Sciences (19)	\$29,139	\$37,913	6.8%
Theology and Religious Vocation (39)	\$43,403	\$51,903	4.6%
Public Administration and Social Services (44)	\$38,903	\$46,036	4.3%
Transportation and Material Moving (49)	\$41,030	\$51,093	5.6%
<b>High Initial Wages; High Growth Rate</b>			
Information Technology (11)	\$48,931	\$70,089	9.4%
Mathematics and Statistics (27)	\$46,958	\$68,786	10.0%

Figure 10: Median Wages and Growth Rates Year One to year Five by CIP, FY2014-15



The Information Technology; and Mathematics/Statistics majors stood out from all other majors as having both high initial wages and high wage growth in South Carolina between the first and fifth years post-graduation. Majors with both low starting wages and slower wage growth include

Family and Consumer Sciences; Theology and Religious Vocations; Public Administration and Social Service; and Transportation and Material Moving.

***Bachelor’s vs. Associate Degrees by Major***

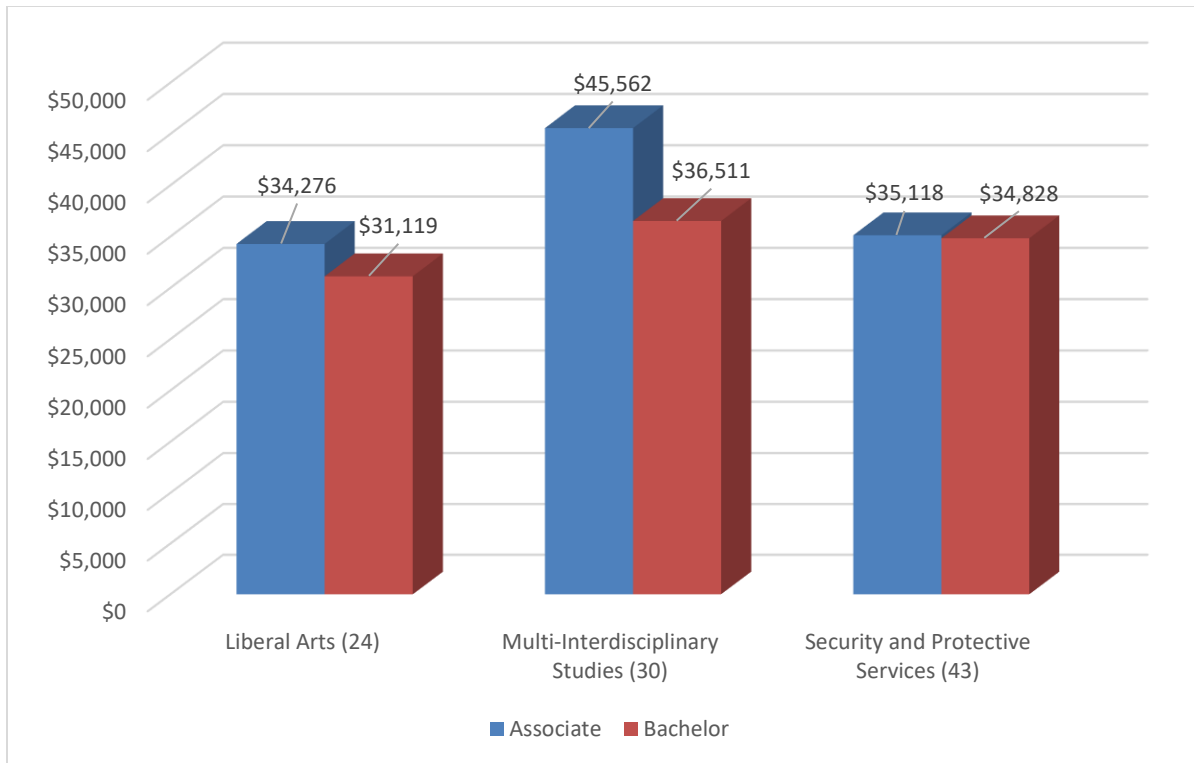
One interesting finding thus far is that, in aggregate, those students graduating with an associate’s degree earned more than those graduating with a bachelor’s degree both one and five years into the student’s career. One of the main reasons for this finding is that 45.5 percent of all graduates with Associate degrees in FY2014-15 majored in a Health field (predominantly nursing), one of the initially highest paying fields. In contrast, those graduating with Bachelor’s degrees tended to be spread out over a variety of majors including business (32.9%), Health (12.6%), Education (7.1%), and Engineering (5.9%). When comparing Associate and Bachelor degree graduates there were only ten majors where there were a sufficient number of students to make valid wage comparisons across fields and degree levels.

*Table 22: Graduates by Major and Degree Level, FY2014-15*

<b>CIP Code</b>	<b>Associate’s</b>	<b>Bachelor’s</b>
Information Technology (11)	177	214
Engineering Technologies (15)	184	29
Family and Consumer Sciences (19)	47	41
Liberal Arts (24)	294	154
(30)	267	35
Security and Protective Services (43)	126	206
Public Administration and Social Services (44)	51	88
(50)	22	155
Health (51)	980	623
Business (52)	421	1,308

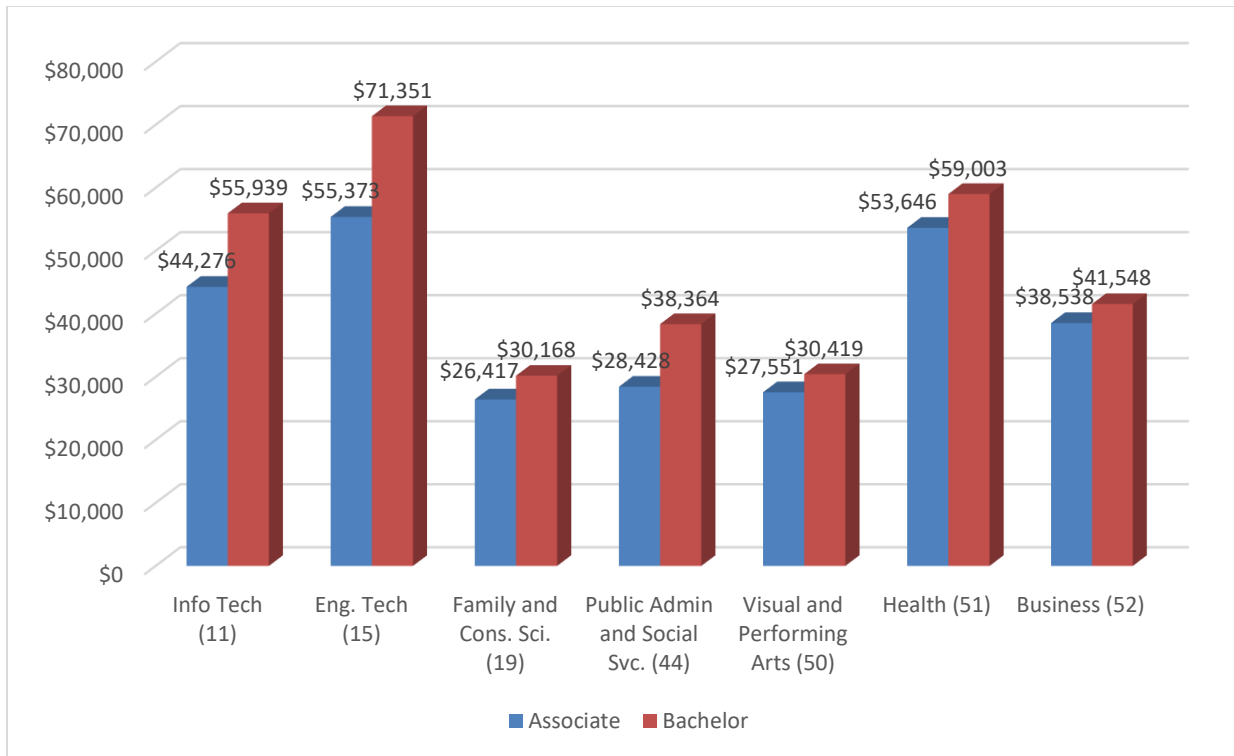
In three of these ten majors associate’s degree earners had median wages one year post-graduation only marginally higher than bachelor’s degree earners. As shown in Figure 11, these included Liberal Arts; Multi-Interdisciplinary Studies; and Security and Protective Services.

Figure 11: Median Wages by Major and Degree Level One Year Post-Graduation, FY2014-15



In the remaining seven majors, bachelor's degree completers earned more than their associate degree counterparts one year post-graduation. These majors included Information Technology; Engineering Technologies; Family and Consumer Sciences; Public Administration and Social Services; Visual and Performing Arts; Health; and Business.

Figure 12: Median Wages by Major and Degree Level One Year Post-Graduation, FY2014-15



This picture changes slightly when looking at wages five years post-graduation for the same ten fields of study. Now, bachelor’s degree recipients typically earn more than their associate degree counterparts in nine of the ten fields. Only in Multi-Interdisciplinary Studies do Associate degree recipients typically earn more than their Bachelor degree counterparts five years post-graduation.

Table 23: Graduates by Major and Degree Level Post-Graduation, FY2014-15

CIP Code	1 Year		5 Years	
	Associate	Bachelor	Associate	Bachelor
Info Tech (11)	\$44,276	\$55,939	\$61,697	\$81,472
Eng. Tech (15)	\$55,373	\$71,351	\$73,548	\$91,207
Family and Cons. Sci. (19)	\$26,417	\$30,168	\$33,342	\$40,092
Liberal Arts (24)	\$34,276	\$31,119	\$44,238	\$45,147
Multi-Interdisciplinary Studies	\$45,562	\$36,511	\$60,083	\$49,407
Security and Protective Services (43)	\$35,118	\$34,828	\$47,652	\$51,414
Public Admin and Social Svc. (44)	\$28,428	\$38,364	\$36,861	\$42,438

Visual and Performing Arts (50)	\$27,551	\$30,419	\$43,295	\$47,530
Health (51)	\$53,646	\$59,003	\$66,183	\$70,571
Business (52)	\$38,538	\$41,548	\$46,122	\$60,732

## FY2019-20

### Demographics

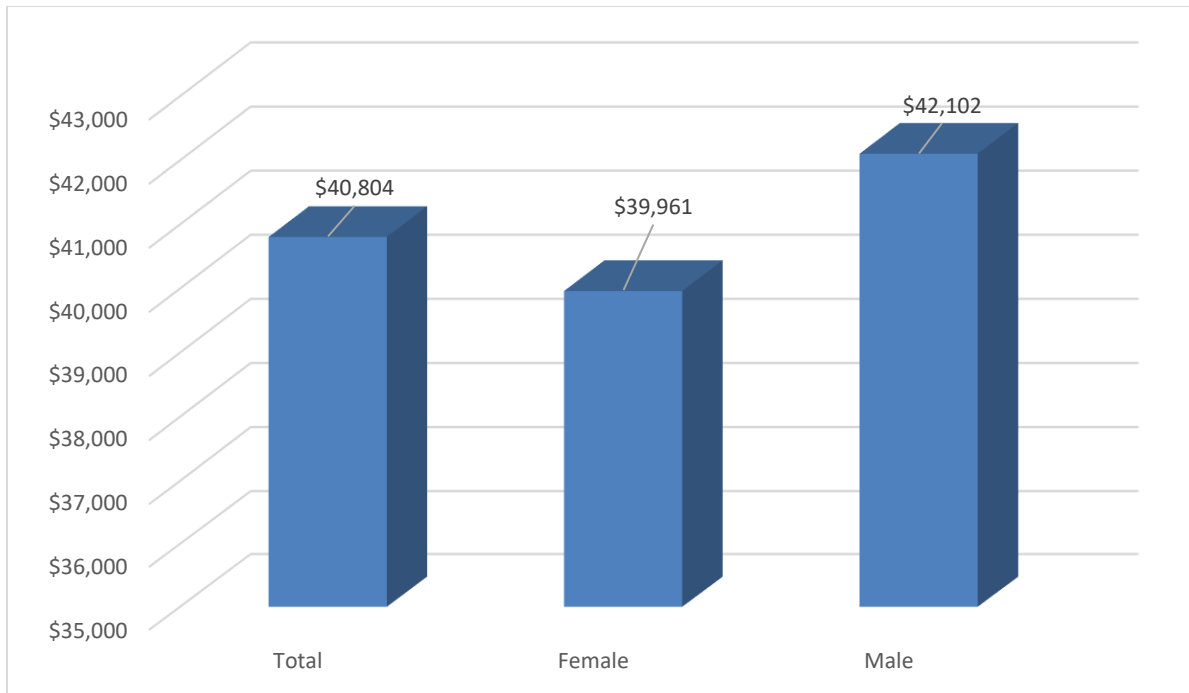
The median earnings for all FY2019-20 graduates meeting the wage threshold was \$40,804 one year post-graduation. This was lower than the one-year post-graduation earnings for those graduating in FY2009-10 (\$43,810) and FY2014-15 (\$43,869). It is likely that the COVID-19 pandemic's impact on the labor market negatively affected median earnings for this cohort of graduates. For those FY2019-20 graduates leaving school in August or December 2019, the mandated shut-down period in second quarter 2020 is included in their first year post-graduation. Table 24 provides the year/quarters included in each of the graduate's first year post-graduation.

*Table 24: Year/Quarter Included in First Year Post-Graduation, FY2019-20*

Graduation	Yr/Quarter	Yr/Quarter	Yr/Quarter	Yr/Quarter
2019-05 Summer 2019	2019/4	2020/1	2020/2	2020/3
2019-10 December 2019	2020/1	2020/2	2020/3	2020/4
2020-20 May 2020	2020/3	2020/4	2021/1	2021/2
2020-30 Summer 2020	2020/3	2020/4	2021/1	2021/2

*Darker shading indicates more impact of pandemic-related shutdowns*

Figure 13: Median Earnings by Gender, FY2019-20

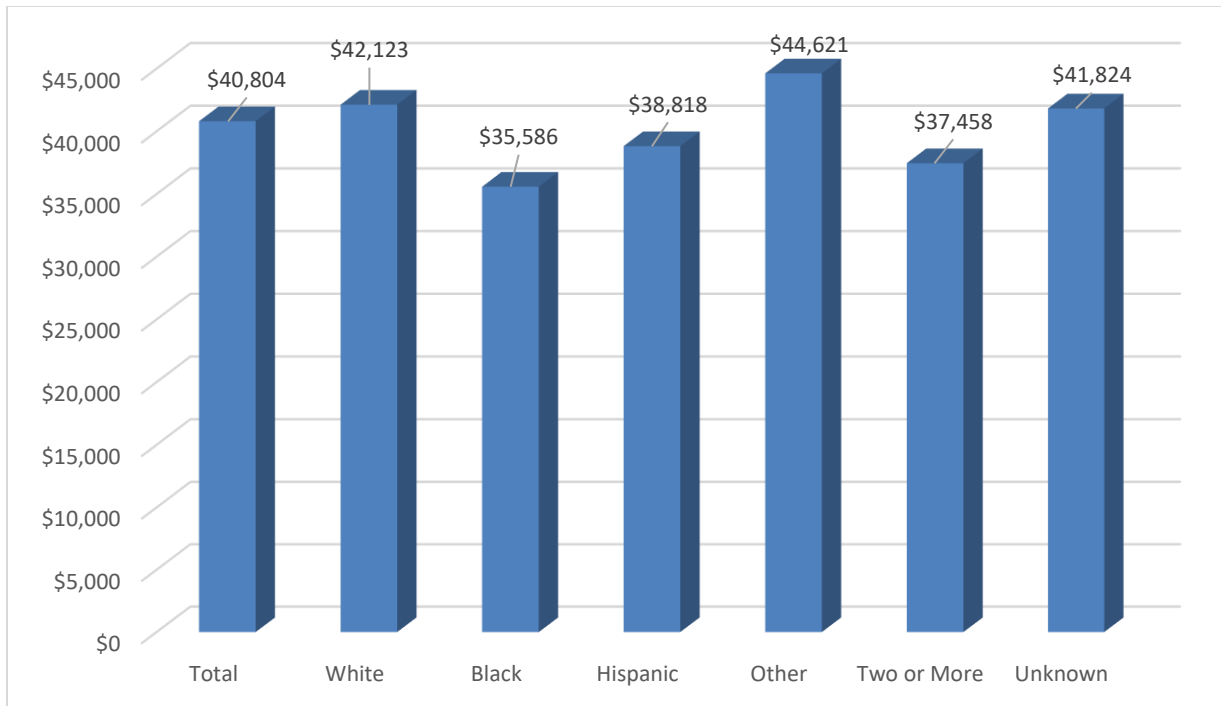


Male student's wages were higher than female graduate's wages one year post-graduation. This finding also held in the FY2014-15 cohort but not in the FY2009-10 cohort. This is likely the result of the lingering effects of the Great Recession, which tended to impact men's employment more than women.<sup>16</sup> Female graduates had median earnings about 95 percent of male graduate earnings one year post-graduation for the FY2019-20 cohort.

<sup>16</sup> Nationally men experienced 78 percent of the job losses between the fourth quarter of 2007 and the first quarter of 2009 (Wall, 2009).



Figure 14: Median Earnings by Race, FY2019-20



In the first year post-graduation, Black graduates meeting the wage threshold earned 84 percent of their white counterparts, and experienced the lowest median wage across all racial groups. This was a fairly uniform finding across all three cohorts examined. Median wages one year post-graduation were generally lower for the FY2019-20 cohort compared to the prior two groups, likely as a result of the pandemic disruptions.

### Degree Level and Institution Type

While wages will vary dramatically based on the student’s field of study, it is also interesting to examine median wages based on degree level. Table 25 provides information on the median wages of students one year post-graduation based on their degree level for the FY2019-20 cohort.

Table 25: Median Wages One Year Post-Graduation, by Degree Level FY2019-20

Degree Level	Students	1-Year Median
Certificate/Diploma	1,621	\$33,843
Associate	4,426	\$41,546
Bachelor	10,039	\$37,032
Masters/Specialist	2,797	\$55,869
Doctorate/First-Professional	646	\$61,578

For this cohort of students those graduating with a Doctorate or First Professional degree had the largest difference in median first year earnings compared to previous groups. Those graduating

in FY2009-10 had earnings almost 17 percent higher than those graduating in FY2019-20. Those graduating with a Bachelor’s degree had fairly similar first year earnings compared to their FY2009-10 counterparts.

Table 25 indicates that Associate degree earners tend to have higher median earnings than Bachelor degree earners one year post-graduation. One of the main difficulties comparing wages between degree levels is that students typically major in very different subjects depending on the degree. This has been addressed in previous sections.

Median wages also differ based on the institution type attended. Wages tend to be highest for those graduating from a research university due to the higher concentration of post-baccalaureate degrees earned. Again the differences in the fields of study at the different institution types tends to make aggregate comparisons less informative. A closer look at the fields of study and average wages by degree level and institution type will be presented in the following section.

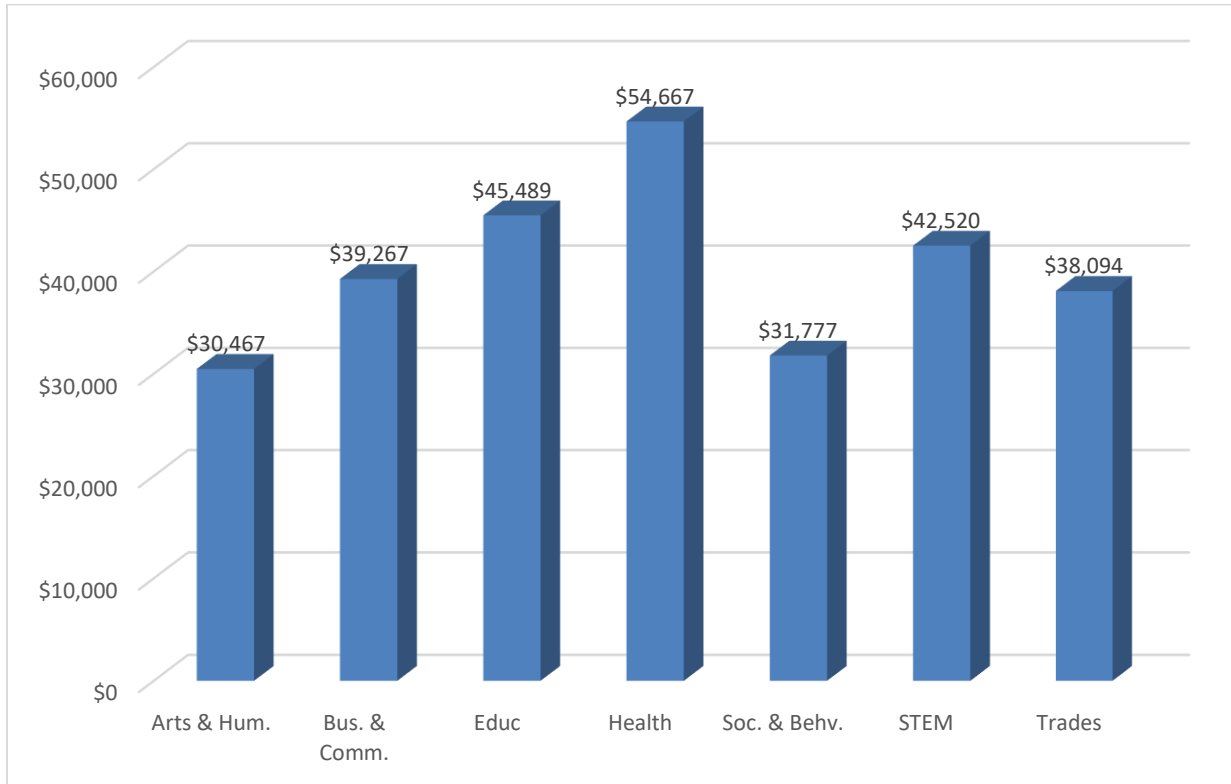
*Table 25: Median Wages One Year Post-Graduation, by Institution Type FY2019-20*

<b>Degree Level</b>	<b>Students</b>	<b>1-Year Median</b>
<b>Public</b>		
Research University	5,636	\$46,729
Comprehensive Teaching	4,787	\$38,696
Two-Year Regional Campus USC	60	\$30,236
Technical College	5,893	\$39,296
<b>Independent</b>		
Senior and Junior	3,153	\$39,025

## Discipline

Using the disciplines defined in Appendix F, median wages based on college major can be examined.

*Figure 15: Median Wages One and Years Post-Graduation, by Discipline FY2019-20*



In the first year post-graduation, students completing a degree in Health had the highest median wages. The only discipline with higher median earnings one year post-graduation for the FY2019-20 cohort compared to the FY2009-10 cohort was Trades. The median wages for the Trades discipline in FY09-10 were likely depressed due to the lingering effects of the Great Recession.

Looking more closely at median wages by CIP code, the degrees with the highest wages one year post-graduation include: Engineering (\$64,026); Library Science (\$54,850); Health (\$54,667); Engineering Technologies (\$50,328); and Transportation and Material Moving (\$47,967). Those majors with lowest median wages were: Visual and Performing Arts (\$27,744); English Language and Literature (\$27,620); Philosophy and Religious Studies (\$27,603); Area, Ethnic, Cultural, Gender Studies (\$27,278); and Family and Consumer Sciences (\$25,198).

Table 26: Median Wages by CIP Code One Year Post-Graduation, FY2019-20

	Graduates	Wages 1 Year
Agriculture (1)	184	\$32,370
Natural Resources & Conservation (3)	89	\$34,940
Architecture (4)	52	\$47,809
Area, Ethnic, Cultural, Gender Studies (5)	17	\$27,278
Communication, Journalism (9)	438	\$31,382
Communications Technologies (10)	19	\$28,232
Information Technology (11)	623	\$45,619
Personal and Culinary Services (12)	97	\$28,603
Education (13)	1,953	\$45,489
Engineering (14)	685	\$64,026
Engineering Technologies (15)	541	\$50,328
Foreign Languages, Literatures, and Linguistics (16)	74	\$35,751
Family and Consumer Sciences (19)	167	\$25,198
Legal Professions and Studies (22)	204	\$43,052
English Language and Literature (23)	199	\$27,620
Liberal Arts (24)	971	\$30,080
Library Science (25)	77	\$54,850
Biology and Biomedical (26)	785	\$29,758
Mathematics and Statistics (27)	84	\$45,110
Military Technologies (29)	32	\$36,963
Multi-Interdisciplinary Studies (30)	351	\$39,748
Parks, Recreation, Leisure, and Fitness (31)	361	\$30,406
Philosophy and Religious Studies (38)	38	\$27,603
Theology and Religious Vocation (39)	65	\$35,179
Physical Sciences (40)	147	\$37,658
Science Technologies (41)	N/D	N/D
Psychology (42)	560	\$28,187
Security and Protective Services (43)	484	\$38,190
Public Administration and Social Service (44)	320	\$37,092
Social Science (45)	507	\$32,030
Construction Trades (46)	95	\$33,378
Mechanic and Repair Technologies (47)	431	\$41,632
Precision Production (48)	293	\$39,068
Transportation and Material Moving (49)	37	\$47,967
Visual and Performing Arts (50)	485	\$27,744
Health (51)	4,407	\$54,667
Business (52)	3,527	\$41,021
History (54)	127	\$29,625

### ***Bachelor's vs. Associate Degrees by Major***

Once again, it appears that, in aggregate, those students graduating with an Associate's degree earned more than those graduating with a Bachelor's degree one year into the student's career. One of the main reasons for this finding is that 33.9 percent of all graduates with Associate

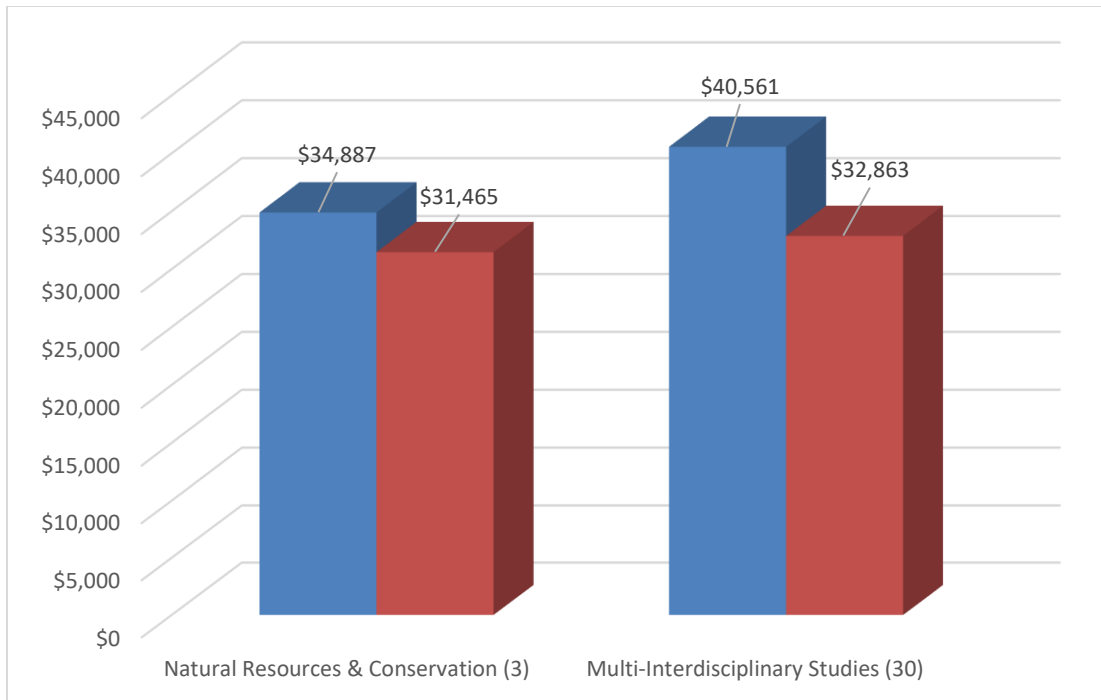
degrees in FY2019-20 majored in a Health field (predominantly nursing), one of the initially highest paying fields. In contrast, those graduating with Bachelor’s degrees tended to be spread out over a variety of majors including Business (22.2%), Health (13.6%), Education (10.2%), and Biology/Biomedical science (7.0%). When comparing Associate and Bachelor degree graduates there were only 11 majors where there were a sufficient number of students to make valid wage comparisons across fields and degree levels.

*Table 27: Graduates by Major and Degree Level, FY2019-20*

<b>CIP Code</b>	<b>Associate’s</b>	<b>Bachelor’s</b>
Natural Resources & Conservation (3)	26	51
Information Technology (11)	205	352
Engineering Technologies (15)	426	38
Family and Consumer Sciences (19)	75	65
Liberal Arts (24)	677	233
Multi-Interdisciplinary Studies (30)	297	48
Security and Protective Services (43)	116	327
Public Administration and Social Services (44)	61	100
Visual & Performing Arts (50)	28	418
Health (51)	1,500	1,360
Business (52)	533	2,229

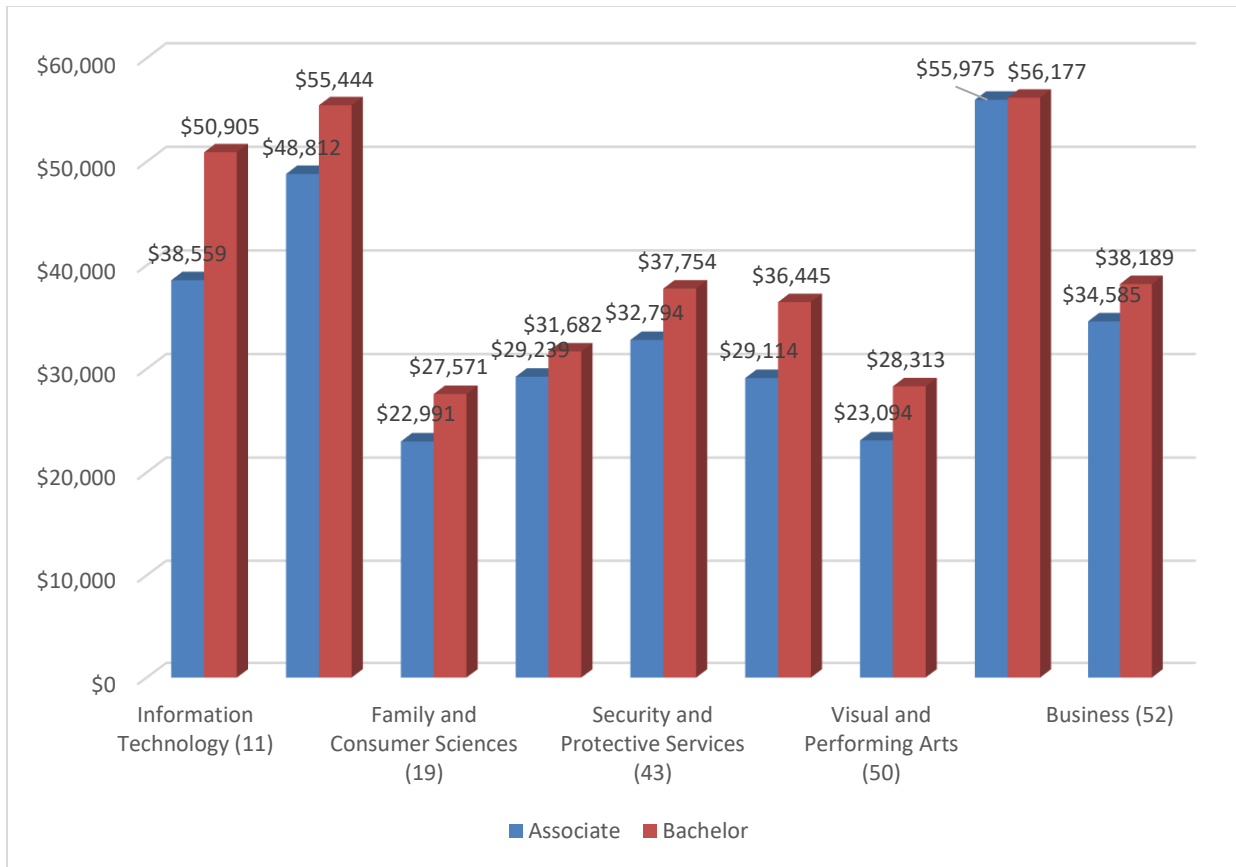
In two of these ten majors associate’s degree earners had median wages one year post-graduation higher than bachelor’s degree earners. As shown in Figure 16, these included Natural Resources & Conservation and Multi-Interdisciplinary Studies.

Figure 16: Median Wages by Major and Degree Level One Year Post-Graduation, FY2019-20



In the remaining seven majors, bachelor's degree completers earned more than their associate degree counterparts one year post-graduation. These majors included Information Technology; Engineering Technologies; Family and Consumer Sciences; Public Administration and Social Services; Visual and Performing Arts; Health; and Business.

Figure 16: Median Wages by Major and Degree Level One Year Post-Graduation, FY2019-20



## Section V: Employment by Industry

The majority of private, non-farm<sup>17</sup> employment in South Carolina is concentrated in Retail Trade, Manufacturing, Health Care and Social Assistance, and Accommodation and Food Service according to the Bureau of Labor Statistics’ Current Employment Statistics (CES) for 2020. The distribution of where SC graduates are employed is largely similar with some notable exceptions.

<sup>17</sup> Since federal and military wages were not available from the DEW wage records, the public administration sector is excluded from this analysis. The agriculture industry is also excluded as the CES data typically reports on non-farm employment, and there were a limited number of graduates employed in agriculture.

Table 28: Distribution of Employment by Industry 10 Years Post-Graduation, FY2009-10

Industry	SC Annual Avg. 2020	10 Years Post-Graduation
Mining and Logging	0.3%	0.0%
Utilities	0.7%	1.5%
Construction	6.0%	3.6%
Manufacturing	14.2%	11.3%
Wholesale Trade	4.2%	4.1%
Retail Trade	14.3%	7.4%
Transportation & Warehousing	4.2%	2.0%
Information	1.6%	2.4%
Finance	4.4%	6.9%
Real Estate	1.8%	1.5%
Professional, Scientific, Technical	5.8%	9.8%
Management	1.4%	0.7%
Administrative Support	9.1%	6.4%
Education	2.2%	12.9%
Health Care and Social Assistance	12.2%	23.1%
Arts, Entertainment, and Recreation	1.5%	1.1%
Accommodation and Food Service	11.7%	3.1%
Other Services	4.3%	2.3%

A significantly larger percentage of the higher education graduates are employed in the Professional, Scientific, and Technical; Education; and Health Care and Social Assistance sectors compared to the state average. Fewer graduating individuals were employed in the Retail Trade; Construction; and Accommodation and Food Service sectors compared to the state average.

Looking more closely at the industries of employment by educational attainment reveals slightly different patterns.



Table 29: Distribution of Employment by Industry and Degree Level 10 Years Post-Graduation, FY2009-10

Industry	SC Annual Avg. 2020	Associate's Degree or Less	Bachelor's Degree	Graduate Degree
Mining and Logging	0.3%	0.0%	0.1%	0.0%
Utilities	0.7%	1.7%	1.4%	1.1%
Construction	6.0%	4.5%	3.6%	1.7%
Manufacturing	14.2%	15.6%	10.1%	6.4%
Wholesale Trade	4.2%	3.2%	5.4%	2.3%
Retail Trade	14.3%	8.0%	7.8%	4.9%
Transportation & Warehousing	4.2%	2.3%	2.4%	0.4%
Information	1.6%	1.6%	3.2%	1.7%
Finance	4.4%	4.2%	9.8%	3.8%
Real Estate	1.8%	1.1%	2.0%	0.9%
Professional, Scientific, Technical	5.8%	4.5%	13.1%	11.1%
Management	1.4%	0.4%	0.9%	0.6%
Administrative Support	9.1%	7.4%	6.6%	3.8%
Education	2.2%	5.0%	10.5%	34.5%
Health Care and Social Assistance	12.2%	34.0%	15.2%	23.9%
Arts, Entertainment, and Recreation	1.5%	0.6%	1.6%	0.7%
Accommodation and Food Service	11.7%	3.2%	3.8%	0.8%
Other Services	4.3%	2.6%	2.4%	1.3%

Those with an Associate's degree or less are highly concentrated in the Health Care and Social Assistance industry, in keeping with the fields of study typically pursued. The second most common industry for these graduates is Manufacturing, which is not unusual given the large number of individuals completing certificates, diplomas, and degrees in welding and other precision production programs.

Individuals graduating with a Bachelor's degree or post-baccalaureate certificate were most heavily contracted in Health Care and Social Assistance and Professional, Scientific, and Technical services. Overall their industry distribution was less heavily concentrated than those with an Associate's degree or less, which is in line with their more varied fields of study.

Students completing a graduate degree in FY2009-10 were most highly concentrated in the Education industry followed by Health Care and Social Assistance. Again, this reflects their degree concentrations of education and health. The most common field of study for this group was Business which had employment across many sectors, the most common being Professional, Scientific, and Technical Services.

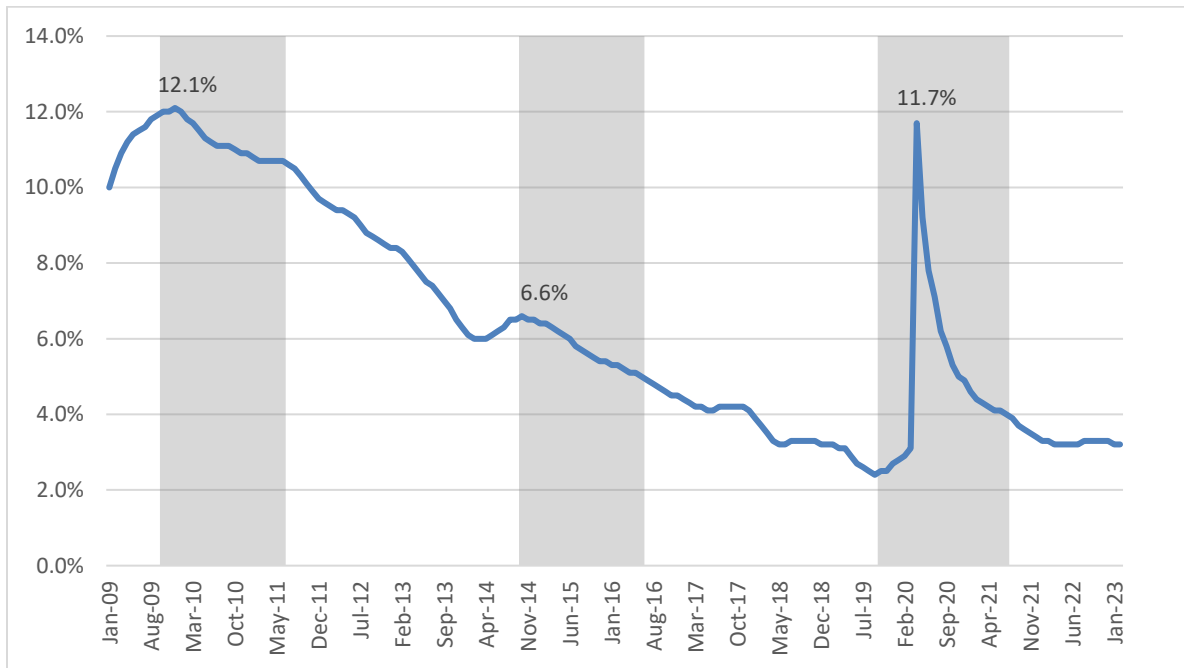
## Section VI: Change in Median Earnings between Cohorts

Section IV closely examined the median wages for students graduating various periods. This section will explore differences in median earnings between the graduates of FY2009-10, FY2014-15, and FY2019-20 to see if there are any significant changes between periods.

South Carolina experienced tremendous economic recovery between July 2009 and June 2016. The unemployment rate<sup>18</sup> dropped by over half from 11.6 percent to 5.0 percent. However, the COVID-19 pandemic-related shutdowns in the spring of 2020 resulted in a dramatic increase in the unemployment rate from 3.1 percent in March 2020 to 11.7 percent one month later. While the unemployment rate quickly recovered to less than 4 percent by summer 2021, it is likely that the labor market disruptions had a measurable impact on first year earnings for FY2019-20 graduates, particularly compared to those graduating in relatively “good” economic times, in FY2014-15.

Figure 17 shows the unemployment rate for the state over this period. The shaded regions represent the time periods of looking at wages one year post-graduation for FY2009-10, FY2014-15, and FY2019-20 graduates.

*Figure 17: SC Unemployment Rate, Jan 2009-Feb 2023*



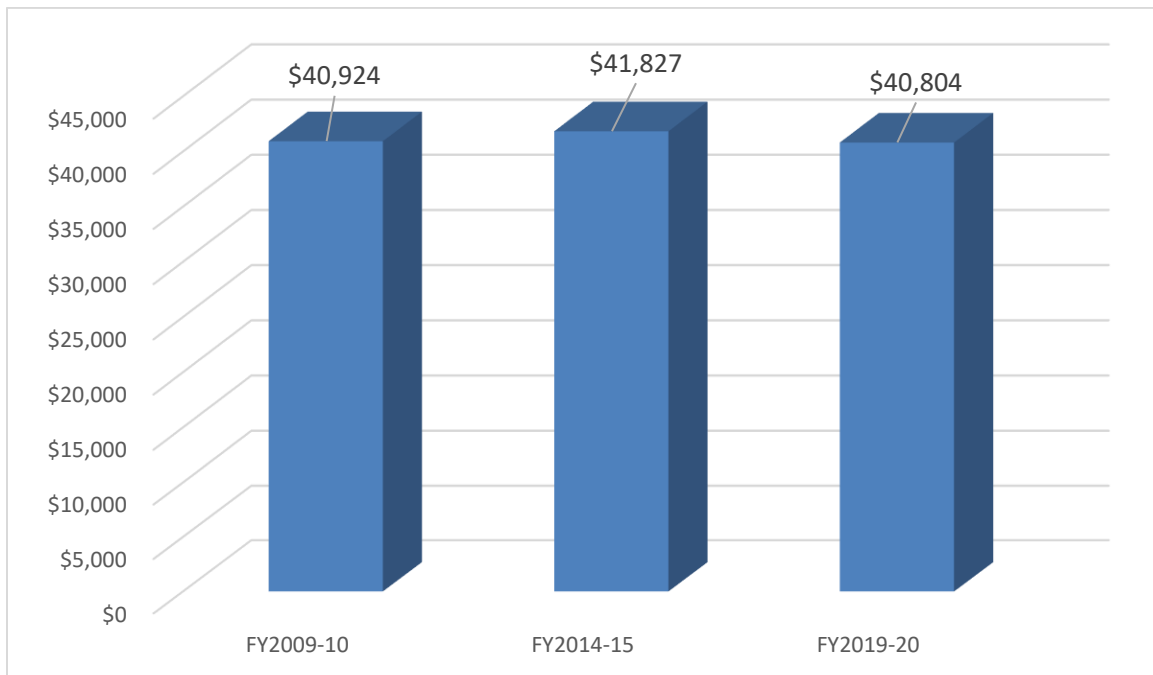
In order to provide a more accurate comparison between the three cohorts all unique students who had re-enrolled at another South Carolina institution of higher education were removed

<sup>18</sup> Bureau of Labor Statistics, Local Area Unemployment Statistics, Seasonally-Adjusted

from the analysis. For all cohorts only students meeting the wage threshold<sup>19</sup> one year post-graduation were included in this section.

The median wages for those students found in the wage records who met the threshold was lower, overall, for those graduating in the FY2009-10 and FY2019-20 cohorts compared to the FY2014-15 graduates.

*Figure 18: Median Wages One Year Post-Graduation, FY2009-10, FY2014-15, & FY2019-20*



### **Change in Median Wages by Degree Level**

Between the cohorts, wage changes were quite varied based on the degree level. Overall, those graduating with a masters or specialist degree had the most stable first year wages—likely as a result of the large number of education majors represented in this category. Wages for doctorate and first professional degree holders showed the most variability, spiking for those graduating in FY2014-15 but declining substantially for those in FY2019-20.

<sup>19</sup> Wage threshold was annualized wages of at least \$14,500. Note that in section IV individuals had to meet the wage threshold in each of the periods being examined. In this section, individuals had to meet the wage threshold in only the first year post-graduation.

Table 16: Median Wages by Degree Level One Year Post-Graduation, FY2009-10 vs.2014-15

<b>Degree Level</b>	<b>FY2009-10</b>	<b>FY2014-15</b>	<b>FY2019-20</b>
Certificate/Diploma	\$33,473	\$35,636	\$33,843
Associate	\$43,137	\$43,081	\$41,546
Bachelor	\$35,374	\$38,074	\$37,032
Masters/Specialist	\$55,486	\$55,863	\$55,869
Doctorate/First-Professional	\$65,091	\$78,089	\$61,578

Again, looking only at aggregates provides an incomplete picture of the value of various degrees of higher education. For example, while overall Associate Degree holders may have experienced a drop in their median wages between the FY2009-10 and FY2019-20 cohorts, if you examine specific degrees, such as Dental Hygiene, median wages between the cohorts increased over 14 percent. The next section, as well as Appendix G, examines these trends in more detail.

### Change in Median Wages by Major

Looking more closely at the change in median wages by major, there is no consistent pattern. Most CIP codes had their highest median one year wages in the FY2014-15 cohort, consistent with a stronger economic climate. There were four major that had higher median wages in the FY2019-20 cohort compared to both the FY2009-10 and FY2014-15 groups including: Personal and Culinary Services; Library Science; Security and Protective Services; and Transportation and Material Moving.

Table 17: Median Wages One Year Post-Graduation, FY2009-10, FY2014-15, & FY2019-20

<b>CIP Code</b>	<b>FY2009-10</b>	<b>FY2014-15</b>	<b>FY2019-20</b>
Agriculture (1)	\$33,144	\$35,349	\$32,370
Natural Resources & Conservation (3)	\$32,138	\$36,077	\$34,940
Architecture (4)	\$30,498	\$49,798	\$47,809
Area, Ethnic, Cultural, Gender Studies (5)	N/D	N/D	\$27,278
Communication, Journalism (9)	\$30,827	\$32,766	\$31,382
Communications Technologies (10)	N/D	\$29,128	\$28,232
Information Technology (11)	\$41,400	\$48,477	\$45,619
Personal and Culinary Services (12)	\$25,077	\$27,994	\$28,603
Education (13)	\$48,982	\$43,326	\$45,489
Engineering (14)	\$60,155	\$71,468	\$64,026
Engineering Technologies (15)	\$37,528	\$54,365	\$50,328
Foreign Languages, Literatures, and Linguistics (16)	\$31,011	\$36,835	\$35,751
Family and Consumer Sciences (19)	\$26,919	\$28,060	\$25,198
Legal Professions and Studies (22)	\$40,079	\$43,343	\$43,052
English Language and Literature (23)	\$30,556	\$30,072	\$27,620
Liberal Arts (24)	\$31,886	\$31,965	\$30,080

CIP Code	FY2009-10	FY2014-15	FY2019-20
Library Science (25)	\$44,213	\$48,616	\$54,850
Biology and Biomedical (26)	\$30,002	\$31,111	\$29,758
Mathematics and Statistics (27)	\$42,951	\$46,359	\$45,110
Military Technologies (29)		N/D	\$36,963
Multi-Interdisciplinary Studies (30)	\$34,368	\$41,383	\$39,748
Parks, Recreation, Leisure, and Fitness (31)	\$29,657	\$30,864	\$30,406
Philosophy and Religious Studies (38)	\$29,884	\$31,039	\$27,603
Theology and Religious Vocation (39)	\$29,554	\$35,625	\$35,179
Physical Sciences (40)	\$39,302	\$41,519	\$37,658
Science Technologies (41)	N/D	N/D	N/D
Psychology (42)	\$29,830	\$31,098	\$28,187
Security and Protective Services (43)	\$33,937	\$35,252	\$38,190
Public Administration and Social Service (44)	\$36,899	\$38,003	\$37,092
Social Science (45)	\$31,125	\$33,184	\$32,030
Construction Trades (46)	\$34,942	\$32,670	\$33,378
Mechanic and Repair Technologies (47)	\$40,498	\$42,074	\$41,632
Precision Production (48)	\$35,706	\$43,846	\$39,068
Transportation and Material Moving (49)	\$36,882	\$40,971	\$47,967
Visual and Performing Arts (50)	\$27,837	\$28,763	\$27,744
Health (51)	\$53,396	\$54,794	\$54,667
Business (52)	\$39,939	\$42,412	\$41,021
History (54)	\$29,323	\$30,842	\$29,625

Majors with the largest number of graduates included Health, Education, and Business, which all experienced fairly stable wages or slight declines.

Given the current challenges faced in recruiting and retaining qualified teachers in the state and the projected teacher shortages, any decline in real wages of education majors is of concern.

Since wage changes vary dramatically based not only on field of study but also on degree level, Appendix G provides detailed comparisons at the CIP code and degree level.

## Section VII: Conclusion

To varying extents, students graduating from South Carolina's colleges and universities are not found at high rates in the state's wage records five or more years post-graduation. In general, only about 53 percent of graduating students are found in the wage records one year post-graduation. This falls to around 48 percent five years post-graduation and around 43 percent ten years post. While there are many potential reasons for this including federal or military employment, starting one's own business, or becoming an independent contractor, it is important to recognize that many graduates will choose to leave the state to find employment. All studies attempting to match supplies of college graduates with future workforce demand must be cognizant of the mobility of this segment of the labor force.

Female and Black graduates are usually found at higher rates in the wage records post-graduation compared to male students and other racial groups. Students graduating from the state's Technical College system tend to be most likely to be found in the state's wage records reflecting the fact that many of their programs are career/workforce-centered. Out-of-state students, particularly at the highest levels of education, are the least likely to be found in the employment records across time. Those majoring in STEM fields tend to have the lowest match rates with wage records while those in Education, Health, and Trades tend to have the

In terms of wage outcomes for college graduates, the aggregate data can only reveal a partial picture. Inflation-adjusted, median annual earnings tend to increase dramatically (5.2 percent per year) for individuals between their first and tenth year post-graduation although there are significant differences depending on specific major and degree level. There are many college majors that have seen stagnant or even falling real wages between the Great Recession and 2020.

It is important to arm students and families with this type of employment and wage information as they make decisions on whether to attend post-secondary education, how to finance that degree, and which majors provide the best wage growth potential.

As other reports have suggested, there appears to be a growing need for additional qualified STEM majors in the state. Graduates in these fields are the least likely to be found in the state's wage records, possibly indicating a high degree of mobility for additional years of schooling or other jobs. Many STEM-related majors have experienced the greatest wage growth between the cohorts as well as growth over time between cohorts. In particular, there appears to be a significant need for additional graduates at the bachelor's level in fields such as Computer and Information Science as well as Civil and Mechanical Engineering.

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## Appendix A

Table A.1: Unique Students Completing Degrees by Institution

Institution	FY2009-10 Graduates	FY2014-15 Graduates	FY2019-20 Graduates
<b>Public Research Institutions</b>			
Clemson	3,335	4,179	5,760
USC Columbia	4,882	6,269	7,672
MUSC	712	748	794
<b>Public Comprehensive Teaching Institutions</b>			
The Citadel	546	692	858
Coastal Carolina	1,066	1,462	1,936
College of Charleston	1,784	1,985	2,051
Francis Marion	408	475	571
Lander	348	348	448
SC State	517	462	368
USC Aiken	356	399	552
USC Beaufort	149	220	372
USC Upstate	718	817	1,115
Winthrop	870	923	1,063
<b>Public Two-Year Regional Campuses of USC</b>			
USC Lancaster	39	40	51
USC Salkehatchie	19	31	27
USC Sumter	11	13	50
USC Union	5	17	16
<b>Public Technical Colleges</b>			
Aiken	193	278	257
Central Carolina	232	342	392
Denmark	56	106	42
Florence-Darlington	416	444	474
Greenville	1,017	1,208	1,230
Horry-Georgetown	503	736	932
Midlands	613	747	1,006
Northeastern	123	95	148
Orangeburg-Calhoun	163	237	301
Piedmont	386	496	764
Spartanburg CC	358	483	473



<b>Institution</b>	<b>FY2009-10 Graduates</b>	<b>FY2014-15 Graduates</b>	<b>FY2019-20 Graduates</b>
TC of the Lowcountry	175	217	243
Tri-County	394	606	713
Trident	762	1,320	1,059
Williamsburg	60	73	55
York	508	475	705
<b>Independent Senior and Junior Institutions</b>			
Allen University	37	64	44
Anderson University	1	428	716
Benedict College	231	330	217
Bob Jones University	678	581	571
Charleston Southern University	410	434	644
Clafin University	228	264	285
Coker College	161	198	251
Columbia College	221	264	305
Columbia Int.'l University	207	265	251
Converse College	173	199	264
Erskine College	145	86	85
Furman University	535	576	658
Limestone College	553	507	375
Lutheran Theological Seminary	30	19	
Morris College	100	110	100
Newberry College	108	170	218
North Greenville University	274	373	438
Presbyterian College	194	231	188
Sherman Coll. Of Straight Chiro.	2	54	90
South University*	112	304	212
Southern Wesleyan University	579	359	304
Voorhees College	87	68	81
Wofford College	222	301	317
Spartanburg Methodist College**	24	37	79

\*For-profit, degree-granting institution

\*\*Independent Junior Institution

## Appendix B

Table B.1: Graduation Year and Semester with Corresponding Wage Year and Quarter

<b>Report Year- Report Sem</b>	<b>Yr/Quarter</b>	<b>Yr/Quarter</b>	<b>Yr/Quarter</b>	<b>Yr/Quarter</b>
<b>2009-05</b>	2009/4	2010/1	2010/2	2010/3
--5-year	2014/4	2015/1	2015/2	2015/3
--10 year	2019/4	2020/1	2020/2	2020/3
<b>2009-10</b>	2010/1	2010/2	2010/3	2010/4
--5-year	2015/1	2015/2	2015/3	2015/4
--10 year	2020/1	2020/2	2020/3	2020/4
<b>2010-20</b>	2010/3	2010/4	2011/1	2011/2
--5-year	2015/3	2015/4	2016/1	2016/2
--10 year	2020/3	2020/4	2021/1	2021/2
<b>2010-30</b>	2010/3	2010/4	2011/1	2011/2
--5-year	2015/3	2015/4	2016/1	2016/2
--10 year	2020/3	2020/4	2021/1	2021/2
<b>2014-05</b>	2014/4	2015/1	2015/2	2015/3
--5 year	2019/4	2020/1	2020/2	2020/3
<b>2014-10</b>	2015/1	2015/2	2015/3	2015/4
--5 year	2020/1	2020/2	2020/3	2020/4
<b>2015-20</b>	2015/3	2015/4	2016/1	2016/2
--5 year	2020/3	2020/4	2021/1	2021/2
<b>2015-30</b>	2015/3	2015/4	2016/1	2016/2
--5 year	2020/3	2020/4	2021/1	2021/2
<b>2019-05</b>	2019/4	2020/1	2020/2	2020/3
<b>2019-10</b>	2020/1	2020/2	2020/3	2020/4
<b>2020-20</b>	2020/3	2020/4	2021/1	2021/2
<b>2020-30</b>	2020/3	2020/4	2021/1	2021/2

## Appendix C

*Table C.1: Percentage of Students Found in Wage Records One Year Post-Graduation by Detailed Degree Level, FY2009-10*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Certificate <1 Year	1,505	1,132	75.2%
One Yr but < 2 Yr Certificate	482	410	85.1%
Associate	4,170	3,415	81.9%
Bachelor	15,425	9,076	58.8%
Post Baccalaureate	41	24	58.5%
Doctor's Professional Practice	645	343	53.2%
Masters	4,144	2,563	61.8%
Post Master's Certificate	N/D	N/D	N/D
Specialist <sup>20</sup>	71	54	76.1%
Doctor's: Research/Scholarship	546	252	46.2%

*Table C.2: Percentage of Students Found in Wage Records One Year Post-Graduation by Detailed Degree Level, FY2014-15*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Certificate <1 Year	1,884	1,525	80.9%
One Yr but < 2 Yr Certificate	542	476	87.8%
Associate	5,731	4,621	80.6%
Bachelor	18,744	10,892	58.1%
Post Baccalaureate	76	38	50.0%
Doctor's Professional Practice	756	384	50.8%
Masters	4,542	2,490	54.8%
Post Master's Certificate	17	15	88.2%
Specialist	108	80	74.1%
Doctor's: Research/Scholarship	765	336	43.9%

<sup>20</sup> This degree is most typically used in the education field.

*Table C.3: Percentage of Students Found in Wage Records One Year Post-Graduation by Detailed Degree Level, FY2019-20*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Certificate <1 Year	2,042	1,652	80.9%
One Yr but < 2 Yr Certificate	498	441	88.6%
Associate	6,590	5,346	81.1%
Bachelor	22,891	13,384	58.5%
Post Baccalaureate	138	35	25.4%
Doctor's Professional Practice	836	390	46.7%
Masters	5,175	2,944	56.9%
Post Master's Certificate	50	24	48.0%
Specialist	126	103	81.7%
Doctor's: Research/Scholarship	845	346	40.9%

*Table C.4: Percentage of Students Found in Wage Records Five Years Post-Graduation by Detailed Degree Level, FY2009-10*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Certificate <1 Year	1,505	980	65.1%
One Yr but < 2 Yr Certificate	482	337	69.9%
Associate	4,170	2,967	71.2%
Bachelor	15,425	6,383	41.4%
Post Baccalaureate	41	16	39.0%
Doctor's Professional Practice	645	322	49.9%
Masters	4,144	1,906	46.0%
Post Master's Certificate	N/D	N/D	N/D
Specialist	71	46	64.8%
Doctor's: Research/Scholarship	546	166	30.4%

*Table C.5: Percentage of Students Found in Wage Records Five Years Post-Graduation by Detailed Degree Level, FY2014-15*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Certificate <1 Year	1,884	1,166	61.9%
One Yr but < 2 Yr Certificate	542	405	74.7%
Associate	5,731	3,900	68.1%
Bachelor	18,744	7,598	40.5%
Post Baccalaureate	76	20	26.3%
Doctor's Professional Practice	756	362	47.9%
Masters	4,542	1,866	41.1%
Post Master's Certificate	17	13	76.5%
Specialist	108	74	68.5%
Doctor's: Research/Scholarship	765	238	31.1%

*Table C.6: Percentage of Students Found in Wage Records Ten Years Post-Graduation by Detailed Degree Level, FY2009-10*

	<b>Students</b>	<b>In Wage Records</b>	<b>Percent in Wage Records</b>
Certificate <1 Year	1,505	863	57.3%
One Yr but < 2 Yr Certificate	482	305	63.3%
Associate	4,170	2,706	64.9%
Bachelor	15,425	5,651	36.6%
Post Baccalaureate	41	15	36.6%
Doctor's Professional Practice	645	312	48.4%
Masters	4,144	1,684	40.6%
Post Master's Certificate	N/D	N/D	N/D
Specialist	71	39	54.9%
Doctor's: Research/Scholarship	546	149	27.3%

## Appendix D

Students remain in the state one, five, and ten years after graduation at different rates depending on their geographic origin and the type of school attended. In general, students at research universities tend to have the lowest percentage of students found in the state wage records while those at the technical colleges had the highest rates.

Out of state students do not typically have high match rates in the employment records except for the technical colleges.

*Table D.1: Percentage of Students Found in Wage Records One, Five, and Ten Years Post-Graduation by Sector and Geographic Origin, FY2009-10*

<b>Geographic Origin</b>	<b>Count</b>	<b>1-Year Count</b>	<b>1-Year Percentage</b>	<b>5-Year Count</b>	<b>5-Year Percentage</b>	<b>10-Year Count</b>	<b>10-Year Percentage</b>
<b>Research Institutions</b>							
In-State	5,362	3,958	73.8%	3,076	57.4%	2,746	51.2%
Out-of-State	3,567	1,086	30.4%	554	15.5%	490	13.7%
<b>Comprehensive Teaching Institutions</b>							
In-State	4,254	3,333	78.3%	2,499	58.7%	2,241	52.7%
Out-of-State	2,508	1,000	39.9%	460	18.3%	399	15.9%
<b>Two-Year Regional Campuses of USC</b>							
In-State	59	47	79.7%	39	66.1%	38	64.4%
Out-of-State	15	3	20.0%	3	20.0%	4	26.7%
<b>Technical Colleges</b>							
In-State	3,947	3,278	83.1%	2,859	72.4%	2,566	65.0%
Out-of-State	2,012	1,560	77.5%	1,325	65.9%	1,214	60.3%
<b>Independent Institutions</b>							
In-State***	2,862	2,156	75.3%	1,722	60.2%	1,525	53.3%
Out-of-State***	2,450	850	34.7%	586	23.9%	501	20.4%

**\*\*\*Note:** State of origin information is missing for the majority of students from independent institutions. Any student with missing data was included in the out-of-state category.

Additionally, there are significant differences in the likelihood of being found in the wage records based on the student’s college major or discipline and geographic origin. Those students in the Trades, Health, and Education tend to have the highest match rates for both in-state and out-of-state students.

*Table D.2: Percentage of Students Found in Wage Records Five & Ten Years Post-Graduation by Discipline and Geographic Origin, FY2009-10*

<b>College Major (Discipline)</b>	<b>In-State Matches 5 Year Post-Graduation</b>	<b>Out-of-State Matches 5 Years Post-Graduation</b>	<b>In-State Matches 10 Year Post-Graduation</b>	<b>Out-of-State Matches 10 Years Post-Graduation</b>
Arts & Humanities	49.4%	19.9%	43.4%	18.1%
Business & Communication	62.4%	22.8%	56.5%	19.8%
Education	68.9%	29.7%	59.6%	24.2%
Health	70.0%	52.5%	64.1%	47.4%
Social & Behavioral	58.4%	18.9%	51.0%	16.8%
STEM	55.8%	20.8%	50.8%	19.3%
Trades	73.4%	56.2%	63.9%	50.9%

## Appendix E

The area or field of study code refers to the Classification of Instructional Program (CIP) codes that were developed and maintained by the US Department of Education's National Center for Education Statistics (NCES).

Table E.1 provides the percentage of students found in the state's wage records one year post-graduation for all cohorts of students.

*Table E.1: Percentage of Students in Wage Records One Year Post-Graduation, by CIP*

Classification of Instructional Program	FY2009-10		FY2014-15		FY2019-20	
	Students	% in WR	Students	% in WR	Students	% in WR
Agriculture (1)	220	53.2%	309	59.5%	407	62.9%
Natural Resources & Conservation (3)	113	64.6%	129	61.2%	186	62.4%
Architecture (4)	108	47.2%	111	39.6%	151	41.7%
Area, Ethnic, Cultural, Gender Studies (5)	23	34.8%	22	50.0%	49	53.1%
Communication, journalism (9)	897	60.6%	1,132	55.4%	1,185	55.9%
Communications Technologies (10)	20	80.0%	26	73.1%	43	74.4%
Information Technology (11)	606	64.9%	980	65.9%	1,236	63.2%
Personal and Culinary Services (12)	207	71.0%	300	80.7%	232	73.7%
Education (13)	2,207	71.4%	2,133	75.7%	2,650	79.5%
Engineering (14)	891	53.5%	1,459	44.9%	1,853	43.3%
Engineering Technologies (15)	342	71.9%	459	75.4%	697	83.6%
Foreign Languages, Literatures, and Linguistics (16)	227	47.6%	200	51.0%	219	49.8%
Family and Consumer Sciences (19)	290	71.4%	369	71.0%	386	66.1%
Legal Professions and Studies (22)	362	69.9%	325	76.0%	298	76.2%
English Language and Literature (23)	537	53.1%	549	57.6%	521	61.4%
Liberal Arts (24)	783	69.1%	1,426	70.3%	2,038	71.2%
Library Science (25)	116	52.6%	77	59.7%	107	74.8%
Biology and Biomedical (26)	857	51.0%	1,614	49.1%	2,155	53.0%
Mathematics and Statistics (27)	172	44.2%	228	44.7%	257	46.7%
Military Technologies (29)	0		15	53.3%	121	43.8%
Multi-Interdisciplinary Studies (30)	325	70.5%	657	74.4%	590	73.4%
Parks, Recreation, Leisure, and Fitness (31)	604	48.3%	853	53.1%	1,098	51.4%



Classification of Instructional Program	FY2009-10		FY2014-15		FY2019-20	
	Students	% in WR	Students	% in WR	Students	% in WR
Philosophy and Religious Studies (38)	159	36.5%	126	52.4%	121	46.3%
Theology and Religious Vocation (39)	430	35.1%	352	36.1%	283	36.7%
Physical Sciences (40)	326	47.5%	357	44.0%	377	52.5%
Science Technologies (41)	N/D	N/D	N/D	N/D	5	80.0%
Psychology (42)	923	60.7%	1,172	61.3%	1,306	65.2%
Security and Protective Services (43)	565	73.1%	863	71.3%	879	71.6%
Public Administration and Social Service (44)	465	70.5%	699	64.7%	578	68.5%
Social Science (45)	1,368	52.9%	1,453	50.5%	1,467	53.0%
Construction Trades (46)	24	83.3%	104	56.7%	135	81.5%
Mechanic and Repair Technologies (47)	511	79.1%	586	82.3%	591	83.8%
Precision Production (48)	287	81.9%	363	89.0%	382	89.5%
Transportation and Material Moving (49)	114	79.8%	171	86.5%	51	90.2%
Visual and Performing Arts (50)	997	55.9%	1,107	58.1%	1,259	62.6%
Health (51)	4,339	77.3%	5,293	73.6%	7,015	71.3%
Business (52)	6,144	62.6%	6,740	58.0%	7,913	54.5%
History (54)	472	49.4%	400	58.3%	350	56.6%
<b>TOTAL</b>	<b>27,036</b>	<b>63.9%</b>	<b>33,165</b>	<b>62.9%</b>	<b>39,191</b>	<b>62.9%</b>

Table E.2 provides the percentage of students found in the state's wage records five years post-graduation for students graduating in FY2009-10 or FY2014-15.

*Table E.2: Percentage of Students in Wage Records Five Years Post-Graduation, by CIP*

Classification of Instructional Program	FY2009-10		FY2014-15	
	Students	% in WR	Students	% in WR
Agriculture (1)	220	42.7%	309	41.7%
Natural Resources & Conservation (3)	113	50.4%	129	45.7%
Architecture (4)	108	34.3%	111	20.7%
Area, Ethnic, Cultural, Gender Studies (5)	23	26.1%	22	27.3%
Communication, journalism (9)	897	40.0%	1,132	34.8%

Classification of Instructional Program	FY2009-10		FY2014-15	
	Students	% in WR	Students	% in WR
Communications Technologies (10)	20	65.0%	26	42.3%
Information Technology (11)	606	55.0%	980	56.0%
Personal and Culinary Services (12)	207	51.2%	300	57.0%
Education (13)	2,207	55.1%	2,133	59.3%
Engineering (14)	891	39.6%	1,459	32.1%
Engineering Technologies (15)	342	64.6%	459	67.1%
Foreign Languages, Literatures, and Linguistics (16)	227	24.7%	200	28.5%
Family and Consumer Sciences (19)	290	54.5%	369	57.7%
Legal Professions and Studies (22)	362	56.4%	325	63.1%
English Language and Literature (23)	537	31.5%	549	37.7%
Liberal Arts (24)	783	50.6%	1,426	52.9%
Library Science (25)	116	38.8%	77	48.1%
Biology and Biomedical (26)	857	29.4%	1,614	30.2%
Mathematics and Statistics (27)	172	29.1%	228	31.1%
Military Technologies (29)	N/A	N/A	15	26.7%
Multi-Interdisciplinary Studies (30)	325	55.4%	657	60.0%
Parks, Recreation, Leisure, and Fitness (31)	604	36.9%	853	37.9%
Philosophy and Religious Studies (38)	159	22.6%	126	27.8%
Theology and Religious Vocation (39)	430	18.4%	352	23.3%
Physical Sciences (40)	326	24.2%	357	29.1%
Science Technologies (41)	N/D	N/D	N/D	N/D
Psychology (42)	923	39.0%	1,172	40.1%
Security and Protective Services (43)	565	60.5%	863	56.3%
Public Administration and Social Service (44)	465	57.6%	699	50.6%
Social Science (45)	1,368	34.9%	1,453	33.6%
Construction Trades (46)	24	70.8%	104	42.3%
Mechanic and Repair Technologies (47)	511	74.0%	586	70.1%
Precision Production (48)	287	78.7%	363	78.0%
Transportation and Material Moving (49)	114	71.1%	171	60.8%
Visual and Performing Arts (50)	997	37.2%	1,107	36.8%
Health (51)	4,339	64.4%	5,293	59.6%

Classification of Instructional Program	FY2009-10		FY2014-15	
	Students	% in WR	Students	% in WR
Business (52)	6,144	47.5%	6,740	43.3%
History (54)	472	35.0%	400	41.0%
<b>TOTAL</b>	<b>27,036</b>	<b>48.5%</b>	<b>33,165</b>	<b>47.2%</b>

## Appendix F

CIP codes were further aggregated into seven disciplines defined in a report from the State Higher Education Executive Officers (SHEEO) entitled “The Economic Benefit of Postsecondary Degrees.” The SHEEO disciplines are defined in Table D.1.

*Table F.1: CIP Codes Included in SHEEO Disciplines*

<b>Discipline</b>	<b>CIP Code</b>	<b>CIP Description</b>
Arts and Humanities	5	Area, ethnic, cultural, and gender studies
	16	Foreign languages, literatures, and linguistics
	23	English language, and literature/letters
	24	Liberal arts and sciences, general studies and
	30	humanities
	38	Multi-Interdisciplinary studies
	39	Philosophy and religious studies
	50	Theology and religious vocations
	54	Visual and performing arts
Business and Communication	9	Communication, journalism, and related
	10	Communications technologies/technicians and
	52	support Business, management, marketing, and related
		support
Education	13	Education
Health	51	Health professions and related clinical sciences
Social and Behavioral Sciences and Human Services	19	Family and consumer sciences/human sciences
	22	Legal Professions
	25	Library science
	31	Parks, recreation, leisure, and fitness studies
	42	Psychology
	44	Public administration and social service professions
45	Social sciences	
Science, Technology, Engineering, and Math (STEM)	1	Agriculture, agriculture operations, and related
	3	Natural resources and conservation
	4	Architecture and related
	11	Computer and information sciences and support
	14	Engineering
	15	Engineering technologies/technicians
	26	Biological and biomedical sciences
	27	Mathematics and statistics
	28	Military science, leadership and operational art
	29	Military technologies and applied sciences
	40	Physical sciences
41	Science technologies/technicians	

<b>Discipline</b>	<b>CIP Code</b>	<b>CIP Description</b>
Trades	12 43 46 47 48 49	Personal and culinary services Security and protective services Construction trades Mechanic and repair technologies/technicians Precision production Transportation and material moving

## Appendix G

This appendix provides the median wages<sup>21</sup> by detailed CIP code and degree level for students one year post-graduation for the three cohorts. Only majors/degree levels with at least 30 students are reported.

*Table G.1: Comparison of Median Wages by Major for Certificate or Diploma Graduates*

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Welding Technology (48.0508)	105	\$31,910	175	\$36,218	159	\$38,254
Licensed Practical/Vocational Nurse (51.3901)	98	\$38,376	139	\$41,325	123	\$38,630
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology (47.0201)	87	\$36,303	89	\$42,257	83	\$37,370
Truck and Bus Driver/Commercial Vehicle Operations (49.0205)	62	\$36,882	37	\$47,967	127	\$40,804
Dental Assisting (51.0601)	59	\$29,971	78	\$29,297	75	\$30,020
Surgical Technology (51.0909)	58	\$33,089	89	\$40,413	68	\$34,534
Pharmacy Technician (51.0805)	45	\$33,712	37	\$32,041	64	\$36,615
Medical/Clinical Assistant (51.0801)	40	\$26,384	95	\$28,843	58	\$28,173

*Table G.2: Comparison of Median Wages by Major for Associate Degree Graduates*

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Registered Nursing (51.3801)	798	\$55,564	1002	\$61,616	708	\$57,798
Liberal Arts and Sciences (24.0101)	201	\$31,323	666	\$29,009	435	\$31,771
Multi-/Interdisciplinary Studies, Other (30.9999)	127	\$36,449	297	\$40,561	343	\$44,213
Business Administration and Management, General (52.0201)	107	\$39,347	153	\$37,268	153	\$41,721

<sup>21</sup> Graduates must have met the \$14,500 wage threshold in their first year post-graduation to be included in Table G.1.

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Data Processing (11.0301)	100	\$37,968	169	\$37,329	180	\$42,890
Criminal Justice/Safety Studies (43.0104)	80	\$34,030	98	\$31,961	130	\$34,440
Business/Commerce, General (52.0101)	75	\$36,126	145	\$34,120	104	\$41,151
Accounting (52.0301)	74	\$35,762	81	\$34,707	111	\$35,629
Medical Radiologic Technology (51.0907)	73	\$42,872	104	\$40,428	110	\$45,661
Administrative Assistant and Secretarial Science, General (52.0401)	73	\$29,549	84	\$31,370	124	\$31,185
Industrial Electronics Technology (47.0105)	68	\$48,912	54	\$59,319	92	\$54,069
Physical Therapy Assistant (51.0806)	66	\$51,169	84	\$34,448	87	\$44,747
Dental Hygiene (51.0602)	60	\$38,935	59	\$49,026	67	\$44,620
Respiratory Care Therapy (51.0908)	59	\$51,498	70	\$61,429	52	\$52,282
Child Care and Support Services Management (19.0708)	54	\$25,328	75	\$22,991	68	\$26,099
Machine Tool Technology/Machinist (48.0501)	48	\$44,815	51	\$41,798	69	\$52,095
Legal Assistant/Paralegal (22.0302)	46	\$34,171	69	\$34,740	61	\$33,213
Automobile Mechanics Technology (47.0604)	46	\$30,223	71	\$34,853	48	\$33,244
Clinical/Medical Laboratory Technician (51.1004)	38	\$38,341	48	\$39,972	36	\$46,242
Industrial Mechanics and Maintenance Technology (47.0303)	36	\$55,970	41	\$57,085	42	\$55,975
Culinary Arts (12.0503)	34	\$27,100	34	\$24,926	71	\$29,386
Electrical, Electronic, and Communications Engineering Technology (15.0303)	32	\$48,386	60	\$51,650	68	\$55,896

Table G.3: Comparison of Median Wages by Major for *Bachelor's Degree Graduates*

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Business Administration and Management, General (52.0201)	856	\$35,688	986	\$36,988	907	\$39,928
Registered Nursing (51.3801)	569	\$57,055	952	\$62,503	729	\$61,118
Business Administration, Management, and Operations, Other (52.0299)	195	\$44,119	65	\$43,089	127	\$48,203
Psychology, General (42.0101)	192	\$28,504	420	\$27,581	296	\$29,180
Criminal Justice/Law Enforcement Administration (43.0103)	166	\$33,284	219	\$34,658	245	\$34,435
Marketing Management, General (52.401)	145	\$32,342	264	\$33,548	181	\$39,049
Biology/Biological Sciences, General (26.0101)	141	\$26,921	482	\$28,832	287	\$29,368
Speech Communication and Rhetoric (9.0101)	138	\$30,784	174	\$29,158	169	\$33,549
Political Science and Government, General (45.1001)	134	\$29,857	175	\$30,347	151	\$33,111
Finance, General (52.0801)	131	\$37,234	190	\$44,910	136	\$46,532
Accounting (52.0301)	124	\$36,304	189	\$41,391	165	\$41,007
Sociology, General (45.1101)	121	\$28,453	134	\$30,316	189	\$32,118
Elementary Education and Teaching (13.1202)	113	\$32,633	299	\$40,997	185	\$37,562
Mechanical Engineering (14.1901)	102	\$61,366	194	\$64,950	123	\$75,879
Early Childhood Education and Teaching (13.1210)	100	\$31,217	302	\$40,844	155	\$36,224
English Language and Literature, General (23.0101)	94	\$28,551	154	\$27,147	133	\$28,245
Hospitality Administration/Management, General (52.0901)	94	\$32,002	123	\$30,026	131	\$35,085
History, General (54.0101)	92	\$29,305	117	\$29,416	131	\$30,777
Liberal Arts and Sciences (24.0101)	90	\$33,541	175	\$31,529	182	\$31,599
Civil Engineering, General (14.0801)	78	\$50,386	113	\$63,282	108	\$61,366
Physical Education Teaching and Coaching (13.1314)	62	\$33,144	51	\$41,292	56	\$36,523
Sport and Fitness Administration (31.0504)	61	\$28,312	133	\$29,288	79	\$31,784
Social Work (44.0701)	60	\$30,978	71	\$36,949	91	\$35,672



Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Computer and Information Sciences, General (11.0101)	58	\$40,636	204	\$52,103	101	\$62,648
Public Relations/Image Management (9.0902)	52	\$30,600	56	\$36,495	70	\$31,801
Chemistry, General (40.0501)	50	\$37,121	71	\$38,797	47	\$39,685
Retailing and Retail Operations (52.1803)	44	\$31,096	41	\$31,252	58	\$31,459
Economics, General (45.0601)	43	\$34,195	76	\$36,098	57	\$36,732
Electrical and Electronics Engineering (14.1001)	40	\$66,538	40	\$80,671	74	\$75,844
Exercise Science and Kinesiology (31.0505)	39	\$29,021	90	\$27,739	62	\$28,636
Fine/Studio Arts, General (50.0702)	38	\$30,816	72	\$27,649	51	\$27,058
Experimental Psychology (42.2704)	36	\$28,720	85	\$27,963	85	\$30,766
Art/Arts Studies, General (50.0701)	36	\$28,431	40	\$26,371	30	\$30,852
Special Education and Teaching, General (13.1001)	30	\$40,230	87	\$43,659	57	\$38,040

Table G.4: Comparison of Median Wages by Major for *Master's/Specialist Degree Graduates*

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Business Administration and Management, General (52.0201)	345	\$74,109	399	\$73,723	335	\$81,939
Educational Leadership and Administration, General (13.0401)	152	\$71,853	115	\$64,460	137	\$67,298
Teacher Education and Professional Development, Specific Levels and Methods, Other (13.1299)	147	\$55,698	33	\$54,057	28	\$52,247
Social Work (44.0701)	106	\$38,717	124	\$38,487	160	\$41,340
Accounting (52.0301)	81	\$66,752	89	\$59,319	78	\$60,947
Counselor Education/School Counseling and Guidance Services (13.1101)	61	\$41,926	65	\$46,989	72	\$44,633
Library and Information Science (25.0101)	52	\$44,213	75	\$54,850	36	\$48,616

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Physician Assistant (51.0912)	45	\$95,808	62	\$83,031	34	\$92,668
Secondary Education and Teaching (13.1205)	44	\$45,564	64	\$46,386	60	\$44,274
Reading Teacher Education (13.1315)	37	\$52,299	80	\$57,637	46	\$58,792
Speech-Language Pathology (51.0203)	32	\$57,897	34	\$59,668	28	\$61,252
Public Administration (44.0401)	30	\$47,532	32	\$49,995	17	\$49,063

*Table G.5: Comparison of Median Wages by Major for Doctorate or First Professional Degree Graduates*

Program	FY2009-10		FY2014-15		FY2019-20	
	Graduates	Wage	Graduates	Wage	Graduates	Wage
Law (22.0101)	106	\$43,029	121	\$50,167	108	\$45,999
Pharmacy (51.2001)	106	\$139,169	117	\$87,508	159	\$130,975
Medicine (51.1201)	79	\$60,309	81	\$60,155	61	\$62,691
Physical Therapy/Therapist (51.2308)	44	\$71,365	46	\$67,117	39	\$78,918
Educational Leadership and Administration, General (13.0401)	35	\$100,380	31	\$92,457	38	\$91,119

At the less than associate's degree level (one or two year certificates/diplomas) there appears to be upward pressure on wages for majors in:

- Welding Technology
- Truck and Bus Driver/Commercial Vehicle Operations

At the associate's degree level, there may be, based on wage growth, an additional need for graduates in:

- Clinical/Medical Laboratory Technician
- Machine Tool Technology/Machinist
- Electrical, Electronic, and Communications Engineering Technology
- Dental Hygiene

At the bachelor's degree level, the state has seen high wage growth for:

- Computer and Information Sciences, General

- Finance, General
- Mechanical Engineering
- Civil Engineering
- Marketing/Marketing Management, General

At the master's/specialist degree level, the majors with the largest change in wages have been:

- Reading Teacher Education
- Business Administration and Management, General
- Library and Information Science

For graduates with a doctorate or first professional degree, wage growth has been strongest for:

- Physical Therapy
- Law