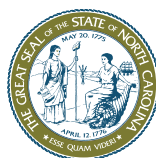


The North Carolina COMMON FOLLOW-UP SYSTEM Evaluation Report

2019



**NC DEPARTMENT
of COMMERCE**
LABOR & ECONOMIC
ANALYSIS

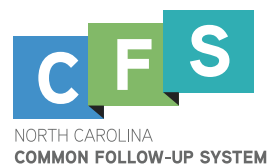


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THE NORTH CAROLINA COMMON FOLLOW-UP SYSTEM (CFS)

2019 EVALUATION REPORT

MAY 2019

Background

The purpose of the Common Follow-up System (CFS) is to provide information on the educational and employment outcomes of publicly supported educational, employment, and training programs for use in policy-making, program evaluation, resource allocation, and career planning.

[Chapter 96 Article 4 of the North Carolina General Statute](#) requires the North Carolina Department of Commerce's Labor and Economic Analysis Division (LEAD) to develop, implement, and maintain a common follow-up information management system for tracking performance measures related to current and former participants in State job training, education, and placement programs. LEAD is also charged with evaluating the effectiveness of programs and determining if specific program goals and objectives are attained, determining placement rates for each program, and with making recommendations regarding programs evaluated. Information about CFS operational activities is available on the [CFS website](#).

Evaluation Highlights

The Common Follow-up System provides the mechanism for carrying out longitudinal analyses that can be utilized to develop measures of program performance. These measures can provide information to be used in assessing program effectiveness. As part of its responsibility for evaluating programs contained in the CFS, LEAD has performed a series of analyses to measure the educational and employment outcomes of individuals participating in several North Carolina's public education, employment, and training programs. The goal is to develop key evaluative performance indicators related to employment and wage outcomes, as well as further participation in education and employment programs. It is intended that these measures can be utilized in concert with other programmatic information to aid in the assessment of program effectiveness.

Analyses focus on addressing four key questions: What percentage of former participants and completers of publicly supported education, employment, and training programs are employed in North Carolina during the years following their participation in these programs? What are the wage outcomes of these individuals? How do employment and wage outcomes vary by industry? To what extent do these individuals enroll in subsequent education, employment, or training programs?

The outcome measures are calculated for five program year-based cohort groups for each program and include outcome measures for up to five years post-exit/graduation. Relevant employment and wage statistics include the number and percent employed in North Carolina, median and average wages for each program, along with summary employment and wage statistics by industry. Post-enrollment measures include post participation in education, employment, and training programs.

» Methodology

Data from the CFS is utilized to perform a series of longitudinal analyses that focus on assessing the educational and employment outcomes of individuals participating in publicly supported education, employment, or training-related programs. Each year, the participating agencies supply data files in a program year. For the 2016-2017 year, the participating agencies submitted data files covering the time period July 1, 2016 through June 30, 2017. These formatted files are created from existing information systems at each of the entities and contain demographic and program-related information for individuals participating in programs and services operated by each of the contributing entities. In addition to the agency data, the CFS contains information provided by the Division of Employment Security including quarterly unemployment insurance wage files and unemployment insurance claims-related information.

Analyses are accomplished by matching individual program participant data across programs and agencies to information in the unemployment insurance (UI) wage file. Specifically, CFS data is used to compile outcome information for five program year cohorts. Each of the participating agencies operate a diverse set of programs and services. These programs vary in terms of participant characteristics, operational guidelines and procedures, and program goals. As a result, program definitions - including participation, exit and completion - can differ across programs. These operational differences provide some inherent challenges when assessing outcomes across programs. This report includes outcome information for exit and completion cohorts, utilizing definitions specific to each of the assessed programs. Therefore, the specific definitions of participant, exiter, and/or completer are provided in each of the corresponding program sections of this report.

Employment and wage outcomes are derived for each program exiter/completer cohort. Information from the quarterly UI wage data is utilized to develop employment and wage statistics. Wage data for each exiter is summed across the four quarters immediately following the exit/completion quarter to produce a one-year post-exit/completion wage. Wage information from the subsequent four quarters are summed to produce a two-year post-exit/completion wage. Successive four quarters are summed to produce subsequent post exit/completion wage statistics. If an individual has wages in any of the four quarters of the corresponding year, they are counted as employed. Employment and wage outcomes are compiled separately for each cohort.

Further analyses of industry employment and wage patterns are also undertaken. Each employer in the state who is covered by the state's unemployment insurance laws is assigned a North American Industry Classification (NAICS) code. Codes are assigned to each employer based on the primary industry function of the employing unit. The NAICS coding system provides a hierarchical coding scheme that allows for the grouping of codes into broader industry sectors. Post-employment statistics are calculated for each program exit/completion cohort by 13 different industry sectors. Individuals can be employed in more than one industry within a year or even within a quarter. In those instances where an individual is found to be employed in more than one industry sector, they are counted separately in each sector but only once in the total employment statistics.

Analysis of post participation in additional education, employment, and training is completed by cross-matching the information across entities and programs. Three measures are developed; the first measure included the number and percentage of individuals who participated in public higher education. This is

compiled by cross-matching the exit or completion cohort to records from the North Carolina Community College System and to records from the University of North Carolina system. If an individual is found to be participating in any program through either of those systems, they are counted as being enrolled in public higher education. The second measure of post participation in education, employment, or training programs is compiled by matching each exit/completion cohort to data from each of the other participating entities. If an individual is found to be enrolled or receiving services at any of those entities, they are counted as being enrolled in further public education, employment, or training. The third measure integrates the information from the second measure along with the employment-related information. The result is a measure of whether individuals are either employed or enrolled in further public education, employment, or training programs.

» Limitations

While the CFS provides a rich source of information regarding the participation of individuals in various education, employment, and training programs, the data is not without limitations. Information supplied by each of the agencies participating in the CFS comes from existing systems within each agency. Any data limitations that exist in those source systems, data repositories, and corresponding data elements are necessarily transferred along with the data to the CFS. CFS also does not include information from North Carolina's private educational institutions, out-of-state colleges and universities, or other employment and training-related service providers that do not provide information to the system.

The unemployment insurance wage data has its own strengths and limitations. Available wage files include information on individuals working in jobs covered by North Carolina's unemployment insurance laws. Available employment-related information includes: quarterly wages paid to an individual, size of the employing firm, and the NAICS code of the firm. Wage information reflects total quarterly wages and is not available for individuals who work outside of North Carolina, are employed in North Carolina but not covered by North Carolina's unemployment insurance laws (e.g., the self-employed, church and religious organization employees, summer camp employees, and other non-covered workers), are enrolled in the military, or are employed by the federal government. Employment-related data that cannot be determined includes: the entry-on-duty date of employment for the person, the employment type (i.e., permanent, temporary, part- or full-time), how much the person worked during the quarter, the number of hours worked, and the person's occupation.

Additionally, the CFS relies on the use of Social Security Numbers (SSNs) to match program participation with employment-related information. If SSNs are not available, the matching of data across agency and employment sources is problematic. LEAD is continuing to work with GDAC to enhance system capability to match data utilizing additional identity resolution methodologies, which will assist in future analytical efforts.

» Programs Assessed

The Common Follow-up System contains information on a diverse set of education, employment, and training programs and services. Analyses included in this report focus on 17 programs across four agencies. These included the following:

THE DEPARTMENT OF COMMERCE

Division of Workforce Solutions:

1. Workforce Investment Act (WIA) Title I Adult Program
2. Workforce Investment Act (WIA) Title I Dislocated Worker Program
3. Workforce Investment Act (WIA) Title I Youth Program
4. Wagner-Peyser Program

THE DEPARTMENT OF HEALTH AND HUMAN SERVICES

5. Division of Social Services - Work First - Temporary Assistance for Needy Families (TANF)
6. Division of Vocational Rehabilitation Services
7. Division of Services for the Blind

THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM

8. Career and Technical Education Programs
9. Workforce Continuing Education Training
10. Human Resources Development Programs
11. Basic Skills Programs
12. Customized Training Program
13. Apprenticeship Program

UNIVERSITY OF NORTH CAROLINA SYSTEM

14. Bachelors Programs
15. Masters Programs
16. Doctoral (Research) Programs
17. Doctoral (Professional Practice) Programs

The Department of Commerce

Division of Workforce Solutions

» Overview of WIA and WIOA Title I Programs

The Workforce Investment Act (WIA) of 1998 authorized the nation's federally funded workforce development system and provided funding for services to employers and job seekers. WIA Title I programs consisted of three distinct funding streams: Adult, Dislocated Workers, and Youth. In July of 2014, the Workforce Innovation and Opportunity Act (WIOA) was signed into law, and superseded WIA. WIOA is designed to help job seekers access the employment, education, training, and support services they need to succeed in the labor market, and to match employers with the skilled workers they need to compete in the global economy. Part of the goal of WIOA is to provide opportunity for reforms of local service centers, known as the American Job Center system, and to ensure that the system is responding to the needs of employers and preparing workers for jobs that are available now and in the future.¹ The act took effect on July 1, 2015, making this reporting year the first to include outcomes for WIOA participants.

¹ U.S. Department of Labor Employment and Training Administration website, <http://www.doleta.gov/wioa/>

WIA Title I Adult and Dislocated Worker programs were designed to increase employment and employment retention, increase earnings of dislocated workers, and enhance customer satisfaction for both participants and employers.² Both WIOA and WIA Adult and Dislocated Worker programs provide a variety of education, employment-related, and training services to eligible customers. Changes implemented with WIOA include the provision of both career and training services, replacing the WIA service levels of core, intensive, and training services. The Adult and Dislocated Worker programs provide comprehensive assessments, career and labor market information, job search and placement assistance, counseling, and occupational and basic skills training. Additional supportive services, including assistance with transportation, childcare, dependent care, housing, and other needs-related payments, are available to help facilitate program participation. Funds also help to support Rapid Response services that assist employers and workers in the event of company layoffs and closings.³

The WIOA Title I Youth program is designed to serve low-income youth who face barriers to continued education and employment. Specific services that are made available include case management, tutoring, alternative secondary school offerings, the provision of work experience, occupational skills training, leadership development opportunities, mentoring, guidance, counseling, and support. Eligibility is defined separately for out-of-school youth aged 16-24 and in-school youth aged 14-21. Funds for youth services are allocated to states and local areas based on a formula. At least 75% of state and local youth funding must be allocated for out-of-school youth and a minimum of 20% of local youth formula funds must be used for work experiences, such as summer and year-round employment, pre-apprenticeship, on-the-job training, or internships and job shadowing.⁴

» WIA/WIOA Title I Adult Program Outcomes

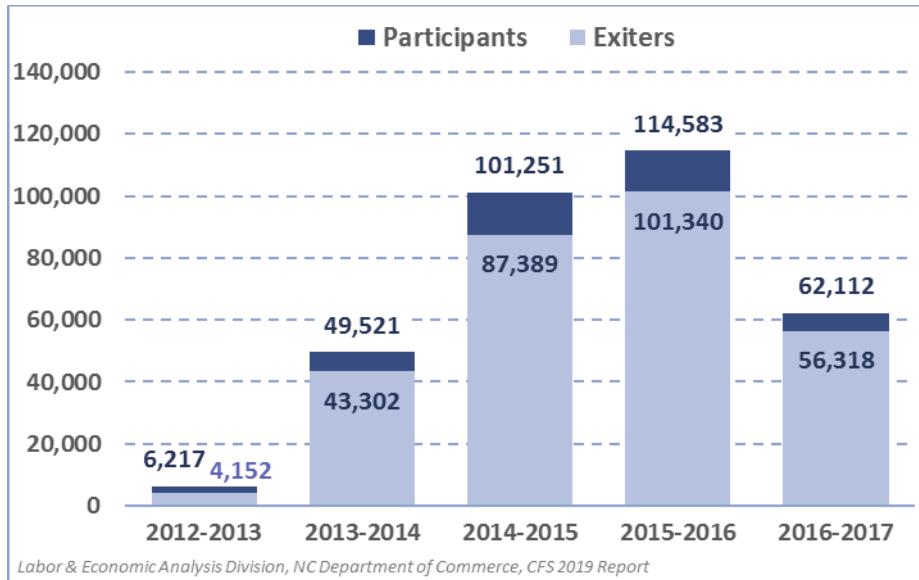
Analyses of program participant counts revealed that the number of WIA and WIOA Adult program participants increased between the 2012-2013 and 2015-2016 program years, followed by a dip in participation in the 2016-2017 program year (Figure 1). Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

² U.S. Department of Labor's Employment and Training Administration website, http://www.doleta.gov/programs/general_info.cfm

³ Ibid.

⁴ U.S. Department of Labor Employment and Training Administration website, https://www.doleta.gov/wioa/Docs/WIOA_YouthProgram_FactSheet.pdf

Figure 1. WIA/WIOA Title I Adult Program Participants and Exiters by Program Year

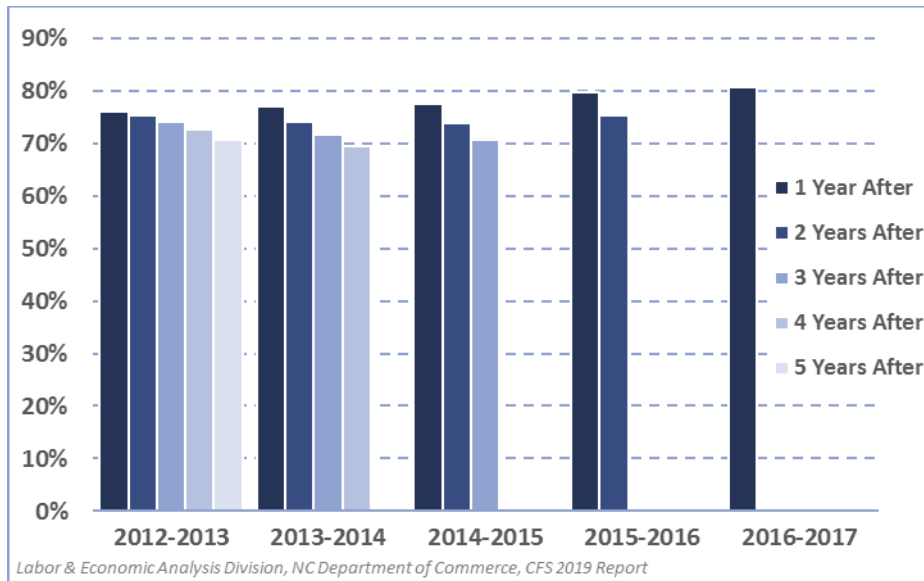


WIOA was implemented in July 2015, therefore post-exit wage and employment statistics for 2016-2017 exiters represent participants who received WIOA services in 2015-2016. Employment and wage outcomes were derived for each cohort of WIA/WIOA program exiters. These included analyses of post-exit employment rates (Figure 2) and wages (Figure 3) for up to five years after exit (also see Table 1). These measures include only those individuals who were employed in North Carolina in jobs covered by the state's unemployment insurance laws.

One-year post-exit employment rates have increased slightly across the five program years (Figure 2). While one-year post-exit enrollment in North Carolina public higher education declined from the 2012-2013 to 2014-2015 exit cohorts, one-year post-exit enrollment in higher education among subsequent cohorts was relatively stable through the 2016-2017 cohort (Table 1).

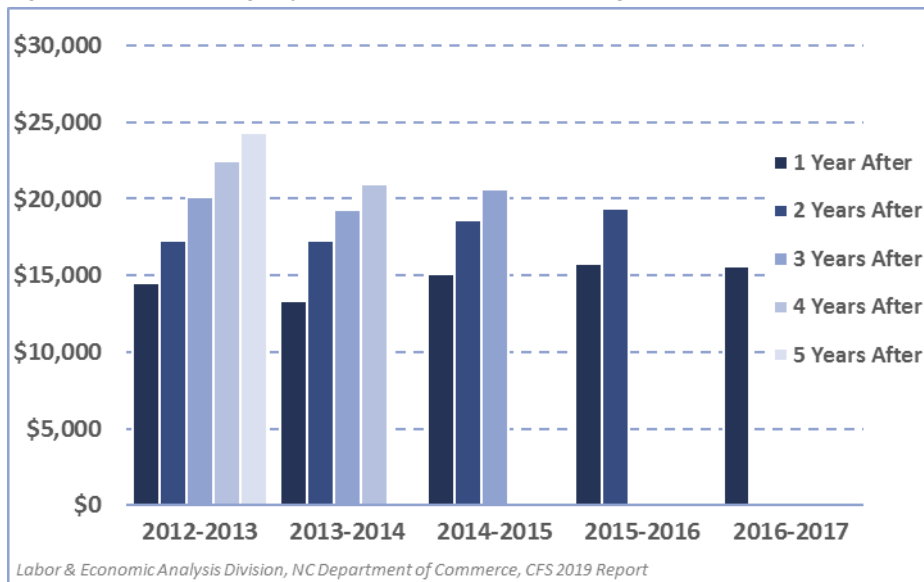
As shown in Figure 2, longer term post-exit employment measures show a slight decline in the percentage of WIA/WIOA Title I Adult exiters employed in North Carolina, which may be due in part to former participants leaving the state or entering employment not covered by unemployment insurance.

Figure 2. Percentage of WIA/WIOA Title I Adult Exiters Employed in North Carolina After Exit, by Year of Exit



One-year post-exit median annual wages ranged from \$13,333 for the 2013-2014 program year exiters to a high of \$15,728 for the 2015-2016 program year exiters (Figure 3 and Table 1).⁵ For all cohorts, the median wages of former participants rose consistently in each subsequent year following program exit. For example, the median wages of participants who exited in program year 2012-2013 increased from \$14,481 one year after exit to \$24,277 five years after exit.

Figure 3. Median Wage of WIA/WIOA Title I Adult Program Exiters in North Carolina, by Year of Exit

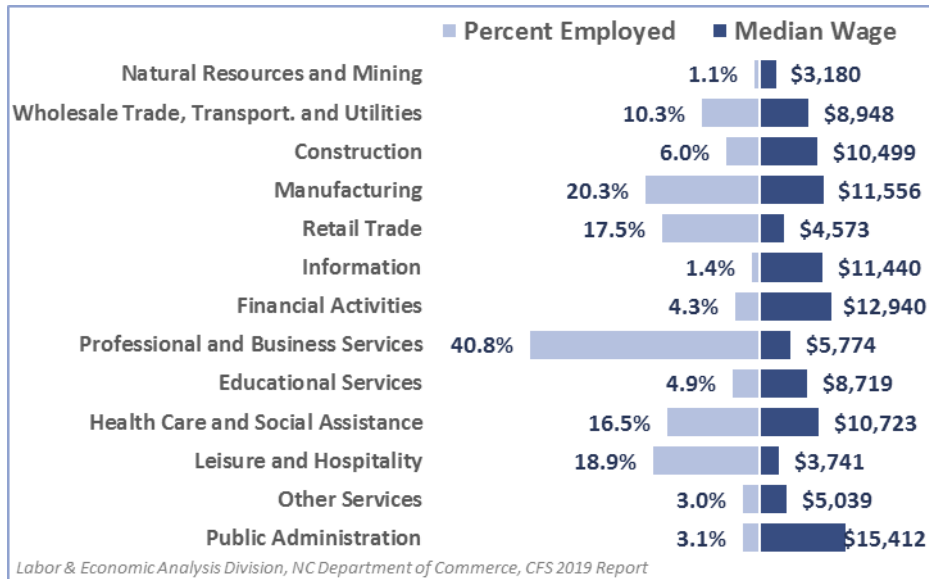


Employment outcomes by industry one year after exit for the 2016-2017 cohort show 41% of WIA/WIOA Adult program exiters were employed in the Professional and Business Services industry, earning a median

⁵ The 2017 CFS Operational and Evaluation Report indicated a one-year post-exit median wage for 2013-2014 WIA Adult exiters of \$13,322. The wage files are continually updated, creating minor calculation changes over time.

annual wage of \$5,774. Other industries employing the 2016-2017 exiting cohort include Manufacturing (20%), Leisure and Hospitality (19%), Retail Trade (18%), and Health Care and Social Assistance (16%). Of these industries, Manufacturing had the highest median annual wage (\$11,556), followed by Health Care and Social Assistance (\$10,723; Figure 4 and Table 1).

Figure 4. 2016-2017 WIA/WIOA Title I Adult Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



Overall, the results indicate that there have been positive short-term employment rates and some fluctuation in wages for WIA/WIOA Adult program exiters. This is indicated by the one-year post-employment and wage trends. When exiters are followed over time, the employment rate tends to decline somewhat, while the median wages continue to rise over time. The median wage of the 2012-2013 WIA Adult exiters was \$14,481 during first year after exit; by the fifth year after exit the median wages rose to \$24,277. By contrast, the 2017 median annual wage in North Carolina for all wage earners covered by unemployment insurance was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.⁶

⁶ Source of wage data: Common Follow-up System. For comparison, the 2017 median annual wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 1. WIA/WIOA Title I Adult Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

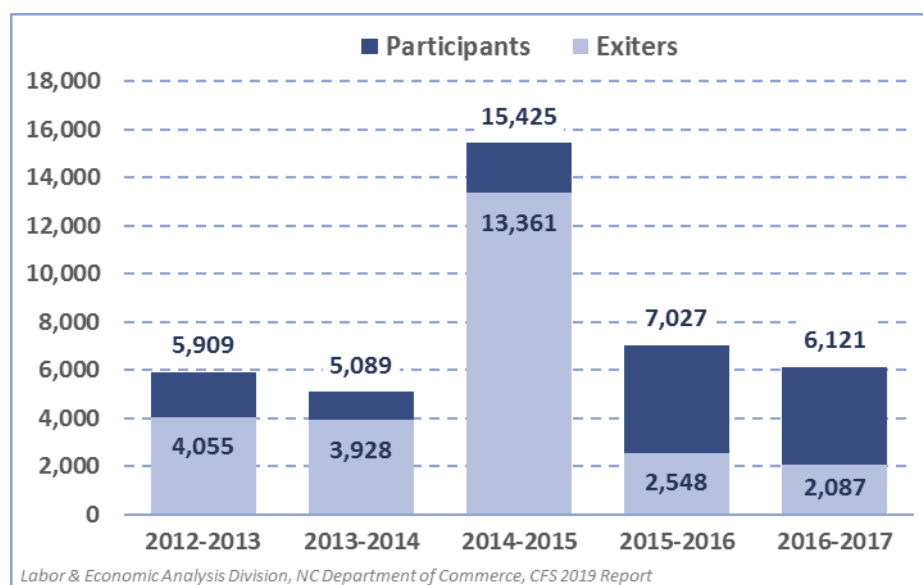
North Carolina Department of Commerce, Division of Workforce Solutions										Common Follow-up System: Evaluative Measures, 2019 Report							
Workforce Investment Act - Adult Program										Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce							
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013	
Participants		6,217	49,521	101,251	114,583	62,112	6,217	49,521	101,251	114,583	6,217	49,521	101,251	6,217	49,521	6,217	
Exiters		4,152	43,302	87,389	101,340	56,318	4,152	43,302	87,389	101,340	4,152	43,302	87,389	4,152	43,302	4,152	
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Exiters Employed In North Carolina		N %	3,160 76%	33,300 77%	67,646 77%	80,712 80%	45,503 81%	3,130 75%	32,082 74%	64,511 74%	76,351 75%	3,078 74%	31,058 72%	61,803 71%	3,018 73%	30,024 69%	2,932 71%
Exiters' Wages in North Carolina		Mean Median	\$17,521 \$14,481	\$16,742 \$13,333	\$18,772 \$15,069	\$19,849 \$15,728	\$19,974 \$15,615	\$20,303 \$17,235	\$20,785 \$17,267	\$22,526 \$18,634	\$23,569 \$19,358	\$23,093 \$20,146	\$22,904 \$19,260	\$24,366 \$20,597	\$25,445 \$22,497	\$24,502 \$20,972	\$27,334 \$24,277
Exiters Enrolled in NC Public Higher Education		N %	1,330 32%	8,093 19%	12,727 15%	14,365 14%	8,211 15%	1,066 26%	5,821 13%	9,711 11%	10,826 11%	803 19%	4,802 11%	8,156 9%	666 16%	4,003 9%	596 14%
Exiters Enrolled in NC Public Education, Employment, or Training Program		N %	2,586 62%	24,655 57%	40,740 47%	42,517 42%	25,201 45%	1,875 45%	16,198 37%	27,580 32%	33,519 33%	1,932 47%	13,266 31%	23,956 27%	1,708 41%	11,712 27%	1,618 39%
Exiters Enrolled or Employed in NC		N %	3,764 91%	37,982 88%	74,709 85%	86,789 86%	48,920 87%	3,455 83%	34,600 80%	68,355 78%	80,868 80%	3,432 83%	32,919 76%	65,268 75%	3,349 81%	31,710 73%	3,246 78%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			0.5%	1.1%	0.9%	0.9%	1.1%	0.5%	1.1%	0.9%	0.9%	0.5%	1.1%	0.8%	0.5%	1.0%	0.5%
Wholesale Trade, Transport. and Utilities			6.2%	7.8%	8.8%	10.0%	10.3%	7.1%	8.4%	9.5%	10.1%	7.6%	8.7%	9.7%	7.8%	8.9%	7.6%
Construction			3.1%	6.6%	7.0%	7.0%	6.0%	3.6%	6.5%	6.9%	6.8%	3.7%	6.6%	6.8%	3.5%	6.5%	3.3%
Manufacturing			9.4%	20.0%	18.0%	18.6%	20.3%	10.6%	20.7%	19.0%	19.5%	11.5%	21.4%	19.5%	12.1%	22.0%	12.7%
Retail Trade			15.4%	17.7%	17.7%	18.0%	17.5%	14.3%	16.5%	16.6%	16.5%	12.9%	15.5%	15.7%	12.4%	15.0%	11.9%
Information			0.8%	1.1%	1.4%	1.5%	1.4%	1.2%	1.1%	1.4%	1.6%	1.1%	1.1%	1.3%	1.2%	1.0%	1.4%
Financial Activities			4.7%	4.4%	4.5%	4.9%	4.3%	4.0%	4.1%	4.9%	5.1%	4.9%	4.2%	5.0%	4.6%	4.4%	5.0%
Professional and Business Services			29.4%	39.4%	39.8%	40.2%	40.8%	26.0%	32.9%	32.8%	33.9%	23.3%	29.8%	30.1%	22.8%	27.9%	21.4%
Educational Services			6.6%	4.5%	4.8%	4.9%	4.9%	6.5%	4.6%	5.0%	5.3%	6.5%	4.9%	5.4%	6.7%	5.2%	7.7%
Health Care and Social Assistance			37.4%	16.1%	15.2%	14.7%	16.5%	38.6%	17.2%	15.9%	15.3%	38.5%	17.9%	16.4%	38.8%	18.1%	38.3%
Leisure and Hospitality			15.1%	18.1%	17.9%	18.6%	18.9%	13.5%	16.9%	16.6%	17.1%	13.1%	16.1%	15.9%	12.3%	15.7%	10.7%
Other Services			2.8%	2.8%	3.0%	3.1%	3.0%	2.6%	2.9%	3.2%	3.0%	2.9%	2.9%	3.1%	2.9%	2.8%	2.5%
Public Administration			4.3%	3.2%	3.1%	3.2%	3.1%	4.9%	3.7%	3.7%	3.5%	5.1%	3.9%	3.8%	5.3%	4.2%	5.5%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			\$1,918	\$3,495	\$4,186	\$4,298	\$3,180	\$4,579	\$4,686	\$5,076	\$6,044	\$5,874	\$6,071	\$7,836	\$1,329	\$7,244	\$2,961
Wholesale Trade, Transport. and Utilities			\$8,860	\$9,665	\$10,044	\$9,263	\$8,948	\$10,670	\$13,313	\$13,829	\$14,113	\$12,257	\$16,247	\$16,540	\$13,991	\$17,010	\$15,598
Construction			\$11,754	\$11,124	\$12,515	\$13,309	\$10,499	\$13,680	\$15,386	\$16,326	\$16,886	\$11,232	\$16,615	\$18,883	\$10,843	\$18,670	\$14,047
Manufacturing			\$16,383	\$11,779	\$13,162	\$11,320	\$11,556	\$18,751	\$17,415	\$18,532	\$16,855	\$21,296	\$19,073	\$20,915	\$22,408	\$21,858	\$22,345
Retail Trade			\$3,950	\$4,897	\$5,385	\$5,160	\$4,573	\$4,220	\$6,631	\$7,616	\$7,010	\$5,560	\$7,849	\$8,416	\$5,583	\$8,103	\$6,023
Information			\$22,593	\$9,405	\$9,248	\$11,215	\$11,440	\$15,077	\$12,288	\$14,739	\$15,463	\$20,406	\$18,081	\$18,956	\$31,395	\$17,886	\$19,756
Financial Activities			\$4,384	\$5,852	\$12,647	\$13,007	\$12,940	\$11,923	\$15,277	\$19,165	\$20,667	\$8,957	\$21,176	\$23,028	\$21,068	\$20,886	\$20,771
Professional and Business Services			\$4,970	\$5,561	\$6,342	\$6,342	\$5,774	\$5,263	\$6,164	\$6,757	\$6,918	\$5,297	\$6,254	\$7,032	\$5,627	\$6,660	\$6,952
Educational Services			\$6,106	\$7,690	\$8,285	\$9,197	\$8,719	\$8,348	\$10,812	\$11,683	\$12,927	\$10,264	\$13,366	\$14,076	\$13,460	\$14,969	\$15,517
Health Care and Social Assistance			\$14,331	\$9,208	\$10,103	\$10,636	\$10,723	\$17,130	\$13,152	\$13,549	\$13,735	\$20,153	\$15,028	\$15,089	\$21,567	\$16,114	\$23,265
Leisure and Hospitality			\$3,916	\$3,927	\$4,423	\$4,123	\$3,741	\$4,140	\$4,518	\$5,235	\$4,756	\$3,586	\$4,775	\$5,299	\$3,821	\$5,138	\$4,964
Other Services			\$5,459	\$3,859	\$5,417	\$5,028	\$5,039	\$7,480	\$5,847	\$7,271	\$7,176	\$3,418	\$7,800	\$9,113	\$5,047	\$8,140	\$11,166
Public Administration			\$15,958	\$14,168	\$16,778	\$16,073	\$15,412	\$19,164	\$21,718	\$23,580	\$24,075	\$24,270	\$26,498	\$26,815	\$28,707	\$27,466	\$28,654
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			\$7,146	\$8,017	\$9,801	\$10,500	\$9,333	\$7,378	\$9,880	\$11,345	\$13,147	\$9,375	\$12,329	\$14,093	\$6,162	\$15,654	\$8,091
Wholesale Trade, Transport. and Utilities			\$12,548	\$14,540	\$15,940	\$15,611	\$15,819	\$15,208	\$18,715	\$20,071	\$20,536	\$17,372	\$21,183	\$21,998	\$19,848	\$22,517	\$22,403
Construction			\$15,017	\$15,794	\$17,270	\$18,161	\$16,307	\$16,460	\$19,733	\$20,829	\$21,689	\$16,430	\$21,604	\$22,888	\$16,504	\$23,351	\$19,084
Manufacturing			\$17,954	\$15,919	\$16,758	\$16,158	\$16,701	\$20,857	\$20,352	\$20,988	\$20,954	\$22,541	\$21,795	\$23,175	\$23,838	\$24,009	\$24,979
Retail Trade			\$7,136	\$8,055	\$9,190	\$9,313	\$8,592	\$7,854	\$10,725	\$11,827	\$11,726	\$9,562	\$12,255	\$12,991	\$10,237	\$12,848	\$10,890
Information			\$21,033	\$17,519	\$17,931	\$21,374	\$20,960	\$20,883	\$20,214	\$24,472	\$26,709	\$27,754	\$23,585	\$27,006	\$31,444	\$24,285	\$29,617
Financial Activities			\$11,325	\$13,521	\$19,205	\$19,647	\$20,445	\$17,759	\$21,914	\$25,383	\$26,451	\$18,399	\$25,868	\$28,998	\$24,260	\$26,877	\$25,387
Professional and Business Services			\$9,743	\$9,921	\$11,612	\$12,432	\$11,901	\$10,534	\$11,942	\$13,609	\$14,429	\$11,662	\$12,568	\$14,309	\$12,071	\$13,367	\$13,426
Educational Services			\$10,498	\$11,752	\$12,984	\$13,604	\$13,557	\$11,930	\$14,917	\$16,302	\$17,202	\$14,196	\$16,881	\$18,505	\$18,094	\$18,334	\$20,328
Health Care and Social Assistance			\$17,706	\$12,669	\$13,548	\$14,411	\$14,855	\$20,721	\$16,447	\$16,756	\$17,216	\$23,787	\$18,194	\$18,127	\$25,548	\$19,348	\$26,789
Leisure and Hospitality			\$6,256	\$6,722	\$7,623	\$7,370	\$6,931	\$6,805	\$7,967	\$8,606	\$8,491	\$6,910	\$8,366	\$9,095	\$7,662	\$8,980	\$8,991
Other Services			\$8,665	\$8,844	\$10,104	\$10,197	\$10,547	\$9,711	\$11,550	\$12,696	\$13,637	\$9,158	\$13,833	\$14,364	\$11,389	\$14,558	\$13,368
Public Administration			\$16,797	\$16,070	\$18,322	\$18,230	\$18,082	\$18,356	\$20,744	\$22,445	\$22,762	\$22,299	\$24,333	\$25,133	\$25,845	\$25,444	\$27,059

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» WIA/WIOA Title I Dislocated Worker Program Outcomes

As shown in Figure 5, analyses indicate fluctuation in the number of participants in the WIA/WIOA Dislocated Worker program between the 2012-2013 and 2016-2017 program years. In particular, there was a large increase in the 2014-2015 program year followed by a drop to closer to prior levels of participation. Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

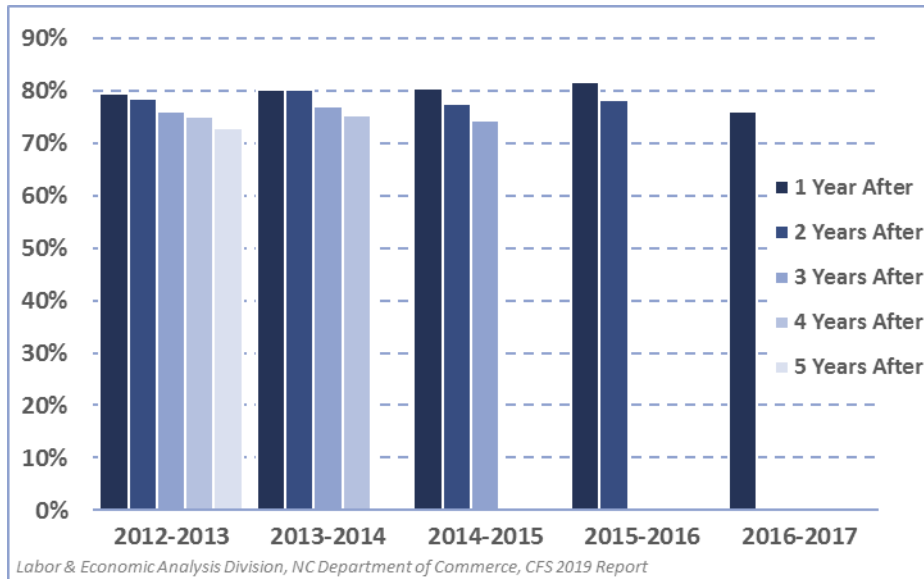
Figure 5. WIA/WIOA Title I Dislocated Worker Program Participants and Exiters by Program Year



WIOA was implemented in July 2015, therefore post-exit wage and employment statistics for 2016-2017 exiters represent participants who received WIOA services in 2015-2016. Employment and wage outcomes were derived for each WIA/WIOA Title I Dislocated Worker exit cohort between 2012-2013 and 2016-2017. These included measures of post-exit employment rates (Figure 6) and wages (Figure 7) for up to five years after exit (also see Table 2). These measures include only those individuals who were employed in North Carolina in jobs covered by the state's unemployment insurance laws.

One-year post-exit employment rates were relatively stable across the five cohorts, ranging from a high of 82% for 2015-2016 exiters to a low of 76% for 2016-2017 exiters (Figure 6 and Table 2). One-year post-exit enrollment in NC public higher education declined between the 2012-2013 and 2014-2015 cohorts, and then stayed relatively stable for the 2015-2016 and 2016-2017 cohorts (Table 2). Longer term post-exit employment measures indicate that five years after exit, just under three-quarters of the 2012-2013 exiting cohort were employed in North Carolina. Post-exit employment rates were relatively steady across cohorts for a given post-exit year.

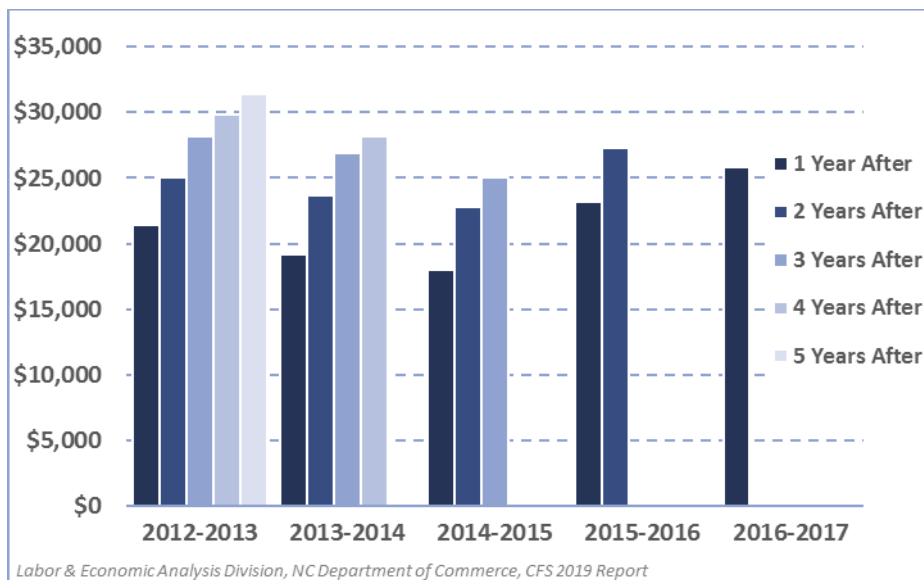
Figure 6. Percentage of WIA/WIOA Title I Dislocated Worker Program Exiters Employed in North Carolina After Completion, by Year of Exit



One-year post-exit median wages dipped from \$21,466 in the 2012-2013 cohort to \$18,034 in the 2014-2015 cohort, before rising again to \$25,839 in the 2016-2017 cohort (Figure 7 and Table 2).

However, median post-exit wages increased over time within all cohorts. The 2012-2013 exiters experienced a growth in median wages from \$21,466 one year after exit to \$28,179 three years after exit and \$31,376 at the five-year mark, while the 2014-2015 exiters saw median wages grow from \$18,034 one-year post-exit to \$25,083 three years post-exit.

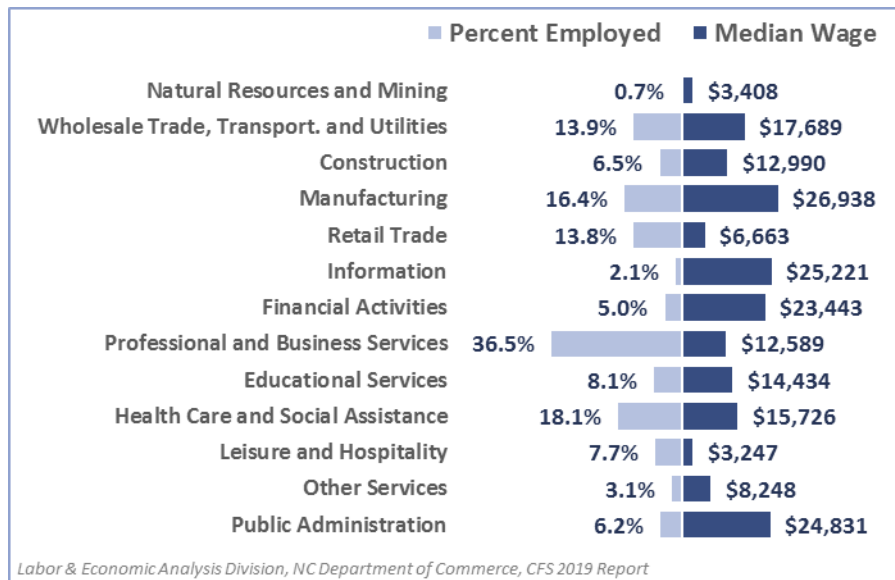
Figure 7. Median Wage of WIA/WIOA Title I Dislocated Worker Program Exiters in North Carolina, by Year of Exit



As shown in Figure 8 and Table 2, one-year employment outcomes by industry for the 2016-2017 exiting cohort indicate that 37% of WIOA Dislocated Worker program participants were subsequently employed in

the Professional and Business Services industry, earning a median annual wage of \$12,589. Other industries frequently employing this cohort one year after exiting the program include Health Care and Social Assistance (18%), Manufacturing (16%), Retail Trade (14%), and Wholesale Trade, Transportation, and Utilities (14%). Of these industries, Manufacturing was associated with the highest median annual wage (\$26,938).

Figure 8. 2016-2017 WIA/WIOA Title I Dislocated Worker Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



Overall, there have been stable short-term employment rates and some recent increases in short-term wage outcomes for WIA/WIOA Dislocated Worker program exiters. This is indicated by the one-year post-employment and wage trends. When exiting cohorts are followed over time, the employment rate tends to decline somewhat, while the median wages rise. The median wage of WIA/WIOA Dislocated Worker participants who exited in the 2012-2013 program year was \$31,376 five years after exit. By contrast, the 2017 annual median wage in North Carolina for all wage earners covered in unemployment insurance was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.⁷

⁷ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 2. WIA/WIOA Title I Dislocated Worker Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

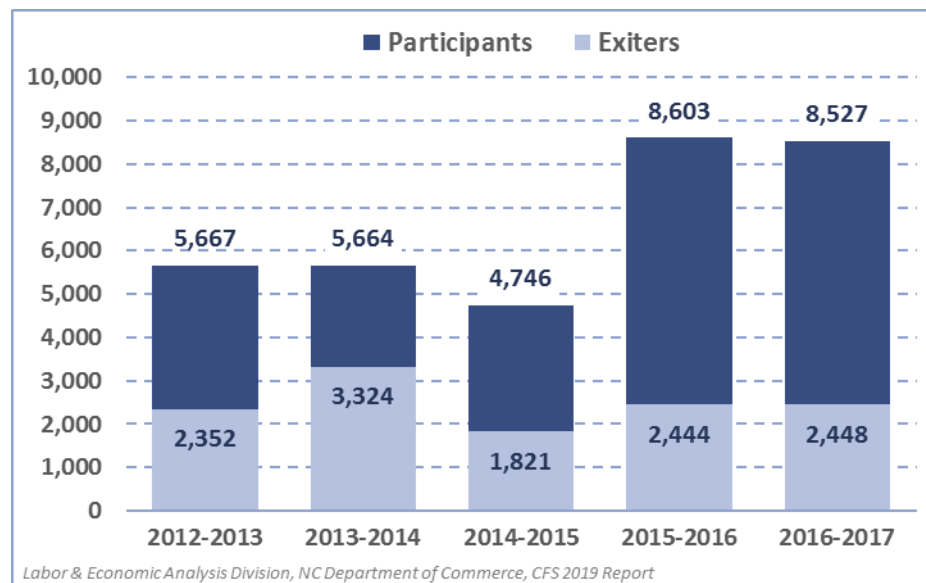
North Carolina Department of Commerce, Division of Workforce Solutions										Common Follow-up System: Evaluative Measures, 2019 Report						
Workforce Investment Act - Dislocated Worker Program										Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce						
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		5,909	5,089	15,425	7,027	6,121	5,909	5,089	15,425	7,027	5,909	5,089	15,425	5,909	5,089	5,909
Exiters		4,055	3,928	13,361	2,548	2,087	4,055	3,928	13,361	2,548	4,055	3,928	13,361	4,055	3,928	4,055
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exiters Employed In North Carolina	N	3,220	3,151	10,757	2,079	1,589	3,187	3,150	10,342	1,994	3,084	3,028	9,940	3,045	2,957	2,959
	%	79%	80%	81%	82%	76%	79%	80%	77%	78%	76%	77%	74%	75%	75%	73%
Exiters' Wages in North Carolina	Mean	\$23,958	\$22,914	\$22,639	\$27,206	\$29,256	\$27,486	\$27,606	\$27,744	\$30,641	\$30,712	\$30,879	\$29,831	\$32,734	\$32,102	\$34,605
	Median	\$21,466	\$19,168	\$18,034	\$23,153	\$25,839	\$25,030	\$23,697	\$22,773	\$27,321	\$28,179	\$26,870	\$25,083	\$29,868	\$28,163	\$31,376
Exiters Enrolled in NC Public Higher Education	N	1,081	1,086	1,785	424	340	785	693	1,329	343	583	486	1,143	490	417	409
	%	27%	28%	13%	17%	16%	19%	18%	10%	13%	14%	12%	9%	12%	11%	10%
Exiters Enrolled in NC Public Education, Employment, or Training Program	N	2,430	2,321	5,772	1,077	962	1,497	1,617	3,795	853	1,595	1,204	3,254	1,382	1,067	1,348
	%	60%	59%	43%	42%	46%	37%	41%	28%	33%	39%	31%	24%	34%	27%	33%
Exiters Enrolled or Employed in NC	N	3,699	3,575	11,563	2,229	1,740	3,401	3,352	10,734	2,102	3,357	3,182	10,321	3,282	3,098	3,199
	%	91%	91%	87%	87%	83%	84%	85%	80%	82%	83%	81%	77%	81%	79%	79%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.3%	0.6%	0.4%	0.6%	0.7%	0.4%	0.6%	0.4%	0.6%	0.5%	0.9%	0.4%	0.6%	0.7%	0.4%
Wholesale Trade, Transport. and Utilities		9.7%	12.4%	11.5%	14.5%	13.9%	9.7%	12.3%	12.1%	13.7%	9.8%	12.4%	11.8%	10.3%	12.2%	10.4%
Construction		5.4%	6.2%	7.4%	5.6%	6.5%	5.8%	6.2%	7.3%	5.3%	5.5%	6.6%	6.8%	5.9%	5.7%	5.7%
Manufacturing		17.4%	21.4%	13.1%	15.1%	16.4%	18.4%	20.5%	14.1%	14.7%	18.9%	21.7%	14.8%	19.0%	21.5%	18.9%
Retail Trade		13.5%	14.2%	15.7%	14.2%	13.8%	12.5%	13.4%	14.6%	12.5%	11.4%	13.3%	13.9%	11.2%	12.7%	11.0%
Information		1.5%	1.7%	2.2%	2.6%	2.1%	1.7%	1.6%	2.1%	2.7%	1.7%	1.4%	2.2%	1.5%	1.3%	1.6%
Financial Activities		4.8%	5.3%	6.4%	6.5%	5.0%	5.1%	5.3%	7.3%	6.0%	5.1%	5.8%	7.4%	5.8%	5.7%	6.3%
Professional and Business Services		35.1%	36.3%	42.9%	37.2%	36.5%	29.1%	29.1%	35.5%	31.5%	25.7%	24.7%	31.2%	24.4%	23.2%	22.3%
Educational Services		8.0%	5.5%	5.8%	6.7%	8.1%	8.1%	5.3%	6.0%	7.2%	7.8%	5.4%	6.8%	8.5%	6.0%	8.7%
Health Care and Social Assistance		25.1%	18.6%	14.2%	20.7%	18.1%	24.1%	20.4%	15.7%	21.5%	24.8%	20.2%	15.6%	23.4%	18.9%	22.9%
Leisure and Hospitality		7.6%	10.3%	13.5%	8.1%	7.7%	6.8%	9.3%	12.8%	7.2%	6.2%	8.1%	12.3%	6.7%	7.9%	6.4%
Other Services		3.0%	2.9%	3.4%	3.0%	3.1%	2.9%	2.6%	3.5%	3.6%	2.7%	2.7%	3.1%	2.9%	3.1%	2.5%
Public Administration		5.2%	4.2%	3.5%	5.8%	6.2%	5.3%	4.6%	3.9%	6.0%	5.7%	4.7%	4.1%	5.9%	5.1%	6.3%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$7,365	\$7,479	\$7,966	\$3,834	\$3,408	\$2,895	\$20,245	\$5,180	\$5,823	\$5,175	\$11,550	\$12,806	\$3,353	\$30,284	\$8,210
Wholesale Trade, Transport. and Utilities		\$17,272	\$12,904	\$11,545	\$18,498	\$17,689	\$20,641	\$19,579	\$17,842	\$24,319	\$25,902	\$23,820	\$21,736	\$27,954	\$25,223	\$26,752
Construction		\$13,946	\$14,109	\$14,961	\$13,508	\$12,990	\$16,462	\$20,963	\$19,595	\$20,892	\$21,995	\$21,970	\$23,568	\$22,259	\$26,565	\$19,367
Manufacturing		\$23,948	\$19,437	\$16,243	\$18,895	\$26,938	\$28,678	\$27,303	\$23,682	\$27,290	\$32,362	\$28,499	\$26,373	\$34,492	\$31,532	\$38,782
Retail Trade		\$6,750	\$5,294	\$6,026	\$6,338	\$6,663	\$7,405	\$8,738	\$7,580	\$7,828	\$10,098	\$9,438	\$9,221	\$12,725	\$9,434	\$13,244
Information		\$25,421	\$12,577	\$12,974	\$31,571	\$25,221	\$32,057	\$20,590	\$22,099	\$26,862	\$22,358	\$32,649	\$19,323	\$35,248	\$33,638	\$38,477
Financial Activities		\$17,246	\$12,732	\$17,842	\$18,106	\$23,443	\$24,054	\$24,470	\$24,642	\$36,142	\$28,502	\$25,598	\$26,949	\$29,451	\$30,736	\$31,037
Professional and Business Services		\$10,203	\$8,371	\$9,210	\$10,186	\$12,589	\$12,769	\$10,949	\$10,434	\$12,499	\$14,550	\$12,088	\$10,761	\$14,272	\$12,129	\$15,061
Educational Services		\$9,362	\$6,429	\$8,355	\$9,420	\$14,434	\$14,918	\$8,818	\$12,769	\$13,383	\$19,777	\$15,248	\$18,168	\$20,619	\$16,386	\$21,582
Health Care and Social Assistance		\$16,461	\$14,744	\$12,896	\$16,218	\$15,726	\$20,383	\$17,544	\$17,148	\$18,708	\$22,502	\$21,321	\$19,265	\$23,898	\$23,208	\$25,072
Leisure and Hospitality		\$3,509	\$4,171	\$5,383	\$3,700	\$3,247	\$4,978	\$5,301	\$6,239	\$5,412	\$4,593	\$5,667	\$7,347	\$5,144	\$6,923	\$4,766
Other Services		\$9,113	\$7,418	\$7,180	\$10,962	\$8,248	\$10,751	\$9,381	\$7,102	\$8,952	\$8,286	\$11,526	\$11,480	\$9,650	\$13,550	\$13,700
Public Administration		\$19,542	\$20,286	\$16,307	\$21,070	\$24,831	\$27,127	\$25,819	\$23,413	\$27,412	\$28,346	\$30,062	\$27,823	\$31,251	\$32,253	\$31,602
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$9,963	\$12,795	\$10,602	\$11,213	\$15,668	\$14,448	\$18,853	\$13,950	\$17,266	\$12,192	\$19,041	\$17,885	\$14,131	\$26,085	\$18,453
Wholesale Trade, Transport. and Utilities		\$20,092	\$18,243	\$17,589	\$20,532	\$23,101	\$23,574	\$24,242	\$23,036	\$26,083	\$27,418	\$26,942	\$26,427	\$28,496	\$28,831	\$30,002
Construction		\$18,566	\$18,290	\$18,503	\$18,730	\$19,171	\$21,265	\$21,691	\$23,470	\$25,514	\$25,586	\$23,505	\$26,854	\$25,144	\$27,093	\$25,455
Manufacturing		\$25,969	\$23,241	\$21,051	\$23,397	\$27,692	\$30,776	\$29,489	\$27,598	\$29,666	\$34,254	\$31,435	\$30,239	\$36,362	\$33,411	\$39,661
Retail Trade		\$10,374	\$8,524	\$10,449	\$10,717	\$10,644	\$12,413	\$11,782	\$13,183	\$12,843	\$15,176	\$13,627	\$14,648	\$16,704	\$13,324	\$17,166
Information		\$26,711	\$19,487	\$20,784	\$34,753	\$31,616	\$31,294	\$26,043	\$27,361	\$37,066	\$30,264	\$36,626	\$29,025	\$38,130	\$38,437	\$41,586
Financial Activities		\$20,603	\$19,206	\$22,389	\$26,824	\$29,017	\$28,228	\$27,233	\$27,993	\$39,720	\$32,955	\$29,499	\$31,094	\$33,956	\$35,265	\$38,485
Professional and Business Services		\$16,236	\$14,958	\$16,081	\$19,424	\$21,394	\$18,208	\$18,863	\$19,317	\$20,981	\$21,064	\$21,221	\$20,557	\$21,996	\$21,914	\$23,388
Educational Services		\$13,002	\$12,298	\$14,012	\$12,901	\$18,205	\$16,543	\$14,133	\$18,110	\$17,566	\$20,083	\$16,523	\$20,933	\$21,302	\$19,532	\$22,677
Health Care and Social Assistance		\$18,455	\$17,806	\$16,666	\$19,018	\$18,584	\$21,938	\$21,500	\$20,211	\$21,387	\$23,476	\$24,438	\$22,314	\$24,812	\$25,933	\$26,612
Leisure and Hospitality		\$6,952	\$6,779	\$8,399	\$7,792	\$8,060	\$8,609	\$8,764	\$9,516	\$9,689	\$9,485	\$9,554	\$10,541	\$9,734	\$9,969	\$10,055
Other Services		\$12,092	\$13,801	\$12,054	\$15,690	\$16,098	\$14,024	\$17,236	\$14,995	\$15,646	\$15,557	\$19,930	\$17,992	\$16,129	\$17,601	\$17,565
Public Administration		\$18,437	\$19,517	\$18,973	\$21,114	\$22,316	\$22,831	\$23,690	\$23,693	\$25,458	\$26,175	\$27,579	\$26,743	\$29,456	\$29,835	\$29,222

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» WIA/WIOA Title I Youth Program Outcomes

Analyses show fluctuations in the numbers of WIA Youth program participants across the 2012-2013 through 2014-2015 program years, followed by a noticeable increase in the 2015-2016 and 2016-2017 program years (Figure 9). Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

Figure 9. WIA/WIOA Title I Youth Program Participants and Exiters by Program Year



WIOA was implemented in July 2015, therefore post-exit wage and employment statistics for 2016-2017 exiters represent participants who received WIOA services in 2015-2016. Employment and wage outcomes were derived for each WIA/WIOA Title I Youth program exit cohort and included post-exit employment rates (Figure 10) and wages (Figure 11) for up to five years after exit (Table 3).

One-year post-participation employment rates continue to reflect a steady increase across the five exiting cohorts. This indicates that the percentage of exiters who were employed one year after exiting the program increased for each subsequent cohort. Rates across the five program years rose from 68% for the 2012-2013 program year exiters to 79% for the 2016-2017 program year exiters (Figure 10 and Table 3). At the same time, rates of one-year post-exit enrollment in NC public higher education declined across all cohorts (Table 3).

One-year post-exit median wages have increased overall across cohorts, from \$5,191 for the 2012-2013 exiters, to \$7,932 for the 2016-2017 completers (Figure 11). It is important to note that WIA/WIOA Title I Youth participants range in age from 14 to 21 and are more likely to be in high school or higher education, and less likely to be working full time, than older workers.

Longer term post-exit employment and wage measures for the WIA/WIOA Title I Youth program indicate that employment rates were relatively stable over time within each cohort, while wages rose over time within each cohort. For example, median wages for the 2012-2013 cohort started at \$5,191 one-year post exit and increased to \$11,468 at five years post exit.

Figure 10. Percentage of WIA/WIOA Title I Youth Program Exiters Employed in North Carolina After Exit, by Year of Exit

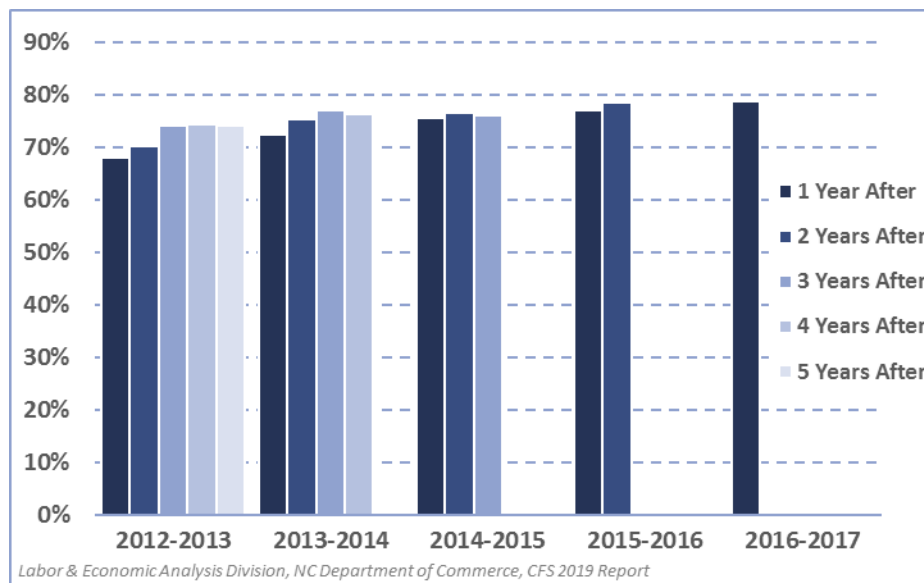
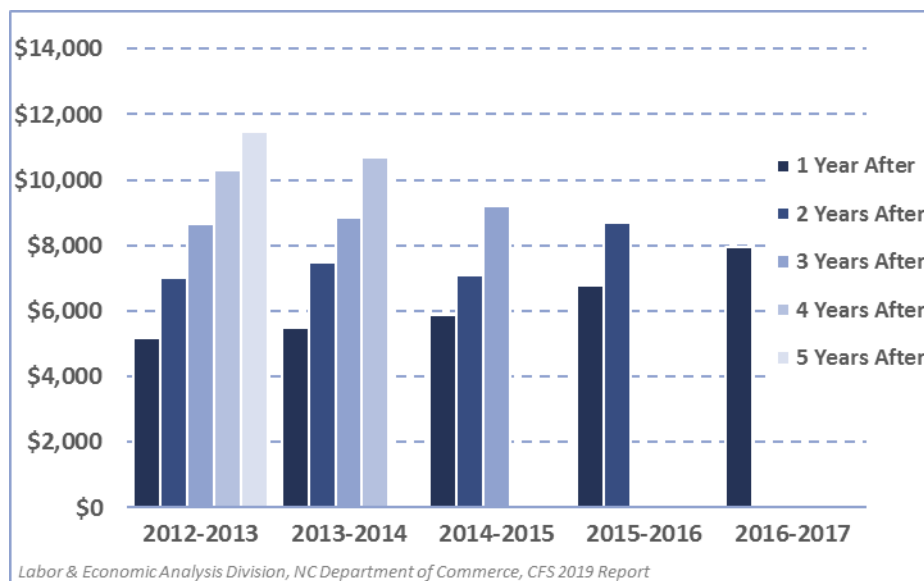
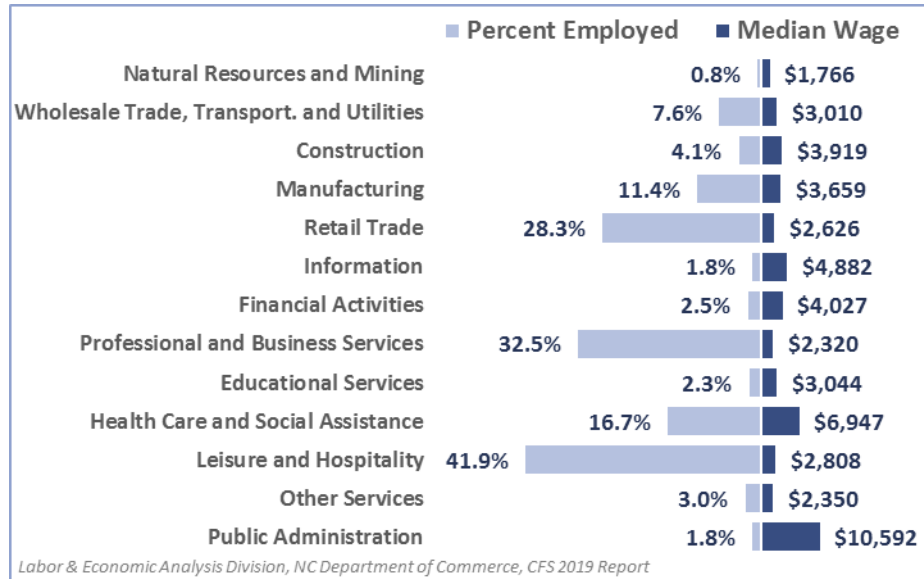


Figure 11. Median Wage of WIA/WIOA Title I Youth Program Exiters in North Carolina, by Year of Exit



As shown in Figure 12 and Table 3, one-year employment outcomes by industry for the 2016-2017 cohort exiters indicate 42% of the Youth program exiters found employment in the Leisure and Hospitality industry, earning a median wage of \$2,808. Other industries employing this cohort one year after exiting the program include Professional and Business Services (33%), Retail Trade (28%), Health Care and Social Assistance (17%), and Manufacturing (11%).

Figure 12. 2016-2017 WIA/WIOA Title I Youth Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry



Overall, the results show that there have been increasing short-term employment rates and short-term median wages for the WIA/WIOA Youth program exiters. This is indicated by the one-year post-employment and wage trends. When exiting cohorts are followed over time, the employment rate tends to be stable. In addition, while the median wages of WIA/WIOA Youth exiters are low, they continue to rise over time. It is important to keep in mind that the WIA/WIOA Youth program serves individuals aged 14 to 21 and are more likely to be in school and less likely to be working full time.

Table 3. WIA/WIOA Title I Youth Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Department of Commerce, Division of Workforce Solutions										Common Follow-up System: Evaluative Measures, 2019 Report						
Workforce Investment Act - Youth Program										Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce						
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		5,667	5,664	4,746	8,603	8,527	5,667	5,664	4,746	8,603	5,667	5,664	4,746	5,667	5,664	5,667
Exiters		2,352	3,324	1,821	2,444	2,448	2,352	3,324	1,821	2,444	2,352	3,324	1,821	2,352	3,324	2,352
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exiters Employed In North Carolina	N	1,599	2,411	1,376	1,882	1,931	1,650	2,504	1,396	1,919	1,744	2,558	1,387	1,750	2,538	1,742
	%	68%	73%	76%	77%	79%	70%	75%	77%	79%	74%	77%	76%	74%	76%	74%
Exiters' Wages in North Carolina	Mean	\$7,482	\$7,541	\$8,004	\$9,084	\$10,418	\$9,311	\$9,710	\$9,912	\$10,996	\$10,991	\$11,215	\$11,842	\$12,462	\$12,958	\$13,982
	Median	\$5,191	\$5,486	\$5,861	\$6,769	\$7,932	\$7,021	\$7,468	\$7,093	\$8,710	\$8,651	\$8,847	\$9,191	\$10,311	\$10,671	\$11,468
Exiters Enrolled in NC Public Higher Education	N	880	1,264	603	699	652	669	891	489	549	525	752	426	415	610	382
	%	37%	38%	33%	29%	27%	28%	27%	27%	22%	22%	23%	23%	18%	18%	16%
Exiters Enrolled in NC Public Education, Employment, or Training Program	N	1,666	2,053	1,122	1,212	1,667	1,244	1,768	830	1,065	1,406	1,511	722	1,309	1,348	1,253
	%	71%	62%	62%	50%	68%	53%	53%	46%	44%	60%	45%	40%	56%	41%	53%
Exiters Enrolled or Employed in NC	N	2,113	2,922	1,623	2,126	2,244	1,964	2,866	1,534	2,076	2,036	2,817	1,494	2,014	2,744	1,996
	%	90%	88%	89%	87%	92%	84%	86%	84%	85%	87%	85%	82%	86%	83%	85%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.8%	1.0%	*	0.6%	0.8%	*	0.8%	*	0.7%	*	0.8%	*	0.9%	0.6%	0.7%
Wholesale Trade, Transport. and Utilities		4.1%	3.2%	4.1%	7.0%	7.6%	4.9%	3.8%	6.2%	8.2%	5.3%	6.7%	7.8%	7.3%	7.1%	6.4%
Construction		2.5%	2.6%	2.8%	3.7%	4.1%	3.6%	3.4%	3.1%	4.4%	4.1%	3.4%	3.2%	3.8%	3.7%	5.5%
Manufacturing		9.3%	9.7%	9.2%	10.0%	11.4%	11.0%	11.7%	9.6%	12.2%	12.9%	13.0%	12.3%	13.3%	12.9%	14.1%
Retail Trade		26.8%	28.9%	28.1%	31.8%	28.3%	28.1%	28.6%	30.9%	28.3%	27.5%	28.4%	29.1%	28.6%	27.4%	25.5%
Information		*	0.5%	*	0.9%	1.8%	*	0.8%	0.9%	0.7%	0.7%	1.3%	1.0%	0.9%	1.6%	1.1%
Financial Activities		1.4%	1.8%	2.0%	1.8%	2.5%	2.4%	2.4%	2.4%	2.3%	1.9%	2.7%	3.2%	2.2%	2.6%	2.2%
Professional and Business Services		32.1%	31.9%	31.9%	35.9%	32.5%	35.0%	36.2%	35.0%	37.4%	37.4%	35.6%	34.0%	36.5%	35.6%	36.6%
Educational Services		3.2%	6.1%	6.9%	2.7%	2.3%	2.2%	2.9%	2.5%	3.0%	2.5%	3.3%	2.7%	2.3%	3.2%	3.0%
Health Care and Social Assistance		14.6%	14.1%	12.6%	14.7%	16.7%	14.3%	14.8%	13.5%	15.4%	15.1%	16.8%	17.5%	16.5%	17.7%	17.9%
Leisure and Hospitality		40.4%	41.5%	46.9%	43.6%	41.9%	40.4%	40.0%	43.5%	40.3%	38.2%	38.6%	40.5%	36.3%	35.8%	32.8%
Other Services		2.8%	2.2%	3.3%	2.9%	3.0%	3.1%	2.6%	3.0%	2.9%	3.0%	3.0%	2.7%	3.5%	3.0%	3.8%
Public Administration		2.2%	2.0%	1.5%	1.9%	1.8%	1.9%	2.3%	2.4%	1.8%	2.4%	2.9%	2.6%	2.7%	2.9%	2.6%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$589	\$748	*	\$1,314	\$1,766	*	\$788	*	\$1,353	*	\$2,392	*	\$1,956	\$3,122	\$1,639
Wholesale Trade, Transport. and Utilities		\$2,258	\$2,216	\$1,865	\$2,767	\$3,010	\$2,108	\$2,563	\$1,968	\$3,009	\$3,248	\$2,326	\$3,288	\$2,958	\$3,296	\$4,375
Construction		\$4,123	\$3,402	\$2,431	\$5,331	\$3,919	\$7,030	\$4,163	\$3,159	\$4,681	\$5,973	\$3,987	\$8,127	\$6,730	\$6,930	\$7,477
Manufacturing		\$4,411	\$3,126	\$2,788	\$4,774	\$3,659	\$5,416	\$5,341	\$5,229	\$7,032	\$6,000	\$5,378	\$7,166	\$6,554	\$6,683	\$7,763
Retail Trade		\$2,834	\$2,904	\$2,450	\$2,531	\$2,626	\$3,285	\$3,019	\$2,888	\$3,118	\$3,751	\$3,616	\$3,123	\$3,966	\$3,958	\$4,549
Information		*	\$5,539	*	\$1,818	\$4,882	*	\$2,609	\$7,615	\$12,283	\$1,964	\$3,149	\$10,726	\$3,119	\$4,472	\$5,114
Financial Activities		\$1,676	\$3,206	\$2,218	\$2,301	\$4,027	\$3,139	\$2,240	\$4,546	\$3,076	\$5,959	\$4,249	\$2,881	\$7,683	\$6,461	\$6,383
Professional and Business Services		\$1,867	\$1,937	\$2,581	\$2,452	\$2,320	\$2,635	\$2,057	\$2,237	\$2,180	\$2,608	\$2,286	\$2,670	\$2,696	\$2,411	\$2,817
Educational Services		\$1,380	\$1,242	\$1,334	\$3,632	\$3,044	\$2,171	\$3,537	\$4,836	\$3,338	\$2,609	\$4,789	\$10,175	\$4,926	\$4,934	\$5,586
Health Care and Social Assistance		\$6,208	\$5,578	\$5,316	\$4,814	\$6,947	\$7,976	\$7,256	\$7,663	\$6,601	\$7,410	\$7,657	\$6,148	\$7,938	\$8,627	\$8,050
Leisure and Hospitality		\$2,360	\$2,459	\$2,547	\$2,438	\$2,808	\$2,511	\$2,843	\$2,587	\$2,637	\$3,176	\$2,943	\$3,212	\$3,235	\$3,414	\$3,881
Other Services		\$2,128	\$2,272	\$2,134	\$2,108	\$2,350	\$3,092	\$2,197	\$2,839	\$2,217	\$3,873	\$3,649	\$3,761	\$2,619	\$2,245	\$2,800
Public Administration		\$8,078	\$6,356	\$7,650	\$6,030	\$10,592	\$14,114	\$8,421	\$9,134	\$8,373	\$14,579	\$9,281	\$10,388	\$20,282	\$20,880	\$26,402
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$1,174	\$2,327	*	\$5,913	\$4,603	*	\$4,923	*	\$8,316	*	\$6,639	*	\$4,752	\$12,296	\$6,987
Wholesale Trade, Transport. and Utilities		\$4,957	\$4,552	\$4,717	\$5,855	\$7,771	\$5,718	\$6,434	\$4,883	\$7,730	\$6,651	\$5,565	\$7,477	\$7,167	\$7,303	\$9,638
Construction		\$7,429	\$6,390	\$6,479	\$8,433	\$9,845	\$10,834	\$7,575	\$7,726	\$9,962	\$10,787	\$7,843	\$12,938	\$12,782	\$11,278	\$14,097
Manufacturing		\$8,003	\$6,206	\$6,989	\$8,307	\$9,263	\$9,321	\$9,397	\$9,031	\$10,886	\$10,537	\$9,803	\$11,102	\$11,872	\$11,873	\$13,162
Retail Trade		\$4,600	\$4,890	\$5,053	\$4,974	\$5,372	\$5,594	\$5,524	\$5,829	\$5,944	\$6,132	\$6,453	\$5,800	\$7,007	\$7,124	\$7,457
Information		*	\$8,775	*	\$6,079	\$10,246	*	\$8,906	\$9,546	\$14,011	\$5,392	\$8,746	\$10,547	\$7,579	\$10,433	\$10,181
Financial Activities		\$7,599	\$5,584	\$6,625	\$6,532	\$10,194	\$7,190	\$6,749	\$10,080	\$7,572	\$10,860	\$8,433	\$9,833	\$11,920	\$12,679	\$11,568
Professional and Business Services		\$3,953	\$4,589	\$4,835	\$4,699	\$4,988	\$4,859	\$5,030	\$4,947	\$4,994	\$5,201	\$5,236	\$5,100	\$5,384	\$5,636	\$5,940
Educational Services		\$3,513	\$3,252	\$2,656	\$6,564	\$6,578	\$4,365	\$7,008	\$8,488	\$7,322	\$6,367	\$8,261	\$13,604	\$8,447	\$10,063	\$11,235
Health Care and Social Assistance		\$8,394	\$7,978	\$8,353	\$8,241	\$9,678	\$9,943	\$9,704	\$11,299	\$9,923	\$10,879	\$10,439	\$10,125	\$11,266	\$11,588	\$11,790
Leisure and Hospitality		\$4,032	\$4,001	\$3,972	\$4,049	\$4,551	\$4,388	\$4,600	\$4,314	\$4,579	\$5,169	\$4,820	\$5,191	\$5,473	\$5,656	\$6,179
Other Services		\$4,545	\$3,827	\$4,060	\$3,919	\$4,755	\$6,458	\$3,956	\$5,194	\$6,523	\$7,025	\$5,524	\$6,252	\$6,330	\$6,938	\$6,648
Public Administration		\$11,700	\$11,033	\$12,747	\$10,002	\$13,976	\$15,293	\$13,870	\$12,477	\$12,666	\$15,996	\$14,638	\$15,385	\$20,307	\$18,423	\$24,700

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Wagner-Peyser Program Overview

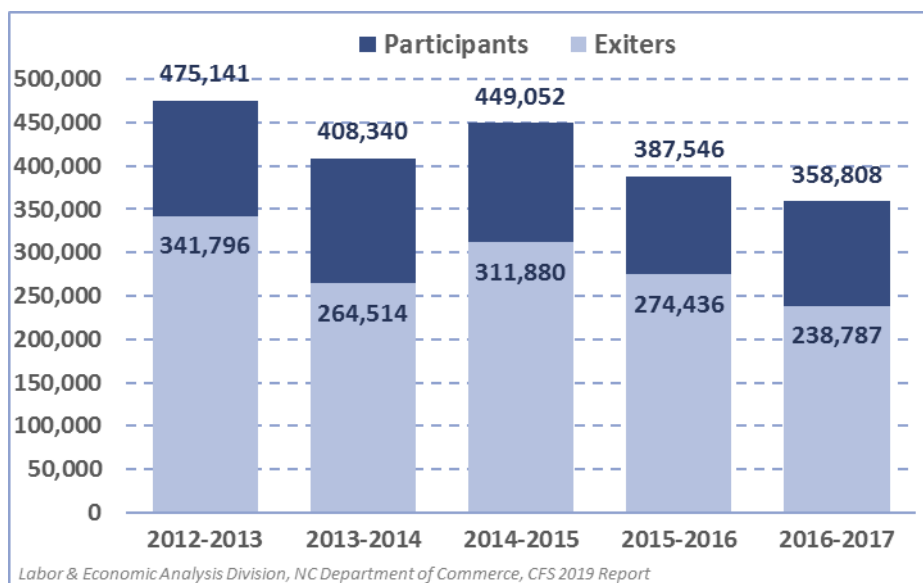
The Wagner-Peyser Act of 1933 established a nationwide system of public employment offices known as the Employment Service. In North Carolina, the Division of Workforce Solutions provides oversight and operational responsibility for the state's Wagner-Peyser Act program. This program provides labor exchange services such as job search assistance, job referral, and placement assistance for job seekers; re-employment services for unemployment insurance claimants; and job recruitment assistance for employers. Specialized services are offered to veterans, individuals with disabilities, migrant and seasonal farm-workers, ex-offenders, youth, minorities and older workers. A range of other services are also available to meet the needs of both job seekers and employers, including skill, ability, and aptitude assessments; career guidance; assistance with job restructuring; and helping employers deal with layoffs.⁸

In 2015, the Workforce Innovation and Opportunity Act (WIOA) took effect, with the Wagner-Peyser Program designated as a core program participant providing services at American Job Centers. The WIOA integrated service delivery model emphasizes co-enrollment of customers in both Wagner-Peyser and WIA/WIOA Adult program when eligibility criteria permit.

» Wagner-Peyser Program Outcomes

As shown in Figure 13, the number of program participants in the Wagner-Peyser program showed an overall decrease between the 2012-2013 and 2016-2017 program years. Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

Figure 13. Wagner-Peyser Program Participants and Exiters by Program Year

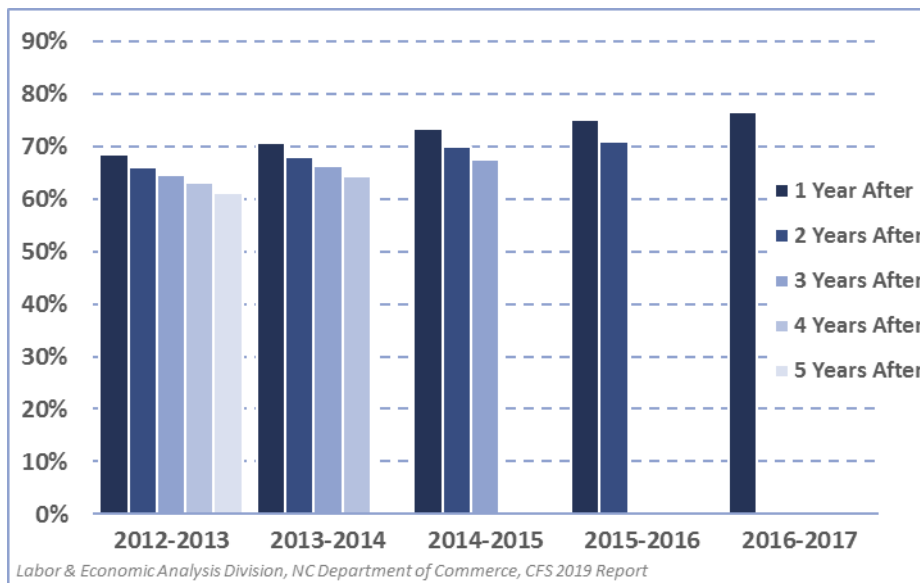


⁸ U.S. Department of Labor Employment and Training Administration, www.doleta.gov/wioa/

Employment and wage outcomes were derived for each cohort of Wagner-Peyser program exiters. Analyses included the post-exit employment rates (Figure 14) and wages (Figure 15) for up to five years after exit (also see Table 4).

One-year post-exit employment rates increased across cohorts, ranging from a low of 68% for the 2012-2013 program year exiters to a high of 76% for the 2016-2017 program year exiters (Figure 14 and Table 4). The percentage of exiters subsequently enrolling in NC public higher education one year after exiting the program shows an overall decline across the five cohorts, from 16% for the 2012-2013 cohort to 11% for the 2016-2017 cohort (Table 4). Longer term post-exit employment measures indicate that each exiting cohort had decreasing percentages of employment in North Carolina over time.

Figure 14. Percentage of Wagner-Peyser Exiters Employed in North Carolina After Exit, by Year of Exit



One-year post-exit median wages showed an overall increase across the five cohorts, from \$15,046 for the 2012-2013 program year exiters to a high of \$18,704 for the 2016-2017 exiters (Figure 15 and Table 4). Within all cohorts, median annual wages increased over time. For example, the 2012-2013 cohort experienced wage growth from \$15,046 to \$19,939 and \$23,327 at years one, three, and five post-exit, respectively.

As shown in Figure 16, one-year employment outcomes by industry indicate that 34% of 2016-2017 Wagner-Peyser program exiters were employed in the Professional and Business Services industry, earning a median annual wage of \$6,680. Other industries frequently employing this cohort one year after exiting the program include Leisure and Hospitality (19%), Retail Trade (18%), Manufacturing (18%), Health Care and Social Assistance (15%), and Wholesale Trade, Transportation, and Utilities (10%). Of these industries, Manufacturing accounted for the highest median annual wage (\$19,654).

Figure 15. Median Wage of Wagner-Peyser Program Exiters in North Carolina, by Year of Exit

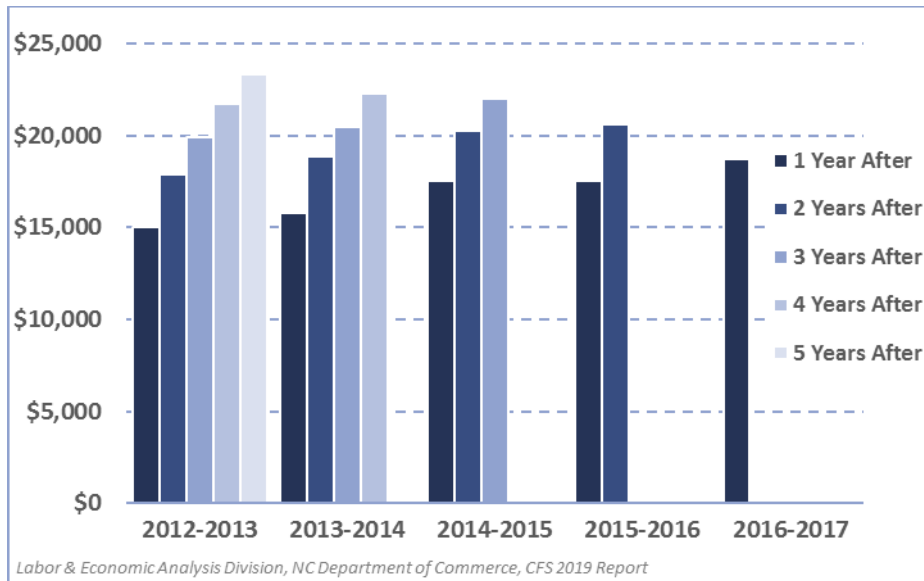
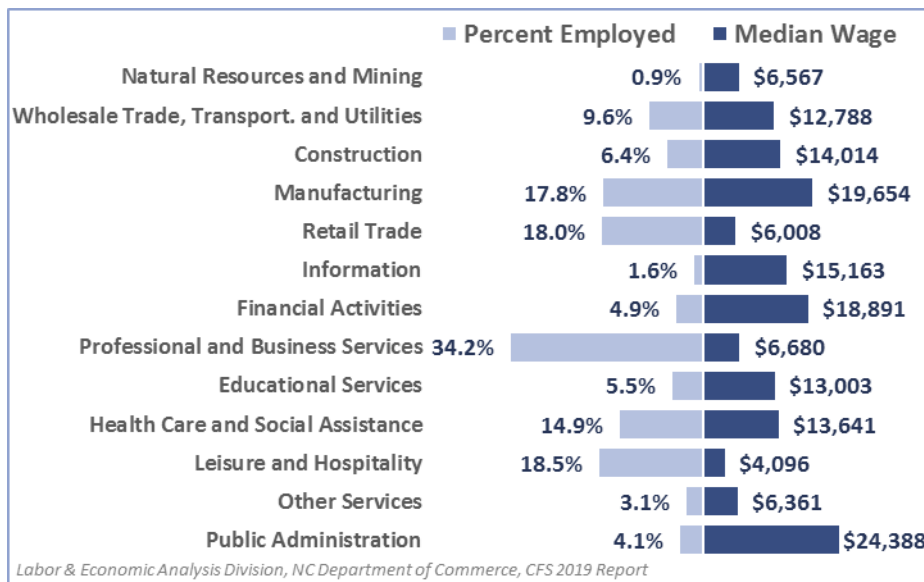


Figure 16. 2016-2017 Wagner-Peyser Exiters One Year Post-Exit: Employment and Median Wage by Industry



Overall, one-year post-exit employment rates and median wages increased for Wagner-Peyser participants. When individual cohorts are followed over time, employment rates tend to decline, while median wages rise. The median wage of Wagner-Peyser participants exiting in the 2012-2013 program year was \$15,046 one year after exit and \$23,327 after five years. By contrast, the 2017 annual median wage in North Carolina for all wage earners covered by unemployment insurance was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.⁹

⁹ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 4. Wagner-Peyser Program Participants and Exitters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Department of Commerce, Division of Workforce Solutions										Common Follow-up System: Evaluative Measures, 2019 Report						
Wagner-Peyser Program										Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce						
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		475,141	408,340	449,052	387,546	358,808	475,141	408,340	449,052	387,546	475,141	408,340	449,052	475,141	408,340	475,141
Exiters		341,796	264,514	311,880	274,436	238,787	341,796	264,514	311,880	274,436	341,796	264,514	311,880	341,796	264,514	341,796
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exiters Employed In North Carolina	N	234,019	186,799	228,836	206,101	182,468	226,096	179,961	218,460	194,914	220,999	175,217	210,386	215,383	169,812	209,204
	%	68%	71%	73%	75%	76%	66%	68%	70%	71%	65%	66%	67%	63%	64%	61%
Exiters' Wages in North Carolina	Mean	\$18,409	\$19,365	\$21,151	\$21,630	\$23,077	\$21,376	\$22,483	\$24,087	\$24,695	\$23,480	\$24,172	\$25,779	\$25,273	\$25,820	\$26,807
	Median	\$15,046	\$15,769	\$17,532	\$17,563	\$18,704	\$17,905	\$18,841	\$20,253	\$20,643	\$19,939	\$20,489	\$22,004	\$21,731	\$22,256	\$23,327
Exiters Enrolled in NC Public Higher Education	N	53,346	41,341	38,675	33,096	26,284	43,999	33,768	33,739	28,496	36,363	29,140	29,235	31,575	24,521	26,959
	%	16%	16%	12%	12%	11%	13%	13%	11%	10%	11%	11%	9%	9%	9%	8%
Exiters Enrolled in NC Public Education, Employment, or Training Program	N	61,455	49,871	48,239	41,750	33,044	92,451	72,390	74,916	67,499	82,090	62,122	68,718	69,638	55,216	62,908
	%	18%	19%	15%	15%	14%	27%	27%	24%	25%	24%	23%	22%	20%	21%	18%
Exiters Enrolled or Employed in NC	N	250,604	199,054	239,306	214,623	188,792	244,844	193,771	230,661	205,686	235,886	185,806	221,507	226,877	179,029	219,643
	%	73%	75%	77%	78%	79%	72%	73%	74%	75%	69%	70%	71%	66%	68%	64%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		1.1%	1.0%	0.9%	0.9%	0.9%	1.1%	0.9%	0.9%	0.9%	1.0%	1.0%	0.9%	1.0%	0.9%	0.9%
Wholesale Trade, Transport. and Utilities		8.1%	8.2%	8.9%	9.4%	9.6%	8.7%	8.9%	9.6%	9.9%	9.3%	9.4%	9.9%	9.7%	9.8%	9.9%
Construction		7.3%	6.4%	7.0%	6.9%	6.4%	7.6%	6.7%	7.1%	7.0%	7.7%	6.8%	7.1%	7.8%	6.7%	7.8%
Manufacturing		14.3%	15.4%	16.0%	15.6%	17.8%	15.9%	16.8%	17.3%	16.9%	16.9%	17.5%	17.8%	17.5%	18.1%	17.9%
Retail Trade		18.2%	19.2%	18.8%	19.1%	18.0%	17.3%	17.7%	17.4%	17.5%	16.5%	16.9%	16.5%	15.9%	16.3%	15.3%
Information		1.3%	1.4%	1.4%	1.5%	1.6%	1.5%	1.4%	1.4%	1.5%	1.4%	1.4%	1.4%	1.4%	1.4%	1.3%
Financial Activities		4.7%	4.7%	4.7%	4.8%	4.9%	5.1%	4.7%	5.1%	5.1%	4.9%	4.8%	5.2%	5.1%	4.9%	5.2%
Professional and Business Services		33.1%	33.5%	33.4%	34.4%	34.2%	29.6%	29.2%	28.7%	29.4%	28.3%	27.8%	27.7%	26.6%	26.4%	25.3%
Educational Services		5.4%	5.8%	5.2%	5.3%	5.5%	5.6%	5.8%	5.5%	5.6%	5.7%	6.0%	5.8%	6.0%	6.3%	6.2%
Health Care and Social Assistance		14.1%	14.7%	14.7%	15.1%	14.9%	14.5%	15.3%	15.3%	15.7%	15.0%	15.8%	15.7%	15.4%	16.1%	15.6%
Leisure and Hospitality		17.2%	18.2%	18.2%	18.8%	18.5%	16.0%	17.1%	17.0%	17.2%	15.6%	16.5%	16.3%	15.2%	15.9%	14.6%
Other Services		3.1%	3.0%	3.1%	3.2%	3.1%	3.1%	3.1%	3.2%	3.1%	3.2%	3.1%	3.2%	3.2%	3.1%	3.2%
Public Administration		4.3%	4.5%	4.2%	4.2%	4.1%	4.5%	4.9%	4.6%	4.4%	4.7%	5.2%	4.7%	5.0%	5.3%	5.1%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$5,224	\$5,280	\$5,366	\$5,261	\$6,567	\$6,976	\$6,234	\$6,387	\$6,687	\$7,820	\$7,486	\$8,040	\$7,830	\$8,529	\$10,555
Wholesale Trade, Transport. and Utilities		\$13,284	\$13,840	\$13,592	\$11,919	\$12,788	\$16,916	\$16,167	\$16,140	\$16,150	\$18,042	\$17,111	\$17,828	\$19,393	\$18,462	\$21,269
Construction		\$13,320	\$12,929	\$14,608	\$14,610	\$14,014	\$15,761	\$15,924	\$17,824	\$18,254	\$17,954	\$17,397	\$19,633	\$20,343	\$19,789	\$22,308
Manufacturing		\$17,883	\$19,315	\$19,914	\$17,856	\$19,654	\$20,848	\$22,526	\$22,119	\$21,688	\$22,561	\$22,912	\$23,552	\$23,743	\$24,344	\$25,057
Retail Trade		\$6,270	\$5,866	\$6,390	\$6,166	\$6,008	\$7,519	\$7,077	\$8,074	\$7,555	\$8,108	\$7,925	\$8,373	\$9,198	\$8,293	\$9,710
Information		\$13,012	\$14,026	\$14,166	\$13,047	\$15,163	\$16,246	\$18,292	\$18,433	\$17,317	\$18,899	\$20,513	\$20,063	\$21,112	\$22,036	\$21,822
Financial Activities		\$13,211	\$12,878	\$17,296	\$17,132	\$18,891	\$16,161	\$20,394	\$22,988	\$23,664	\$21,499	\$23,401	\$25,933	\$24,231	\$25,801	\$26,649
Professional and Business Services		\$6,648	\$6,225	\$6,504	\$6,446	\$6,680	\$7,217	\$6,525	\$6,820	\$7,129	\$7,194	\$6,584	\$7,068	\$7,255	\$6,860	\$7,623
Educational Services		\$10,720	\$10,678	\$12,067	\$12,057	\$13,003	\$13,830	\$14,702	\$15,404	\$16,168	\$15,637	\$16,650	\$17,834	\$17,312	\$18,776	\$19,376
Health Care and Social Assistance		\$11,968	\$12,499	\$13,611	\$13,814	\$13,641	\$14,329	\$15,019	\$15,955	\$16,052	\$15,453	\$16,296	\$17,070	\$16,880	\$17,281	\$17,766
Leisure and Hospitality		\$4,512	\$3,965	\$4,394	\$4,075	\$4,096	\$5,168	\$4,438	\$4,936	\$4,619	\$5,321	\$4,522	\$5,006	\$5,447	\$4,797	\$5,663
Other Services		\$6,877	\$5,819	\$6,145	\$5,831	\$6,361	\$7,845	\$6,892	\$7,535	\$7,939	\$8,262	\$8,031	\$8,287	\$9,060	\$8,867	\$10,527
Public Administration		\$22,702	\$23,662	\$24,836	\$24,099	\$24,388	\$26,659	\$28,014	\$28,774	\$29,168	\$28,832	\$30,055	\$30,606	\$30,055	\$31,596	\$31,593
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$10,401	\$10,700	\$11,384	\$11,666	\$13,972	\$12,585	\$12,514	\$13,229	\$13,634	\$13,811	\$13,952	\$14,943	\$14,820	\$15,467	\$16,826
Wholesale Trade, Transport. and Utilities		\$18,124	\$18,412	\$18,983	\$18,310	\$19,876	\$21,429	\$21,057	\$21,629	\$22,124	\$22,815	\$22,170	\$23,296	\$24,009	\$23,538	\$25,517
Construction		\$17,458	\$17,576	\$19,139	\$19,820	\$19,655	\$20,050	\$20,638	\$22,255	\$22,836	\$22,281	\$22,338	\$24,048	\$24,387	\$24,140	\$26,168
Manufacturing		\$20,138	\$21,760	\$22,066	\$21,083	\$22,363	\$23,014	\$24,439	\$24,129	\$24,273	\$24,719	\$24,950	\$25,615	\$25,884	\$26,544	\$27,340
Retail Trade		\$9,661	\$9,389	\$10,462	\$10,449	\$10,634	\$11,366	\$11,270	\$12,571	\$12,340	\$12,573	\$12,463	\$13,310	\$13,802	\$13,191	\$14,564
Information		\$19,682	\$21,002	\$22,070	\$22,131	\$24,907	\$23,417	\$25,544	\$26,931	\$26,942	\$25,289	\$27,137	\$28,147	\$27,006	\$28,809	\$28,545
Financial Activities		\$17,624	\$18,390	\$22,093	\$22,333	\$25,197	\$20,884	\$24,579	\$27,050	\$27,691	\$25,266	\$27,614	\$30,106	\$27,643	\$29,368	\$29,733
Professional and Business Services		\$11,657	\$11,676	\$12,827	\$13,319	\$14,267	\$13,312	\$13,141	\$14,319	\$15,126	\$13,887	\$13,594	\$14,906	\$14,587	\$14,444	\$15,379
Educational Services		\$14,847	\$15,693	\$16,764	\$16,816	\$17,907	\$17,492	\$18,701	\$19,358	\$20,057	\$19,208	\$20,143	\$21,120	\$20,434	\$21,840	\$22,117
Health Care and Social Assistance		\$15,008	\$15,757	\$16,985	\$17,309	\$17,246	\$17,101	\$18,196	\$19,375	\$19,407	\$18,470	\$19,451	\$20,325	\$19,822	\$20,426	\$20,763
Leisure and Hospitality		\$7,103	\$6,745	\$7,578	\$7,271	\$7,518	\$8,114	\$7,748	\$8,479	\$8,299	\$8,727	\$8,197	\$8,967	\$9,099	\$8,618	\$9,631
Other Services		\$11,497	\$10,804	\$11,488	\$11,607	\$12,533	\$12,957	\$12,753	\$13,351	\$14,130	\$13,840	\$13,956	\$14,562	\$14,949	\$15,227	\$16,320
Public Administration		\$21,644	\$22,711	\$23,637	\$23,308	\$23,570	\$24,399	\$26,047	\$26,490	\$27,024	\$26,433	\$27,788	\$28,527	\$27,801	\$29,706	\$29,647

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Summary and Recommendations

DWS offers a broad spectrum of services to several customer groups, and those described in this section provide different types of services to different customers. Although there is some overlap between programs, and some common trends indicating their interrelationship, caution should be exercised when comparing the outcome measures of these programs.

The number of participants served under the WIA/WIOA Adult program experienced significant increases between the 2012-2013 and 2015-2016 program years, and then declined by nearly half between 2015-2016 and 2016-2017. Likewise, the WIA/WIOA Dislocated Worker program saw a large spike in participation in 2014-2015, and then returned to historically normal levels the following year. Participation trends during the early portion of the study period likely reflect recent efforts to integrate service delivery and leverage resources across the multiple programs that a given customer may be eligible for, whereas more recent data likely reflects changes in how DWS measures “participation” for WIOA reporting purposes.

These sharp increases in program participation occurred alongside shifts in the outcomes of program exiters, particularly for the WIA/WIOA Adult program. This program saw a sudden decline in the share of exiters subsequently enrolling in public higher education in their post-2013 cohorts. The shift in outcomes was also apparent in these exiters’ industry of employment; while earlier cohorts were concentrated in the Health Care and Social Assistance sector, post-2013 cohorts were more likely to be employed in Manufacturing and lower-paying Professional and Business Services jobs (a sector which includes temporary help agencies).

More research is needed to determine whether these shifts in outcomes reflect changes in the nature of services provided or merely reflect the changing composition of program participants after service integration and changes in reporting. Further study of service integration is recommended, including changes in the types of services provided and customers served, and the relative performance of different types of services (or combinations thereof). The shift in industries employing WIA Adult program exiters away from the high-demand Health Care and Social Assistance sector also suggests that an examination of the alignment between workforce programs and the needs of the labor market may be merited.

Both the WIA/WIOA Youth and Wagner-Peyser programs exhibited outcome trends that were consistent with a tightening labor market. These programs saw nearly continuous increases in wage earnings, increasing rates of employment in the state, and declining rates of enrollment in public higher education between the 2012-2013 and 2016-2017 cohorts, which may be due in part to the gradual expansion of employment opportunities for young, unemployed, and underemployed workers. However, the outcomes of WIA/WIOA Adult and Dislocated Worker program exiters demonstrated no such continuous change during the same time period, with the exception of the sharp post-2013 shifts mentioned above. WIA/WIOA Adult and Dislocated Worker programs focus on participants with barriers to employment that make it difficult for these individuals to benefit from the general improvement in the labor market.

Further study of the services received by and the outcomes of WIA/WIOA Adult and WIA/WIOA Dislocated Worker participants, as well as other DWS customer groups that are underemployed or unemployed, may be beneficial. As the labor market continues to tighten and employers struggle to fill positions, providing workforce services that bring workers off the sidelines will become an even more urgent priority for North Carolina’s workforce system.

The Department of Health and Human Services

Division of Social Services

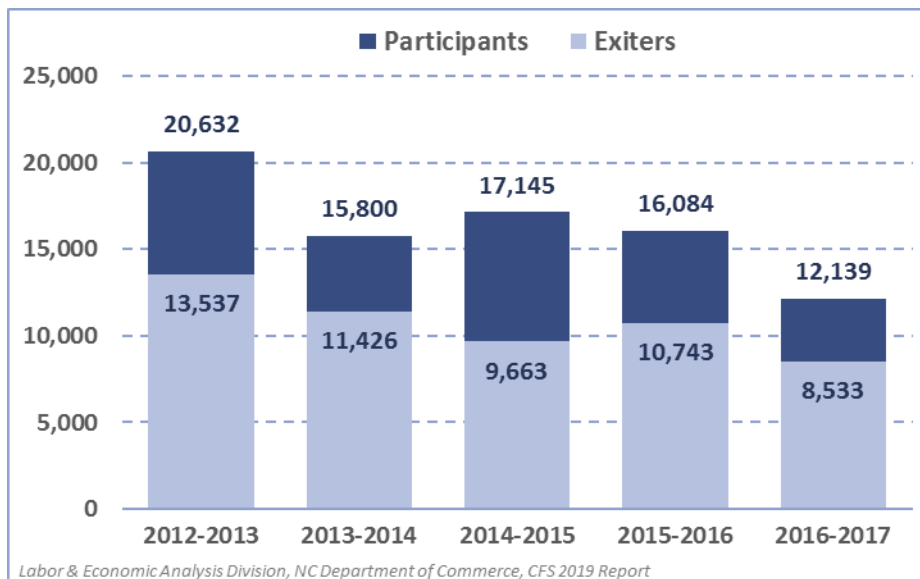
» Work First Program Overview

North Carolina's Temporary Assistance for Needy Families (TANF) program is called Work First. Work First provides time-limited cash assistance (up to 24 months) to needy families with children who meet eligibility requirements. Work First is based on the foundational premise that parents have a responsibility to support themselves and their children. Through Work First, parents can receive short-term training and other related services that can help them become employed and self-sufficient.¹⁰ Work First emphasizes three strategies: diversion, shortening the time of assistance, and retention. Diversion strategies focus on keeping families off cash assistance by helping them with unexpected emergencies and setbacks. Strategies to shorten assistance include making work mandatory and limiting the time a family can receive assistance. Retention strategies to help keep families off assistance encourage savings and provide employment-related services, transportation assistance, short-term skills training, and family enrichment services.¹¹ With the implementation of WIOA, Work First became a required partner in the One-Stop career centers.

» Work First Program Outcomes

The number of individuals participating in or exiting Work First trended downward between the 2012-2013 and 2016-2017 program years (Figure 17). Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

Figure 17. Work First Program Participants and Exiters by Program Year



Figures 18 and 19 show employment and wage outcomes for Work First program participants by year of exit (also see Table 5). One-year post-exit employment rates increased progressively across the five

¹⁰ North Carolina Division of Social Services, <http://www.ncdhhs.gov/dss/workfirst/index.htm>

¹¹ Ibid.

program years, ranging from 65% for the 2012-2013 program year exiters to 73% for the 2016-2017 program year exiters. One-year post-exit median wages also increased across the five program years, from \$7,195 for the 2012-2013 program year exiters to \$8,508 for the 2016-2017 program year exiters.

Figure 18. Percentage of Work First Program Exiters Employed in North Carolina After Exit, by Year of Exit

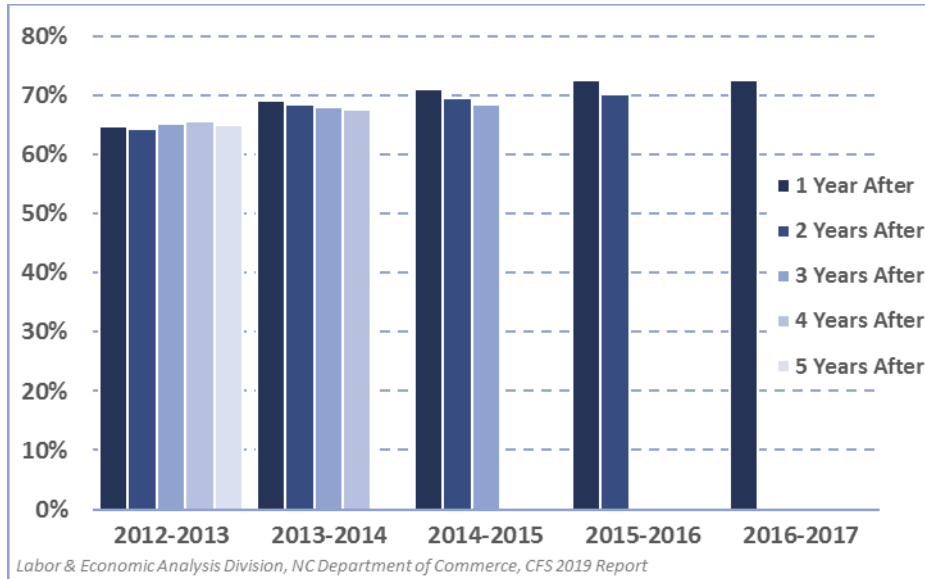
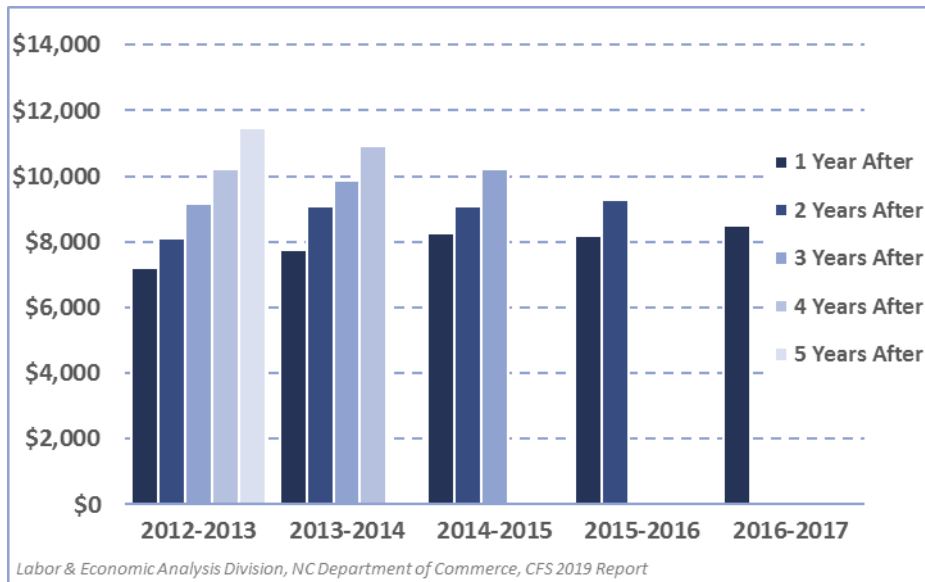


Figure 19. Median Wage of Work First Program Exiters in North Carolina, by Year of Exit

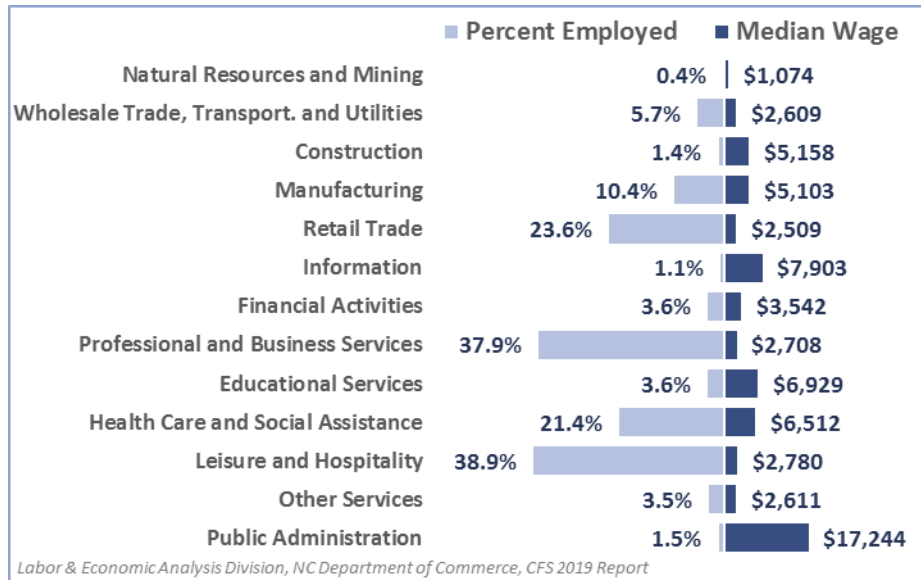


Within cohorts, employment rates fluctuated slightly while median wages increased over time. For example, the employment rates of the 2012-2013 cohort stayed within one percentage point of 65% from year one to year five after exit, while their median annual wages increased from \$7,195 one year after exit to \$10,861 at year five.

Work First program exiters earned low wages across all industries. Figure 20 and Table 5 show that 39% of 2016-2017 exiters were employed in Leisure and Hospitality, followed by Professional and Business Services

(38%), Retail Trade (24%), Health Care and Social Assistance (21%), and Manufacturing (10%). Of these industries, Health Care and Social Assistance paid the highest median annual wage (\$6,512).

Figure 20. 2016-2017 Work First Program Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



» Summary and Recommendations

Overall, the findings reported above indicate that there was a decrease in the number of Work First participants over time, and an increase in short-term employment rates and median wages for program exiters across cohorts, both of which are consistent with a growing economy and a tightening labor market. Additionally, while employment rates showed little change over time within cohorts, median wages increased over time within each cohort.

A stated goal of the Work First program is to assist individuals in becoming economically self-sufficient. We find that Work First program exiters experience low employment and wage outcomes, with wages below established federal poverty guidelines and employment rates well below the statewide average. More research is needed to establish the impact of the Work First program on participants, who might have barriers to employment that precede their time in the program.

Table 5. Work First Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

Department of Health and Human Services							Common Follow-up System: Evaluative Measures, 2019 Report										
Work First - Employment and Training Program							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce										
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013	
Participants		20,632	15,800	17,145	16,084	12,139	20,632	15,800	17,145	16,084	20,632	15,800	17,145	20,632	15,800	20,632	
Exiters		13,537	11,426	9,663	10,743	8,533	13,537	11,426	9,663	10,743	13,537	11,426	9,663	13,537	11,426	13,537	
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Exiters Employed In North Carolina		N %	8,763 65%	7,894 69%	6,875 71%	7,800 73%	6,194 73%	8,715 64%	7,821 68%	6,719 70%	7,534 70%	8,832 65%	7,781 68%	6,613 68%	8,890 66%	7,726 68%	8,804 65%
Exiters' Wages in North Carolina		Mean Median	\$9,144 \$7,195	\$9,663 \$7,740	\$10,155 \$8,266	\$10,306 \$8,200	\$10,861 \$8,508	\$10,514 \$8,087	\$11,315 \$9,069	\$11,502 \$9,072	\$11,706 \$9,264	\$11,804 \$9,143	\$12,466 \$9,873	\$12,752 \$10,204	\$12,875 \$10,233	\$13,629 \$10,909	\$14,079 \$11,470
Exiters Enrolled in NC Public Higher Education		N %	3,132 23%	2,424 21%	1,609 17%	1,706 16%	1,177 14%	2,465 18%	1,833 16%	1,368 14%	1,418 13%	1,994 15%	1,489 13%	1,234 13%	1,684 12%	1,331 12%	1,472 11%
Exiters Enrolled in NC Public Education, Employment, or Training Program		N %	5,525 41%	4,996 44%	3,689 38%	3,930 37%	3,478 41%	5,551 41%	4,578 40%	3,527 37%	3,903 36%	5,060 37%	4,083 36%	3,341 35%	4,360 32%	3,695 32%	4,037 30%
Exiters Enrolled or Employed in NC		N %	10,245 76%	9,002 79%	7,547 78%	8,443 79%	6,768 79%	9,974 74%	8,688 76%	7,248 75%	8,125 76%	9,821 73%	8,453 74%	7,079 73%	9,591 71%	8,273 72%	9,430 70%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			0.3%	0.3%	0.3%	0.5%	0.4%	0.3%	0.3%	0.4%	0.4%	0.3%	0.4%	0.4%	0.4%	0.5%	0.4%
Wholesale Trade, Transport. and Utilities			3.1%	3.7%	4.8%	5.2%	5.7%	3.3%	4.6%	5.6%	5.5%	4.3%	5.6%	6.2%	5.3%	5.7%	5.9%
Construction			1.4%	1.3%	1.4%	1.3%	1.4%	1.5%	1.2%	1.6%	1.3%	1.7%	1.3%	1.6%	1.6%	1.5%	1.5%
Manufacturing			7.2%	8.1%	8.4%	9.2%	10.4%	8.0%	9.8%	10.8%	10.6%	8.5%	10.7%	11.7%	10.5%	11.9%	10.9%
Retail Trade			23.0%	23.8%	23.8%	25.6%	23.6%	22.6%	22.9%	23.2%	23.2%	22.1%	23.2%	23.4%	22.0%	21.9%	21.0%
Information			1.0%	0.8%	1.0%	0.8%	1.1%	1.2%	0.9%	1.0%	1.0%	1.2%	1.1%	1.3%	1.2%	1.0%	1.4%
Financial Activities			3.7%	4.2%	3.5%	3.7%	3.6%	4.4%	4.3%	3.8%	4.2%	4.0%	4.4%	4.0%	4.1%	4.6%	4.2%
Professional and Business Services			36.1%	39.3%	38.9%	36.5%	37.9%	37.0%	37.4%	37.0%	35.2%	36.5%	35.0%	35.8%	34.8%	35.2%	34.3%
Educational Services			3.0%	3.1%	2.8%	3.4%	3.6%	3.3%	3.3%	3.3%	3.4%	3.5%	3.7%	3.4%	3.8%	4.1%	4.2%
Health Care and Social Assistance			19.8%	20.1%	19.4%	20.5%	21.4%	20.9%	21.9%	21.2%	22.3%	22.3%	24.0%	22.3%	24.3%	23.9%	25.4%
Leisure and Hospitality			34.9%	34.2%	38.2%	38.8%	38.9%	33.3%	34.4%	37.3%	36.9%	33.5%	33.0%	36.0%	33.3%	32.6%	33.1%
Other Services			2.1%	2.7%	2.7%	2.9%	3.5%	2.7%	2.5%	2.9%	2.9%	2.8%	3.0%	2.7%	2.7%	2.9%	2.8%
Public Administration			1.3%	1.5%	1.2%	1.7%	1.5%	1.7%	1.7%	1.3%	1.9%	1.8%	1.9%	1.5%	2.0%	2.0%	2.0%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			\$1,206	\$1,214	\$1,151	\$2,068	\$1,074	\$3,233	\$2,603	\$1,901	\$1,612	\$2,762	\$1,856	\$2,579	\$1,016	\$2,936	\$1,409
Wholesale Trade, Transport. and Utilities			\$3,575	\$3,430	\$2,584	\$2,673	\$2,609	\$3,930	\$2,462	\$1,882	\$2,675	\$3,728	\$3,375	\$2,758	\$3,232	\$3,916	\$4,332
Construction			\$4,600	\$2,548	\$6,577	\$5,557	\$5,158	\$5,022	\$4,482	\$6,722	\$7,828	\$7,074	\$6,808	\$6,366	\$8,096	\$6,942	\$8,655
Manufacturing			\$4,545	\$4,776	\$4,653	\$4,533	\$5,103	\$6,338	\$5,913	\$4,652	\$5,107	\$6,465	\$6,220	\$6,223	\$6,127	\$6,928	\$7,059
Retail Trade			\$3,426	\$3,215	\$3,204	\$3,081	\$2,509	\$3,408	\$3,663	\$3,349	\$3,223	\$3,333	\$3,593	\$3,349	\$3,380	\$3,236	\$3,711
Information			\$4,710	\$8,725	\$6,116	\$5,806	\$7,903	\$10,262	\$9,757	\$17,128	\$6,387	\$10,026	\$11,403	\$7,880	\$13,070	\$13,673	\$9,820
Financial Activities			\$4,867	\$2,460	\$8,282	\$5,465	\$3,542	\$3,749	\$4,828	\$5,474	\$5,540	\$5,791	\$9,077	\$7,798	\$8,676	\$7,733	\$11,301
Professional and Business Services			\$2,841	\$3,229	\$2,819	\$2,501	\$2,708	\$2,932	\$2,752	\$2,653	\$2,731	\$3,025	\$2,883	\$2,876	\$2,787	\$3,010	\$2,975
Educational Services			\$7,388	\$6,341	\$7,838	\$5,577	\$6,929	\$9,108	\$7,997	\$8,205	\$8,567	\$9,474	\$8,223	\$10,916	\$10,696	\$10,315	\$12,175
Health Care and Social Assistance			\$6,860	\$6,498	\$6,495	\$7,133	\$6,512	\$7,794	\$7,396	\$7,344	\$7,351	\$8,223	\$7,829	\$8,506	\$9,112	\$9,161	\$9,711
Leisure and Hospitality			\$3,271	\$3,199	\$2,952	\$3,193	\$2,780	\$3,254	\$2,984	\$3,077	\$3,049	\$3,258	\$3,365	\$2,806	\$3,610	\$3,349	\$3,303
Other Services			\$3,613	\$3,053	\$3,456	\$3,115	\$2,611	\$3,001	\$5,183	\$3,610	\$2,975	\$2,564	\$2,882	\$3,266	\$3,887	\$3,732	\$2,496
Public Administration			\$10,682	\$12,335	\$12,386	\$9,989	\$17,244	\$15,620	\$18,125	\$20,316	\$17,146	\$22,108	\$21,189	\$16,175	\$20,479	\$27,603	\$23,969
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			\$3,767	\$3,907	\$6,540	\$3,700	\$4,347	\$5,053	\$7,289	\$5,732	\$4,704	\$5,185	\$8,648	\$7,964	\$4,553	\$7,774	\$6,736
Wholesale Trade, Transport. and Utilities			\$7,052	\$7,138	\$6,104	\$6,611	\$6,716	\$8,147	\$7,539	\$6,697	\$7,582	\$8,069	\$8,818	\$8,265	\$8,062	\$9,837	\$9,711
Construction			\$8,926	\$7,036	\$10,770	\$10,173	\$10,436	\$9,748	\$9,639	\$12,475	\$12,645	\$11,458	\$12,117	\$11,725	\$13,662	\$14,330	\$13,750
Manufacturing			\$7,907	\$8,547	\$8,414	\$7,799	\$8,902	\$10,035	\$10,017	\$8,971	\$9,023	\$10,797	\$11,036	\$10,978	\$10,675	\$12,293	\$11,949
Retail Trade			\$5,461	\$5,399	\$5,668	\$5,383	\$5,054	\$5,746	\$6,386	\$6,276	\$6,196	\$6,245	\$6,665	\$6,543	\$6,604	\$6,764	\$7,270
Information			\$10,906	\$12,930	\$14,381	\$11,132	\$12,947	\$14,345	\$14,481	\$20,232	\$10,476	\$15,249	\$15,390	\$15,143	\$17,841	\$16,598	\$16,895
Financial Activities			\$9,730	\$8,751	\$11,795	\$11,206	\$9,409	\$9,478	\$11,268	\$12,315	\$11,784	\$11,962	\$13,687	\$14,646	\$14,035	\$14,047	\$16,459
Professional and Business Services			\$5,794	\$6,053	\$5,685	\$5,269	\$5,827	\$6,101	\$6,106	\$5,535	\$5,736	\$6,310	\$6,037	\$6,029	\$6,185	\$6,325	\$6,544
Educational Services			\$9,301	\$8,947	\$10,712	\$8,780	\$10,694	\$11,549	\$10,593	\$10,943	\$11,434	\$12,873	\$10,905	\$13,366	\$13,378	\$12,775	\$14,959
Health Care and Social Assistance			\$9,204	\$8,999	\$9,120	\$9,684	\$9,614	\$10,332	\$10,329	\$10,499	\$10,643	\$11,404	\$11,089	\$11,619	\$12,008	\$12,131	\$12,594
Leisure and Hospitality			\$4,849	\$4,909	\$4,757	\$5,019	\$4,865	\$5,152	\$5,054	\$5,225	\$5,479	\$5,375	\$5,518	\$5,436	\$5,849	\$5,656	\$6,082
Other Services			\$5,907	\$6,244	\$6,970	\$6,050	\$6,015	\$6,240	\$8,766	\$7,747	\$7,082	\$6,606	\$7,292	\$7,803	\$7,085	\$8,780	\$6,787
Public Administration			\$15,330	\$14,269	\$16,178	\$14,810	\$17,736	\$17,630	\$18,871	\$19,520	\$18,472	\$20,895	\$20,963	\$19,043	\$20,769	\$24,453	\$23,759

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

Division of Vocational Rehabilitation Services

» Program Overview

The North Carolina Division of Vocational Rehabilitation Services (DVRS) is responsible for the general state vocational rehabilitation services program under Title I, Part B of the Rehabilitation Act of 1973 as amended. It is also responsible for the state supported employment services program under Title VI, Part B, of this same act. The Rehabilitation Act of 1973, as amended, was part of the Workforce Information Act. In July of 2014, the Workforce Innovation and Opportunity Act (WIOA) was signed into law and made significant changes to Title I of the Act that affects the Vocational Rehabilitation (VR) program. WIOA strengthens the alignment of the VR program with other core components of the workforce development system and emphasizes the achievement of competitive integrated employment as well as the provision of services to students and youth with disabilities.

The Division of Vocational Rehabilitation Services provides counseling, training, education, transportation, job placement, assistive technology, and other support services to people with disabilities through seventy-two local offices, two vocational rehabilitation training facilities, and public school systems throughout North Carolina.¹² These services are provided to people with a wide range of physical, psychiatric, or intellectual disabilities, deafness or auditory impairment, and other communicative disorders. Services are provided to individuals to assist them with finding a job and staying on the job. Some services are provided based on economic need, while others are provided regardless of income.

For a person to be eligible for Vocational Rehabilitation services they must have a physical, mental, or intellectual impairment that limits their opportunities to find or keep a job, and require Vocational Rehabilitation program services for job preparation, search, or retention. Individuals who are receiving Social Security Disability Insurance or Supplemental Security Income benefits are presumed eligible for Vocational Rehabilitation program services if they intend to get or keep a job.¹³

» Vocational Rehabilitation Program Outcomes

As shown in Figure 21, the number of individuals exiting the Vocational Rehabilitation program fluctuated between a high of 60,105 in 2012-2013 program year to a low of 48,682 in 2014-2015.

Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

Employment (Figure 22) and wage outcomes (Figure 23) were examined separately for each cohort exiting the Vocational Rehabilitation program, for up to five years after exit (also see Table 6). One-year post-exit employment rates indicated an upward trend across cohorts, ranging from a low of 44% for 2012-2013 program year exiters to a high of 52% for 2016-2017 program year exiters. One-year post-exit median annual wages fluctuated, ranging from \$7,861 for 2016-2017 exiters to \$8,845 for 2014-2015 exiters.

¹² North Carolina Division of Vocational Rehabilitation Services, <http://www.ncdhhs.gov/dvrs/aboutus.htm>

¹³ North Carolina Division of Vocational Rehabilitation Services, Employment Services for People with Disabilities, <https://www.ncdhhs.gov/assistance/disability-services/employment-services-for-people-with-disabilities>

Longer term post-exit employment and wage measures indicate a slight decrease in the percentage of each exiting cohort who were employed in North Carolina over time. Wages, however, increased over time within each exiting cohort. The 2012-2013 exiters saw median annual wages increase from \$8,298 at one-year post-exit to \$9,855 and \$11,365 at three and five years post-exit, respectively. The 2013-2014 exiters had an increase in median wages from \$7,332 one year after exit to \$9,687 in year three and \$10,708 in year four.

Figure 21. Vocational Rehabilitation Program Participants and Exiters by Program Year

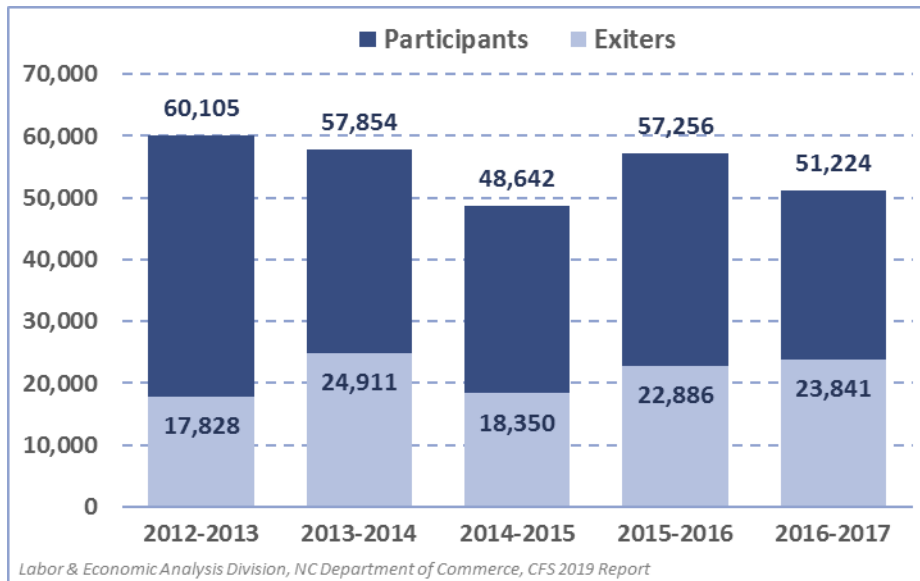


Figure 22. Percentage of Vocational Rehabilitation Program Exiters Employed in North Carolina After Exit, by Year of Exit

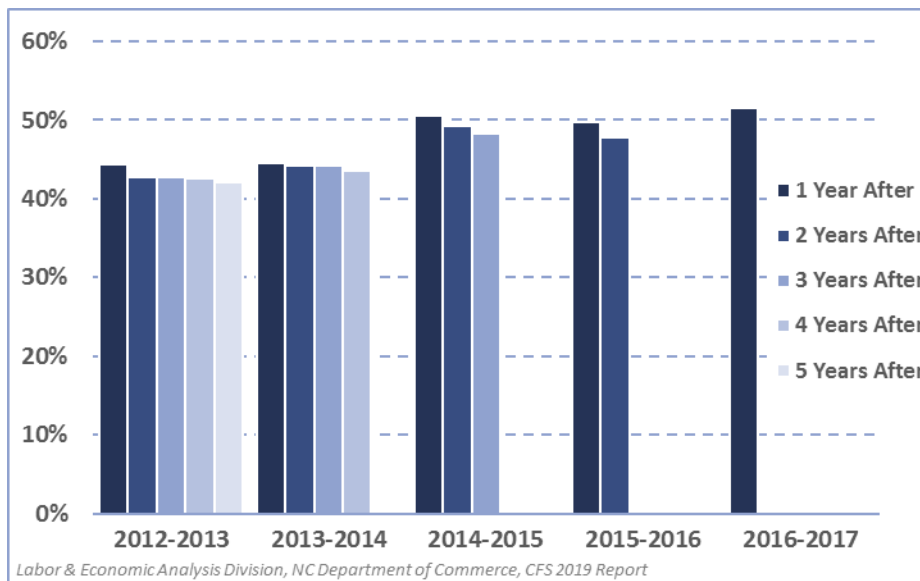
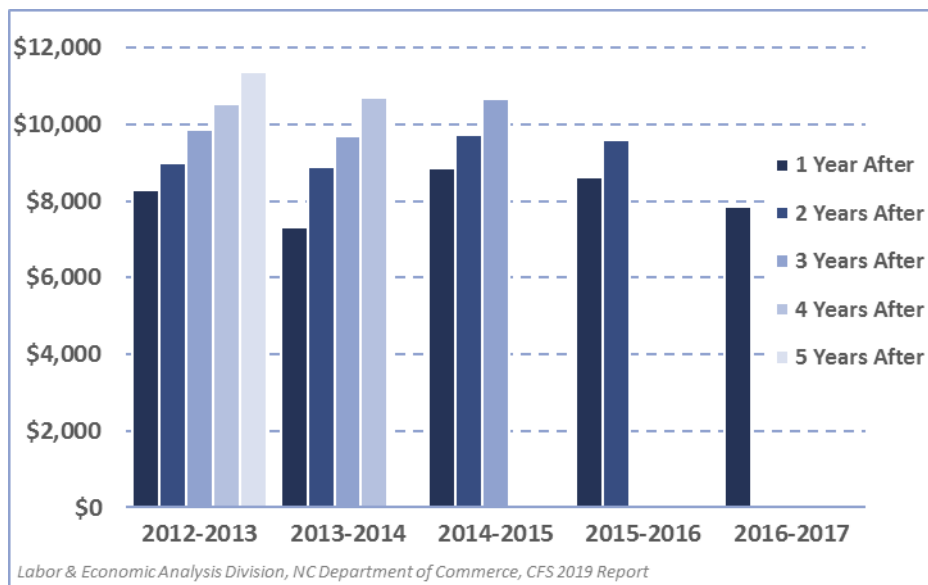
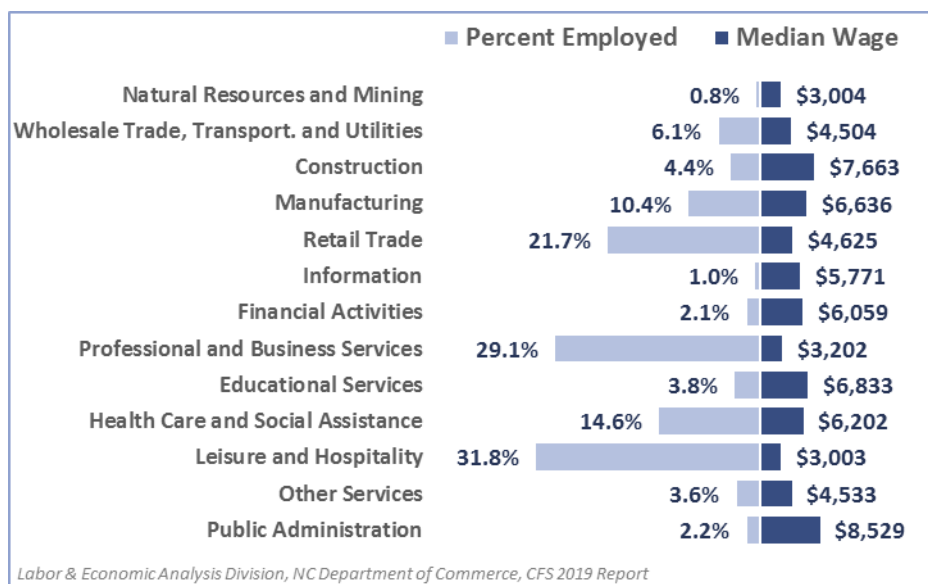


Figure 23. Median Wage of Vocational Rehabilitation Program Exiters in North Carolina, by Year of Exit



In examining one-year post-exit wage and employment outcomes by industry (Figure 24) for the most recent cohort of Vocational Rehabilitation program exiters (2016-2017) examined in this report, industries employing these former program participants include Leisure and Hospitality (31.8%), Professional and Business Services (29.1%), Retail Trade (21.7%), Health Care and Social Assistance (14.6%), and Manufacturing (10.4%). Of these, the least prevalent have the highest median wage (Manufacturing, \$6,636, and Health Care and Social Assistance, \$6,202).

Figure 24. 2016-2017 Vocational Rehabilitation Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



» Summary and Recommendations

Overall, the results indicate that there have been relatively stable short-term employment rates and median wages for Vocational Rehabilitation program exiters, as indicated by the one-year post employment and wage trends. However, when exiters are followed over time, median wages rise while the employment rate declines somewhat. This decline could be attributable to several factors including people not sustaining employment, moving out of state, or finding employment in jobs not covered by North Carolina's unemployment insurance laws. There are a variety of reasons why individuals are not found in covered employment including retirement, death, and inability to find employment, or leaving the labor force.

The 2017 annual median wage in North Carolina for all persons employed in unemployment insurance-covered jobs was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.¹⁴ Median wages for DVRS program exiters are shown in Table 6, and range from \$7,332 for 2013-2014 program exiters one year after exit, \$11,365 for 2012-2013 exiters five years post-exit. These are well below the typical annual income in North Carolina and below the U.S. poverty line.

It is important to keep in mind that persons participating in rehabilitation services through the DVRS have disabilities or communicative disorders which may impact the number of hours they can work and their ability to maintain employment. These factors contribute to the low post-exit wage rates for this program. Further analyses are recommended to assess the various disability categories to determine if there are differential outcomes by type or severity of disability. In addition, further analyses by region are needed in order to determine if there are geographical disparities in outcomes.

Part of the requirement of the new WIOA is the development of an integrated service delivery plan that includes the coordination between WIOA, Wagner-Peyser, Adult Basic Education and Vocational Rehabilitation programs. It is recommended that North Carolina's integrated service delivery plan and implementation continue to focus on the leveraging of resources and services across these programs and focus on achieving higher employment and wage outcomes for all participants and the acquisition of increased occupational skills and educational credentials.

¹⁴ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 6. Vocational Rehabilitation Program Participants and Exitters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

Department of Health and Human Services											Common Follow-up System: Evaluative Measures, 2019 Report					
Vocational Rehabilitation - Employment and Training Program											Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce					
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		60,105	57,854	48,642	57,256	51,224	60,105	57,854	48,642	57,256	60,105	57,854	48,642	60,105	57,854	60,105
Exitters		17,828	24,911	18,350	22,886	23,841	17,828	24,911	18,350	22,886	17,828	24,911	18,350	17,828	24,911	17,828
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exitters Employed In North Carolina	N	7,898	11,075	9,287	11,365	12,291	7,625	10,995	9,050	10,951	7,625	11,017	8,866	7,601	10,849	7,495
	%	44%	44%	51%	50%	52%	43%	44%	49%	48%	43%	44%	48%	43%	44%	42%
Exitters' Wages in North Carolina	Mean	\$10,875	\$10,207	\$11,796	\$11,514	\$10,970	\$11,776	\$12,034	\$12,835	\$12,808	\$13,004	\$13,021	\$13,914	\$14,122	\$14,172	\$15,083
	Median	\$8,298	\$7,332	\$8,845	\$8,626	\$7,861	\$8,996	\$8,907	\$9,743	\$9,603	\$9,855	\$9,687	\$10,656	\$10,537	\$10,708	\$11,365
Exitters Enrolled in NC Public Higher Education	N	2,823	3,791	2,508	2,967	2,874	2,334	3,015	2,103	2,477	2,034	2,591	1,775	1,658	2,136	1,387
	%	16%	15%	14%	13%	12%	13%	12%	11%	11%	11%	10%	10%	9%	9%	8%
Exitters Enrolled in NC Public Education, Employment, or Training Program	N	4,727	6,820	4,746	5,443	6,000	4,684	10,635	4,695	5,490	4,684	6,166	4,460	4,122	5,611	3,725
	%	27%	27%	26%	24%	25%	26%	43%	26%	24%	26%	25%	24%	23%	23%	21%
Exitters Enrolled or Employed in NC	N	9,776	13,666	10,768	13,095	14,258	9,425	15,861	10,558	12,729	9,343	13,126	10,319	9,044	12,792	8,792
	%	55%	55%	59%	57%	60%	53%	64%	58%	56%	52%	53%	56%	51%	51%	49%
Exitters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.7%	0.8%	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	1.0%	0.8%	0.7%	1.1%	0.7%	1.0%
Wholesale Trade, Transport. and Utilities		4.8%	5.3%	6.0%	6.0%	6.1%	5.4%	6.1%	6.6%	6.5%	6.2%	6.5%	7.3%	6.8%	7.0%	7.0%
Construction		4.6%	4.5%	5.1%	5.2%	4.4%	5.1%	4.9%	5.3%	5.3%	5.2%	5.1%	5.8%	5.4%	5.5%	5.6%
Manufacturing		9.0%	9.4%	11.5%	10.3%	10.4%	10.1%	10.6%	12.5%	11.5%	11.4%	11.4%	12.7%	11.9%	11.5%	12.4%
Retail Trade		22.4%	23.1%	22.4%	22.0%	21.7%	21.6%	21.8%	21.0%	21.0%	20.3%	20.1%	20.9%	19.1%	20.2%	19.1%
Information		0.7%	0.9%	0.9%	0.8%	1.0%	0.8%	1.0%	1.0%	0.8%	0.8%	1.0%	1.0%	0.9%	1.0%	1.0%
Financial Activities		2.2%	2.3%	2.1%	2.2%	2.1%	2.5%	2.1%	2.4%	2.6%	2.3%	2.3%	2.4%	2.4%	2.2%	2.3%
Professional and Business Services		27.3%	29.0%	29.2%	28.3%	29.1%	27.9%	28.7%	28.4%	27.8%	27.7%	29.0%	28.5%	27.7%	28.2%	27.7%
Educational Services		4.1%	3.9%	3.8%	3.7%	3.8%	4.3%	3.6%	3.8%	3.9%	4.3%	3.9%	4.1%	4.6%	4.0%	4.5%
Health Care and Social Assistance		17.3%	15.9%	15.6%	14.7%	14.6%	17.1%	15.9%	15.4%	15.4%	16.9%	16.1%	16.3%	17.2%	16.8%	17.3%
Leisure and Hospitality		28.1%	28.8%	28.8%	30.2%	31.8%	26.5%	28.3%	28.1%	29.0%	26.5%	27.6%	27.8%	27.2%	27.1%	26.8%
Other Services		3.3%	3.7%	3.7%	3.6%	3.6%	3.4%	3.6%	3.8%	3.4%	3.4%	4.0%	3.9%	3.3%	3.7%	3.4%
Public Administration		1.8%	2.1%	2.0%	2.3%	2.2%	2.0%	2.3%	2.4%	2.6%	2.2%	2.6%	2.4%	2.5%	2.7%	2.5%
Exitters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$3,827	\$1,821	\$2,073	\$5,186	\$3,004	\$4,771	\$2,728	\$2,177	\$5,535	\$4,599	\$3,018	\$2,763	\$6,441	\$4,462	\$4,358
Wholesale Trade, Transport. and Utilities		\$7,321	\$5,206	\$6,725	\$5,365	\$4,504	\$8,602	\$6,007	\$6,555	\$5,746	\$8,783	\$8,698	\$6,977	\$9,568	\$8,471	\$9,700
Construction		\$6,240	\$5,961	\$7,256	\$7,751	\$7,663	\$6,950	\$6,006	\$8,521	\$8,825	\$8,260	\$7,180	\$8,291	\$9,916	\$10,051	\$10,099
Manufacturing		\$8,706	\$8,160	\$9,409	\$8,453	\$6,636	\$10,677	\$9,731	\$10,274	\$9,370	\$10,832	\$9,358	\$11,877	\$11,648	\$11,390	\$12,392
Retail Trade		\$5,294	\$4,435	\$5,036	\$5,464	\$4,625	\$5,698	\$5,446	\$5,655	\$5,727	\$5,641	\$6,344	\$5,448	\$5,971	\$6,592	\$5,914
Information		\$7,202	\$5,302	\$5,891	\$5,342	\$5,771	\$7,611	\$4,621	\$5,286	\$5,028	\$7,827	\$6,033	\$4,878	\$9,118	\$5,833	\$7,905
Financial Activities		\$4,970	\$3,588	\$6,596	\$6,932	\$6,059	\$3,932	\$4,802	\$6,835	\$5,200	\$6,719	\$6,669	\$7,543	\$7,088	\$8,786	\$10,880
Professional and Business Services		\$4,061	\$3,227	\$3,674	\$3,188	\$3,202	\$3,500	\$3,382	\$3,377	\$3,161	\$3,634	\$3,308	\$3,538	\$3,608	\$3,497	\$3,818
Educational Services		\$7,356	\$5,660	\$6,801	\$7,640	\$6,833	\$8,254	\$7,677	\$7,579	\$8,440	\$9,262	\$7,642	\$8,437	\$8,977	\$8,942	\$10,316
Health Care and Social Assistance		\$7,634	\$6,663	\$8,334	\$7,657	\$6,202	\$8,792	\$7,904	\$8,635	\$7,971	\$9,386	\$7,942	\$8,672	\$9,454	\$8,031	\$9,185
Leisure and Hospitality		\$3,495	\$2,838	\$3,344	\$3,667	\$3,003	\$3,650	\$3,684	\$3,557	\$3,660	\$3,563	\$3,443	\$3,567	\$3,543	\$3,714	\$3,790
Other Services		\$4,580	\$2,884	\$4,314	\$3,654	\$4,533	\$4,710	\$4,527	\$3,976	\$4,740	\$3,839	\$4,563	\$4,845	\$4,242	\$5,934	\$4,376
Public Administration		\$10,284	\$8,364	\$8,516	\$8,444	\$8,529	\$9,803	\$13,096	\$10,305	\$11,171	\$11,753	\$14,623	\$11,793	\$11,657	\$16,851	\$22,556
Exitters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$7,595	\$5,822	\$6,741	\$10,460	\$8,773	\$9,762	\$7,705	\$7,366	\$9,797	\$9,700	\$7,786	\$8,400	\$10,705	\$10,152	\$8,839
Wholesale Trade, Transport. and Utilities		\$11,753	\$9,634	\$11,610	\$9,754	\$9,279	\$12,695	\$11,474	\$12,497	\$11,360	\$13,302	\$12,997	\$12,716	\$14,098	\$13,815	\$14,771
Construction		\$10,756	\$10,616	\$12,103	\$12,642	\$13,017	\$12,228	\$11,617	\$13,600	\$14,715	\$14,213	\$13,771	\$13,609	\$15,537	\$15,326	\$16,105
Manufacturing		\$12,257	\$12,107	\$13,230	\$12,662	\$11,739	\$13,533	\$13,759	\$14,379	\$13,883	\$14,831	\$13,883	\$16,002	\$15,988	\$15,547	\$17,225
Retail Trade		\$7,394	\$6,843	\$7,459	\$7,994	\$7,416	\$7,897	\$7,984	\$8,528	\$8,689	\$8,667	\$8,951	\$8,871	\$9,272	\$9,330	\$9,558
Information		\$12,222	\$10,454	\$9,183	\$11,077	\$12,133	\$13,887	\$12,263	\$10,082	\$10,994	\$13,406	\$14,377	\$11,101	\$17,364	\$14,266	\$14,891
Financial Activities		\$10,823	\$9,761	\$11,563	\$12,398	\$10,814	\$10,709	\$11,987	\$13,621	\$13,344	\$13,864	\$13,205	\$14,534	\$15,400	\$15,936	\$18,079
Professional and Business Services		\$7,359	\$6,606	\$6,958	\$6,529	\$6,487	\$7,138	\$7,081	\$6,850	\$6,807	\$7,405	\$7,132	\$7,240	\$7,626	\$7,810	\$8,035
Educational Services		\$10,542	\$10,044	\$10,838	\$11,196	\$11,709	\$12,243	\$12,351	\$12,013	\$12,735	\$13,190	\$12,104	\$13,288	\$13,077	\$13,736	\$14,485
Health Care and Social Assistance		\$10,667	\$9,932	\$11,651	\$10,770	\$9,625	\$11,515	\$11,707	\$12,143	\$11,467	\$12,308	\$12,302	\$12,319	\$12,600	\$12,480	\$12,845
Leisure and Hospitality		\$5,459	\$4,883	\$5,469	\$5,709	\$5,102	\$5,761	\$5,671	\$5,845	\$6,045	\$6,024	\$5,920	\$6,137	\$6,265	\$6,187	\$6,573
Other Services		\$8,779	\$6,897	\$7,364	\$7,682	\$8,138	\$8,338	\$8,751	\$8,158	\$8,998	\$7,741	\$9,089	\$9,009	\$8,565	\$10,709	\$10,141
Public Administration		\$16,036	\$14,344	\$14,632	\$14,894	\$15,907	\$15,119	\$16,583	\$15,897	\$16,623	\$16,473	\$17,230	\$17,679	\$17,729	\$19,097	\$21,308

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

Division of Services for the Blind

» Program Overview

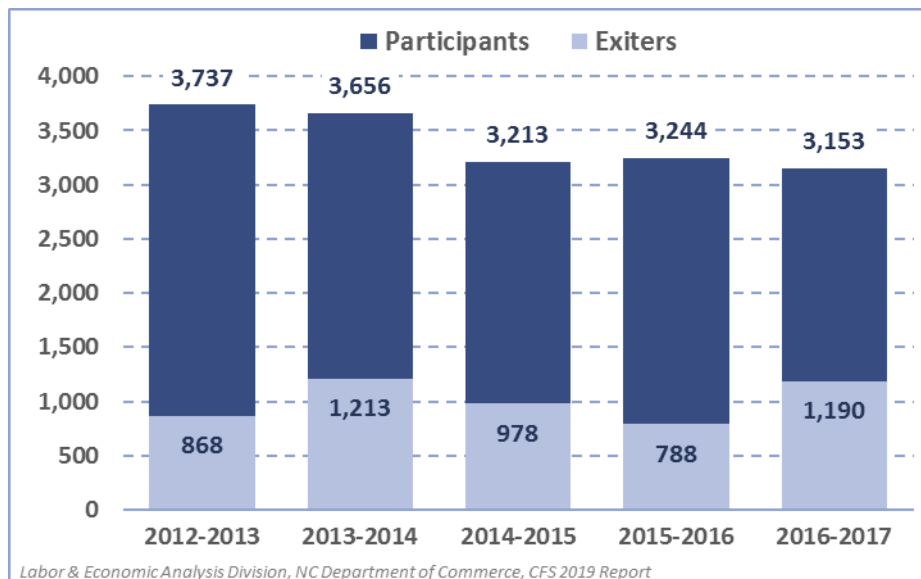
The Division of Services for the Blind (DSB) provides vocational rehabilitation services to enable the blind or visually impaired – including individuals who are deafblind – to reach their goals of independence and employment.¹⁵ Together with DVRS, DSB is responsible for the state vocational rehabilitation services program under Title I, Part B of the Rehabilitation Act of 1973; for the state-supported employment services program under Title VI, Part B of this act; and for providing partner services under WIOA.

DSB services help individuals find a job, keep a job, or return to work, and are tailored to the unique vocational assistance needs of those with vision loss or impairment. Individuals can choose from an array of programs and services that best suit their individual vocational needs.¹⁶ DSB services tackle the skills and technologies required by workers and job-seekers with visual loss or impairment, encompassing a wide range of job and mobility trainings, coaching services, assistive technologies, and medical assistance with vision loss or impairment. Some services are provided based on economic need, while others are provided regardless of income. Services are provided through staff located in district offices, through third-party agreements with local Department of Social Services offices and local school districts, and through the Rehabilitation Center for the Blind.

» DSB Vocational Rehabilitation Program Outcomes

As shown in Figure 25, the number of individuals receiving vocational rehabilitation services through DSB has declined from 2012-2013 to 2016-2017 program years. Between 3,213 and 3,737 individuals were served during each program year during this time.

Figure 25. DSB Vocational Rehabilitation Program Participants and Exiters by Program Year



¹⁵ Division of Services for the Blind, <http://www.ncdhhs.gov/dsb>

¹⁶ Division of Services for the Blind, Vocational Rehabilitation for the Blind, <https://www.ncdhhs.gov/assistance/vision-loss/vocational-rehabilitation-for-blind>

Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit. Analyses included the development of post-exit employment rates (Figure 26) and wage statistics (Figure 27) for up to five years after exit (also see Table 7). One-year post-exit employment rates ranged from a low of 46% for the 2012-2013 exiters to a high of 54% for the 2015-2016 exiters. One-year post-exit median wages were stable over time, ranging from \$14,571 for the 2013-2014 program year exiters to a high of \$15,708 for the 2012-2013 exiters.

Figure 26. Percentage of DSB Vocational Rehabilitation Program Exiters Employed in North Carolina After Exit, by Year of Exit

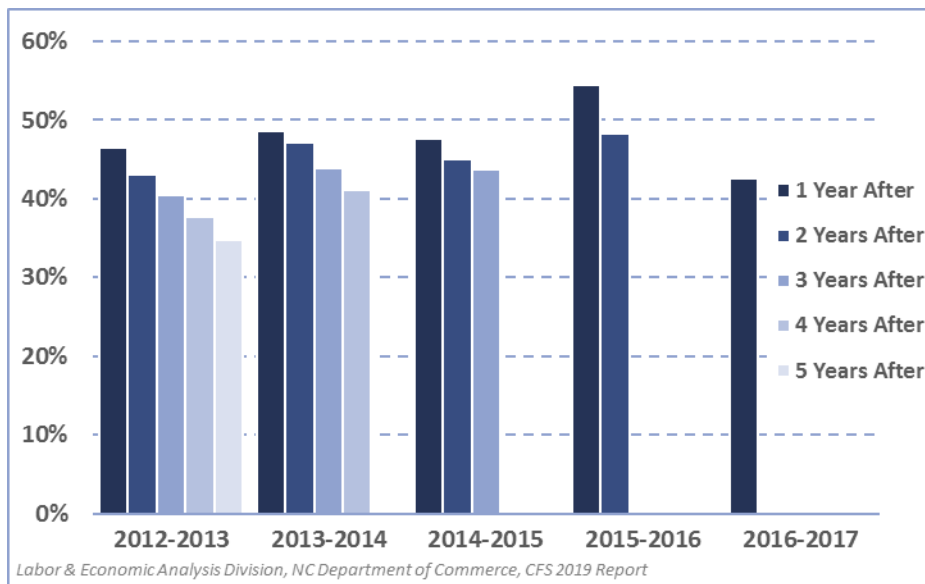
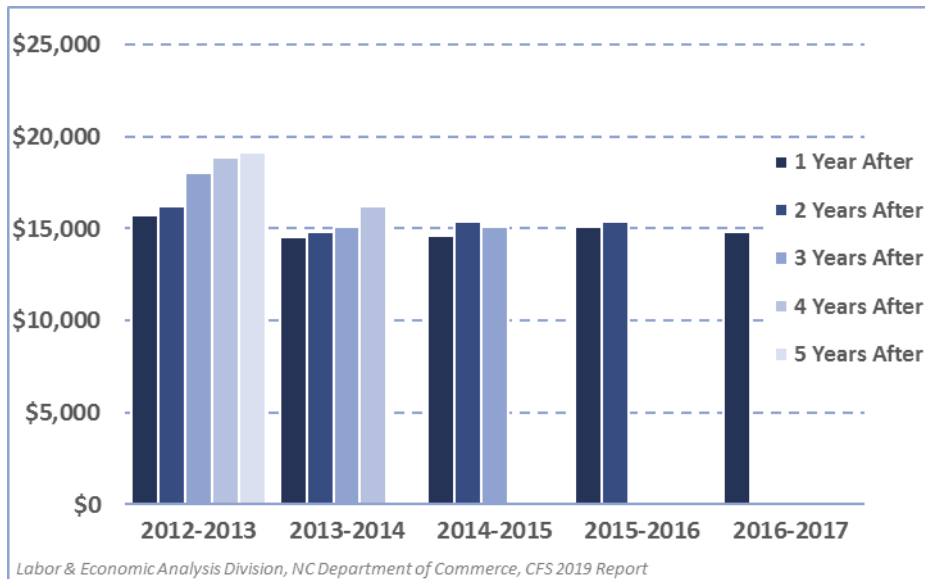


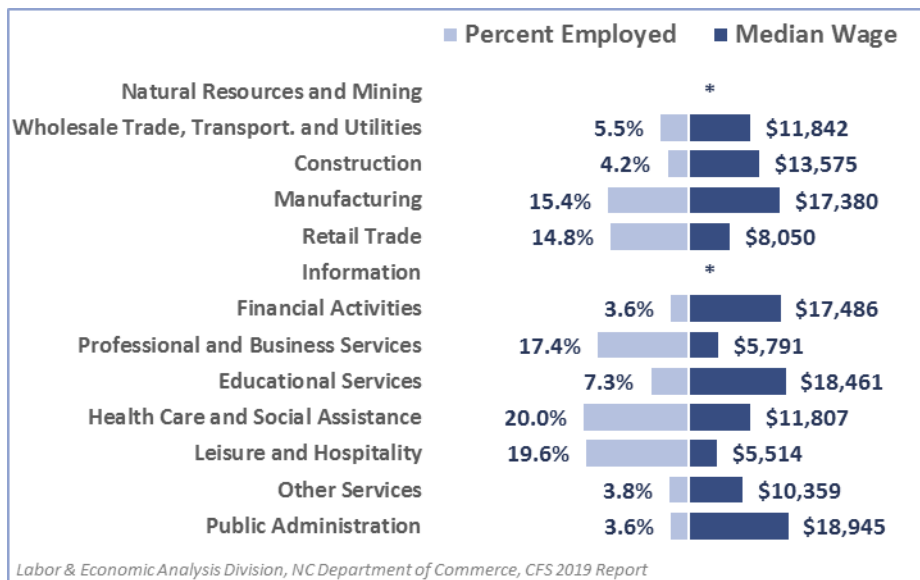
Figure 27. Median Wage of DSB Vocational Rehabilitation Program Exiters in North Carolina, by Year of Exit



Longer term post-exit employment and wage measures show decreasing employment rates, combined with increasing wages over time, for all cohorts. Earlier cohorts show steeper decreases in employment rates compared to recent ones, while wage growth rates do not show a clear pattern across cohorts. However, earlier cohorts have data on as many as five years after program exit, whereas recent cohorts have fewer years of outcomes available. Emerging cohort-based patterns may change or become less prominent in the future.

In examining one-year post-exit wage and employment outcomes by industry (Figure 28) for the most recent cohort of Services for the Blind Vocational Rehabilitation program exiters (2016-2017), industries employing these former program participants include Health Care and Social Assistance (20%), Leisure and Hospitality (19.6%), Professional and Business Services (17.4%), Manufacturing (15.4%), and Retail Trade (14.8%), and. Of these, Manufacturing and Health Care and Social Assistance have the highest annual median wage among program exiters (\$17,380 and \$11,807, respectively).

Figure 28. 2016-2017 DSB Vocational Rehabilitation Program Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



» Summary and Recommendations

Overall, the results show fluctuations in the short-term employment rates, and increases in the short-term median wages, for DSB program exiters. This is indicated by the one-year post-exit employment and wage trends. However, when exiters are followed over longer periods of time the employment rate tends to decline. This decline could be attributable to several factors, including people not sustaining employment, moving out of state, or finding employment in jobs not covered by North Carolina's unemployment insurance laws.

Over time, the median wages of DSB exiters increased within each cohort. For example, the 2012-2013 cohort saw one-year post-exit median wages of \$15,708 increase to \$19,176 four years post exit. By contrast, the 2017 annual median wage in North Carolina for all persons employed in unemployment insurance-covered jobs was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-

person household and \$16,240 for a two-person household.¹⁷ While the annual median post-exit wage of DSB clients is below the state's annual median, it exceeds the federal poverty guidelines for a one- or two-person household, and shows annual growth for those individuals who are employed after exit.

As previously noted, part of the requirement of the new WIOA is the development of an integrated service delivery plan that includes the coordination between WIOA, Wagner-Peyser, Adult Basic Education and Vocational Rehabilitation programs. It is recommended that North Carolina's integrated service delivery plan and implementation continue to focus on the leveraging of resources and services across these programs and focus on achieving higher employment and wage outcomes for all participants and the acquisition of increased occupational skills and educational credentials.

¹⁷ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 7. DSB Vocational Rehabilitation Program Participants and Exiters, Outcomes One Through Five Years After Exit, Overall and By Industry

Department of Health and Human Services										Common Follow-up System: Evaluative Measures, 2019 Report						
Services for the Blind - Employment and Training Program										Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce						
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		3,737	3,656	3,213	3,244	3,153	3,737	3,656	3,213	3,244	3,737	3,656	3,213	3,737	3,656	3,737
Exiters		868	1,213	978	788	1,190	868	1,213	978	788	868	1,213	978	868	1,213	868
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exiters Employed In North Carolina		N 403 46%	590 49%	466 48%	429 54%	506 43%	374 43%	571 47%	440 45%	380 48%	351 40%	532 44%	428 44%	327 38%	499 41%	302 35%
Exiters' Wages in North Carolina		Mean \$17,825 \$15,708	\$16,813 \$14,571	\$16,746 \$14,639	\$17,603 \$15,118	\$18,112 \$14,793	\$18,539 \$16,211	\$17,918 \$14,858	\$17,853 \$15,361	\$18,621 \$15,416	\$20,415 \$18,011	\$18,696 \$15,108	\$18,035 \$15,096	\$21,675 \$18,900	\$19,909 \$16,196	\$21,930 \$19,176
Exiters Enrolled in NC Public Higher Education		N 54 6%	97 8%	67 7%	44 6%	72 6%	51 6%	64 5%	55 6%	39 5%	36 4%	74 6%	46 5%	30 3%	54 4%	30 3%
Exiters Enrolled in NC Public Education, Employment, or Training Program		N 103 12%	218 18%	177 18%	99 13%	203 17%	124 14%	360 30%	170 17%	129 16%	107 12%	197 16%	152 16%	92 11%	172 14%	98 11%
Exiters Enrolled or Employed in NC		N 430 50%	664 55%	522 53%	454 58%	579 49%	417 48%	734 61%	499 51%	423 54%	387 45%	598 49%	478 49%	360 41%	555 46%	348 40%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*					*				*			*		*
Wholesale Trade, Transport. and Utilities		5.7%	5.4%	5.6%	5.1%	5.5%	5.6%	5.6%	6.6%	5.5%	4.0%	6.8%	6.1%	5.8%	7.6%	6.3%
Construction		4.7%	3.4%	5.6%	4.0%	4.2%	4.8%	5.6%	5.0%	3.9%	4.3%	4.9%	5.8%	4.3%	4.4%	5.0%
Manufacturing		12.9%	12.5%	14.8%	14.9%	15.4%	15.2%	13.0%	14.3%	16.8%	14.0%	13.7%	14.5%	15.3%	14.4%	15.9%
Retail Trade		13.6%	19.5%	19.7%	20.0%	14.8%	15.0%	20.3%	18.0%	19.5%	15.1%	19.2%	20.1%	14.7%	17.4%	15.6%
Information		*					*				2.1%			*		*
Financial Activities		2.5%	3.9%	*	2.6%	3.6%	2.9%	3.9%	*	2.6%	3.4%	2.8%	*	3.7%	3.2%	3.6%
Professional and Business Services		19.9%	20.0%	22.1%	21.7%	17.4%	19.8%	18.0%	20.5%	18.7%	19.9%	18.8%	17.1%	17.4%	19.0%	16.9%
Educational Services		5.2%	7.5%	8.6%	8.6%	7.3%	5.3%	8.1%	7.5%	9.2%	5.4%	7.7%	6.8%	5.2%	8.8%	5.3%
Health Care and Social Assistance		24.6%	19.0%	19.1%	18.4%	20.0%	21.9%	20.1%	18.2%	20.0%	22.5%	18.4%	20.3%	21.7%	18.0%	20.2%
Leisure and Hospitality		14.4%	18.0%	15.5%	16.1%	19.6%	13.9%	18.9%	15.5%	15.5%	12.5%	18.4%	15.2%	12.8%	20.2%	13.9%
Other Services		3.7%	4.6%	3.2%	4.2%	3.8%	3.7%	3.9%	3.6%	3.9%	5.4%	3.8%	2.8%	*	2.6%	3.6%
Public Administration		4.7%	3.4%	4.1%	3.3%	3.6%	5.3%	3.5%	4.8%	3.9%	5.4%	3.8%	4.2%	5.8%	3.4%	6.3%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*					*				*			*		*
Wholesale Trade, Transport. and Utilities		\$14,326	\$12,840	\$11,134	\$11,369	\$11,842	\$14,707	\$14,726	\$14,615	\$8,189	\$18,126	\$12,492	\$14,184	\$20,173	\$9,305	\$16,065
Construction		\$9,586	\$19,224	\$16,191	\$18,636	\$13,575	\$9,785	\$8,806	\$27,884	\$10,774	\$20,232	\$13,009	\$26,736	\$7,785	\$21,967	\$11,128
Manufacturing		\$16,268	\$17,208	\$14,860	\$16,755	\$17,380	\$16,185	\$17,689	\$18,284	\$16,593	\$16,629	\$19,736	\$15,352	\$17,703	\$18,310	\$19,004
Retail Trade		\$12,170	\$10,951	\$8,880	\$8,455	\$8,050	\$11,309	\$11,597	\$11,180	\$7,445	\$11,782	\$11,238	\$9,773	\$14,072	\$9,633	\$11,480
Information		*\$11,415					*				*\$16,549			*\$17,110		*
Financial Activities		\$19,687	\$18,525	*	\$6,143	\$17,486	\$20,174	\$16,478	*	\$6,657	\$27,966	\$27,660	*	\$27,220	\$16,556	\$31,312
Professional and Business Services		\$10,154	\$6,929	\$8,987	\$6,810	\$5,791	\$9,212	\$6,528	\$7,311	\$7,555	\$9,524	\$5,925	\$8,285	\$11,446	\$7,905	\$10,757
Educational Services		\$9,525	\$12,455	\$9,424	\$12,731	\$18,461	\$9,920	\$12,792	\$10,200	\$14,186	\$7,886	\$14,098	\$12,046	\$12,978	\$11,051	\$15,553
Health Care and Social Assistance		\$14,831	\$12,446	\$12,286	\$14,271	\$11,807	\$17,109	\$11,087	\$12,567	\$13,073	\$15,068	\$11,885	\$12,444	\$18,427	\$15,727	\$18,067
Leisure and Hospitality		\$6,325	\$7,403	\$6,052	\$5,643	\$5,514	\$7,976	\$6,146	\$9,424	\$7,168	\$11,412	\$7,361	\$6,495	\$9,174	\$6,073	\$6,516
Other Services		\$14,126	\$5,231	\$5,492	\$13,913	\$10,359	\$20,823	\$4,311	\$4,633	\$11,864	\$14,269	\$4,568	\$8,690	*	\$8,250	\$15,261
Public Administration		\$25,545	\$11,306	\$13,362	\$13,787	\$18,945	\$20,438	\$10,624	\$16,432	\$18,299	\$26,557	\$11,417	\$16,405	\$29,402	\$21,870	\$28,855
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*					*				*			*		*
Wholesale Trade, Transport. and Utilities		\$17,533	\$17,727	\$17,029	\$14,952	\$17,730	\$16,919	\$20,405	\$18,569	\$14,590	\$20,529	\$18,403	\$18,516	\$18,991	\$18,160	\$18,414
Construction		\$16,002	\$21,787	\$18,524	\$21,721	\$24,074	\$16,949	\$17,751	\$24,487	\$21,123	\$21,062	\$21,347	\$22,151	\$14,981	\$24,271	\$16,744
Manufacturing		\$18,336	\$19,346	\$15,453	\$19,922	\$19,333	\$15,339	\$22,611	\$19,048	\$19,467	\$17,978	\$22,680	\$18,632	\$20,311	\$21,298	\$20,737
Retail Trade		\$12,410	\$11,512	\$11,097	\$10,669	\$10,802	\$11,817	\$11,841	\$11,998	\$9,562	\$13,458	\$12,518	\$11,996	\$14,869	\$13,005	\$14,653
Information		*\$10,841					*				*\$22,329			*\$20,516		*
Financial Activities		\$20,052	\$28,621	*	\$27,819	\$21,772	\$19,464	\$26,784	*	\$30,348	\$26,753	\$37,787	*	\$26,023	\$33,541	\$25,333
Professional and Business Services		\$13,528	\$12,340	\$12,277	\$9,968	\$13,768	\$12,620	\$12,095	\$12,550	\$11,941	\$13,659	\$11,890	\$14,952	\$16,082	\$13,172	\$15,635
Educational Services		\$16,137	\$14,606	\$12,573	\$18,122	\$24,927	\$17,512	\$15,027	\$14,608	\$18,819	\$16,666	\$16,831	\$15,357	\$19,980	\$15,349	\$21,271
Health Care and Social Assistance		\$16,444	\$14,396	\$13,950	\$16,828	\$13,457	\$19,567	\$13,407	\$14,935	\$17,505	\$20,271	\$14,107	\$15,101	\$21,386	\$16,852	\$21,427
Leisure and Hospitality		\$8,483	\$8,072	\$9,361	\$8,632	\$8,334	\$9,449	\$8,020	\$11,144	\$8,810	\$12,780	\$9,200	\$9,821	\$11,809	\$9,285	\$10,990
Other Services		\$15,061	\$9,340	\$9,425	\$13,362	\$13,586	\$19,071	\$8,953	\$9,027	\$13,739	\$16,059	\$8,820	\$12,316	*	\$11,020	\$16,632
Public Administration		\$23,882	\$13,889	\$17,611	\$17,543	\$25,774	\$23,467	\$13,282	\$17,382	\$20,882	\$27,237	\$15,678	\$18,094	\$28,896	\$20,915	\$27,437

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

North Carolina Community College System (NCCCS)

Career and Technical Education (CTE) Programs

» Overview of CTE Programs

North Carolina's Community Colleges offer a diverse set of programs aimed at minimizing barriers to high-quality post-secondary education and developing a competent workforce. Curriculum programs range in length from one semester to two years and include a wide variety of programs offered within the area of Applied Sciences, as well as College Transfer and General Education programs in areas including, but not limited to, Arts and Sciences.

Academic credentials conferred by curriculum programs may include certificates, diplomas, or associate degrees, depending on the specific area and program.¹⁸ Certificate programs are curriculum programs designed to provide entry-level, employment-related training, ranging from 12 to 18 semester credit hours, and with full-time enrollment can usually be completed within one semester. Diploma programs are longer curriculum programs also designed to provide entry-level employment-related training. They range from 36 to 48 semester credit hours, and with full-time enrollment can usually be completed within two semesters and one summer session. Associate degree programs are planned academic curriculum programs designed to provide students with employment-related training or academic preparation for college transfer to a four-year institution. Associate degree programs typically include 60 to 76 semester credit hours and can usually be completed within four semesters by a full-time student.

This report focuses on Career and Technical Education (CTE) programs as they are related to employment and workforce training. CTE programs are a subset of Applied Science curriculum programs.

All of North Carolina's community colleges offer applied science programs. Over 200 certificate, diploma, and associate degree programs are offered in applied sciences, with each of these courses of study falling into one of ten broad fields: agricultural and natural resource technologies, biological and chemical technologies, business technologies, commercial and artistic production technologies, construction technologies, engineering technologies, health sciences, industrial technologies, public service technologies, and transport systems technologies.

Nearly all of the curriculum programs in the applied sciences receive funding through the U.S. Department of Education's Carl D. Perkins Career and Technical Educational Act of 2006; in this report, these are referred to as Career and Technical Education programs.¹⁹ The Perkins Act is intended to more fully develop the academic, vocational, and technical skills of secondary and postsecondary students who elect to enroll in vocational and technical education programs. The North Carolina Department of Public Instruction (DPI) is the recipient of the Federal Perkins Act funds and works in collaboration with the North Carolina Community College System to

¹⁸ North Carolina Community College System, <http://www.ncccommunitycolleges.edu/academic-programs/nc-community-college-system-catalog>

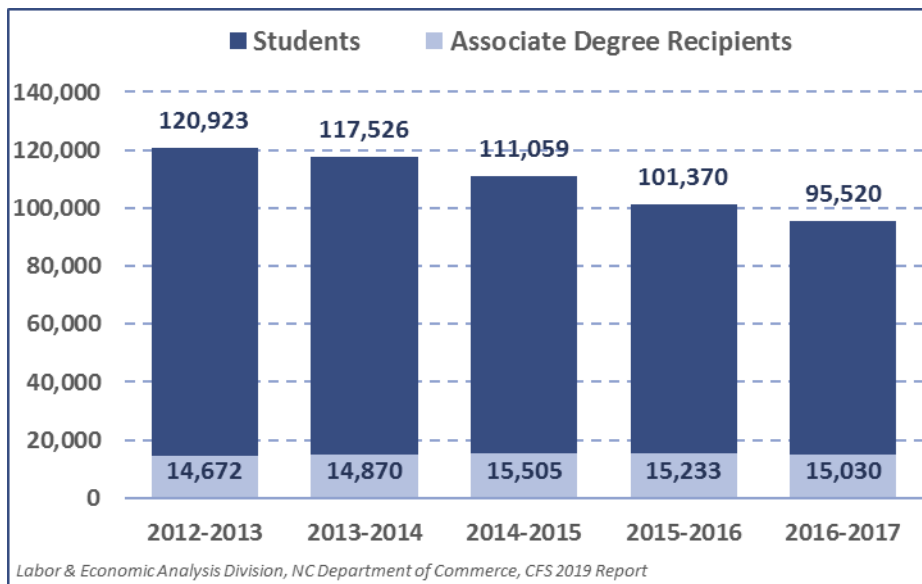
¹⁹ The Strengthening Career and Technical Education for the 21st Century (Perkins V) Act replaces the Perkins Act of 2006 (Perkins IV). This act will go into effect on July 1, 2019.

implement and deliver the programs and activities required under the Perkins Act. Funding is split between DPI and NCCCS. Perkins Act programs are also required partners under WIOA.

» CTE Associate Degree Program Outcomes

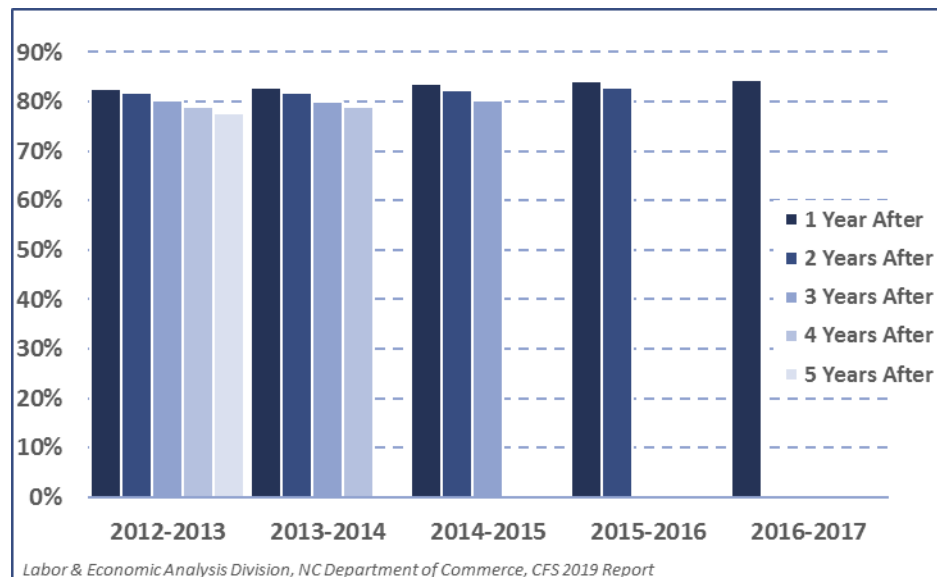
As shown in Figure 29, participation in CTE associate degree programs declined throughout the period studied, with the number of students decreasing from 120,923 in the 2012-2013 program year to 95,520 in 2016-2017. Students who were recorded as having graduated from an associate degree program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion. The number of CTE associate degree program completers trended slightly upward through 2014-2015 program year, followed by a slight decline in the subsequent two years.

Figure 29. NCCCS CTE Associate Degree Program Participants and Completers by Program Year



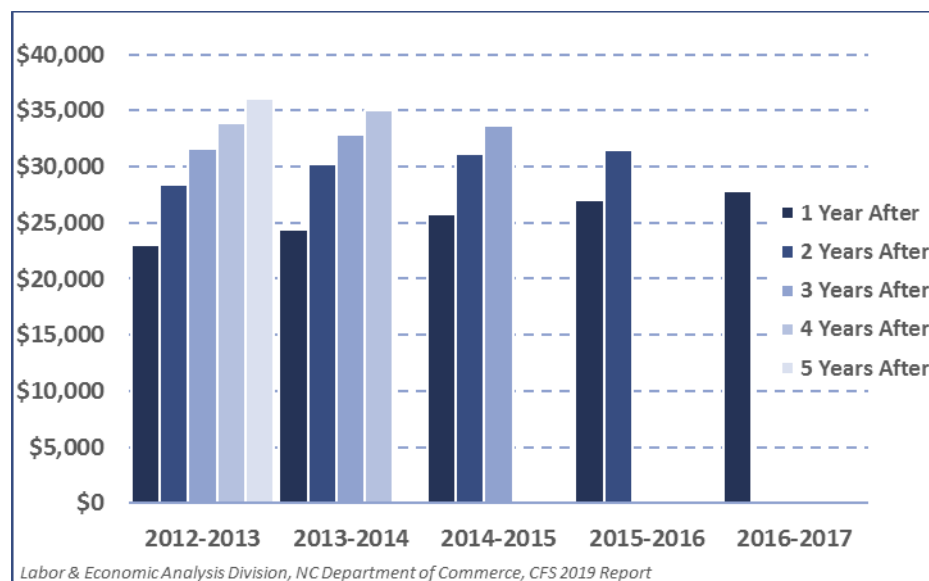
The rate of employment in North Carolina one year after graduation consistently stayed at 83% to 84% across all cohorts, while the rate of subsequent enrollment in public higher education programs ranged from 29% to 31% (see Figure 30 and Table 8). Both employment rates and subsequent enrollment one year after graduation showed minimal fluctuation across cohorts.

Figure 30. Percentage of NCCCS CTE Associate Degree Completers Employed in North Carolina After Degree Conferment, by Year of Graduation



Wage earnings at one year after graduation increased with each successive cohort (Figure 31). Median wage earnings increased from \$22,986 for the cohort graduating in 2012-2013 to \$27,865 for the cohort graduating in 2016-2017 (Table 8).

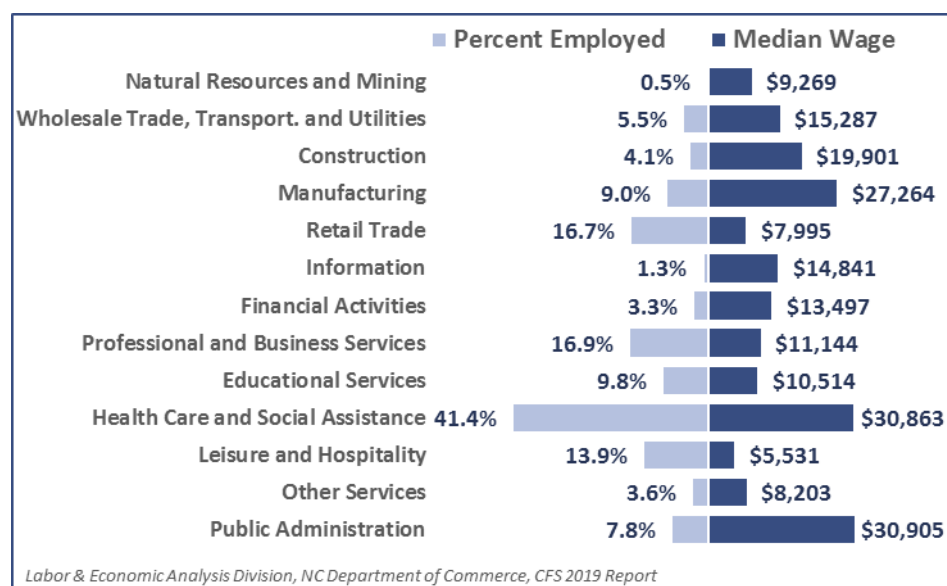
Figure 31. Median Wage of NCCCS CTE Associate Degree Completers in North Carolina, by Year of Graduation



In all cohorts examined here, the share of CTE associate degree recipients employed in North Carolina declined slightly when followed over time; for instance, the employment rate for 2012-2013 graduates declined from 83% after one year to 78% after five years (Table 8). Those who were employed in North Carolina saw their wages continue to increase in each year after graduation. For example, the annual median wage for the 2012-2013 cohort increased by 57% (from \$22,986 to \$36,086) over five years. CTE associate degree program

graduates were by far most likely to be employed in the Health Care and Social Assistance sector, due in part to the large number of students graduating from health science programs (see Appendix Tables 1, 2, 3, and 4); this was also one of the top-paying sectors for graduates across all cohorts (Figure 32).

Figure 32. 2016-2017 NCCCS CTE Associate Degree Completers One Year After Graduation: Percentage Employed and Median Wage by Industry



The outcomes for CTE associate degree recipients varied by the program of study (see Appendix Tables 1, 2, 3, and 4). One year after graduation, the 2012-2013 cohort saw median wages ranging from \$12,400 for commercial and artistic production technologies majors to \$33,346 for health sciences majors (Appendix Table 1). By the fifth year after graduation, health sciences majors earned a median wage of \$46,206, the second-highest after industrial technologies graduates, who earned \$48,371 five years after graduation. NCCCS graduates earning an associate in the area of health sciences also consistently had the highest rate of employment within North Carolina one year after graduation (ranging from 89% to 92%). This is consistent with the relatively higher employment rates and wages for associate degree recipients working in the Health Care and Social Assistance industry, as noted previously and shown above in Figure 32 for the most recent cohort (also see Table 8).

Graduates of the largest CTE program area, business technologies, had relatively high employment rates (75%-80%) in the first year for all cohorts, and their median earnings showed a steady increase. For the 2012-2013 graduating cohort, median wages increased from \$19,376 one year after graduation to \$31,558 in year five.

Table 8. NCCCS CTE Associate Degree Participants and Completers, Outcomes One Through Five Years After Graduation, Overall and By Industry

North Carolina Community College System							Common Follow-up System: Evaluative Measures, 2019 Report									
Associate Degree																
All Programs							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Students		120,923	117,526	111,059	101,370	95,520	120,923	117,526	111,059	101,370	120,923	117,526	111,059	120,923	117,526	120,923
Associate Degree Recipients		14,672	14,870	15,505	15,233	15,030	14,672	14,870	15,505	15,233	14,672	14,870	15,505	14,672	14,870	14,672
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Associate Degree Recipients Employed in North Carolina	N	12,132	12,318	12,976	12,816	12,675	11,984	12,160	12,747	12,603	11,775	11,892	12,443	11,595	11,741	11,382
	%	83%	83%	84%	84%	84%	82%	82%	82%	83%	80%	80%	80%	79%	79%	78%
Associate Degree Recipients' Wages in North Carolina	Mean	\$25,301	\$26,482	\$27,659	\$29,215	\$29,733	\$30,432	\$32,179	\$33,138	\$33,717	\$33,746	\$35,294	\$35,501	\$36,437	\$37,306	\$38,514
	Median	\$22,986	\$24,350	\$25,798	\$27,000	\$27,865	\$28,385	\$30,208	\$31,094	\$31,497	\$31,633	\$32,836	\$33,656	\$33,916	\$35,083	\$36,086
Graduates Enrolled in NC Public Higher Education	N	4,411	4,683	4,633	4,549	4,372	3,924	3,844	3,993	3,809	3,322	3,369	3,455	2,812	2,707	2,426
	%	30%	31%	30%	30%	29%	27%	26%	26%	25%	23%	23%	22%	19%	18%	17%
Graduates Enrolled in NC Public Education, Employment, or Training Program	N	6,124	6,263	6,110	5,787	5,625	5,195	4,928	4,968	4,794	4,357	4,280	4,440	3,734	3,609	3,314
	%	42%	42%	39%	38%	37%	35%	33%	32%	31%	30%	29%	29%	25%	24%	23%
Graduates Enrolled or Employed in NC	N	13,163	13,330	13,900	13,687	13,442	12,748	12,859	13,432	13,188	12,341	12,416	12,993	12,026	12,131	11,711
	%	90%	90%	90%	90%	89%	87%	86%	87%	87%	84%	83%	84%	82%	82%	80%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.5%	0.4%	0.5%	0.6%	0.5%	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.3%	0.5%
Wholesale Trade, Transport. and Utilities		5.1%	5.2%	5.6%	5.5%	5.5%	5.3%	5.3%	6.0%	5.3%	5.6%	5.5%	6.2%	5.9%	5.7%	5.9%
Construction		3.0%	3.3%	3.6%	3.6%	4.1%	3.1%	3.1%	3.6%	3.6%	3.1%	3.2%	3.4%	3.4%	3.1%	3.3%
Manufacturing		8.5%	8.8%	8.6%	8.7%	9.0%	9.2%	9.6%	9.0%	9.4%	9.8%	10.2%	9.5%	10.1%	10.3%	10.3%
Retail Trade		17.4%	16.8%	16.8%	16.4%	16.7%	14.3%	12.9%	13.0%	13.4%	12.2%	11.8%	11.9%	11.2%	10.7%	10.5%
Information		1.4%	1.3%	1.6%	1.4%	1.3%	1.6%	1.4%	1.5%	1.4%	1.6%	1.4%	1.5%	1.8%	1.4%	1.6%
Financial Activities		3.6%	3.4%	3.7%	3.4%	3.3%	3.5%	3.6%	3.5%	3.5%	3.8%	3.8%	3.7%	3.9%	4.3%	4.1%
Professional and Business Services		19.8%	19.6%	18.4%	18.0%	16.9%	18.1%	17.2%	16.8%	16.4%	16.9%	16.4%	15.8%	16.2%	15.9%	15.6%
Educational Services		9.3%	9.4%	8.7%	9.8%	9.8%	9.0%	9.1%	9.6%	10.4%	9.4%	10.2%	10.3%	10.4%	10.5%	10.9%
Health Care and Social Assistance		40.6%	41.7%	41.0%	42.1%	41.4%	40.7%	41.8%	40.7%	41.0%	40.9%	41.1%	39.9%	39.8%	40.3%	39.2%
Leisure and Hospitality		13.7%	14.4%	13.3%	14.0%	13.9%	10.4%	10.8%	10.0%	10.1%	8.8%	9.4%	9.0%	8.1%	8.2%	7.4%
Other Services		3.5%	3.2%	3.9%	3.7%	3.6%	3.1%	2.8%	3.4%	3.3%	3.0%	2.4%	3.2%	2.9%	2.5%	2.7%
Public Administration		7.2%	7.6%	7.4%	7.9%	7.8%	7.5%	8.1%	8.2%	8.5%	8.1%	8.8%	8.9%	8.7%	9.1%	9.2%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$9,893	\$11,075	\$13,777	\$12,147	\$9,269	\$12,865	\$11,500	\$21,974	\$25,769	\$15,633	\$19,731	\$18,808	\$11,683	\$30,055	\$16,004
Wholesale Trade, Transport. and Utilities		\$17,072	\$14,653	\$16,705	\$14,629	\$15,287	\$24,320	\$20,900	\$23,364	\$22,342	\$25,097	\$25,724	\$25,972	\$28,146	\$27,875	\$31,003
Construction		\$14,384	\$11,205	\$17,044	\$18,288	\$19,901	\$17,416	\$17,521	\$23,022	\$20,484	\$23,307	\$23,011	\$28,871	\$25,570	\$24,218	\$30,977
Manufacturing		\$22,228	\$25,080	\$25,210	\$25,270	\$27,264	\$30,910	\$32,383	\$32,801	\$32,481	\$34,297	\$35,557	\$35,617	\$36,568	\$38,862	\$39,456
Retail Trade		\$6,851	\$6,441	\$6,522	\$7,960	\$7,995	\$8,861	\$9,862	\$10,269	\$11,135	\$11,328	\$12,910	\$12,205	\$12,962	\$12,825	\$14,182
Information		\$19,250	\$15,212	\$12,554	\$14,561	\$14,841	\$24,600	\$19,848	\$20,075	\$21,524	\$28,524	\$27,773	\$27,007	\$29,491	\$31,702	\$32,767
Financial Activities		\$11,035	\$14,617	\$14,995	\$16,256	\$13,497	\$19,220	\$22,282	\$24,260	\$23,986	\$21,596	\$24,875	\$26,788	\$26,980	\$27,038	\$30,176
Professional and Business Services		\$8,914	\$9,693	\$9,764	\$9,873	\$11,144	\$11,556	\$13,404	\$12,619	\$13,665	\$14,862	\$15,632	\$16,434	\$18,315	\$18,022	\$19,127
Educational Services		\$8,744	\$8,725	\$8,978	\$10,757	\$10,514	\$13,475	\$11,807	\$15,201	\$16,605	\$16,742	\$15,908	\$18,405	\$19,576	\$19,312	\$21,862
Health Care and Social Assistance		\$26,212	\$25,989	\$28,850	\$30,361	\$30,863	\$32,788	\$34,308	\$35,351	\$35,000	\$34,540	\$35,371	\$35,528	\$35,421	\$36,055	\$36,099
Leisure and Hospitality		\$5,506	\$5,792	\$5,256	\$5,404	\$5,531	\$7,429	\$6,985	\$6,416	\$6,433	\$7,605	\$7,441	\$6,678	\$7,554	\$8,145	\$8,575
Other Services		\$6,933	\$7,214	\$7,466	\$6,457	\$8,203	\$9,535	\$10,042	\$12,162	\$9,782	\$11,823	\$13,644	\$14,736	\$14,455	\$13,852	\$18,047
Public Administration		\$25,185	\$27,916	\$28,195	\$28,931	\$30,905	\$32,486	\$33,605	\$33,494	\$35,134	\$34,718	\$36,035	\$36,030	\$36,362	\$37,938	\$36,967
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$17,594	\$13,398	\$17,049	\$18,452	\$15,490	\$21,047	\$16,509	\$24,088	\$24,294	\$20,413	\$20,449	\$22,075	\$19,530	\$26,156	\$21,351
Wholesale Trade, Transport. and Utilities		\$22,083	\$20,973	\$22,007	\$20,695	\$21,533	\$26,516	\$25,803	\$26,196	\$25,772	\$28,622	\$29,178	\$28,900	\$31,411	\$31,705	\$34,280
Construction		\$18,828	\$16,584	\$20,422	\$20,822	\$21,660	\$21,987	\$21,813	\$25,421	\$23,132	\$25,772	\$24,937	\$29,013	\$28,057	\$27,913	\$33,474
Manufacturing		\$26,359	\$27,705	\$27,908	\$28,338	\$29,034	\$32,095	\$33,990	\$34,011	\$33,815	\$35,798	\$37,001	\$36,631	\$38,039	\$40,000	\$40,686
Retail Trade		\$10,107	\$10,374	\$10,626	\$11,989	\$11,995	\$12,985	\$14,001	\$14,290	\$15,306	\$15,391	\$16,262	\$16,165	\$16,983	\$17,505	\$18,574
Information		\$22,296	\$23,082	\$20,806	\$20,082	\$19,314	\$26,039	\$27,831	\$26,841	\$23,598	\$29,178	\$31,287	\$29,564	\$29,642	\$35,920	\$34,060
Financial Activities		\$16,275	\$18,712	\$18,899	\$19,576	\$18,156	\$20,885	\$23,120	\$24,743	\$24,646	\$24,506	\$25,174	\$27,040	\$28,289	\$27,857	\$31,474
Professional and Business Services		\$13,557	\$14,899	\$14,919	\$14,928	\$16,647	\$17,075	\$18,683	\$18,515	\$18,584	\$20,425	\$20,763	\$21,615	\$22,878	\$23,419	\$24,469
Educational Services		\$13,100	\$13,133	\$13,462	\$14,407	\$14,523	\$16,841	\$15,992	\$17,144	\$18,395	\$18,558	\$18,049	\$19,308	\$20,517	\$20,658	\$22,990
Health Care and Social Assistance		\$26,735	\$26,886	\$29,288	\$30,739	\$31,434	\$32,517	\$34,003	\$35,369	\$35,722	\$34,919	\$36,139	\$36,382	\$36,909	\$36,783	\$37,520
Leisure and Hospitality		\$8,943	\$9,038	\$8,862	\$9,150	\$9,337	\$11,108	\$11,216	\$11,056	\$10,635	\$12,018	\$12,599	\$12,065	\$12,991	\$13,612	\$13,764
Other Services		\$11,156	\$11,349	\$12,472	\$12,219	\$12,799	\$13,878	\$14,602	\$15,997	\$15,118	\$16,392	\$18,153	\$18,244	\$19,387	\$18,603	\$22,262
Public Administration		\$25,436	\$27,264	\$28,110	\$28,440	\$29,849	\$30,872	\$32,136	\$32,841	\$33,328	\$33,198	\$34,650	\$35,109	\$35,281	\$37,145	\$36,690

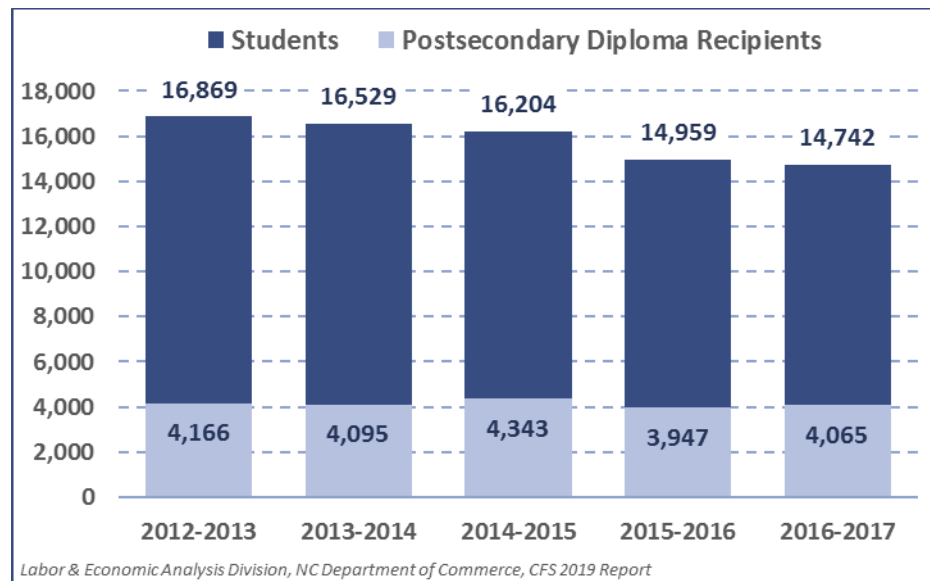
* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» CTE Diploma Program Outcomes

As shown in Figure 33, participation in CTE diploma programs declined slightly throughout the period studied, with the number of students decreasing from 16,869 in the 2012-2013 program year to 14,742 in 2016-2017. Students who were recorded as having graduated from a diploma program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion.

The number of CTE diploma program completers fluctuated from year to year, ranging from 3,947 to 4,343.

Figure 33. NCCCS CTE Diploma Program Participants and Completers by Program Year



The rate of employment in North Carolina one year after earning a CTE diploma ranged from 81% to 84% (see Figure 34 and Table 9). The rate of subsequent enrollment in public higher education programs ranged from 36% and 39%, with both employment and subsequent enrollment outcomes fluctuating from cohort to cohort (Table 9).

Wage earnings one year after graduation increased with each successive cohort (see Figure 35 and Table 9). Median wage earnings increased from \$21,066 for the cohort graduating in 2012-2013 to \$25,629 for the 2016-2017 graduates.

Figure 34. Percentage of NCCCS CTE Diploma Recipients Employed in North Carolina After Completion, by Year of Graduation

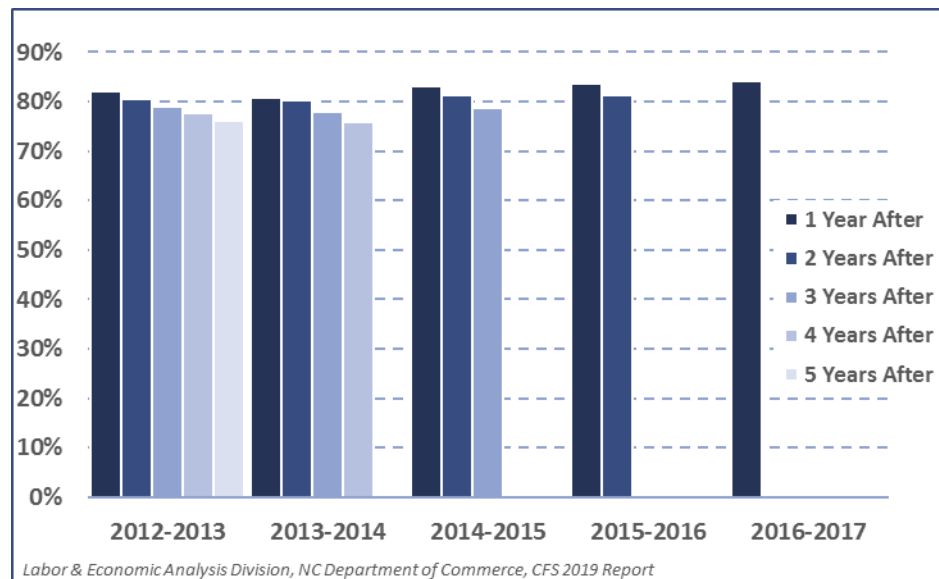
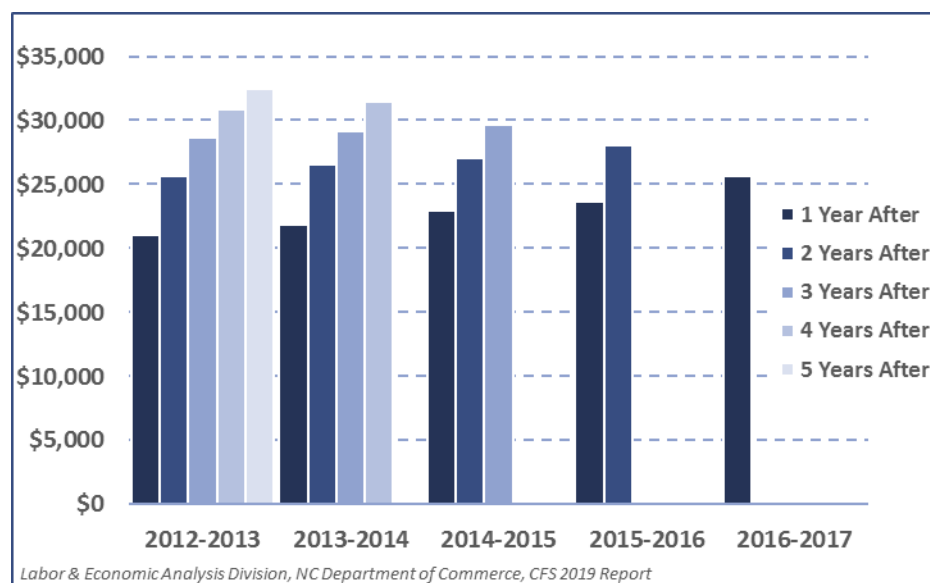


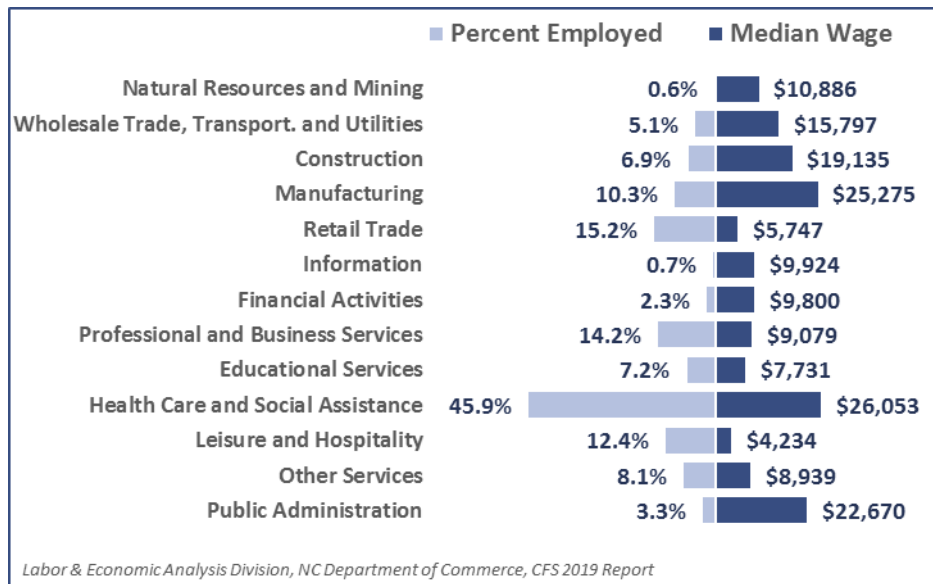
Figure 35. Median Wage of NCCCS CTE Diploma Recipients in North Carolina, by Year of Graduation



The share of CTE diploma recipients employed in North Carolina declined slightly over time. For instance, the employment rate for 2012-2013 graduates declined from 82% after one year to 76% after five years. Of those CTE Diploma recipients who were employed, wages continued to increase each year after graduation.

These graduates were by far most likely to be employed in the Health Care and Social Assistance sector (Figure 36), due in part to the large number of students graduating from health science programs. This was also one of the top-paying industries for graduates across all cohorts.

Figure 36. 2016-2017 NCCCS CTE Diploma Recipients One Year After Graduation: Percentage Employed and Median Wage by Industry



The outcomes of CTE diploma recipients varied widely by the program of study (see Appendix Tables 5, 6, 7, and 8). In the first year after graduation, the 2012-2013 cohort saw median wages ranging from \$12,012 for public service technologies majors to \$24,731 for health sciences majors (Appendix Table 5). By the fifth year after graduation, health sciences majors earned a median wage of \$34,689, the second highest earning diploma program area after industrial technologies majors (\$37,309) as the top-earning diploma program group. For all cohorts, health sciences graduates also had the highest employment rate within North Carolina, with one-year employment rates of 88% to 92% depending on the cohort. This is consistent with the relatively higher employment rates and wages for CTE diploma recipients working in the Health Care and Social Assistance industry, as noted previously and shown above in Figure 36 for the most recent cohort (also see Table 9).

Table 9. NCCCS CTE Diploma Program Participants and Completers, Outcomes One Through Five Years After Graduation, Overall and By Industry

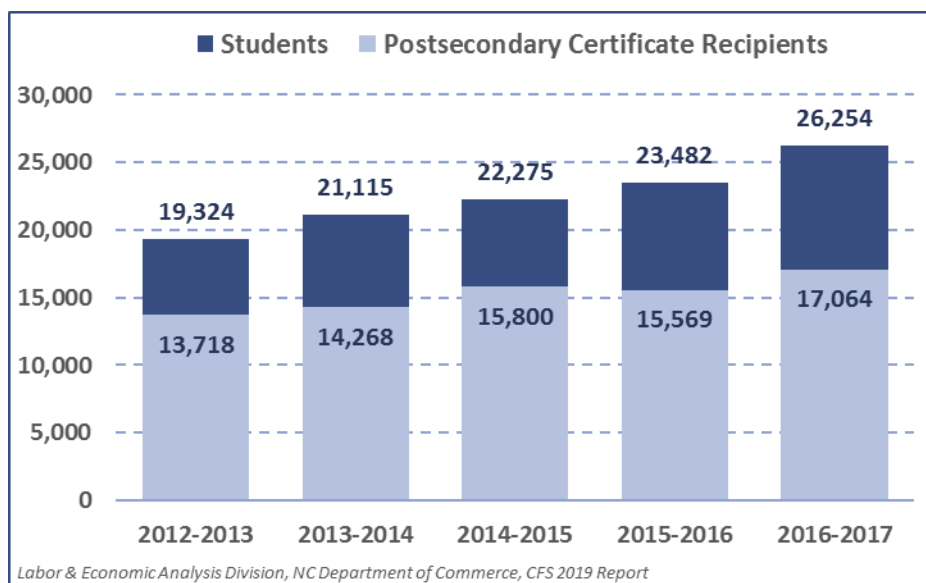
North Carolina Community College System							Common Follow-up System: Evaluative Measures, 2019 Report									
Postsecondary Diploma																
All Programs							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Students		16,869	16,529	16,204	14,959	14,742	16,869	16,529	16,204	14,959	16,869	16,529	16,204	16,869	16,529	16,869
Postsecondary Diploma Recipients		4,166	4,095	4,343	3,947	4,065	4,166	4,095	4,343	3,947	4,166	4,095	4,343	4,166	4,095	4,166
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Postsecondary Diploma Recipients Employed in North Carolina	N	3,417	3,308	3,604	3,296	3,422	3,351	3,291	3,529	3,206	3,290	3,189	3,419	3,235	3,104	3,170
	%	82%	81%	83%	84%	84%	80%	80%	81%	81%	79%	78%	79%	78%	76%	76%
Postsecondary Diploma Recipients' Wages in North Carolina	Mean	\$21,850	\$23,046	\$23,467	\$24,403	\$26,380	\$26,001	\$27,351	\$27,398	\$28,665	\$29,295	\$30,078	\$30,397	\$31,819	\$32,641	\$33,638
	Median	\$21,066	\$21,834	\$22,992	\$23,614	\$25,629	\$25,658	\$26,521	\$27,070	\$28,006	\$28,612	\$29,120	\$29,643	\$30,874	\$31,406	\$32,412
Graduates Enrolled in NC Public Higher Education	N	1,586	1,587	1,592	1,506	1,450	1,105	1,044	1,123	936	889	828	774	770	609	615
	%	38%	39%	37%	38%	36%	27%	25%	26%	24%	21%	20%	18%	18%	15%	15%
Graduates Enrolled in NC Public Education, Employment, or Training Program	N	1,988	1,949	1,940	1,747	1,759	1,434	1,336	1,380	1,169	1,176	1,096	1,039	1,021	847	832
	%	48%	48%	45%	44%	43%	34%	33%	32%	30%	28%	27%	24%	25%	21%	20%
Graduates Enrolled or Employed in NC	N	3,762	3,694	3,916	3,577	3,677	3,561	3,469	3,721	3,358	3,433	3,323	3,539	3,359	3,209	3,265
	%	90%	90%	90%	91%	90%	85%	85%	86%	85%	82%	81%	81%	81%	78%	78%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.5%	0.3%	0.4%	0.5%	0.6%	0.4%	0.4%	0.3%	0.5%	0.4%	0.5%	*	0.5%	*	0.3%
Wholesale Trade, Transport. and Utilities		4.0%	4.5%	4.5%	5.2%	5.1%	4.3%	4.3%	5.0%	4.8%	4.7%	5.4%	4.9%	4.9%	5.4%	5.2%
Construction		5.3%	6.0%	5.5%	6.5%	6.9%	5.6%	5.3%	5.4%	6.2%	5.4%	4.8%	5.5%	5.3%	4.6%	5.5%
Manufacturing		7.5%	9.9%	9.4%	9.5%	10.3%	7.8%	9.6%	9.5%	10.2%	8.4%	10.5%	10.2%	8.7%	10.9%	9.2%
Retail Trade		15.7%	17.0%	16.1%	15.7%	15.2%	12.5%	12.9%	13.5%	12.9%	11.4%	12.3%	11.9%	10.5%	11.4%	10.3%
Information		0.6%	0.8%	1.0%	0.8%	0.7%	0.9%	0.9%	0.8%	0.7%	0.9%	0.8%	0.8%	0.9%	0.8%	0.8%
Financial Activities		2.9%	2.7%	3.0%	2.3%	2.3%	2.8%	3.2%	3.0%	2.6%	2.9%	3.3%	3.4%	3.2%	3.1%	3.3%
Professional and Business Services		17.9%	17.0%	14.7%	14.1%	14.2%	16.0%	14.3%	12.8%	12.2%	13.1%	14.0%	12.6%	12.3%	12.9%	11.9%
Educational Services		6.7%	5.5%	6.3%	7.1%	7.2%	6.1%	5.0%	7.1%	7.3%	6.2%	6.5%	7.3%	7.1%	6.8%	8.2%
Health Care and Social Assistance		48.3%	45.8%	46.3%	45.9%	45.9%	48.9%	46.4%	47.1%	46.2%	49.6%	45.7%	46.7%	49.1%	45.7%	48.5%
Leisure and Hospitality		13.1%	13.8%	14.7%	13.5%	12.4%	8.8%	10.1%	10.2%	9.5%	8.1%	8.9%	9.0%	7.5%	7.8%	7.0%
Other Services		7.5%	8.0%	7.5%	8.0%	8.1%	6.9%	7.5%	6.1%	7.0%	6.3%	6.5%	6.0%	5.2%	6.1%	5.1%
Public Administration		3.2%	3.2%	3.6%	3.5%	3.3%	3.6%	3.1%	3.6%	3.7%	3.8%	4.2%	4.1%	4.4%	3.8%	4.6%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$5,415	\$7,386	\$8,839	\$2,451	\$10,886	\$9,775	\$12,454	\$7,861	\$21,949	\$6,160	\$10,043	*	\$10,365	*	\$4,402
Wholesale Trade, Transport. and Utilities		\$11,779	\$13,815	\$14,732	\$14,581	\$15,797	\$19,023	\$20,608	\$23,045	\$26,948	\$23,214	\$20,416	\$26,824	\$27,635	\$24,960	\$24,660
Construction		\$13,932	\$15,319	\$14,233	\$17,132	\$19,135	\$17,901	\$20,785	\$20,790	\$24,101	\$24,213	\$26,686	\$22,316	\$27,032	\$32,667	\$29,728
Manufacturing		\$21,066	\$20,157	\$22,228	\$20,576	\$25,275	\$27,581	\$31,080	\$30,119	\$30,838	\$31,847	\$33,153	\$32,370	\$33,722	\$34,038	\$36,283
Retail Trade		\$5,750	\$5,803	\$6,130	\$5,523	\$5,747	\$8,309	\$9,131	\$8,868	\$7,719	\$8,889	\$11,798	\$9,888	\$10,523	\$13,601	\$10,892
Information		\$6,757	\$12,324	\$5,116	\$6,360	\$9,924	\$12,252	\$18,601	\$11,629	\$11,921	\$30,012	\$32,873	\$17,201	\$19,973	\$34,421	\$25,553
Financial Activities		\$6,249	\$12,829	\$10,000	\$7,753	\$9,800	\$11,709	\$11,972	\$14,653	\$15,468	\$16,476	\$13,464	\$16,068	\$26,239	\$26,908	\$29,249
Professional and Business Services		\$5,796	\$6,008	\$7,007	\$7,375	\$9,079	\$7,687	\$9,069	\$7,678	\$9,789	\$10,125	\$9,070	\$10,731	\$12,818	\$10,330	\$11,950
Educational Services		\$9,601	\$8,153	\$7,762	\$10,060	\$7,731	\$16,079	\$14,685	\$12,981	\$13,846	\$18,533	\$14,591	\$12,108	\$20,998	\$16,857	\$20,327
Health Care and Social Assistance		\$21,995	\$23,083	\$23,857	\$24,854	\$26,053	\$26,684	\$26,917	\$26,698	\$27,725	\$28,985	\$28,776	\$29,561	\$30,510	\$30,370	\$31,732
Leisure and Hospitality		\$4,093	\$4,545	\$3,895	\$3,583	\$4,234	\$5,639	\$6,016	\$5,253	\$5,269	\$4,983	\$5,813	\$5,617	\$6,012	\$6,522	\$6,258
Other Services		\$9,084	\$8,575	\$8,064	\$10,742	\$8,939	\$11,112	\$12,282	\$15,921	\$17,087	\$12,292	\$16,904	\$15,798	\$17,740	\$17,680	\$18,215
Public Administration		\$22,438	\$16,917	\$17,500	\$11,977	\$22,670	\$27,096	\$31,486	\$29,285	\$27,162	\$29,407	\$28,240	\$32,759	\$30,428	\$35,763	\$30,918
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$9,122	\$15,268	\$16,403	\$9,737	\$16,903	\$17,481	\$17,712	\$23,527	\$18,308	\$21,928	\$20,375	*	\$19,145	*	\$22,740
Wholesale Trade, Transport. and Utilities		\$16,889	\$19,465	\$18,233	\$19,657	\$20,678	\$22,496	\$25,173	\$23,538	\$26,731	\$25,969	\$25,345	\$27,193	\$30,439	\$28,856	\$29,497
Construction		\$15,967	\$17,150	\$18,830	\$19,836	\$20,183	\$21,258	\$22,313	\$23,897	\$24,072	\$25,448	\$28,679	\$25,209	\$27,979	\$32,964	\$29,400
Manufacturing		\$22,208	\$25,133	\$25,618	\$24,589	\$27,582	\$27,951	\$32,452	\$31,222	\$31,614	\$32,170	\$33,778	\$33,643	\$34,671	\$35,838	\$37,013
Retail Trade		\$8,267	\$8,626	\$9,322	\$9,657	\$10,679	\$10,785	\$12,618	\$12,144	\$12,514	\$12,647	\$14,543	\$13,221	\$13,932	\$16,804	\$15,164
Information		\$13,955	\$21,715	\$16,140	\$12,961	\$18,261	\$19,075	\$24,427	\$23,115	\$18,091	\$24,822	\$29,604	\$27,441	\$21,129	\$30,715	\$26,360
Financial Activities		\$12,480	\$17,483	\$15,289	\$16,512	\$16,187	\$15,513	\$17,835	\$18,935	\$20,725	\$19,056	\$21,403	\$21,508	\$25,486	\$28,345	\$28,578
Professional and Business Services		\$9,964	\$10,291	\$11,459	\$12,386	\$14,274	\$13,217	\$14,560	\$14,185	\$15,513	\$16,108	\$15,997	\$17,009	\$18,378	\$17,107	\$19,376
Educational Services		\$12,771	\$12,666	\$11,732	\$14,120	\$12,361	\$16,905	\$17,478	\$15,704	\$16,573	\$20,056	\$18,669	\$16,729	\$21,390	\$20,300	\$22,122
Health Care and Social Assistance		\$21,713	\$22,196	\$22,765	\$24,047	\$25,355	\$25,424	\$26,002	\$26,038	\$27,182	\$28,335	\$27,848	\$29,132	\$30,229	\$30,420	\$31,623
Leisure and Hospitality		\$6,757	\$7,929	\$6,845	\$6,807	\$7,585	\$8,983	\$10,288	\$9,115	\$8,757	\$9,313	\$11,062	\$9,985	\$10,472	\$11,397	\$11,636
Other Services		\$11,723	\$12,580	\$11,799	\$13,964	\$13,046	\$14,641	\$16,367	\$17,698	\$19,028	\$16,786	\$20,041	\$18,664	\$21,243	\$21,575	\$21,253
Public Administration		\$22,307	\$20,092	\$21,754	\$20,617	\$23,859	\$26,663	\$29,944	\$28,411	\$27,207	\$29,011	\$27,652	\$31,036	\$30,126	\$33,612	\$31,027

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» CTE Certificate Program Outcomes

As shown in Figure 37, participation in CTE certificate programs increased steadily throughout the period studied, with the number of students growing from 19,324 in the 2012-2013 program year to 26,254 in 2016-2017. Students who were recorded as having graduated from a certificate program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion. Following the trend of increased enrollment, the number of CTE certificate program completers also increased over time.

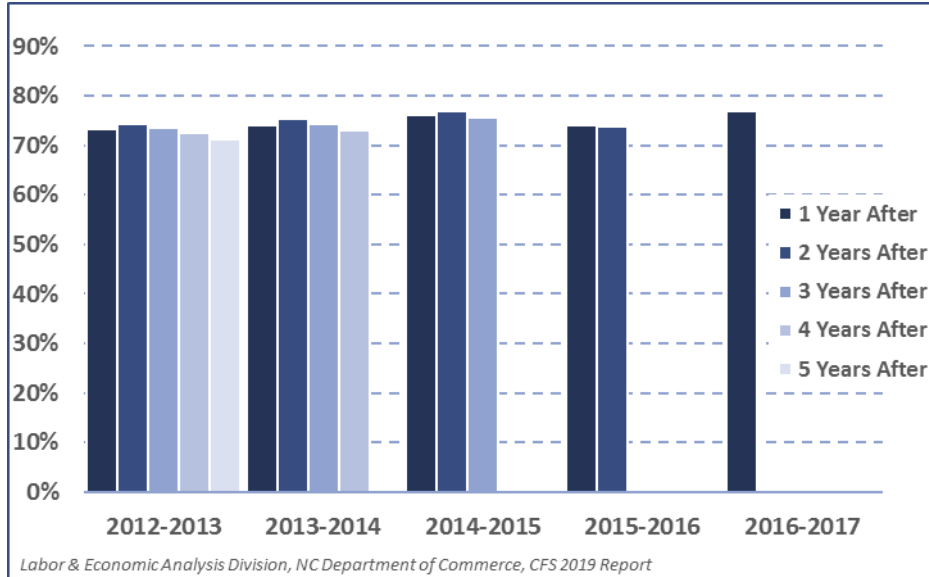
Figure 37. NCCCS CTE Certificate Program Participants and Completers by Program Year



The rate of employment in North Carolina one year after graduation ranged from 73% to 77%, while the rate of subsequent enrollment in public higher education programs ranged from 55% to 63% (see Figure 38 and Table 10). Both outcomes fluctuated from cohort to cohort, showing no clear trend.

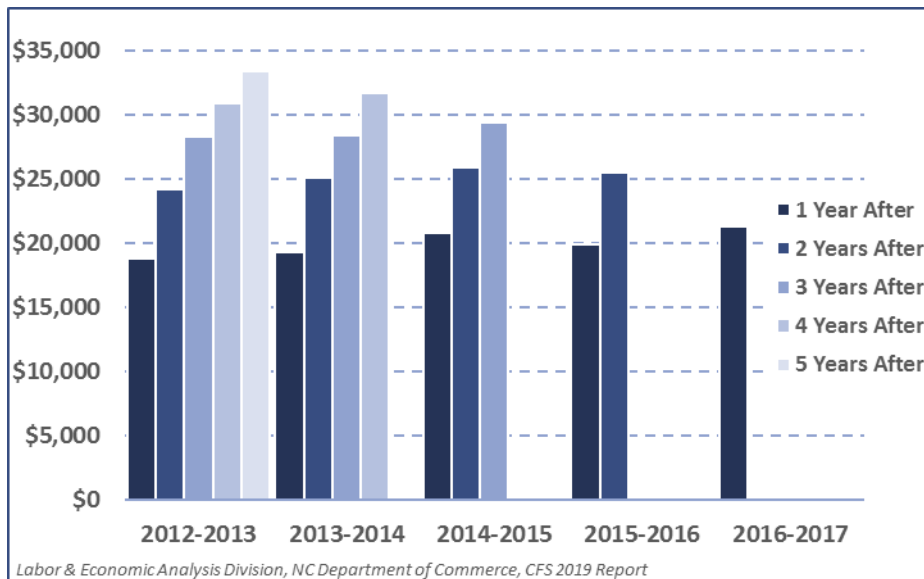
The share of CTE certificate recipients employed in North Carolina remained relatively stable over time for each graduating cohort. For instance, the employment rate for 2012-2013 graduates decreased only slightly from 73% after one year to 71% after five years (Figure 38 and Table 10).

Figure 38. Percentage of NCCCS CTE Certificate Recipients Employed in North Carolina After Completion, by Year of Graduation



Wage earnings one year after completion increased for each successive cohort, with median wage earnings increasing from \$18,790 for the cohort graduating in 2012-2013 to \$21,351 for the 2016-2017 graduates (see Figure 39 and Table 10). CTE certificate recipients employed in North Carolina saw their wages increase in each year after graduation for all years examined in this report (Figure 39 and Table 10).

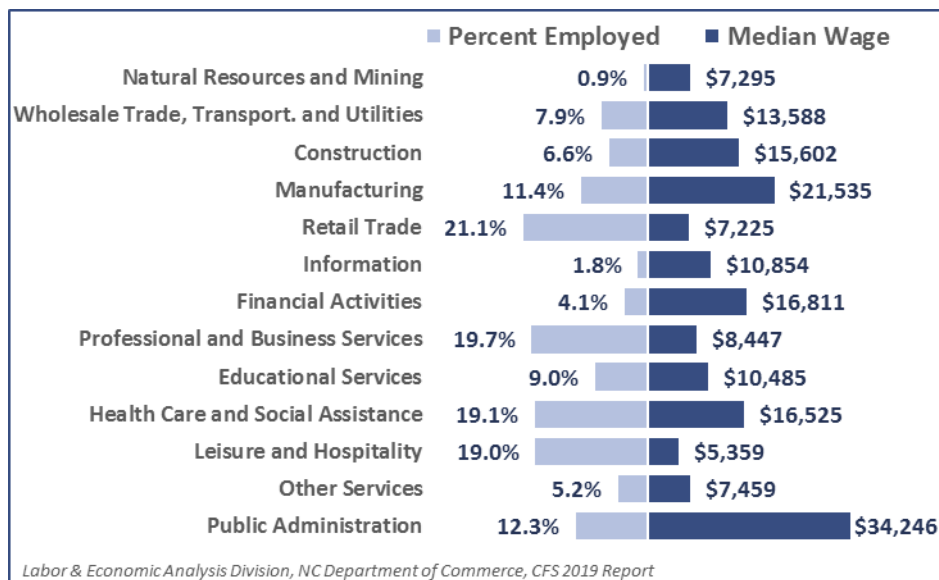
Figure 39. Median Wage of NCCCS CTE Certificate Recipients in North Carolina, by Year of Graduation



For the most recent cohort included in this report (2016-2017), CTE certificate recipients' top industries of employment one year after graduation were Retail Trade and Professional and Business Services (Figure 40). Jobs in Retail Trade and Professional and Business Services (an industry that includes temporary help agencies) offered among the lowest wages of any sector in each year after graduation. However, over time,

the number of CTE certificate recipients employed in Retail Trade gradually declined while more found jobs in the relatively higher-paying Manufacturing and Public Administration sectors.

Figure 40. 2016-2017 NCCCS CTE Certificate Recipients One Year After Graduation: Percentage Employed and Median Wage by Industry



The outcomes of CTE certificate recipients varied by the program of study (Appendix Tables 9, 10, 11, and 12). The 2012-2013 cohort saw one-year post-graduation median wages ranging from \$15,991 for commercial and artistic production technologies majors to \$20,151 for agricultural and natural resources technologies majors. Students of the largest two programs offered by NCCCS — business technologies and public service technologies — earned \$19,751 and \$18,683, respectively, in their first year after completion. Biological and chemical technologies, while the smallest NCCCS certificate program in terms of enrollment, is one of the top-earning program areas, with first-year median wages reaching \$29,201 for the 2014-2015 cohort of certificate recipients.

Table 10. NCCCS CTE Certificate Program Participants and Completers, Outcomes One Through Five Years After Graduation, Overall and By Industry

North Carolina Community College System							Common Follow-up System: Evaluative Measures, 2019 Report									
Postsecondary Certificate																
All Programs							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Students		19,324	21,115	22,275	23,482	26,254	19,324	21,115	22,275	23,482	19,324	21,115	22,275	19,324	21,115	19,324
Postsecondary Certificate Recipients		13,718	14,268	15,800	15,569	17,064	13,718	14,268	15,800	15,569	13,718	14,268	15,800	13,718	14,268	13,718
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Postsecondary Certificate Recipients Employed in North Carolina	N	10,043	10,571	12,028	11,526	13,104	10,199	10,758	12,164	11,495	10,078	10,617	11,927	9,943	10,415	9,779
	%	73%	74%	76%	74%	77%	74%	75%	77%	74%	73%	74%	75%	72%	73%	71%
Postsecondary Certificate Recipients' Wages in North Carolina	Mean	\$23,075	\$23,560	\$25,287	\$24,015	\$25,463	\$27,631	\$28,534	\$29,831	\$28,891	\$31,376	\$31,985	\$33,276	\$34,265	\$35,101	\$36,803
	Median	\$18,790	\$19,336	\$20,767	\$19,963	\$21,351	\$24,216	\$25,154	\$25,888	\$25,509	\$28,325	\$28,389	\$29,390	\$30,969	\$31,738	\$33,462
Graduates Enrolled in NC Public Higher Education	N	7,518	9,029	9,249	9,147	10,441	5,119	5,713	6,081	5,858	3,856	4,174	4,489	3,133	3,241	2,547
	%	55%	63%	59%	59%	61%	37%	40%	38%	38%	28%	29%	28%	23%	23%	19%
Graduates Enrolled in NC Public Education, Employment, or Training Program	N	8,387	9,857	10,157	9,848	11,180	6,195	6,795	7,107	6,826	4,907	5,187	5,465	4,068	4,228	3,416
	%	61%	69%	64%	63%	66%	45%	48%	45%	44%	36%	36%	35%	30%	30%	25%
Graduates Enrolled or Employed in NC	N	12,173	12,992	14,299	13,796	15,525	11,387	12,067	13,463	12,806	10,916	11,502	12,779	10,569	11,025	10,223
	%	89%	91%	91%	89%	91%	83%	85%	85%	82%	80%	81%	81%	77%	77%	75%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.6%	0.6%	0.7%	0.7%	0.9%	0.5%	0.5%	0.7%	0.6%	0.4%	0.5%	0.6%	0.5%	0.6%	0.6%
Wholesale Trade, Transport. and Utilities		8.4%	8.7%	7.9%	7.9%	7.9%	8.5%	9.0%	8.3%	7.9%	8.8%	9.3%	8.5%	9.2%	9.6%	9.0%
Construction		5.2%	6.0%	5.9%	6.6%	6.6%	5.4%	6.1%	6.1%	6.9%	5.6%	6.5%	6.3%	5.6%	6.4%	5.7%
Manufacturing		10.0%	10.8%	11.6%	12.0%	11.4%	11.3%	12.2%	12.3%	13.7%	11.9%	12.7%	12.9%	12.6%	13.1%	12.8%
Retail Trade		20.4%	20.5%	21.3%	21.0%	21.1%	17.6%	17.7%	18.2%	18.5%	15.4%	15.9%	16.3%	14.5%	14.4%	13.3%
Information		1.7%	1.7%	1.8%	1.5%	1.8%	2.1%	1.9%	1.7%	1.3%	2.3%	2.1%	1.7%	2.3%	1.9%	2.1%
Financial Activities		4.4%	4.2%	3.8%	4.0%	4.1%	4.7%	4.3%	3.7%	4.3%	5.1%	4.6%	4.1%	5.3%	4.8%	5.7%
Professional and Business Services		23.1%	23.6%	21.3%	20.0%	19.7%	22.0%	22.1%	21.4%	19.9%	20.6%	20.8%	20.5%	20.0%	20.2%	19.2%
Educational Services		9.8%	10.1%	9.6%	9.1%	9.0%	9.5%	10.0%	10.3%	9.8%	9.9%	9.8%	10.4%	10.0%	9.8%	10.4%
Health Care and Social Assistance		19.6%	17.6%	17.7%	18.6%	19.1%	19.6%	17.8%	17.9%	18.8%	19.7%	17.8%	18.1%	19.6%	17.9%	19.5%
Leisure and Hospitality		16.0%	17.0%	16.9%	19.2%	19.0%	13.1%	14.4%	13.9%	15.1%	11.8%	12.6%	12.0%	11.3%	11.5%	10.2%
Other Services		5.1%	5.2%	5.4%	5.6%	5.2%	4.8%	5.0%	4.9%	4.9%	4.3%	4.6%	4.7%	4.2%	4.3%	4.2%
Public Administration		12.1%	13.1%	14.6%	12.5%	12.3%	12.4%	13.4%	15.0%	12.7%	12.9%	13.7%	15.1%	13.0%	13.9%	13.2%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$5,891	\$5,636	\$9,992	\$5,184	\$7,295	\$10,889	\$11,086	\$11,436	\$7,295	\$9,258	\$16,082	\$15,367	\$13,537	\$20,081	\$13,927
Wholesale Trade, Transport. and Utilities		\$15,980	\$14,550	\$17,567	\$12,745	\$13,588	\$23,201	\$20,605	\$21,581	\$19,978	\$26,549	\$24,772	\$25,946	\$26,965	\$27,186	\$31,135
Construction		\$10,830	\$11,585	\$12,565	\$13,428	\$15,602	\$18,868	\$19,412	\$18,433	\$19,038	\$22,549	\$22,209	\$23,693	\$28,289	\$27,229	\$29,600
Manufacturing		\$21,354	\$21,904	\$22,232	\$22,957	\$21,535	\$27,227	\$29,292	\$28,702	\$27,902	\$32,874	\$33,897	\$33,398	\$34,821	\$37,633	\$36,717
Retail Trade		\$6,257	\$6,059	\$6,790	\$6,274	\$7,225	\$7,913	\$7,952	\$8,473	\$8,391	\$8,510	\$10,764	\$11,045	\$10,360	\$12,550	\$12,021
Information		\$18,757	\$14,695	\$11,942	\$8,625	\$10,854	\$26,654	\$20,833	\$18,007	\$15,749	\$28,311	\$22,646	\$19,952	\$29,967	\$31,422	\$37,590
Financial Activities		\$19,747	\$13,179	\$16,292	\$15,841	\$16,811	\$22,300	\$21,659	\$22,771	\$22,065	\$25,175	\$23,107	\$24,295	\$31,693	\$29,687	\$35,095
Professional and Business Services		\$7,844	\$8,134	\$8,596	\$7,469	\$8,447	\$10,666	\$10,575	\$10,132	\$9,434	\$13,017	\$11,206	\$11,866	\$14,171	\$13,761	\$16,272
Educational Services		\$9,428	\$7,205	\$10,065	\$9,346	\$10,485	\$13,505	\$9,419	\$13,096	\$13,170	\$16,404	\$15,104	\$18,160	\$18,127	\$19,037	\$20,832
Health Care and Social Assistance		\$16,025	\$14,515	\$15,401	\$15,642	\$16,525	\$18,921	\$18,254	\$18,796	\$18,295	\$20,862	\$20,782	\$20,507	\$22,740	\$22,252	\$23,821
Leisure and Hospitality		\$5,304	\$5,462	\$5,161	\$4,703	\$5,359	\$6,050	\$5,500	\$6,070	\$5,065	\$6,719	\$5,884	\$5,584	\$6,363	\$6,806	\$7,575
Other Services		\$6,085	\$6,918	\$6,096	\$6,333	\$7,459	\$8,808	\$9,235	\$9,094	\$9,561	\$11,653	\$12,441	\$12,785	\$14,339	\$15,575	\$15,224
Public Administration		\$29,416	\$31,369	\$34,017	\$32,969	\$34,246	\$35,612	\$36,630	\$38,865	\$38,268	\$37,661	\$38,652	\$41,207	\$39,992	\$40,805	\$41,972
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$12,067	\$12,640	\$16,365	\$12,868	\$13,890	\$15,843	\$20,036	\$21,901	\$16,608	\$17,970	\$25,888	\$27,031	\$19,768	\$28,153	\$18,962
Wholesale Trade, Transport. and Utilities		\$22,558	\$20,075	\$22,454	\$21,096	\$21,363	\$27,354	\$25,284	\$26,274	\$27,075	\$30,853	\$28,672	\$29,685	\$31,593	\$31,150	\$35,050
Construction		\$16,801	\$16,666	\$19,174	\$18,962	\$20,860	\$22,916	\$23,654	\$24,854	\$24,936	\$26,949	\$26,346	\$28,428	\$31,820	\$30,556	\$33,867
Manufacturing		\$26,650	\$27,313	\$28,079	\$27,754	\$27,251	\$31,259	\$32,480	\$32,457	\$31,733	\$36,087	\$36,484	\$36,108	\$37,658	\$39,798	\$40,052
Retail Trade		\$10,438	\$10,061	\$10,903	\$10,810	\$11,518	\$12,599	\$13,116	\$13,674	\$13,640	\$14,189	\$16,167	\$16,325	\$15,776	\$18,056	\$18,361
Information		\$24,765	\$22,452	\$20,654	\$16,154	\$21,142	\$28,758	\$26,319	\$26,429	\$20,931	\$31,825	\$29,602	\$29,243	\$34,699	\$36,236	\$39,846
Financial Activities		\$25,236	\$23,898	\$21,837	\$23,159	\$24,021	\$27,630	\$25,788	\$25,309	\$26,762	\$30,792	\$28,613	\$27,389	\$35,757	\$32,458	\$39,620
Professional and Business Services		\$14,224	\$14,182	\$14,572	\$13,927	\$15,540	\$17,871	\$17,750	\$17,863	\$17,105	\$20,943	\$19,681	\$20,608	\$23,308	\$22,442	\$25,541
Educational Services		\$14,651	\$13,211	\$15,815	\$15,596	\$17,782	\$18,281	\$16,313	\$18,325	\$18,829	\$20,459	\$19,000	\$21,085	\$21,740	\$21,756	\$23,959
Health Care and Social Assistance		\$18,100	\$17,150	\$18,029	\$18,158	\$18,966	\$20,566	\$20,446	\$20,614	\$20,601	\$22,653	\$22,889	\$22,258	\$24,159	\$24,367	\$25,122
Leisure and Hospitality		\$8,618	\$8,846	\$8,930	\$8,328	\$9,262	\$10,479	\$10,040	\$10,191	\$9,328	\$11,920	\$11,297	\$11,180	\$12,582	\$12,437	\$14,228
Other Services		\$9,676	\$11,046	\$10,847	\$10,830	\$12,440	\$12,602	\$14,160	\$14,860	\$14,532	\$16,028	\$17,305	\$17,028	\$18,586	\$19,626	\$20,606
Public Administration		\$29,106	\$31,563	\$34,533	\$30,358	\$32,004	\$34,587	\$36,565	\$39,021	\$35,977	\$36,588	\$38,640	\$42,322	\$39,155	\$41,253	\$41,083

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Summary and Recommendations

The outcomes of CTE program graduates were generally positive. CTE associate degree, diploma, and certificate recipients have seen their wages increase in each year after graduation, and each cohort tended to earn more in each year than the prior cohort.

Between the 2012-2013 and 2016-2017 program years, CTE certificate programs have experienced a significant increase in enrollment and completion number at 36% and 24% respectively. During the same period, the number of postsecondary diploma recipients remained steady over time, while the number of the associate degree graduates slightly trended up. However, the number of participants in CTE associate degree and diploma programs decreased notably over time, declining 21% and 13% respectively over the same period. This could possibly be attributed to the tightening labor market, with more individuals choosing to pursue employment opportunities rather than taking a year or more to upgrade their education and skills.

There is still a gap between the number of students participating in CTE associate degree programs each year and the smaller number of students graduating each year. This may reflect in part the large number of students who attend associate degree programs part time and thus have a long time to completion. Additionally, given the current tight labor market, it may be that greater numbers of community college program participants are being hired prior to receiving their credential as the economy improves and employers struggle to find qualified talent.

Although this report examines only outcomes of program completers, it is possible that students who complete some coursework but do not attain credentials have an advantage in the labor market over those who take no coursework at all.

It is important to keep in mind that the variation in outcomes between different areas of study and different degree levels should be interpreted with caution as student body may vary significantly in terms of demographics, employment history, and other social or economic aspects across different community colleges programs.

Continuing Education

Continuing education programs operated by the North Carolina Community Colleges include non-credit courses related to a diverse set of occupation-specific training, workforce development training, community service training, and business and industry training programs. Courses are designed to assist individuals in gaining short-term training and skill enhancement including occupational skills, entrepreneurial skills, personal growth, and development. Organized within the North Carolina Community College System's continuing education programs are several programmatic areas including Workforce Continuing Education training and Human Resources Development.

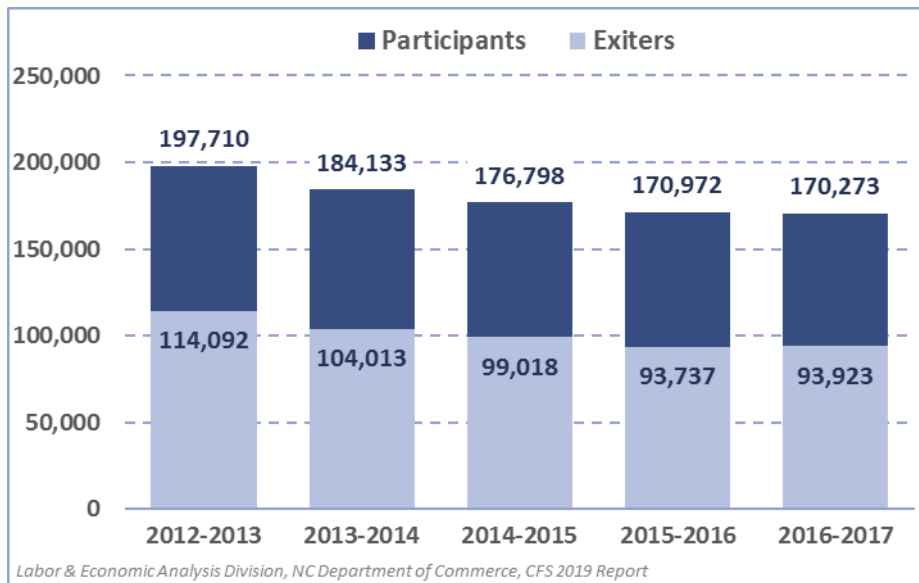
» Overview of Workforce Continuing Education Programs

Workforce Continuing Education training programs provide a variety of non-credit courses organized under several topical areas. These areas include: agricultural and natural resources; business and computer training; construction; education and language; health; industrial/manufacturing; public safety; transport technology; and service occupations. Workforce Continuing Education programs consist of one or more courses designed to train an individual for full- or part-time employment, upgrade the skills of incumbent workers, or retrain individuals for new employment in a different occupation or industry. Course and program offerings provide instruction focused on skill competencies that may lead to a recognized credential (licensure, certification, renewal, registry listing) and/or meet local workforce needs.

» Workforce Continuing Education Program Outcomes

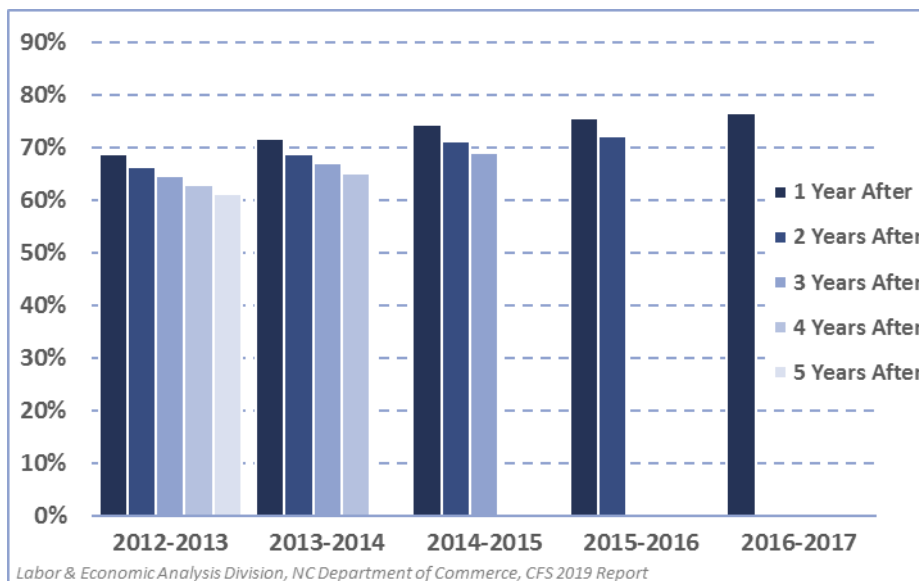
Analyses revealed a decline in the number of Workforce Continuing Education participants across the program years (Figure 41 and Table 11). Enrollment in these programs was at a five-year high of 197,710 during the 2012-2013 program year and declined slowly each year to 170,273 in 2016-2017. Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit. The number of exiters across this time period reflected a similar decline across the five-year time period. These declines may be partially attributed to changes in economic conditions.

Figure 41. NCCCS Workforce Continuing Education Program Participants and Exiters by Program Year



Employment and wage outcomes were derived for each cohort of Workforce Continuing Education program year exiters for up to five years after exit. As shown in Figure 42, one-year post-exit employment rates for Workforce Continuing Education program participants varied across the five years, ranging from 69% for the 2012-2013 program year exiters to a high of 77% for the 2016-2017 program year exiters. When considering a longer time horizon, this percentage showed a slight decline. For example, 61% of completers remained employed in North Carolina after five years, as indicated by the 2012-2013 program year cohort outcomes.

Figure 42. Percentage of NCCCS Workforce Continuing Education Program Exiters Employed in North Carolina, by Year of Exit



One-year post-exit median wages ranged from a low of \$23,329 for the 2012-2013 program year exiters to a high of \$28,163 for the 2016-2017 program year exiters (Figure 43). When examining cohort wage outcomes over time, median post-exit earnings exhibited steady progress for all Workforce Continuing Education exiters. The analyses show that, on average across cohorts, program exiters experienced an 8.6% annual increase in their median wages each year post exit. For example, for the 2012-2013 program year cohort, median wages rose each year, from \$23,329 in their first year after completion to \$32,410 in year five.

Figure 43. Median Wage of NCCCS Workforce Continuing Education Program Exiters in North Carolina, by Year of Exit

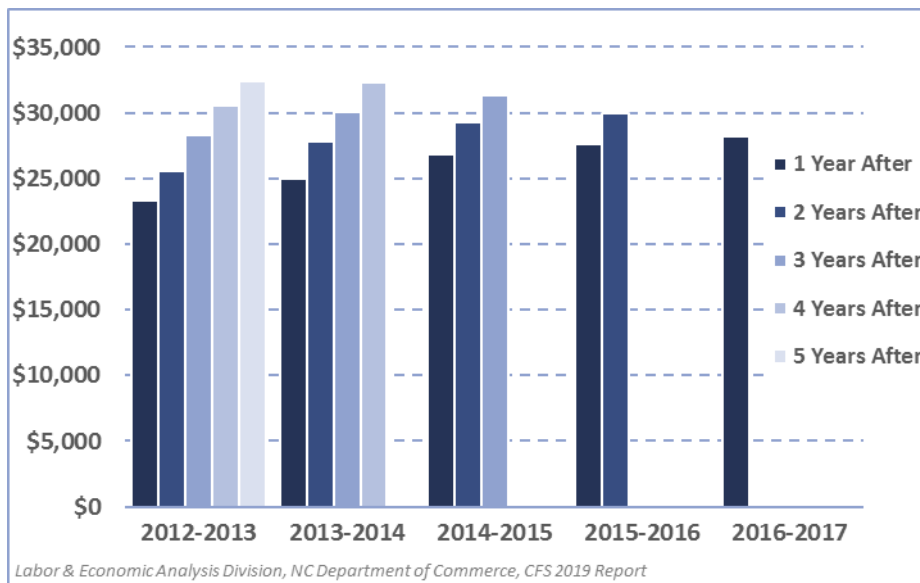
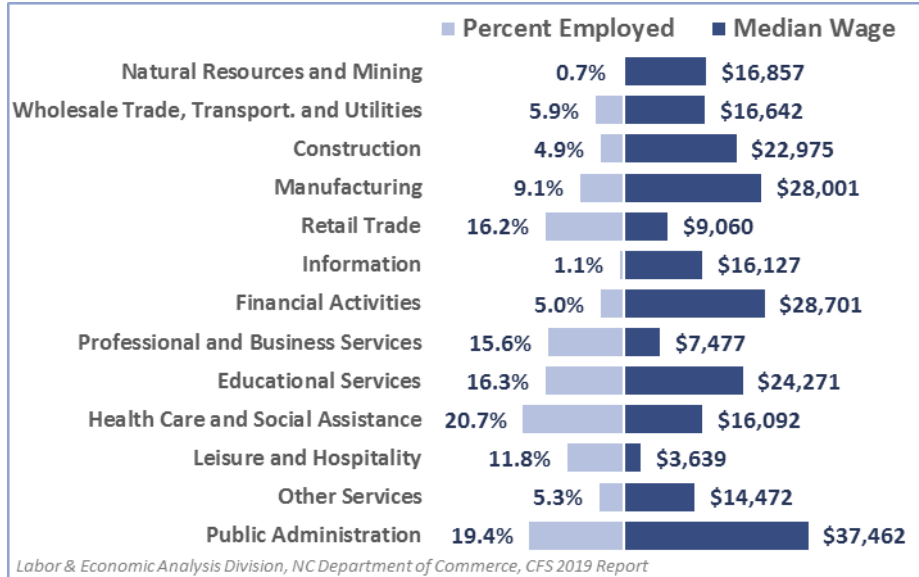


Figure 44 summarizes one-year outcomes by industry for the most recent cohort of exiters (2016-2017) examined in this report. It indicates that a significant number Workforce Continuing Education program exiters found employment in the Health Care and Social Assistance (20.7%), Public Administration (19.4%), Educational Services (16.3%), or Retail Trade (16.2%) sectors. It is worth noting that Public Administration, one of the largest sectors employing individuals who previously participated in continuing education, provides the highest pay (median annual wage of \$37,462). For comparison, the 2017 annual median wage in North Carolina for all persons employed in unemployment insurance-covered jobs was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.²⁰

²⁰ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Figure 44. 2016-2017 Workforce Continuing Education Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



» Summary and Recommendations

Overall, the results indicate that there have been stable short-term employment rates and median wages for Workforce Continuing Education program exiters. This is indicated by the one-year post employment and wage trends. When exiters are followed over time, the employment rate tends to decline somewhat. This decline could be attributable to several factors including people not sustaining employment, moving out of state, or finding employment in jobs not covered by North Carolina's unemployment insurance laws. There are a variety of reasons why individuals are not found in covered employment, including retirement, death, inability to find employment, or leaving the labor force. However, the median wages of Workforce Continuing Education program exiters continue to rise over time.

One suggested area for further investigation is the examination of industrial and occupational credentials obtained by participants in Workforce Continuing Education and other workforce development programs. While Workforce Continuing Education programs do not typically offer an academic credential, they do provide critical training that can lead to occupational or industry certifications. At the present time, there is no central repository of information regarding industry and occupational credentials. It is recommended that the North Carolina Community College System work with the Department of Commerce and local community colleges to determine if this information exists at the local colleges or could be accessed through other informational resources such as North Carolina's Licensing Boards. Information regarding occupational and industrial credentials is needed to further study the role that the Workforce Continuing Education and other workforce development programs play in helping workers access key skills and credentials.

Table 11. NCCCS Workforce Continuing Education Participants and Exiters, Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Community College System							Common Follow-up System: Evaluative Measures, 2019 Report									
Workforce Continuing Education Program							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		197,710	184,133	176,798	170,972	170,273	197,710	184,133	176,798	170,972	197,710	184,133	176,798	197,710	184,133	197,710
Exiters		114,092	104,013	99,018	93,737	93,923	114,092	104,013	99,018	93,737	114,092	104,013	99,018	114,092	104,013	114,092
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exiters Employed In North Carolina	N %	78,545 69%	74,598 72%	73,620 74%	70,997 76%	71,882 77%	75,642 66%	71,644 69%	70,629 71%	67,778 72%	73,672 65%	69,741 67%	68,403 69%	71,877 63%	67,841 65%	69,962 61%
Exiters' Wages in North Carolina	Mean Median	\$28,576 \$23,329	\$30,014 \$24,956	\$31,541 \$26,787	\$32,285 \$27,597	\$32,600 \$28,163	\$30,645 \$25,610	\$32,533 \$27,768	\$33,873 \$29,254	\$34,365 \$29,922	\$33,031 \$28,263	\$34,700 \$30,070	\$35,770 \$31,343	\$35,266 \$30,514	\$36,713 \$32,305	\$37,032 \$32,410
Exiters Enrolled in NC Public Higher Education	N %	23,661 21%	20,174 19%	18,111 18%	17,380 19%	16,952 18%	31,478 28%	28,510 27%	28,500 29%	26,672 28%	22,817 20%	22,004 21%	20,986 21%	23,154 20%	21,746 21%	17,743 16%
Exiters Enrolled in NC Public Education, Employment, or Training Program	N %	32,868 29%	28,649 28%	25,888 26%	24,480 26%	24,072 26%	38,984 34%	34,962 34%	34,007 34%	32,266 34%	29,887 26%	27,565 27%	26,395 27%	29,238 26%	27,136 26%	23,750 21%
Exiters Enrolled or Employed in NC	N %	86,778 76%	80,885 78%	78,786 80%	75,497 81%	76,183 81%	83,711 73%	78,418 75%	76,437 77%	73,147 78%	79,507 70%	74,756 72%	72,717 73%	77,332 68%	72,473 70%	74,165 65%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.6%	0.7%	0.8%	0.7%	0.7%	0.6%	0.7%	0.8%	0.8%	0.7%	0.7%	0.8%	0.7%	0.7%	0.7%
Wholesale Trade, Transport. and Utilities		5.4%	5.6%	5.8%	6.1%	5.9%	5.8%	6.0%	6.2%	6.5%	6.1%	6.4%	6.4%	6.5%	6.6%	6.7%
Construction		4.5%	4.6%	4.8%	5.1%	4.9%	4.8%	4.9%	5.1%	5.5%	5.1%	5.2%	5.2%	5.3%	5.4%	5.5%
Manufacturing		9.2%	8.9%	8.5%	8.8%	9.1%	10.0%	9.5%	9.1%	9.5%	10.4%	9.9%	9.4%	10.7%	10.3%	10.8%
Retail Trade		17.6%	17.6%	17.4%	16.9%	16.2%	16.6%	16.2%	16.0%	15.5%	15.5%	15.1%	14.9%	14.6%	14.2%	13.7%
Information		1.1%	1.3%	1.1%	1.1%	1.1%	1.2%	1.3%	1.2%	1.1%	1.2%	1.3%	1.1%	1.2%	1.3%	1.2%
Financial Activities		5.7%	5.9%	5.5%	5.6%	5.0%	5.8%	5.8%	5.6%	5.7%	5.7%	5.9%	5.6%	5.8%	5.9%	5.8%
Professional and Business Services		18.0%	17.8%	17.1%	16.7%	15.6%	17.8%	17.4%	16.6%	16.3%	17.2%	16.7%	16.2%	16.7%	16.3%	16.3%
Educational Services		13.0%	13.0%	14.9%	13.7%	16.3%	12.8%	12.8%	14.9%	13.7%	12.6%	12.8%	15.0%	12.8%	13.1%	13.1%
Health Care and Social Assistance		20.9%	20.1%	19.9%	21.0%	20.7%	21.2%	20.8%	20.6%	21.2%	21.7%	21.3%	20.8%	22.0%	21.3%	21.9%
Leisure and Hospitality		12.0%	12.3%	11.9%	12.1%	11.8%	11.0%	11.4%	10.8%	10.9%	10.4%	10.5%	9.9%	10.0%	9.7%	9.3%
Other Services		5.1%	4.9%	5.3%	5.1%	5.3%	5.0%	4.7%	5.0%	5.0%	4.8%	4.6%	4.9%	4.7%	4.6%	4.6%
Public Administration		15.7%	18.3%	18.0%	18.7%	19.4%	13.8%	16.1%	15.9%	16.2%	13.7%	16.1%	15.6%	13.8%	15.8%	13.6%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$10,018	\$11,092	\$9,272	\$12,715	\$16,857	\$13,183	\$13,260	\$13,103	\$17,992	\$12,779	\$15,542	\$15,453	\$14,489	\$17,107	\$20,400
Wholesale Trade, Transport. and Utilities		\$17,779	\$17,145	\$16,905	\$16,162	\$16,642	\$20,961	\$20,306	\$21,072	\$20,966	\$22,087	\$22,732	\$22,522	\$23,767	\$24,623	\$26,152
Construction		\$18,000	\$18,044	\$21,271	\$22,185	\$22,975	\$20,309	\$21,096	\$23,092	\$23,353	\$22,024	\$23,852	\$25,867	\$25,000	\$26,364	\$26,700
Manufacturing		\$30,444	\$29,571	\$29,238	\$29,885	\$28,001	\$32,032	\$32,030	\$31,203	\$32,453	\$34,129	\$33,339	\$32,857	\$34,954	\$34,930	\$36,151
Retail Trade		\$8,307	\$8,335	\$8,963	\$9,320	\$9,060	\$9,880	\$10,230	\$11,046	\$11,065	\$11,583	\$11,995	\$12,444	\$13,462	\$13,038	\$14,252
Information		\$16,198	\$20,335	\$21,293	\$17,326	\$16,127	\$21,050	\$24,209	\$22,264	\$25,049	\$24,262	\$25,376	\$27,321	\$24,173	\$28,679	\$27,003
Financial Activities		\$25,532	\$26,840	\$28,280	\$29,523	\$28,701	\$27,614	\$30,775	\$31,155	\$31,678	\$30,858	\$32,561	\$33,398	\$31,944	\$34,904	\$34,547
Professional and Business Services		\$7,199	\$7,398	\$8,028	\$7,375	\$7,477	\$8,457	\$8,631	\$8,988	\$8,595	\$9,064	\$8,913	\$10,069	\$9,759	\$10,071	\$10,794
Educational Services		\$20,078	\$20,121	\$23,963	\$22,135	\$24,271	\$21,831	\$22,037	\$25,133	\$24,826	\$23,416	\$23,083	\$27,288	\$24,245	\$25,014	\$26,059
Health Care and Social Assistance		\$14,080	\$14,077	\$15,096	\$15,984	\$16,092	\$16,952	\$17,620	\$18,200	\$19,051	\$19,685	\$20,292	\$21,028	\$22,203	\$23,183	\$24,327
Leisure and Hospitality		\$3,780	\$3,891	\$3,745	\$3,614	\$3,639	\$4,219	\$4,336	\$4,052	\$4,028	\$4,303	\$4,476	\$4,175	\$4,529	\$4,628	\$4,761
Other Services		\$12,892	\$13,896	\$14,155	\$15,356	\$14,472	\$13,950	\$14,500	\$16,896	\$16,755	\$15,641	\$17,499	\$17,823	\$17,243	\$18,993	\$19,545
Public Administration		\$33,159	\$35,833	\$36,055	\$36,958	\$37,462	\$35,892	\$39,548	\$39,814	\$40,638	\$37,640	\$41,397	\$41,269	\$39,027	\$42,835	\$40,326
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$18,275	\$17,955	\$18,802	\$22,316	\$24,526	\$20,195	\$20,617	\$21,164	\$25,545	\$21,103	\$21,667	\$22,892	\$22,877	\$23,644	\$24,970
Wholesale Trade, Transport. and Utilities		\$26,337	\$25,626	\$26,911	\$26,121	\$25,681	\$28,540	\$27,487	\$28,982	\$28,688	\$29,676	\$29,209	\$30,600	\$30,657	\$31,585	\$32,765
Construction		\$23,938	\$24,046	\$26,500	\$27,299	\$28,318	\$25,686	\$26,890	\$28,845	\$29,006	\$27,363	\$29,311	\$30,845	\$29,734	\$31,374	\$32,070
Manufacturing		\$35,857	\$35,172	\$35,922	\$34,941	\$34,236	\$37,325	\$37,108	\$37,081	\$36,571	\$38,968	\$38,079	\$38,042	\$39,602	\$39,468	\$40,839
Retail Trade		\$16,268	\$16,499	\$17,716	\$18,375	\$17,576	\$18,000	\$18,857	\$19,797	\$19,962	\$19,906	\$20,509	\$21,019	\$21,594	\$21,562	\$22,568
Information		\$27,510	\$31,921	\$32,656	\$31,009	\$28,730	\$30,082	\$33,814	\$35,337	\$35,121	\$32,430	\$35,574	\$39,020	\$33,127	\$37,266	\$36,016
Financial Activities		\$28,713	\$29,684	\$31,880	\$33,156	\$32,845	\$30,968	\$34,018	\$35,021	\$35,763	\$34,794	\$36,113	\$37,351	\$37,178	\$38,536	\$40,169
Professional and Business Services		\$16,451	\$16,304	\$17,331	\$17,182	\$17,174	\$17,841	\$18,041	\$19,409	\$19,139	\$19,285	\$19,255	\$21,128	\$20,845	\$20,762	\$22,380
Educational Services		\$24,034	\$23,943	\$27,913	\$26,645	\$28,310	\$25,794	\$25,929	\$29,391	\$28,882	\$27,192	\$27,034	\$31,025	\$28,245	\$28,770	\$29,661
Health Care and Social Assistance		\$20,664	\$20,352	\$20,904	\$21,960	\$21,380	\$22,567	\$22,918	\$23,187	\$24,235	\$24,977	\$25,136	\$25,387	\$27,397	\$27,786	\$29,218
Leisure and Hospitality		\$7,263	\$7,562	\$7,851	\$7,440	\$7,669	\$8,233	\$8,559	\$8,753	\$8,441	\$8,855	\$9,264	\$9,278	\$9,509	\$9,795	\$10,122
Other Services		\$18,485	\$19,207	\$19,744	\$20,790	\$20,360	\$19,901	\$21,161	\$21,882	\$22,501	\$21,529	\$23,385	\$23,012	\$23,034	\$24,655	\$24,809
Public Administration		\$32,641	\$35,746	\$35,490	\$36,241	\$36,530	\$35,506	\$39,744	\$39,495	\$40,137	\$37,487	\$41,509	\$41,110	\$38,848	\$42,941	\$40,128

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Overview of Human Resources Development Programs

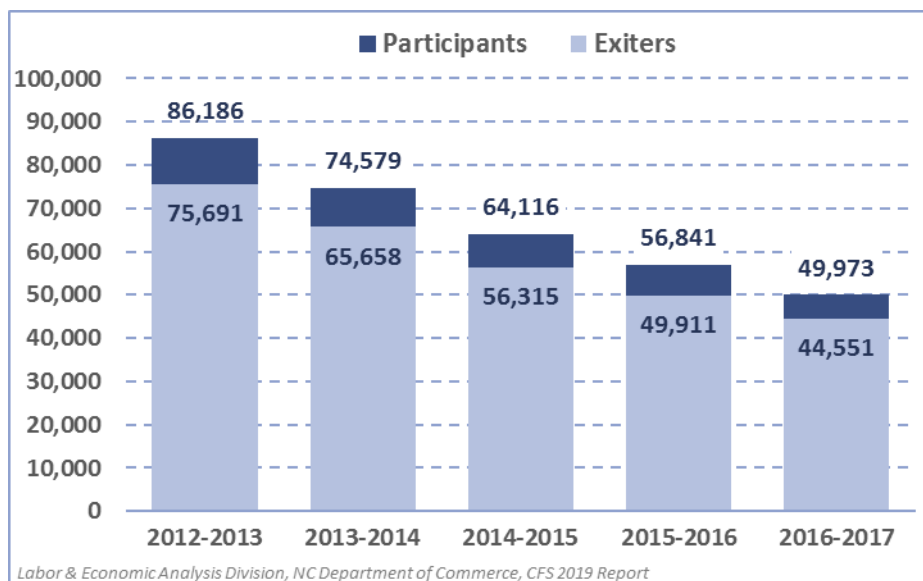
Human Resources Development (HRD) programs operated by the North Carolina Community Colleges consist of instructional programs targeting unemployed and underemployed adults. HRD training focuses on the assessment and development of employability competency skills identified as “essential” for the workplace. Skill development is accomplished through a variety of training-related activities and services, including self-esteem and goal-setting activities, career exploration and planning of educational and employment opportunities, resume and job application preparation, interviewing techniques, job referral and placement services, basic skills review, placement test review, and study skills strategies. Some community college HRD programs focus on short-term skills training, computer literacy, clerical skills, word processing, customer service, child care, home health care, hospitality, tourism training, or other skills training matched to local workforce needs.²¹

HRD programs are often provided in conjunction with, or as a part of, a participant’s enrollment in other workforce development programs. For example, some WIA or WIOA participants who receive career services receive part of these services through their enrollment in HRD programs. HRD programs often provide an initial opportunity for students who have not participated in educational or training programs for many years. This initial participation may lead to further enrollment in other educational and training programs.

» Human Resources Development Programs Outcomes

As shown in Figure 45, analyses revealed a noticeable decline in the number of participants in HRD programs between the 2012-2013 and 2016-2017, followed by a decrease between 2012-2013 and 2014-2015.

Figure 45. NCCCS Human Resources Development Program Participants and Exiters by Program Year

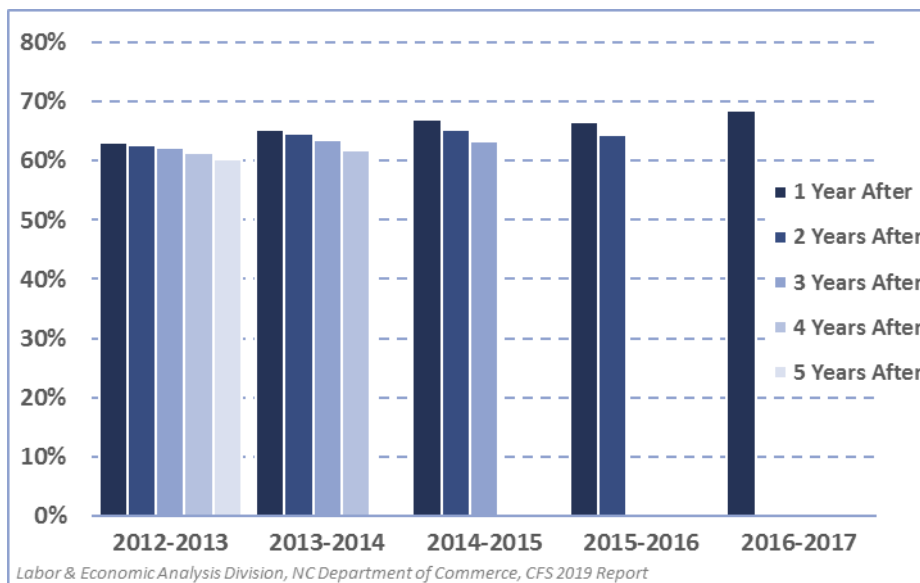


²¹ North Carolina Community College System, <http://www.nccommunitycolleges.edu/academic-programs/nc-community-college-system-catalog>

Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit, for each cohort. These included measures of post-exit employment rates (Figure 46) and wage statistics (Figure 47) for up to five years after exit (also see Table 12). These measures include only those individuals who were employed in North Carolina in jobs covered by the state's unemployment insurance laws.

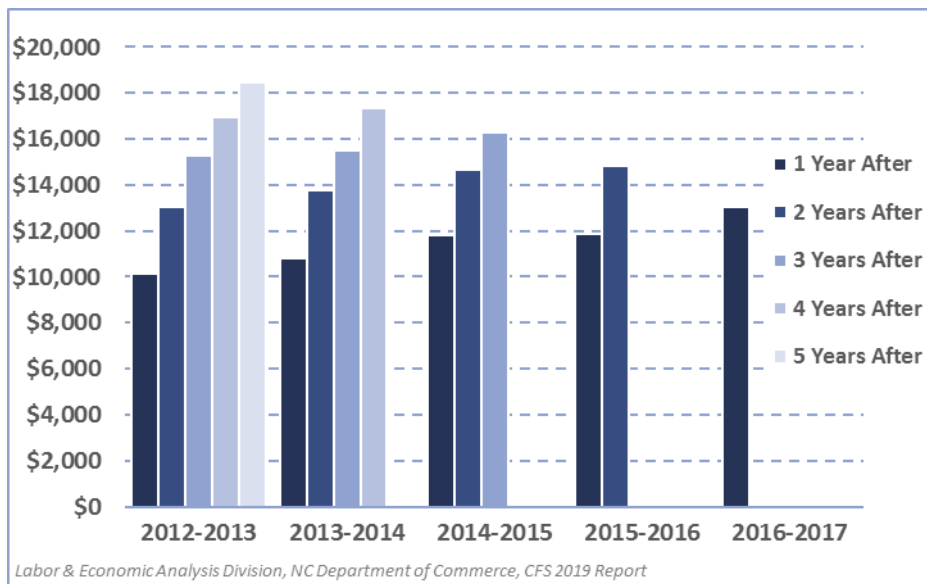
One-year post-exit employment rates consistently increased across the five cohorts, ranging from 63% in 2012-2013 to 69% in 2016-2017 (Figure 46 and Table 12), while subsequent enrollment in NC public higher education declined across cohorts (Table 12). One-year post-exit median wages increased steadily between the 2012-13 and 2016-2017 cohorts (from \$10,136 to \$13,048, respectively).

Figure 46. Percentage of NCCCS Human Resources Program Exiters Employed in North Carolina After Exit, by Year of Exit



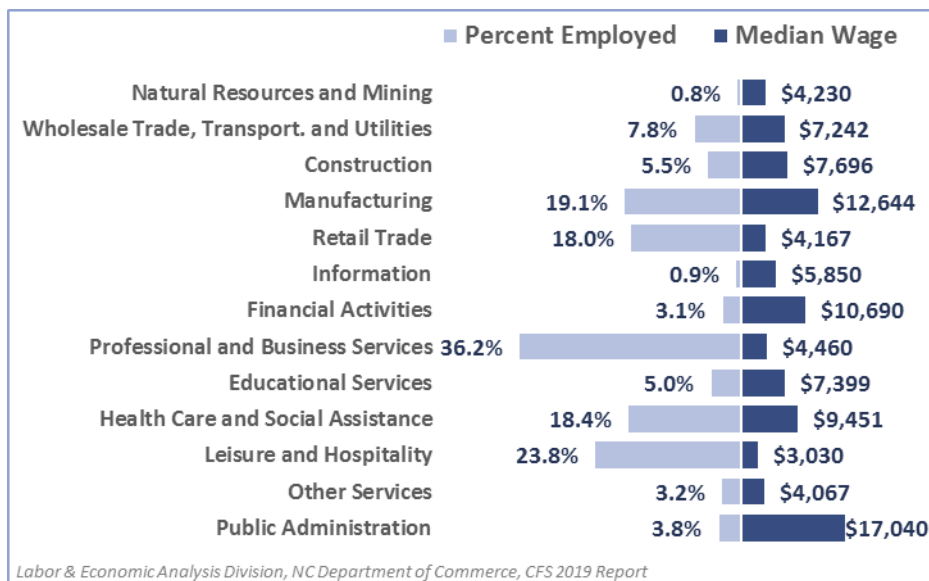
Longer term post-exit employment and wage measures indicate that five years after exit, 60% of the 2012-2013 exiting cohort were employed in North Carolina. Post-exit employment rates were relatively stable across cohorts for a given post-exit year, while the median post-exit wage increased over time across all cohorts. The 2012-2013 exiters experienced a growth in median wages from \$10,136 one year after exit to \$15,297 at year three and \$18,438 at the five-year mark, while the 2014-2015 exiters saw median wages grow from \$11,826 one year after exit to \$16,273 at year three.

Figure 47. Median Wage of NCCCS Human Resources Program Exiters in North Carolina, by Year of Exit



In looking at one-year outcomes by industry for the most recent cohort of exiters examined in this report (those who exited during the 2016-2017 program year), the largest group (36.2%) of HRD program exiters found employment in the Professional and Business Services industry (a sector which includes temporary help agencies), earning a median wage of \$4,460 (Figure 48 and Table 12). Other relatively common industries employing this cohort one-year post exit include Leisure and Hospitality (23.8%), Manufacturing (19.1%), Health Care and Social Assistance (18.4%), and Retail Trade (18%). Of those largest industries employing HRD program exiters, Manufacturing was associated with the highest median annual wage (\$12,644).

Figure 48. 2016-2017 NCCCS Human Resources Development Program Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



Overall, the results indicate that there have been improvements in short-term employment rates and short-term wage outcomes for HRD program exiters. This is indicated by the one-year post-employment and wage trends. When exiting cohorts are followed over time, the employment rate remains stable, while the median wages rise. The median wage of HRD program participants who exited in the 2012-2013 program year was \$18,438 five years after exit. By contrast, the 2017 median annual wage in North Carolina for all unemployment insurance-covered workers was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.²²

» Summary and Recommendations

The post-exit outcomes of NCCCS HRD program participants are trending in a favorable direction. Median wages and employment rates have improved from one cohort to the next throughout the period studied, evidence that individuals who participate in HRD programs are benefitting from the increase in employer demand as the economy continues to grow.

The rate of subsequent enrollment by HRD exiters in public higher education programs has declined over time, which is also consistent with the pursuit of employment opportunities in a tightening labor market. Still, HRD exiters show greater levels of enrollment in higher education than participants of many other training programs, suggesting that many HRD program participants are subsequently pursuing pathways to further skill development.

To the extent that HRD programming varies by campus, additional analysis might be merited to assess whether the services offered through local HRD programs are aligned with the needs of the local labor market.

²² Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 12. NCCCS Human Resources Development Participants and Exiters, Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Community College System Human Resources Development Program							Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>										
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013	
Participants		86,186	74,579	64,116	56,841	49,973	86,186	74,579	64,116	56,841	86,186	74,579	64,116	86,186	74,579	86,186	
Exiters		75,691	65,658	56,315	49,911	44,551	75,691	65,658	56,315	49,911	75,691	65,658	56,315	75,691	65,658	75,691	
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Exiters Employed In North Carolina		N %	47,712 63%	42,860 65%	37,797 67%	33,214 67%	30,526 69%	47,495 63%	42,469 65%	36,744 65%	32,120 64%	47,191 62%	41,713 64%	35,666 63%	46,477 61%	40,577 62%	45,586 60%
Exiters' Wages in North Carolina		Mean Median	\$13,537 \$10,136	\$14,017 \$10,823	\$15,008 \$11,826	\$15,276 \$11,862	\$16,570 \$13,048	\$16,441 \$13,044	\$16,978 \$13,779	\$17,747 \$14,687	\$18,140 \$14,803	\$18,607 \$15,297	\$18,771 \$15,515	\$19,362 \$16,273	\$20,335 \$16,965	\$20,424 \$17,331	\$21,710 \$18,438
Exiters Enrolled in NC Public Higher Education		N %	22,488 30%	17,825 27%	13,053 23%	11,144 22%	9,785 22%	16,467 22%	13,286 20%	10,281 18%	8,637 17%	12,740 17%	10,451 16%	8,267 15%	10,486 14%	8,573 13%	8,531 11%
Exiters Enrolled in NC Public Education, Employment, or Training Program		N %	40,690 54%	35,509 54%	28,676 51%	23,593 47%	20,832 47%	29,837 39%	25,163 38%	19,718 35%	17,433 35%	25,067 33%	20,560 31%	16,730 30%	21,040 28%	17,996 27%	18,473 24%
Exiters Enrolled or Employed in NC		N %	60,359 80%	52,629 80%	45,055 80%	38,998 78%	35,371 79%	55,368 73%	48,455 74%	41,157 73%	36,058 72%	53,098 70%	46,164 70%	39,149 70%	50,926 67%	44,262 67%	49,248 65%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining		0.7% 0.9% 0.9% 1.1% 0.8%					0.8% 0.9% 1.0% 1.0%				0.8% 1.0% 0.9%			0.9% 0.9%		0.8%	
Wholesale Trade, Transport, and Utilities		6.1% 6.8% 7.2% 7.6% 7.8%					6.8% 7.7% 7.9% 7.7%				7.5% 8.1% 8.3%			8.0% 8.4%		8.4%	
Construction		4.7% 5.0% 5.6% 5.8% 5.5%					5.1% 5.5% 5.9% 6.2%				5.6% 5.8% 6.0%			5.9% 6.0%		6.1%	
Manufacturing		16.9% 17.9% 19.8% 19.5% 19.1%					17.5% 19.2% 20.8% 20.3%				19.0% 20.4% 21.7%			19.8% 21.5%		20.3%	
Retail Trade		18.0% 18.7% 18.2% 18.6% 18.0%					17.4% 17.1% 17.5% 17.1%				16.7% 16.5% 16.6%			16.2% 15.9%		15.6%	
Information		0.9% 0.8% 0.7% 0.8% 0.9%					0.9% 0.8% 0.8% 0.8%				0.9% 0.8% 0.8%			0.9% 0.8%		0.9%	
Financial Activities		3.2% 3.3% 2.7% 2.8% 3.1%					4.0% 2.8% 2.9% 3.0%				3.0% 2.9% 2.9%			3.2% 3.1%		3.2%	
Professional and Business Services		36.1% 38.0% 38.0% 37.3% 36.2%					33.0% 33.2% 32.8% 32.1%				31.5% 30.9% 30.3%			29.9% 29.6%		28.7%	
Educational Services		4.5% 4.6% 4.3% 4.7% 5.0%					4.5% 4.5% 4.4% 4.5%				4.5% 4.6% 4.5%			4.8% 4.9%		5.0%	
Health Care and Social Assistance		16.0% 16.4% 15.8% 16.2% 18.4%					16.6% 16.9% 16.3% 16.9%				17.2% 17.6% 16.8%			17.8% 18.0%		18.1%	
Leisure and Hospitality		21.9% 22.7% 22.8% 23.9% 23.8%					20.5% 21.4% 21.5% 21.9%				19.9% 20.7% 20.4%			19.6% 19.9%		19.1%	
Other Services		2.8% 2.4% 2.8% 2.8% 3.2%					2.8% 2.8% 2.9% 2.9%				2.8% 2.9% 2.9%			3.0% 2.9%		2.9%	
Public Administration		2.4% 2.6% 2.8% 3.2% 3.8%					2.8% 2.9% 3.0% 3.3%				3.1% 3.2% 3.4%			3.3% 3.5%		3.5%	
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining		\$2,227 \$2,308 \$3,616 \$2,916 \$4,230					\$2,880 \$3,643 \$3,820				\$2,583 \$2,862 \$5,298			\$2,600 \$2,602		\$3,584	
Wholesale Trade, Transport, and Utilities		\$7,538 \$8,127 \$7,335 \$7,000 \$7,242					\$10,212 \$10,451 \$10,243 \$10,933				\$11,750 \$11,225 \$10,960			\$12,778 \$12,331		\$13,616	
Construction		\$7,025 \$6,880 \$7,831 \$8,408 \$7,696					\$9,667 \$8,910 \$9,703 \$10,259				\$11,098 \$10,590 \$10,612			\$12,155 \$12,241		\$13,578	
Manufacturing		\$9,565 \$11,408 \$12,617 \$10,538 \$12,644					\$15,809 \$16,196 \$16,532 \$15,919				\$18,377 \$17,585 \$19,224			\$19,801 \$19,327		\$21,177	
Retail Trade		\$4,296 \$4,027 \$4,433 \$4,201 \$4,167					\$5,503 \$5,300 \$5,376 \$5,432				\$5,947 \$5,888 \$6,045			\$6,752 \$6,370		\$7,054	
Information		\$6,250 \$6,610 \$6,649 \$8,588 \$5,850					\$9,578 \$8,704 \$7,808 \$8,802				\$10,436 \$11,881 \$9,080			\$11,507 \$10,743		\$11,904	
Financial Activities		\$4,856 \$3,753 \$9,275 \$8,696 \$10,690					\$4,340 \$10,529 \$12,495 \$12,677				\$15,903 \$13,995 \$14,536			\$18,890 \$16,529		\$20,428	
Professional and Business Services		\$4,350 \$4,303 \$4,417 \$3,987 \$4,460					\$4,723 \$4,443 \$4,389 \$4,146				\$4,724 \$4,393 \$4,636			\$4,764 \$4,528		\$4,920	
Educational Services		\$6,586 \$6,794 \$6,486 \$6,973 \$7,399					\$9,796 \$9,433 \$9,144 \$11,127				\$11,403 \$11,127 \$10,990			\$12,816 \$13,114		\$14,619	
Health Care and Social Assistance		\$8,291 \$8,021 \$8,528 \$8,922 \$9,451					\$11,137 \$10,856 \$11,369 \$11,874				\$12,736 \$13,077 \$13,118			\$14,176 \$14,145		\$15,302	
Leisure and Hospitality		\$3,099 \$3,168 \$3,076 \$2,973 \$3,030					\$3,678 \$3,574 \$3,609 \$3,506				\$3,933 \$3,684 \$3,840			\$3,970 \$3,947		\$4,172	
Other Services		\$3,531 \$3,706 \$3,874 \$3,837 \$4,067					\$5,021 \$5,026 \$4,946 \$5,217				\$5,416 \$4,757 \$5,580			\$5,919 \$5,315		\$6,657	
Public Administration		\$11,216 \$11,615 \$11,848 \$11,051 \$17,040					\$19,511 \$19,736 \$19,024 \$18,567				\$24,459 \$23,516 \$23,855			\$26,317 \$26,284		\$27,930	
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining		\$6,486 \$7,101 \$8,252 \$6,561 \$9,880					\$7,371 \$8,981 \$9,178 \$8,930				\$8,016 \$8,151 \$11,183			\$8,753 \$9,772		\$10,043	
Wholesale Trade, Transport, and Utilities		\$12,495 \$12,906 \$12,054 \$12,809 \$13,730					\$15,444 \$15,713 \$15,660 \$16,428				\$17,090 \$17,054 \$16,718			\$18,190 \$18,290		\$19,323	
Construction		\$12,256 \$12,295 \$12,869 \$14,159 \$13,438					\$15,303 \$14,946 \$15,329 \$16,434				\$16,861 \$17,209 \$16,654			\$18,334 \$18,342		\$19,699	
Manufacturing		\$14,060 \$15,278 \$16,367 \$15,199 \$17,165					\$18,782 \$19,233 \$19,490 \$19,352				\$20,745 \$20,476 \$21,296			\$21,911 \$21,862		\$23,289	
Retail Trade		\$7,020 \$6,860 \$7,617 \$7,620 \$7,656					\$8,610 \$8,778 \$9,317 \$9,364				\$9,772 \$9,786 \$10,360			\$10,944 \$10,583		\$11,521	
Information		\$12,754 \$12,210 \$13,219 \$13,800 \$14,005					\$16,145 \$14,622 \$16,860 \$17,909				\$18,761 \$18,062 \$18,401			\$20,240 \$18,760		\$21,594	
Financial Activities		\$11,938 \$10,789 \$14,952 \$14,345 \$17,469					\$13,311 \$17,671 \$18,199 \$18,145				\$21,301 \$20,009 \$19,449			\$23,190 \$21,869		\$24,778	
Professional and Business Services		\$8,017 \$7,858 \$8,018 \$7,968 \$8,798					\$9,109 \$8,742 \$8,747 \$9,173				\$9,481 \$9,014 \$9,315			\$9,985 \$9,427		\$10,430	
Educational Services		\$10,914 \$10,714 \$10,743 \$11,512 \$11,775					\$13,770 \$13,077 \$13,442 \$15,172				\$15,536 \$14,507 \$15,252			\$16,497 \$16,244		\$18,158	
Health Care and Social Assistance		\$11,115 \$11,185 \$11,722 \$12,329 \$12,610					\$13,422 \$13,778 \$14,243 \$14,810				\$15,360 \$15,728 \$15,726			\$17,002 \$17,065		\$18,192	
Leisure and Hospitality		\$5,328 \$5,369 \$5,517 \$5,487 \$5,619					\$6,327 \$6,264 \$6,432 \$6,377				\$7,067 \$6,631 \$6,952			\$7,559 \$7,135		\$8,147	
Other Services		\$7,297 \$7,497 \$8,252 \$7,949 \$8,927					\$9,345 \$9,136 \$10,231 \$9,953				\$10,137 \$10,161 \$10,621			\$10,758 \$11,223		\$11,778	
Public Administration		\$15,647 \$15,497 \$15,920 \$15,416 \$18,365					\$19,699 \$20,151 \$20,259 \$20,035				\$22,640 \$22,142 \$22,809			\$24,056 \$24,393		\$25,900	

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Overview of Basic Skills Programs

The Basic Skills programs operated by the North Carolina Community Colleges include a group of education programs designed to assist adults with the acquisition of basic educational skills. Programs offered under the Basic Skills designation include Adult Basic Education (ABE); Adult Secondary Education (ASE), including High School Equivalency and Adult High School Diploma programs; and English as a second language (ESL).²³ In July of 2014, the Workforce Innovation and Opportunity Act (WIOA) was signed into law. The WIOA supersedes the Workforce Investment Act of 1998 and amends the Adult Education and Family Literacy Act, which authorizes programs offered through North Carolina's Basic Skills programs.

Adult Basic Education (ABE) is a program of instruction designed to assist adults 16 or older who function below the high school level, with instruction in reading, writing, math and English. Adults with intellectual disabilities are also served by the ABE program provided they have a formal diagnosis and show progress in the program.

The Adult Secondary Education (ASE) program is designed to prepare adults, 18 or older, for further education or transition toward skill obtainment and employment, and includes both the Adult High School (AHS) and the High School Equivalency (HSE) Diploma programs.²⁴ The AHS program consists of classroom instruction, learning laboratory courses, and distance education to assist adults with obtaining an Adult High School Diploma. The HSE program offers instruction to assist learners who are preparing to take a high school equivalency exam such as GED®, HiSET®, or TASC.

English as a Second Language is a program to assist adults who have limited English proficiency, and includes instruction in English language listening, speaking, reading, writing, and comprehension.²⁵

» Program Outcomes

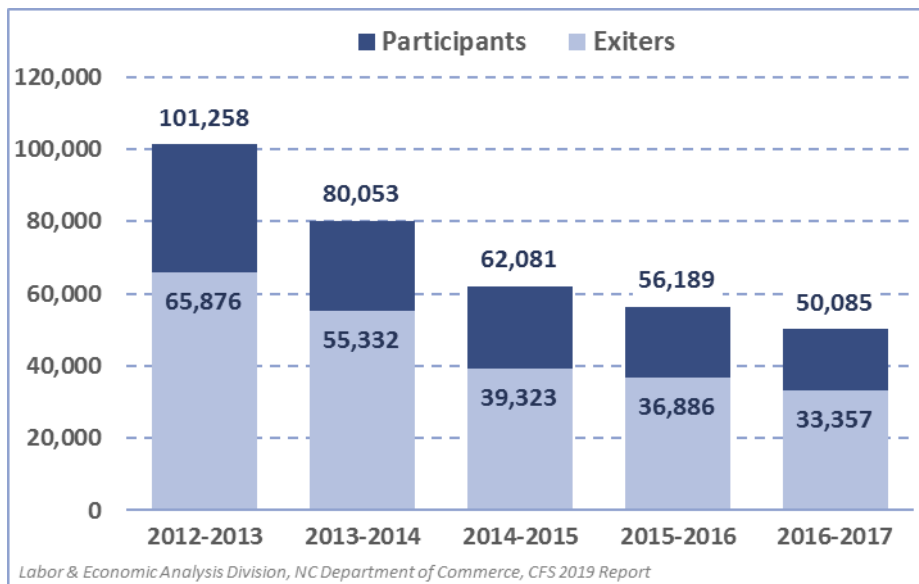
Employment and wage outcome measures were calculated for each cohort of participants exiting the Basic Skills programs. Participants who were not enrolled in a Basic Skills program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit. Results indicated that the number of Basic Skills participants and exiters declined noticeably over the five-year time period (Figure 49).

²³ North Carolina Community College System, <http://www.nccommunitycolleges.edu/academic-programs/nc-community-college-system-catalog>

²⁴ <http://www.nccommunitycolleges.edu/college-and-career-readiness/adult-secondary-education>

²⁵ <http://www.nccommunitycolleges.edu/academic-programs/nc-community-college-system-catalog>

Figure 49. NCCCS Basic Skills Program Participants and Exitters by Program Year



Figures 50 and 51 show the employment and wage outcomes for Basic Skills program exitters by program year (also see Table 13). Short-term outcomes at one year after program exit show steady increases in employment rates with nearly each successive cohort, and little variation in median wages by cohort. One-year post-exit employment increased from 52% for the 2012-2013 exiting cohort to 57% for the 2016-2017 cohort. One-year post-completion median wages for Basic Skills program completers varied marginally between \$8,428 for the 2012-2013 cohort and \$9,112 for the 2016-2017 cohort.

Longer-term post-exit employment and wage measures indicate rather stable employment rates and steady increases in median wages. Employment stayed at the level of 52-53% for the 2012-2013 cohort, 54-55% for the 2013-2014 cohort, and 53-54% for the 2014-2015 cohort for all post-exit years. While the median post-completion wages were fairly low, all showed significant and regular increases over time for all cohorts in this analysis. For all cohorts, median wages rose by from 17% to 20% between the first and second post-exit years. In the later post-exit years, median wages for all cohorts kept growing at annual rates ranging from 10% to 14%.

Figure 50. Percentage of NCCCS Basic Skills Exiters Employed in North Carolina After Exit, by Year of Exit

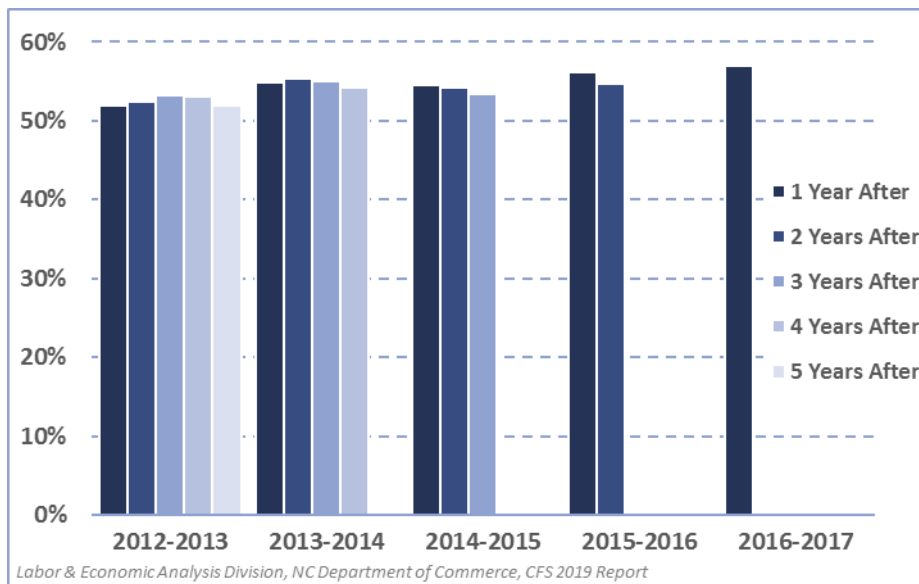
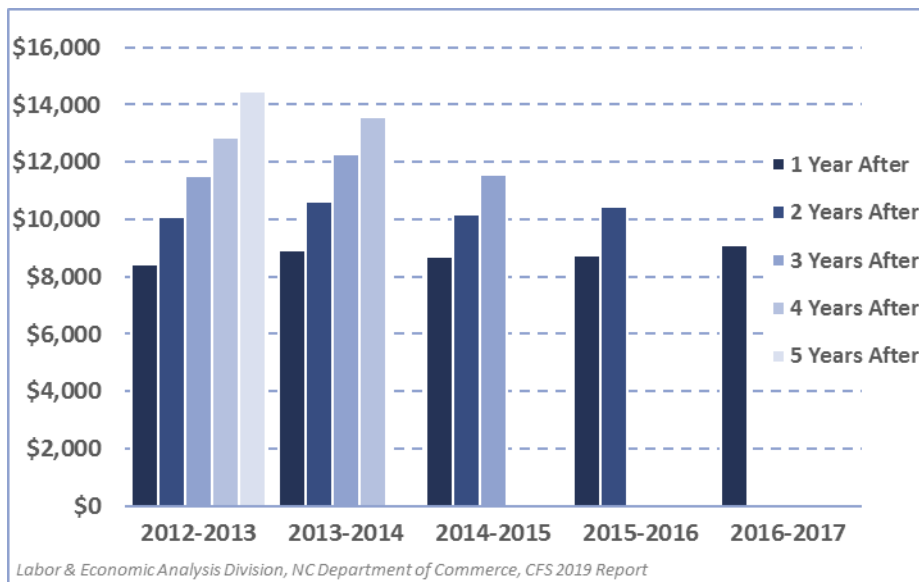
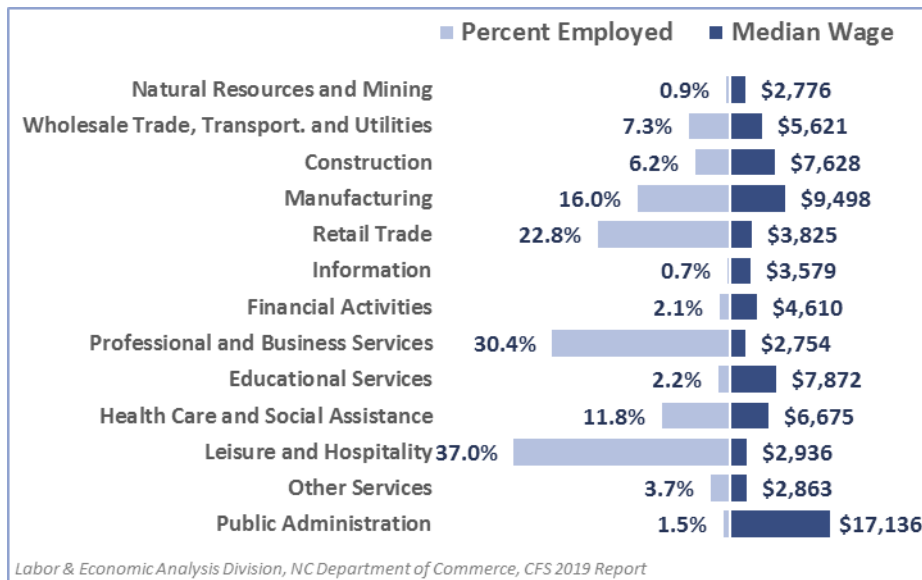


Figure 51. Median Wage of NCCCS Basic Skills Program Exiters in North Carolina, by Year of Exit



Further analysis of one-year outcomes for the 2016-2017 exiting cohort (Figure 52) reveals that the largest percentage of Basic Skills program exiters were employed in Leisure and Hospitality (37%) and Professional and Business Services (30.4%), paying median annual wages of \$2,936 and \$2,754, respectively. While these are among the lowest-paid median wages for this cohort, they often represent temporary or part-time employment. The Public Administration sector provided the highest median wage (\$17,136) but employed few Basic Skills exiters (1.5% of the overall 2016-2017 cohort one year after exit). The second- and third-highest-paid industries were Manufacturing (16%) and Educational Services (2.2%), paying \$9,498 and \$7,872 in median annual wages, respectively.

Figure 52. 2016-2017 NCCCS Basic Skills Program Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



» Summary and Recommendations

Overall, the results indicate that there have been comparable employment rates across program year cohorts and stable employment rates when Basic Skills program participants are followed over time. The post-exit median wage rates of Basic Skills participants are low; however, there are some increases over time. For example, the median wage for the 2012-2013 program year cohort was \$8,428 one year after exit, increasing to \$14,461 by year five. By contrast, the 2017 annual median wage in North Carolina for all persons employed in UI-covered jobs was \$27,259, while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.²⁶ While post-exit wages are low, stable employment rates demonstrate a positive outcome for Basic Skills program credential recipients. In addition, the subsequent enrollment of Basic Skills programs exiters in further education is a positive outcome for the program. Between 10% and 18% of the participants were enrolled in additional higher educational programs during the five years after exiting the program. This indicates that individuals are continuing in additional skill development after gaining their high school credential.

As previously noted, part of the requirement of WIOA is the development of an integrated service delivery plan that includes the coordination between WIOA, Wagner-Peyser, Adult Basic Education and Vocational Rehabilitation programs. It is recommended that North Carolina's integrated service delivery plan and implementation continue to focus on the leveraging of resources and services across these programs and focus on achieving higher employment and wage outcomes for all participants and for increasing occupational skills and educational credentials.

²⁶ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey). Source of poverty guidelines: U.S. Department of Health & Human Services, <https://aspe.hhs.gov/2017-poverty-guidelines>

Table 13. NCCCS Basic Skills Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Community College System							Common Follow-up System: Evaluative Measures, 2019 Report										
Basic Skills Program							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce										
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013	
Participants		101,258	80,053	62,081	56,189	50,085	101,258	80,053	62,081	56,189	101,258	80,053	62,081	101,258	80,053	101,258	
Exiters		65,876	55,332	39,323	36,886	33,357	65,876	55,332	39,323	36,886	65,876	55,332	39,323	65,876	55,332	65,876	
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Exiters Employed In North Carolina		N %	34,239 52%	30,310 55%	21,424 54%	20,702 56%	18,990 57%	34,512 52%	30,588 55%	21,320 54%	20,156 55%	35,021 53%	30,401 55%	20,966 53%	34,923 53%	30,030 54%	34,240 52%
Exiters' Wages in North Carolina		Mean Median	\$11,905 \$8,428	\$12,368 \$8,925	\$12,469 \$8,695	\$12,657 \$8,755	\$13,143 \$9,112	\$13,507 \$10,080	\$14,001 \$10,613	\$14,017 \$10,183	\$14,192 \$10,458	\$15,032 \$11,501	\$15,549 \$12,282	\$15,384 \$11,549	\$16,475 \$12,853	\$16,814 \$13,563	\$17,926 \$14,463
Exiters Enrolled in NC Public Higher Education		N %	11,063 17%	8,893 16%	5,034 13%	4,870 13%	4,052 12%	12,073 18%	9,480 17%	6,221 16%	5,677 15%	9,973 15%	8,093 15%	5,224 13%	8,156 12%	6,452 12%	6,725 10%
Exiters Enrolled in NC Public Education, Employment, or Training Program		N %	19,265 29%	16,027 29%	10,111 26%	9,353 25%	8,296 25%	19,385 29%	15,471 28%	10,213 26%	9,437 26%	16,715 25%	13,260 24%	9,044 23%	14,459 22%	11,628 21%	12,785 19%
Exiters Enrolled or Employed in NC		N %	40,852 62%	35,141 64%	24,572 62%	23,439 64%	21,270 64%	40,533 62%	35,074 63%	24,247 62%	22,779 62%	39,761 60%	33,783 61%	23,345 59%	38,591 59%	32,745 59%	37,247 57%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			1.2%	1.1%	1.1%	1.1%	0.9%	1.2%	1.1%	1.2%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.0%
Wholesale Trade, Transport. and Utilities			5.9%	6.0%	6.2%	6.7%	7.3%	6.6%	7.2%	7.4%	7.4%	7.1%	7.8%	7.9%	8.0%	8.3%	8.4%
Construction			6.1%	6.0%	6.1%	6.6%	6.2%	6.9%	6.5%	7.0%	7.0%	7.1%	7.0%	7.6%	7.6%	7.3%	8.0%
Manufacturing			14.5%	14.8%	14.8%	15.3%	16.0%	15.7%	16.5%	16.1%	16.2%	16.9%	16.9%	17.1%	17.6%	17.6%	18.4%
Retail Trade			21.5%	22.4%	21.9%	22.2%	22.8%	21.4%	21.1%	21.5%	21.6%	20.4%	20.6%	20.7%	19.9%	19.9%	18.9%
Information			0.5%	0.7%	0.6%	0.5%	0.7%	0.6%	0.8%	0.7%	0.6%	0.7%	0.7%	0.8%	0.8%	0.8%	0.8%
Financial Activities			2.4%	2.5%	2.2%	2.2%	2.1%	2.7%	2.5%	2.2%	2.4%	2.5%	2.4%	2.3%	2.6%	2.5%	2.8%
Professional and Business Services			30.6%	31.5%	32.0%	31.3%	30.4%	30.6%	31.1%	31.5%	30.4%	30.7%	31.0%	31.0%	30.1%	29.8%	29.5%
Educational Services			2.2%	2.1%	2.1%	2.1%	2.2%	2.3%	2.3%	2.4%	2.4%	2.4%	2.5%	2.4%	2.7%	2.7%	2.7%
Health Care and Social Assistance			10.8%	11.5%	11.0%	12.3%	11.8%	11.4%	12.3%	11.9%	13.1%	12.1%	13.1%	12.6%	13.0%	13.9%	13.5%
Leisure and Hospitality			32.6%	33.1%	35.7%	36.2%	37.0%	30.6%	31.9%	33.1%	33.8%	29.8%	30.7%	31.1%	28.9%	29.1%	28.0%
Other Services			3.0%	3.4%	3.4%	3.4%	3.7%	3.4%	3.6%	3.5%	3.6%	3.5%	3.7%	3.6%	3.5%	3.7%	3.5%
Public Administration			1.4%	1.5%	1.4%	1.6%	1.5%	1.6%	1.6%	1.6%	1.7%	1.7%	1.9%	1.8%	1.9%	1.9%	2.1%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			\$3,360	\$3,840	\$2,069	\$3,116	\$2,776	\$3,271	\$3,708	\$3,239	\$4,522	\$3,639	\$4,016	\$4,121	\$4,454	\$5,423	\$4,471
Wholesale Trade, Transport. and Utilities			\$7,950	\$7,753	\$6,110	\$5,526	\$5,621	\$8,657	\$7,346	\$6,312	\$5,852	\$9,031	\$7,978	\$8,579	\$8,521	\$9,090	\$10,291
Construction			\$7,568	\$7,545	\$6,953	\$7,070	\$7,628	\$8,717	\$8,172	\$7,960	\$8,952	\$10,297	\$10,056	\$8,942	\$11,585	\$10,910	\$13,364
Manufacturing			\$12,057	\$12,835	\$9,896	\$8,507	\$9,498	\$13,770	\$13,480	\$10,541	\$10,879	\$15,032	\$14,677	\$11,941	\$15,072	\$15,573	\$16,008
Retail Trade			\$4,359	\$4,108	\$3,878	\$3,568	\$3,825	\$4,628	\$4,639	\$4,080	\$4,083	\$5,038	\$5,213	\$4,504	\$5,469	\$5,445	\$6,007
Information			\$5,525	\$4,553	\$3,192	\$5,318	\$3,579	\$5,602	\$3,600	\$2,830	\$5,095	\$4,552	\$6,199	\$4,753	\$5,353	\$7,004	\$7,800
Financial Activities			\$4,698	\$4,193	\$4,069	\$6,750	\$4,610	\$3,980	\$6,444	\$6,855	\$6,194	\$7,058	\$9,042	\$6,867	\$8,887	\$9,047	\$8,984
Professional and Business Services			\$2,803	\$3,022	\$2,746	\$2,670	\$2,754	\$3,158	\$3,027	\$2,798	\$2,797	\$3,110	\$3,189	\$2,982	\$3,241	\$3,461	\$3,627
Educational Services			\$10,268	\$8,756	\$9,583	\$10,237	\$7,872	\$11,122	\$9,550	\$9,627	\$11,001	\$12,066	\$11,884	\$11,555	\$12,330	\$12,300	\$14,492
Health Care and Social Assistance			\$7,806	\$7,882	\$7,479	\$6,384	\$6,675	\$8,575	\$8,787	\$8,215	\$7,189	\$9,197	\$10,053	\$9,414	\$10,204	\$10,680	\$11,487
Leisure and Hospitality			\$3,334	\$3,343	\$2,997	\$3,106	\$2,936	\$3,609	\$3,494	\$3,222	\$3,172	\$3,702	\$3,707	\$3,508	\$3,831	\$3,800	\$4,045
Other Services			\$3,616	\$3,758	\$3,326	\$3,456	\$2,863	\$3,880	\$4,038	\$4,376	\$3,638	\$4,752	\$4,249	\$4,639	\$5,692	\$4,851	\$5,875
Public Administration			\$16,019	\$15,653	\$18,269	\$16,579	\$17,136	\$20,227	\$22,339	\$21,349	\$25,000	\$23,146	\$24,899	\$25,436	\$25,623	\$27,906	\$27,204
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			\$8,296	\$9,727	\$8,758	\$8,666	\$8,238	\$9,290	\$10,056	\$9,440	\$10,942	\$9,677	\$10,323	\$10,589	\$10,474	\$12,043	\$10,705
Wholesale Trade, Transport. and Utilities			\$13,065	\$13,281	\$11,952	\$11,495	\$11,833	\$14,241	\$13,354	\$12,493	\$12,904	\$14,871	\$14,298	\$14,132	\$15,012	\$15,625	\$16,571
Construction			\$13,303	\$12,770	\$12,974	\$12,538	\$13,765	\$14,437	\$14,225	\$14,416	\$14,763	\$16,115	\$15,996	\$15,427	\$17,926	\$17,159	\$19,376
Manufacturing			\$15,467	\$15,993	\$15,133	\$14,742	\$15,613	\$16,935	\$16,825	\$16,000	\$16,368	\$17,919	\$17,875	\$17,164	\$18,644	\$18,724	\$19,587
Retail Trade			\$7,263	\$7,233	\$7,237	\$7,065	\$7,367	\$8,050	\$8,375	\$7,979	\$8,105	\$8,978	\$9,269	\$8,638	\$9,869	\$9,893	\$10,688
Information			\$12,853	\$10,177	\$9,421	\$17,774	\$10,410	\$13,449	\$10,409	\$10,678	\$12,854	\$13,242	\$12,877	\$11,188	\$14,520	\$13,554	\$15,770
Financial Activities			\$11,209	\$10,469	\$10,258	\$12,629	\$13,982	\$11,336	\$12,516	\$12,927	\$12,878	\$13,550	\$15,257	\$13,625	\$15,626	\$16,222	\$15,673
Professional and Business Services			\$6,138	\$6,265	\$6,017	\$5,896	\$6,013	\$6,686	\$6,529	\$6,350	\$6,403	\$6,868	\$6,904	\$6,812	\$7,201	\$7,534	\$7,966
Educational Services			\$13,347	\$11,769	\$12,759	\$13,510	\$12,234	\$13,915	\$12,593	\$12,834	\$14,124	\$14,551	\$13,562	\$14,560	\$15,108	\$14,644	\$16,515
Health Care and Social Assistance			\$10,924	\$11,294	\$11,356	\$10,433	\$10,807	\$11,678	\$12,133	\$12,106	\$11,290	\$12,514	\$13,092	\$13,029	\$13,358	\$13,790	\$14,341
Leisure and Hospitality			\$5,749	\$5,711	\$5,568	\$5,692	\$5,596	\$6,309	\$6,210	\$6,059	\$6,069	\$6,986	\$6,715	\$6,640	\$7,457	\$7,119	\$7,986
Other Services			\$7,787	\$7,253	\$8,057	\$7,358	\$7,203	\$8,392	\$7,819	\$9,426	\$8,083	\$9,434	\$8,851	\$10,115	\$10,720	\$9,705	\$11,195
Public Administration			\$18,313	\$18,815	\$21,685	\$20,863	\$19,899	\$20,167	\$21,683	\$23,446	\$24,207	\$21,977	\$23,406	\$25,051	\$23,551	\$25,875	\$25,168

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Overview of Customized Training Program

The Customized Training (CT) Program began in 1958 as the New and Expanding Industry Training Program. In 2008, legislation was passed to combine the New and Expanding Industry Training Program, the Focused Industry Training Program, and the Customized Industry Training Program into one. The CT program was developed in recognition of the fact that a critical consideration for a business or industry considering locating, expanding, or remaining in North Carolina is the ability of the state to ensure the presence of a well-trained workforce.

The Customized Training Program supports the economic development efforts of the state by providing education, training, and support services for eligible new, expanding, and existing businesses and industries in North Carolina through the state's network of 58 community colleges serving all 100 counties. The program also provides services to individuals who are employed or seeking employment by an eligible business or industry. To qualify, businesses and industries must fall within the eligible clusters of manufacturing, technology intensive (i.e., information technology, life sciences), regional or national warehousing and distribution centers, customer support centers, air courier services, national headquarters with operations outside North Carolina, and civil service employees providing technical support to US military installations located in North Carolina.

Eligible businesses and industries must also demonstrate that they are making an appreciable capital investment; deploying new technology; creating jobs, expanding the existing workforce, or improving the productivity and profitability of the operation in the state; and enhancing workers' skills. Resources may support training assessment, instructional design, instructional costs, and training delivery for personnel involved in the direct production of goods and services, as well as those in production and technology support; employees eligible for training also include full-time probationary employees of eligible companies. The use of Customized Training funds requires that trainees are paid by the company for all time during training hours.²⁷

» Customized Training Program Outcomes

As shown in Figure 53, the number of participants in CT programs increased between the 2012-2013 and 2014-2015 program years, followed by a decline in participation for the next two program years. Participants who were not enrolled in the program during any part of the year following enrollment were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

Figures 54 and 55 show the program employment and wage outcomes during the period studied (also see Table 14). The rate of employment in North Carolina one year after exit showed gradual increases across four of the five cohorts, with a minor dip for the 2015-2016 cohort. The rate reached a high of 92% for the 2016-2017 cohort, up five percent points from the low in the 2012-2013 cohort. Over time, the employment rate declined slowly for all cohorts. For example, employment rates in North Carolina for the 2012-2013 exiting cohort decreased from 87% to 75% over the five years after exit (Figure 54).

Median wages one year after exit fluctuated across the cohorts examined here. Longer-term wage outcomes, however, showed moderate wage growth for all cohorts. For the 2012-2013 cohort, the five-year post-exit median wage was \$47,218 — a 16% increase from their first-year post-exit wage of \$40,854.

²⁷ Customized Training Program Expenditures Report, http://www.nccommunitycolleges.edu/sites/default/files/state-board/program/prog_08_-_customized_training_program_expenditures_report_2016-2017.pdf

Figure 53. NCCCS Customized Training Program Participants and Exiters by Program Year

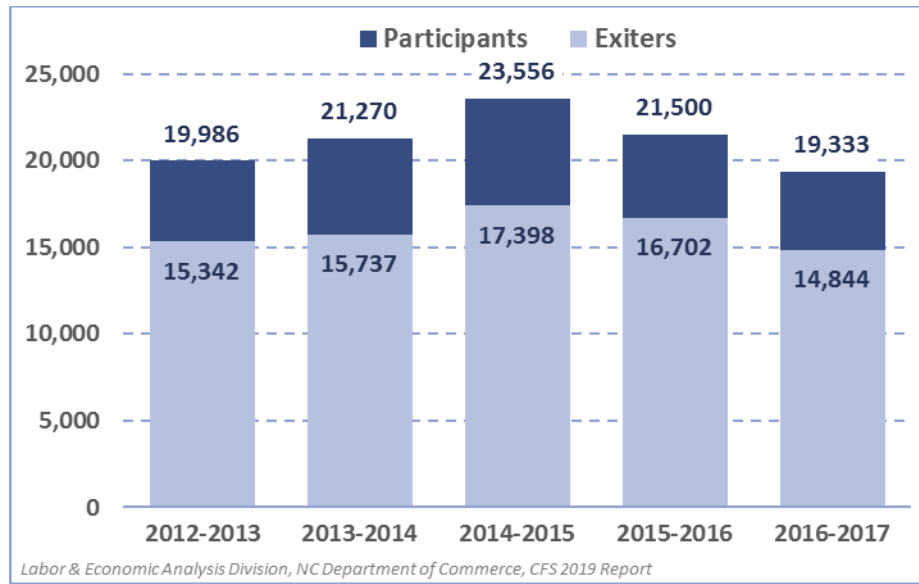
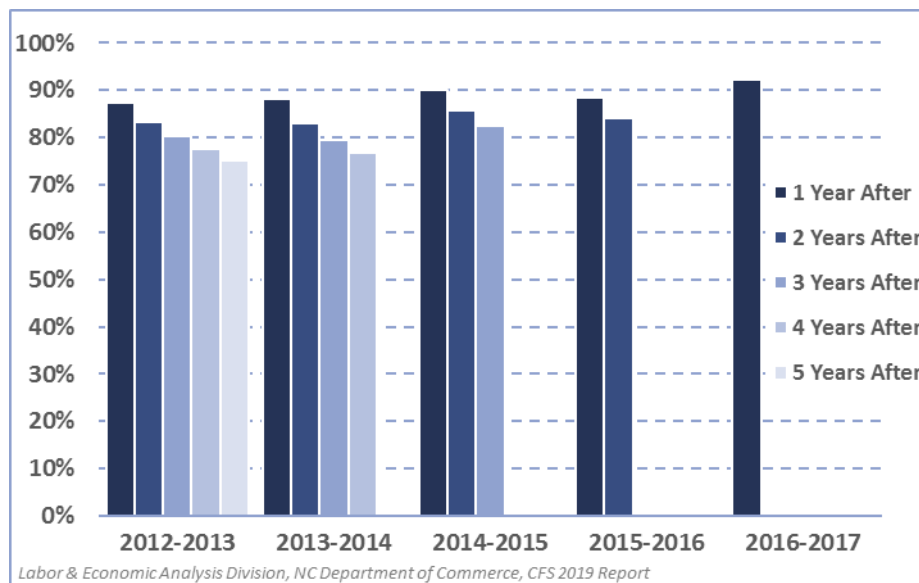


Figure 54. Percentage of NCCCS Customized Training Program Exiters Employed in North Carolina After Exit, by Year of Exit



The post-participation industries of employment for CT program exiters indicate that Manufacturing was the dominant employment industry, with relatively high wages across the five program years examined. As shown in Figure 56, during the first year after exit for the 2016-2017 cohort, Manufacturing accounted for the largest share of employment (79.4%; median wage of \$45,296), distantly followed by Professional and Business Services industry (12.6%; median wage of \$11,240), a sector which includes temporary help services. Both three- and five-year post-exit industry employment rates reflect a similar trend (see Table 14). By contrast, the 2017 annual median wage in North Carolina for all persons employed in unemployment insurance-covered jobs was \$27,259,

while the 2017 federal poverty guideline was \$12,060 for a one-person household and \$16,240 for a two-person household.²⁸

Figure 55. Median Wage of NCCCS Customized Training Program Exiters in North Carolina, by Year of Exit

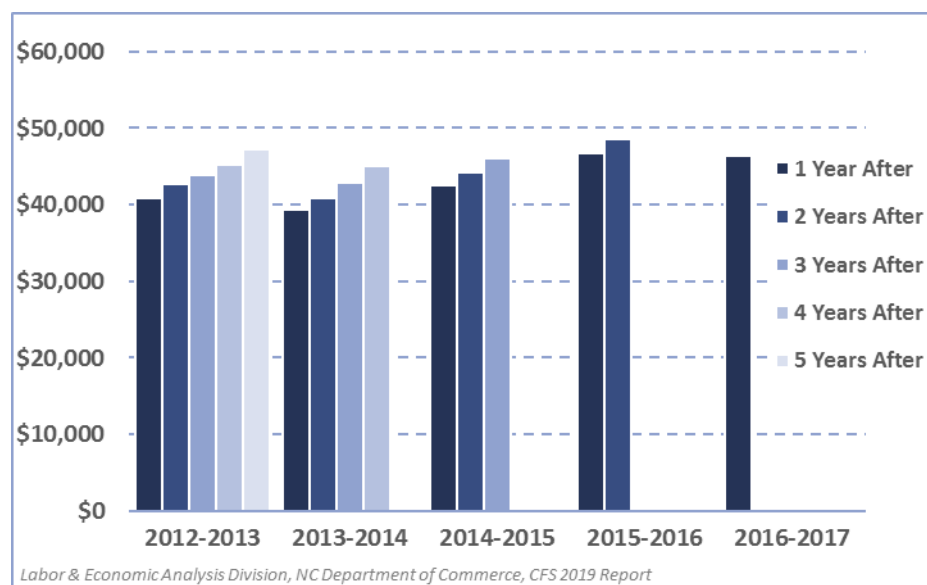
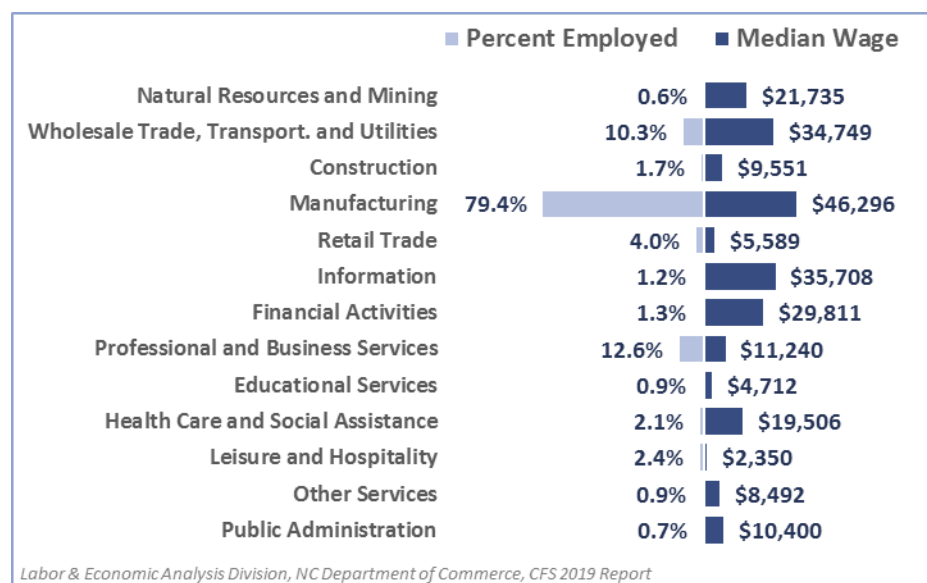


Figure 56. 2016-2017 NCCCS Customized Training Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



²⁸ Source of wage data: Common Follow-up System. For comparison, the 2017 annual median wage in North Carolina for all wage-earning residents was \$30,936 (American Community Survey).
Source of poverty guidelines: U.S. Department of Health & Human Services,
<https://aspe.hhs.gov/2017-poverty-guidelines>

» Summary and Recommendations

The outcome measures for Customized Training program exiters indicate fairly high post-exit employment rates (ranging from 87% to 92% in the first year after exit) as compared to other workforce training programs examined in this report. While the annual median wages had slight fluctuations across program years, CT program exiters earned higher wages relative to exiters in other workforce training programs. Overall, the progressive growth in employment rates and wages demonstrate a positive outcome for the program.

When exiters are followed over longer periods of time, the employment rate tends to decline. This may be due to several factors, including individuals leaving the state to work in other states or finding employment in jobs not covered by North Carolina's unemployment insurance. This is evidenced by the declining employment rate for CT program exiters, down 12% five years after exit for the 2012-2013 cohort. However, employment retention rate for the program completers remains at 75% after five years, a rate that is much higher than most other workforce programs. In addition, the median wages for CT program exiters reveal a stable increase over time, representing some of the highest wage outcomes among other workforce training programs. The elevated wages are likely due to the fact that eligible CT program participants were already employed during training.

The dominant industry of employment for CT program exiters reflects a heavy concentration on the high-paying Manufacturing industry, one of the eligible industry clusters for the CT program. Plastic Product, Motor Vehicle Parts, as well as Pharmaceutical and Medicine Manufacturing represented the top three Manufacturing subsectors employing CT program exiters. This demonstrates alignment of North Carolina's workforce and economic development efforts.

Table 14. NCCCS Customized Training Participants and Exiters, Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Community College System Customized Training Program							Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Participants		19,986	21,270	23,556	21,500	19,333	19,986	21,270	23,556	21,500	19,986	21,270	23,556	19,986	21,270	19,986
Exiters		15,342	15,737	17,398	16,702	14,844	15,342	15,737	17,398	16,702	15,342	15,737	17,398	15,342	15,737	15,342
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Exiters Employed In North Carolina	N	13,409	13,858	15,672	14,792	13,684	12,770	13,068	14,934	14,057	12,316	12,527	14,330	11,913	12,083	11,518
	%	87%	88%	90%	89%	92%	83%	83%	86%	84%	80%	80%	82%	78%	77%	75%
Exiters' Wages in North Carolina	Mean	\$45,832	\$45,122	\$47,735	\$52,998	\$51,965	\$47,826	\$47,052	\$49,728	\$55,490	\$49,626	\$49,249	\$51,454	\$50,914	\$51,384	\$53,029
	Median	\$40,854	\$39,392	\$42,474	\$46,722	\$46,320	\$42,699	\$40,920	\$44,143	\$48,544	\$43,887	\$42,922	\$46,067	\$45,159	\$44,958	\$47,218
Exiters Enrolled in NC Public Higher Education	N	1,575	1,836	1,864	1,865	1,836	3,668	3,243	3,939	3,427	2,593	2,602	2,990	2,540	2,465	2,221
	%	10%	12%	11%	11%	12%	24%	21%	23%	21%	17%	17%	17%	17%	16%	14%
Exiters Enrolled in NC Public Education, Employment, or Training Program	N	2,859	3,205	3,355	3,177	2,853	4,837	4,421	5,086	4,480	3,652	3,568	4,083	3,458	3,396	3,057
	%	19%	20%	19%	19%	19%	32%	28%	29%	27%	24%	23%	23%	23%	22%	20%
Exiters Enrolled or Employed in NC	N	13,594	13,995	15,828	14,930	13,756	13,088	13,383	15,208	14,322	12,594	12,771	14,587	12,136	12,289	11,725
	%	89%	89%	91%	89%	93%	85%	85%	87%	86%	82%	81%	84%	79%	78%	76%
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.5%	0.3%	0.3%	0.5%	0.6%	0.2%	0.3%	0.4%	0.6%	0.2%	0.4%	0.4%	0.3%	0.4%	0.3%
Wholesale Trade, Transport. and Utilities		9.6%	12.0%	10.2%	11.1%	10.3%	8.9%	11.0%	9.9%	10.9%	8.7%	11.6%	10.5%	8.9%	11.5%	10.3%
Construction		2.0%	2.0%	2.0%	2.2%	1.7%	2.5%	2.4%	2.6%	2.6%	2.8%	2.8%	2.7%	3.0%	2.9%	3.3%
Manufacturing		73.3%	71.0%	72.5%	73.6%	79.4%	72.5%	69.1%	68.9%	71.8%	71.0%	67.0%	67.5%	69.8%	65.9%	68.8%
Retail Trade		3.2%	4.7%	4.2%	4.7%	4.0%	4.0%	4.7%	4.8%	5.5%	4.3%	5.3%	5.2%	4.8%	5.5%	4.7%
Information		0.3%	0.3%	0.3%	0.6%	1.2%	0.5%	0.5%	0.4%	0.6%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Financial Activities		3.4%	3.1%	5.3%	4.0%	1.3%	3.1%	3.0%	5.0%	3.7%	2.8%	3.0%	4.8%	3.1%	3.1%	3.1%
Professional and Business Services		15.8%	18.7%	16.6%	14.7%	12.6%	14.9%	16.1%	15.1%	13.9%	14.6%	15.0%	14.4%	13.3%	13.9%	12.4%
Educational Services		1.1%	1.4%	1.0%	1.1%	0.9%	1.5%	1.6%	1.3%	1.2%	1.5%	1.9%	1.6%	1.7%	1.9%	2.0%
Health Care and Social Assistance		3.5%	2.2%	2.4%	2.0%	2.1%	3.6%	2.5%	2.8%	2.2%	3.7%	2.8%	3.1%	3.9%	3.1%	4.1%
Leisure and Hospitality		1.8%	2.6%	3.0%	2.7%	2.4%	2.0%	2.7%	3.3%	2.9%	2.2%	3.2%	3.3%	2.4%	3.1%	2.7%
Other Services		0.8%	1.6%	1.1%	1.2%	0.9%	0.9%	1.8%	1.3%	1.2%	1.2%	1.8%	1.3%	1.2%	1.9%	1.3%
Public Administration		0.9%	1.1%	0.9%	0.7%	0.7%	1.1%	1.4%	1.1%	0.9%	1.4%	1.6%	1.2%	1.5%	1.7%	1.6%
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$19,746	\$3,572	\$11,321	\$43,383	\$21,735	\$4,294	\$5,590	\$16,064	\$38,216	\$13,718	\$13,108	\$26,059	\$15,585	\$16,375	\$11,856
Wholesale Trade, Transport. and Utilities		\$29,815	\$29,873	\$28,842	\$30,177	\$34,749	\$33,104	\$31,692	\$34,174	\$29,953	\$33,520	\$30,880	\$34,734	\$34,542	\$34,572	\$34,602
Construction		\$12,500	\$10,459	\$17,001	\$20,193	\$9,551	\$18,083	\$15,437	\$19,143	\$21,223	\$24,550	\$19,170	\$22,763	\$27,662	\$21,612	\$21,374
Manufacturing		\$43,201	\$41,992	\$43,212	\$48,593	\$46,296	\$45,265	\$44,297	\$45,731	\$49,819	\$46,551	\$46,690	\$47,739	\$47,915	\$49,054	\$50,487
Retail Trade		\$4,693	\$4,332	\$4,797	\$6,677	\$5,589	\$6,297	\$6,766	\$6,114	\$10,809	\$9,165	\$8,408	\$8,919	\$8,299	\$8,673	\$9,433
Information		\$16,645	\$9,838	\$8,633	\$24,974	\$35,708	\$12,728	\$22,807	\$13,646	\$27,431	\$28,211	\$28,356	\$25,630	\$38,750	\$32,082	\$26,706
Financial Activities		\$37,304	\$46,262	\$55,175	\$55,846	\$29,811	\$36,419	\$50,258	\$55,022	\$58,475	\$41,714	\$47,163	\$53,747	\$41,766	\$45,694	\$38,163
Professional and Business Services		\$12,180	\$11,627	\$12,531	\$10,877	\$11,240	\$13,359	\$12,461	\$13,994	\$14,400	\$11,790	\$12,953	\$14,858	\$14,039	\$14,859	\$13,664
Educational Services		\$7,576	\$4,028	\$7,214	\$6,435	\$4,712	\$7,886	\$7,836	\$10,110	\$10,437	\$15,405	\$9,016	\$8,774	\$14,454	\$13,378	\$17,824
Health Care and Social Assistance		\$22,187	\$9,512	\$12,010	\$14,629	\$19,506	\$22,009	\$13,430	\$15,014	\$18,535	\$23,652	\$15,610	\$18,839	\$21,562	\$18,248	\$22,875
Leisure and Hospitality		\$2,666	\$2,553	\$2,339	\$2,500	\$2,350	\$3,022	\$3,722	\$3,600	\$3,038	\$3,178	\$3,945	\$3,440	\$3,957	\$4,747	\$3,305
Other Services		\$15,630	\$18,258	\$11,254	\$5,798	\$8,492	\$11,860	\$15,666	\$17,336	\$4,064	\$12,071	\$19,076	\$15,275	\$19,406	\$19,003	\$14,594
Public Administration		\$10,100	\$16,366	\$10,613	\$9,706	\$10,400	\$14,249	\$24,072	\$17,521	\$17,024	\$18,068	\$29,712	\$24,448	\$26,441	\$32,056	\$29,670
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$20,993	\$12,368	\$32,447	\$39,593	\$27,657	\$13,178	\$14,432	\$36,668	\$37,916	\$18,099	\$19,236	\$39,980	\$17,637	\$23,298	\$19,136
Wholesale Trade, Transport. and Utilities		\$37,219	\$32,344	\$34,635	\$35,820	\$39,358	\$41,267	\$36,188	\$39,012	\$34,828	\$42,559	\$36,210	\$38,893	\$43,948	\$39,118	\$41,693
Construction		\$19,482	\$17,136	\$22,967	\$26,906	\$17,311	\$23,292	\$21,374	\$24,370	\$28,638	\$28,221	\$23,920	\$27,783	\$28,475	\$25,909	\$26,127
Manufacturing		\$47,400	\$46,201	\$46,946	\$53,134	\$50,774	\$49,780	\$48,679	\$49,670	\$54,268	\$51,437	\$50,866	\$51,704	\$52,435	\$53,341	\$54,873
Retail Trade		\$10,452	\$9,804	\$12,325	\$16,194	\$13,078	\$12,348	\$12,809	\$13,761	\$17,768	\$14,608	\$14,445	\$15,521	\$15,468	\$15,508	\$15,760
Information		\$26,802	\$15,953	\$17,931	\$34,970	\$39,882	\$27,132	\$29,114	\$25,910	\$37,707	\$37,455	\$33,270	\$36,200	\$47,841	\$34,143	\$50,893
Financial Activities		\$39,063	\$51,525	\$60,626	\$60,732	\$34,601	\$38,470	\$56,651	\$59,710	\$63,050	\$45,881	\$54,082	\$63,367	\$46,005	\$59,495	\$44,861
Professional and Business Services		\$21,851	\$22,171	\$23,658	\$25,171	\$28,672	\$24,298	\$25,172	\$25,926	\$31,476	\$25,610	\$27,793	\$28,011	\$28,003	\$31,388	\$31,204
Educational Services		\$17,946	\$14,291	\$16,886	\$14,959	\$14,988	\$18,024	\$17,188	\$17,245	\$18,208	\$22,099	\$18,554	\$18,101	\$22,219	\$21,605	\$23,076
Health Care and Social Assistance		\$24,228	\$26,838	\$22,490	\$25,520	\$26,295	\$25,098	\$27,415	\$24,461	\$27,622	\$27,596	\$29,862	\$27,060	\$28,173	\$32,650	\$30,616
Leisure and Hospitality		\$5,675	\$5,799	\$5,691	\$5,657	\$5,226	\$7,235	\$8,070	\$7,404	\$7,348	\$7,393	\$9,070	\$7,999	\$8,321	\$10,675	\$8,318
Other Services		\$21,425	\$20,839	\$20,549	\$12,365	\$19,545	\$20,731	\$23,095	\$23,882	\$13,740	\$18,933	\$24,976	\$23,025	\$25,746	\$24,927	\$25,768
Public Administration		\$15,147	\$19,663	\$18,971	\$17,886	\$16,725	\$18,002	\$24,352	\$21,851	\$22,655	\$19,002	\$28,053	\$25,129	\$23,561	\$31,160	\$26,490

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Overview of Apprenticeship Programs

ApprenticeshipNC (formerly known as NCWorks Apprenticeship) is a State Approving Agency for the US Department of Labor for workforce training program certification. The purpose of the Apprenticeship program is to provide individuals the opportunity to obtain occupational training and practical skills that will address the skills gap while providing an educational opportunity to attain a fundamental understanding of an occupation. ApprenticeshipNC assists North Carolina's employers in developing their own specialized, fully trained, and productive workforce to compete in a global economy.

The Fitzgerald Act of 1937 established a national apprenticeship program, and North Carolina's apprenticeship programs are authorized by and operate under the requirements and guidelines outlined under North Carolina General Statute Article 1 of Chapter 115D. In North Carolina, apprenticeship is a voluntary system of employer-driven employee training. Employers who agree to sponsor apprenticeship programs take on the responsibilities and obligations of the program. Employers who participate are required to have an approved plan that includes on-the-job training requirements, technical instruction requirements, defined training hours, and wage scale progression for participation to reward increased employee capability and skill. Wage rates for apprentices typically begin at about half the rate of experienced journey workers, then rise as the apprentice gains skills and competencies through the program. At the successful completion of on-the-job as well as instructional learning, apprentices receive an industry and federally recognized Journey-worker certificate that certifies occupational proficiency.

Apprenticeship programs typically take four years to complete and are established in almost 1,300 jobs and 700 employers in North Carolina. Apprenticeship programs are provided in a diverse set of industries and occupations, from advanced manufacturing to network maintenance to public administration.

On November 1, 2017, the Apprenticeship program was transferred from the North Carolina Department of Commerce to the North Carolina Community College System Office. As a result, the staff and resources of the Apprenticeship program and the advisory Apprenticeship Council were transitioned to the System Office.²⁹ The NC Community College System now oversees the development and maintenance of Registered Apprenticeship programs throughout North Carolina under the guidance of the US Department of Labor. The Apprenticeship Council, an advisory group of professionals from across the state, provides guidance to the State Board of Community Colleges and helps formulate policy for the statewide Apprenticeship program.

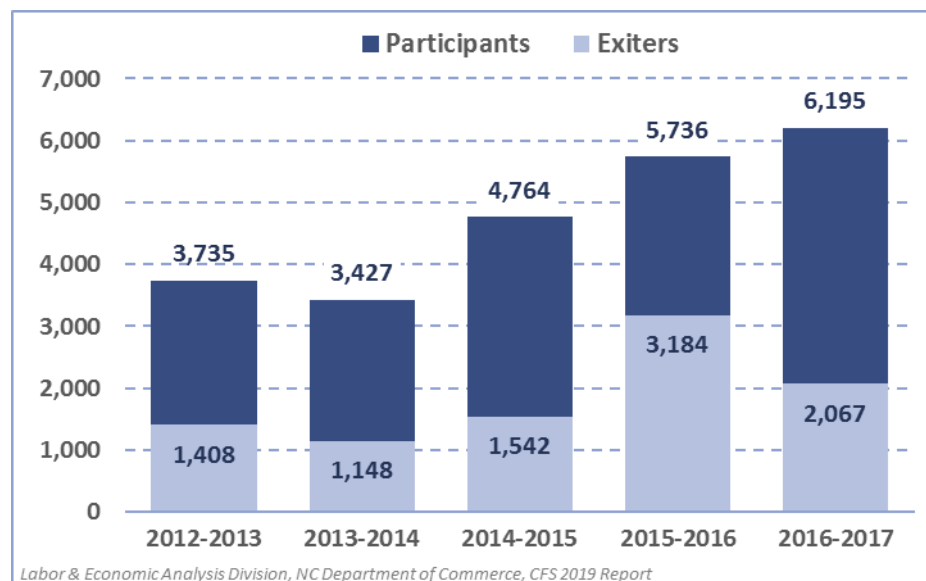
» Apprenticeship Program Outcomes

As shown in Figure 57, participation in the ApprenticeshipNC program decreased slightly between 2012-2013 and 2013-2014 program years, but significantly increased afterwards. This recent growth was likely achieved in part by eliminating, in 2014-2015, the fee requirement for program participation and in addition, efforts to expand outreach through regional partnerships with colleges, workforce boards, and employers.

²⁹ See NC Session Law 2017-57, Senate Bill 257, Section 15.13. (a), <http://www.ncoah.com/rules/rrc/meetings/Agendas/August%202017/04%20NCAC%2022.pdf>

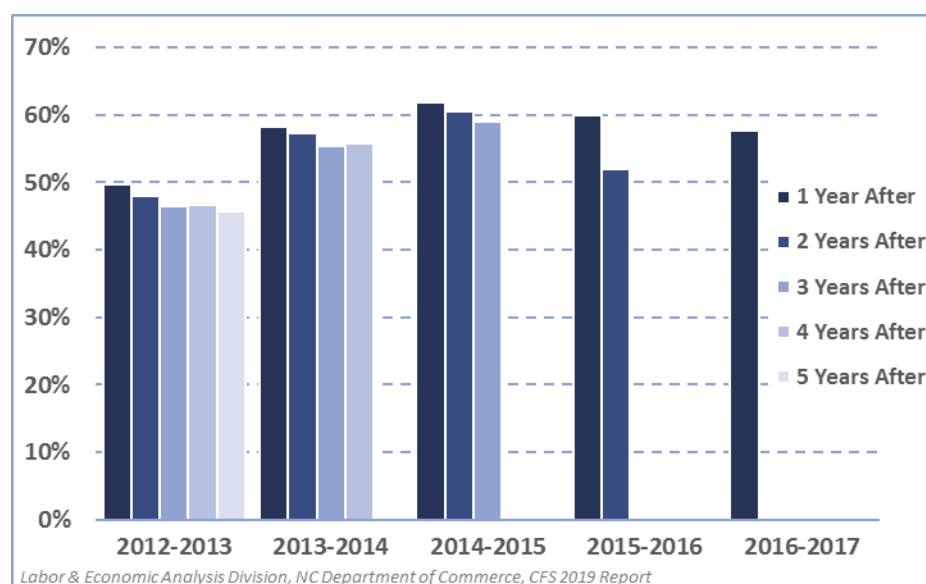
An important aspect of the apprenticeship program is that participation statistics can only be fully measured by a voluntarily shared SSN, thus numbers produced from the CFS may differ from those reported by the US Department of Labor.

Figure 57. Apprenticeship Program Participants and Exiters by Program Year



Participants who exited the apprenticeship program were defined as program exiters, and their subsequent wages and employment outcomes were tracked post exit.

Figure 58. Percentage of Apprenticeship Program Exiters Employed in North Carolina After Exit, by Year of Exit

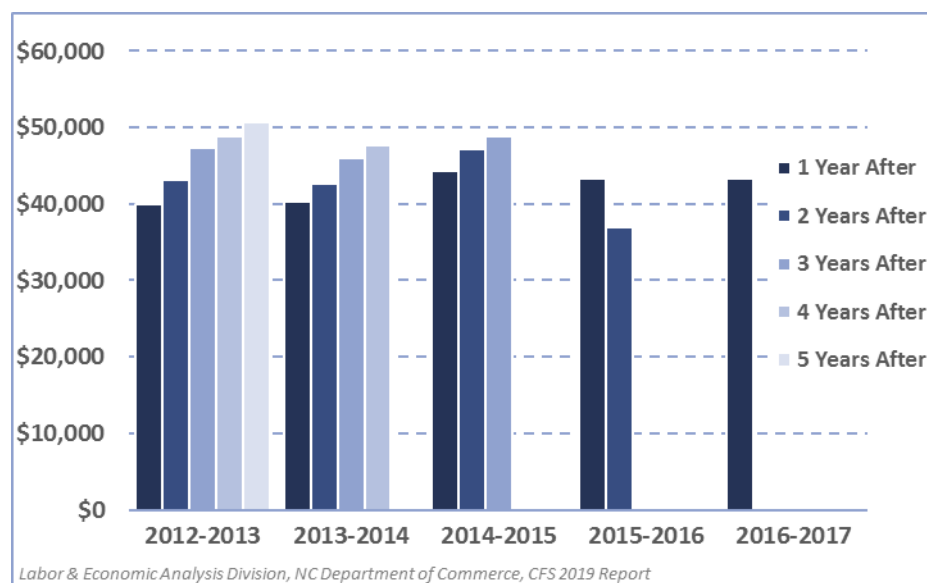


One-year post-exit employment rates, shown in Figure 58 and Table 15, fluctuated between a low of 50% for exiters in the 2012-2013 program year to a high of 62% for exiters in the 2014-2015 program year. When the

exiting cohorts were followed over multiple years, the cohort employment rates showed a slight decline. Of the 2012-2013 exiters, 50% were employed in the first year after exit while 46% were employed after year five.

As shown in Figure 59, one-year post-exit median wages increased for each successive cohort, ranging from \$39,940 for the 2012-2013 program year to \$44,240 for 2014-2015. Over time, wages also increased within each cohort. In the 2012-2013 cohort, post-exit wages increased by 27%, from \$39,940 one year after exit to \$50,762 five years after exit. This is well above \$27,259, the 2017 median annual wage in North Carolina for all wage earners covered in unemployment insurance.³⁰

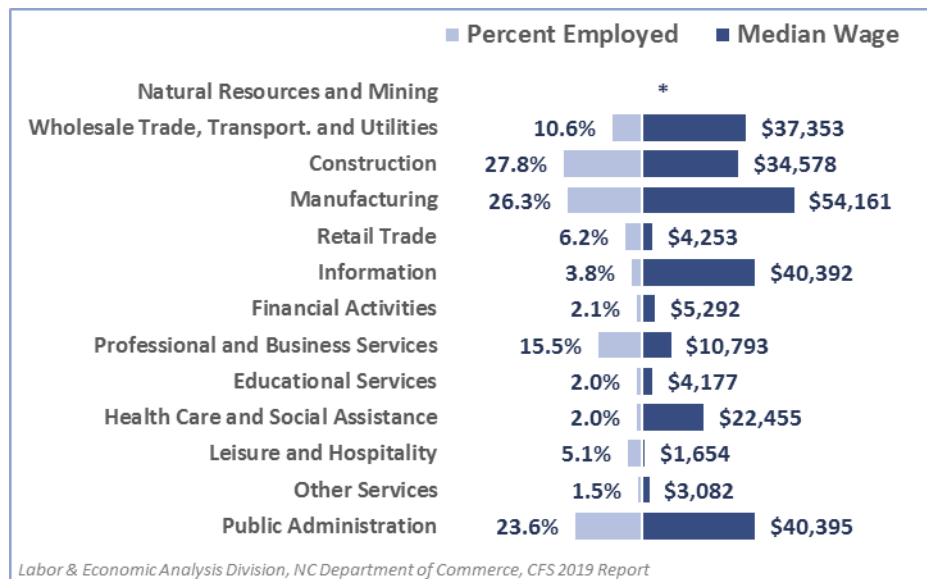
Figure 59. Median Wage of Apprenticeship Program Exiters in North Carolina, by Year of Exit



Analysis of industries of employment for program exiters reveals some variability across cohorts. Figure 60 shows that one year after exit, large percentages of the 2016-2017 cohort exiters were found to be employed in Construction (27.8%), Manufacturing (26.3%), and Public Administration (23.6%). Other industries that employed former apprenticeship program participants included Professional and Business Services (15.5%), and Wholesale Trade, Transportation, and Utilities (10.6%).

³⁰ Source of wage data: Common Follow-up System. For comparison, the 2017 median annual wage for all wage earners in North Carolina was \$30,936 based on American Community Survey.

Figure 60. 2016-2017 Apprenticeship Exiters One Year After Exit: Percentage Employed and Median Wage by Industry



Post-exit participation in public higher education (Table 15) indicates an upward trend for the completers of the Apprenticeship program. The percentage of exiters enrolled in NC public higher education one year after exit ranged from 18% for the 2012-2013 program year to 22% for 2016-2017.

» Summary and Recommendations

Overall, outcome measures for Apprenticeship program exiters show that short-term employment fluctuated considerably across cohorts, but median annual wages increased.

When exiters are followed over longer periods of time, the rate of employment in North Carolina tends to decline. This decline could be attributed to several factors including individuals not sustaining employment, moving out of state, or finding employment in jobs not covered by North Carolina's unemployment insurance laws. However, median wages increase over time, demonstrating some of the highest wage outcomes of any workforce development programs examined in this report. These wage progressions are not unexpected, as participants are employed during program participation and experiencing rising wage as a result of successfully completing training hours and achieving skill gains. It is worth mentioning that eliminating the fee requirement for program participation in 2014-2015 had likely a significant positive effect on program participation.

It is recommended that additional analyses of the Registered Apprenticeship program be undertaken to further the understanding of the specific jobs that lead to the greatest wage progressions and employment stability.

Table 15. Apprenticeship Program Participants and Exiters, Showing Outcomes One Through Five Years After Exit, Overall and By Industry

North Carolina Community College System Apprenticeship Program										Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2014-2015
Participants		3,735	3,427	4,764	5,736	6,195	3,735	3,427	4,764	5,736	3,735	3,427	4,764	3,735	3,427	4,764	3,735	3,427	4,764
Exiters		1,408	1,148	1,542	3,184	2,067	1,408	1,148	1,542	3,184	1,408	1,148	1,542	1,408	1,148	1,542	1,408	1,148	1,542
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After			
Exiters Employed In North Carolina	N %	699 50%	669 58%	955 62%	1,912 60%	1,193 58%	676 48%	657 57%	933 61%	1,654 52%	655 47%	637 55%	910 59%	658 47%	640 56%	644 46%			
Exiters' Wages in North Carolina	Mean Median	\$43,331 \$39,940	\$43,705 \$40,255	\$46,040 \$44,240	\$46,987 \$43,393	\$46,822 \$43,400	\$46,912 \$43,102	\$46,538 \$42,579	\$50,023 \$47,105	\$41,567 \$36,999	\$51,624 \$47,417	\$49,770 \$45,971	\$53,302 \$48,825	\$53,842 \$48,863	\$50,876 \$47,706	\$56,224 \$50,762			
Exiters Enrolled in NC Public Higher Education	N %	255 18%	207 18%	320 21%	676 21%	454 22%	218 15%	198 17%	267 17%	419 13%	226 16%	188 16%	237 15%	200 14%	172 15%	199 14%			
Exiters Enrolled in NC Public Education, Employment, or Training Program	N %	355 25%	297 26%	389 25%	815 26%	530 26%	314 22%	263 23%	327 21%	499 16%	280 20%	244 21%	298 19%	235 17%	220 19%	242 17%			
Exiters Enrolled or Employed in NC	N %	797 57%	733 64%	1,029 67%	2,028 64%	1,279 62%	744 53%	694 60%	985 64%	1,712 54%	712 51%	678 59%	950 62%	705 50%	670 58%	690 49%			
Exiters' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After			
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
Wholesale Trade, Transport. and Utilities		12.3%	7.8%	11.0%	11.4%	10.6%	9.9%	7.3%	11.5%	10.2%	10.5%	7.2%	11.4%	12.0%	8.9%	11.3%			
Construction		27.2%	29.0%	28.7%	28.5%	27.8%	24.6%	28.9%	28.9%	27.6%	23.4%	28.7%	27.8%	22.5%	27.3%	21.9%			
Manufacturing		20.0%	19.9%	21.3%	23.3%	26.3%	20.9%	19.9%	22.0%	22.4%	21.7%	20.9%	21.9%	20.1%	20.5%	21.0%			
Retail Trade		4.7%	5.7%	9.3%	5.5%	6.2%	5.9%	5.5%	9.0%	5.1%	6.1%	5.8%	9.8%	5.8%	5.5%	5.7%			
Information		9.0%	8.7%	6.6%	6.7%	3.8%	9.3%	8.1%	6.3%	6.6%	8.7%	8.0%	6.5%	8.4%	7.3%	7.6%			
Financial Activities		*	*	*	1.6%	2.1%	*	*	1.1%	1.7%	*	1.9%	1.8%	*	2.0%	*			
Professional and Business Services		18.7%	17.0%	14.2%	15.7%	15.5%	17.5%	14.8%	13.9%	14.1%	14.5%	14.8%	14.4%	15.8%	15.8%	15.8%			
Educational Services		3.1%	2.7%	1.8%	2.1%	2.0%	3.6%	2.1%	2.0%	2.6%	4.6%	2.5%	2.5%	4.0%	2.5%	4.7%			
Health Care and Social Assistance		1.9%	3.6%	1.2%	1.5%	2.0%	2.1%	4.7%	1.4%	2.2%	2.6%	3.6%	1.8%	2.4%	2.7%	2.5%			
Leisure and Hospitality		5.2%	3.9%	4.7%	4.3%	5.1%	4.4%	4.6%	5.0%	3.9%	3.5%	5.3%	4.5%	4.6%	5.2%	5.0%			
Other Services		1.4%	2.2%	1.5%	1.6%	1.5%	1.6%	2.4%	1.8%	1.8%	1.8%	3.0%	2.0%	2.3%	2.3%	2.6%			
Public Administration		21.6%	23.0%	17.7%	22.3%	23.6%	20.9%	20.7%	17.0%	20.4%	20.2%	20.9%	16.3%	19.3%	19.7%	18.5%			
Exiters' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After			
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
Wholesale Trade, Transport. and Utilities		\$30,032	\$38,499	\$57,464	\$37,565	\$37,353	\$56,898	\$49,895	\$66,190	\$34,639	\$67,423	\$60,884	\$72,662	\$69,039	\$41,080	\$75,167			
Construction		\$26,650	\$34,180	\$40,870	\$34,594	\$34,578	\$36,196	\$38,680	\$45,930	\$31,103	\$42,290	\$41,280	\$48,487	\$43,425	\$44,487	\$45,360			
Manufacturing		\$54,699	\$57,317	\$49,073	\$56,031	\$54,161	\$56,512	\$59,790	\$51,402	\$44,152	\$56,437	\$60,515	\$49,972	\$64,171	\$60,957	\$57,299			
Retail Trade		\$3,443	\$5,250	\$9,026	\$4,233	\$4,253	\$3,210	\$9,279	\$15,180	\$3,438	\$8,579	\$8,081	\$12,548	\$13,517	\$6,664	\$13,623			
Information		\$38,842	\$40,825	\$45,629	\$40,924	\$40,392	\$41,638	\$43,093	\$47,530	\$38,380	\$46,811	\$42,369	\$48,945	\$47,366	\$44,225	\$48,899			
Financial Activities		*	*	*	\$5,632	\$5,292	*	*	\$14,583	\$4,499	*	\$6,660	\$14,128	*	\$20,000	*			
Professional and Business Services		\$11,905	\$9,966	\$10,001	\$9,814	\$10,793	\$11,914	\$16,097	\$11,185	\$11,484	\$25,470	\$21,813	\$13,309	\$15,903	\$18,554	\$33,481			
Educational Services		\$3,020	\$5,495	\$3,016	\$4,685	\$4,177	\$4,234	\$4,098	\$2,767	\$7,086	\$3,989	\$1,164	\$1,854	\$6,048	\$6,067	\$4,971			
Health Care and Social Assistance		\$15,079	\$25,235	\$3,745	\$9,183	\$22,455	\$12,188	\$8,924	\$14,992	\$12,067	\$9,762	\$15,974	\$14,093	\$11,039	\$23,129	\$16,850			
Leisure and Hospitality		\$1,736	\$1,438	\$2,206	\$1,627	\$1,654	\$3,459	\$5,239	\$3,461	\$1,638	\$3,210	\$4,169	\$4,245	\$2,819	\$4,260	\$4,308			
Other Services		\$8,965	\$3,435	\$3,981	\$5,759	\$3,082	\$3,020	\$11,456	\$12,031	\$12,141	\$27,493	\$5,244	\$8,447	\$16,431	\$5,831	\$11,200			
Public Administration		\$38,943	\$38,595	\$41,353	\$41,213	\$40,395	\$41,417	\$40,516	\$44,436	\$37,559	\$43,698	\$44,750	\$47,429	\$45,592	\$46,721	\$49,773			
Exiters' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After			
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
Wholesale Trade, Transport. and Utilities		\$40,506	\$50,552	\$55,312	\$50,252	\$48,036	\$55,846	\$56,595	\$59,296	\$51,594	\$63,059	\$64,704	\$68,458	\$65,554	\$54,686	\$73,012			
Construction		\$32,064	\$32,716	\$39,264	\$37,310	\$37,907	\$37,716	\$37,136	\$45,198	\$34,385	\$43,555	\$43,407	\$51,774	\$48,797	\$47,610	\$49,514			
Manufacturing		\$52,943	\$55,487	\$54,134	\$54,353	\$54,120	\$56,670	\$59,125	\$53,727	\$47,012	\$59,219	\$56,820	\$53,965	\$62,194	\$57,918	\$58,459			
Retail Trade		\$8,440	\$12,108	\$18,614	\$8,961	\$9,479	\$9,748	\$17,347	\$21,040	\$10,368	\$13,437	\$17,230	\$21,229	\$15,966	\$12,500	\$18,033			
Information		\$36,770	\$41,081	\$41,378	\$37,678	\$34,055	\$39,554	\$43,756	\$44,846	\$38,696	\$44,010	\$40,829	\$44,246	\$43,968	\$38,972	\$46,835			
Financial Activities		*	*	*	\$11,126	\$7,346	*	*	\$22,365	\$11,072	*	\$16,596	\$20,234	*	\$35,780	*			
Professional and Business Services		\$23,248	\$23,172	\$24,608	\$19,579	\$18,679	\$28,855	\$28,589	\$29,796	\$21,182	\$39,100	\$32,250	\$32,366	\$36,527	\$33,593	\$48,922			
Educational Services		\$10,745	\$11,888	\$7,660	\$14,935	\$11,854	\$12,673	\$11,383	\$9,821	\$16,960	\$14,625	\$10,714	\$12,807	\$16,394	\$13,246	\$12,882			
Health Care and Social Assistance		\$20,170	\$19,808	\$6,076	\$22,770	\$25,788	\$17,911	\$13,839	\$13,980	\$18,493	\$17,371	\$19,524	\$16,027	\$18,719	\$23,107	\$20,136			
Leisure and Hospitality		\$5,387	\$6,530	\$5,777	\$3,560	\$3,632	\$7,573	\$7,959	\$9,176	\$4,290	\$8,713	\$8,323	\$8,217	\$8,977	\$10,628	\$11,542			
Other Services		\$15,758	\$6,528	\$15,724	\$16,303	\$11,282	\$13,624	\$12,973	\$22,696	\$22,176	\$22,988	\$10,942	\$21,743	\$22,452	\$14,539	\$21,445			
Public Administration		\$38,306	\$38,473	\$40,264	\$40,688	\$39,587	\$40,509	\$41,334	\$43,473	\$37,482	\$42,693	\$44,119	\$46,525	\$46,129	\$46,146	\$50,449			

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

University of North Carolina System (UNC)

» Overview of Degree Programs

North Carolina's public university system offers an array of higher education programs through 16 campuses around the state.³¹ Each year, over 50,000 degrees are awarded to students graduating from more than 200 academic degree programs offered by the UNC system.³² Most UNC curriculum program participants are enrolled in academic degree programs; fewer are working toward other post-master's, post-baccalaureate, or post-secondary credentials. This evaluation report focuses on the outcomes of UNC's bachelor's, master's, and doctoral degree programs.

Bachelor's programs are typically completed within four years of matriculation by full-time students. While many bachelor's program enrollees begin their studies shortly after completing secondary education, other students are enrolled as sophomores or juniors after transferring from another institution of higher education or enter higher education later in the life course. Master's programs are typically completed in one to two years by full-time students, depending on the program. Most students enroll in master's programs after obtaining a bachelor's degree; however, some UNC campuses offer dual-degree programs that allow students to satisfy some master's degree requirements before obtaining their bachelor's.

Doctoral programs fall under two categories: research and professional practice. Research programs lead to the attainment of a Doctor of Philosophy (PhD) degree and prepare students to conduct academic research in their field of study. Professional practice programs lead to the attainment of a credential in fields such as law (JD) and medicine (MD) and prepare students for professional employment in their field, although individuals often need to satisfy additional requirements, such as passing an examination or completing an internship, to receive a license to practice.

» UNC Bachelor's Degree Program Outcomes

As shown in Figure 61, enrollment in bachelor's degree programs increased slightly during the period studied, with the number of students increasing from 180,360 in the 2012-2013 program year to 184,628 in 2016-2017. Students who were recorded as having graduated from a bachelor's program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion. The number of bachelor's program completers also trended upward during this period.

Figures 62 and 63 show employment and wage outcomes at one through five years after graduation, for all graduating cohorts from 2010-2011 to 2014-2015. The rate of employment in North Carolina one year after graduation was relatively unchanged across cohorts, ranging from 75% to 77%. The rate at which bachelor's graduates subsequently enrolled in public education, employment, or training programs was also relatively stable, ranging from 21% to 22% (Table 16). Wage earnings one year following graduation increased across cohorts, with median wage earnings increasing from \$19,702 for the cohort graduating in 2012-2013 to \$23,511 for the 2016-2017 cohort.

³¹ UNC also operates the NC School of Science of Mathematics, a residential high school, and offers a high school program through the UNC School of the Arts.

³² The University of North Carolina System website, <https://www.northcarolina.edu/>

Figure 61. UNC Bachelor's Degree Program Participants and Completers by Program Year

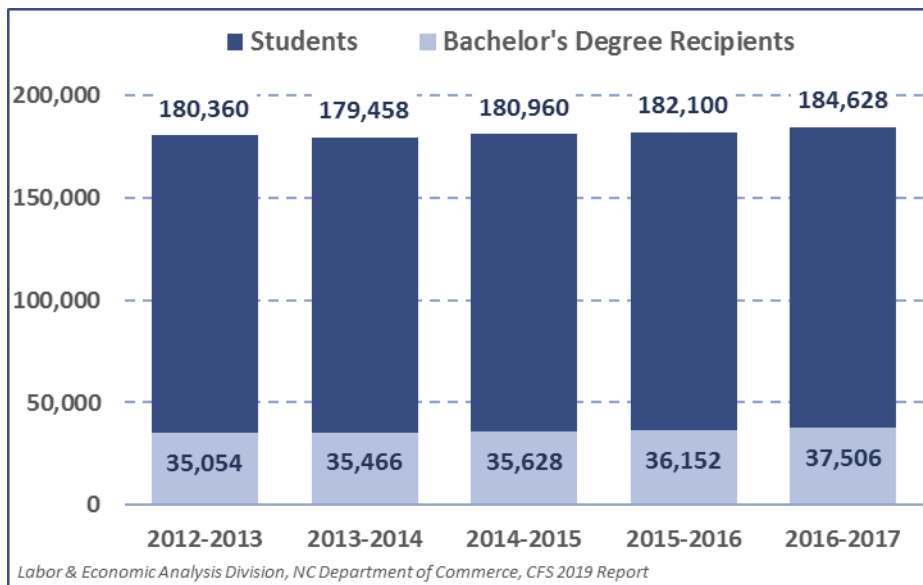
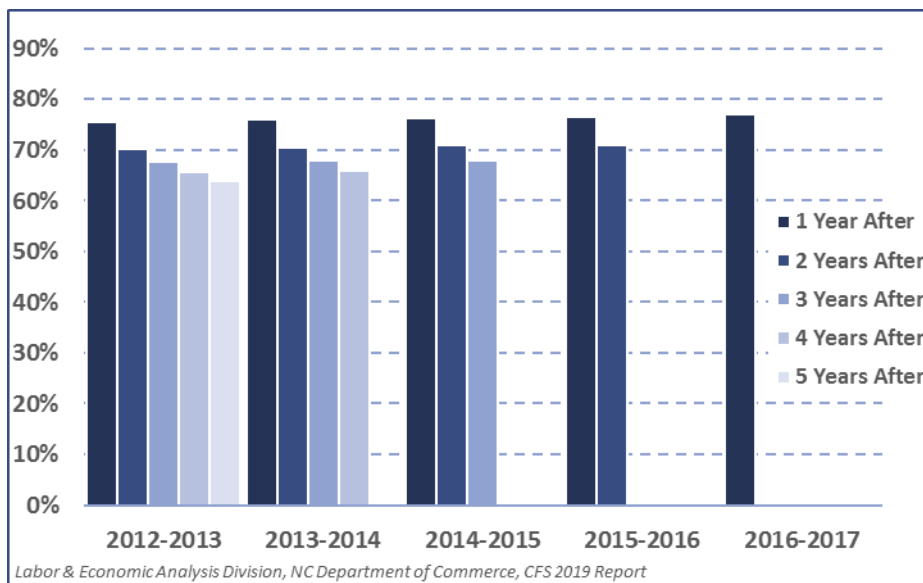


Figure 62. Percentage of UNC Bachelor's Program Completers Employed in North Carolina After Degree Conferral, by Year of Graduation



Bachelor's recipients saw their wages increase in each year after graduation, while the share employed in North Carolina declined; for instance, the employment rate for 2012-2013 graduates declined from 75% after one year to 64% after five years.

Bachelor's graduates saw high rates of employment in the low-paying Retail Trade and Leisure and Hospitality industries in their first year after graduation, as well as in industries paying relatively higher wages such as Professional and Business Services, Educational Services, and Health Care and Social Assistance (Figure 64).

Figure 63. Median Wage of UNC Bachelor's Program Completers in North Carolina, by Year of Graduation

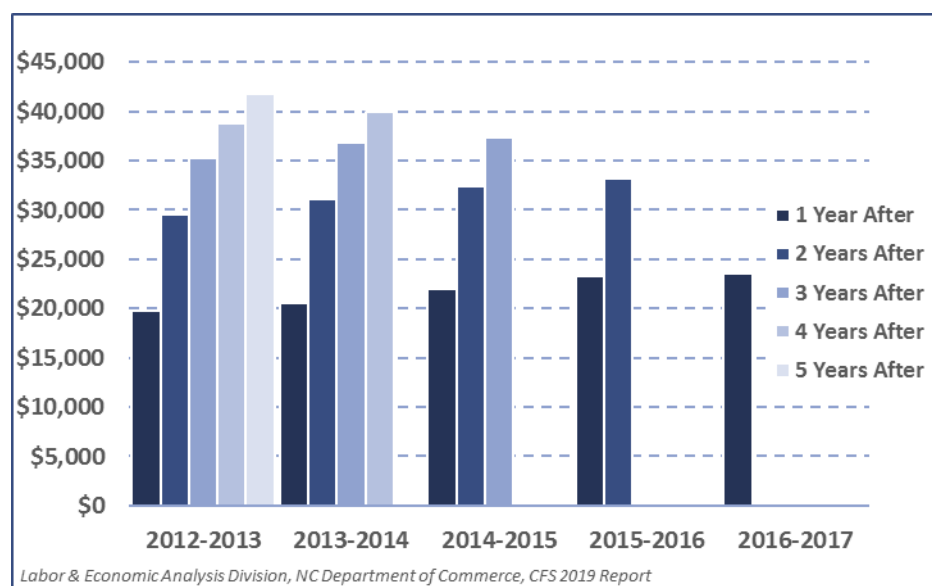
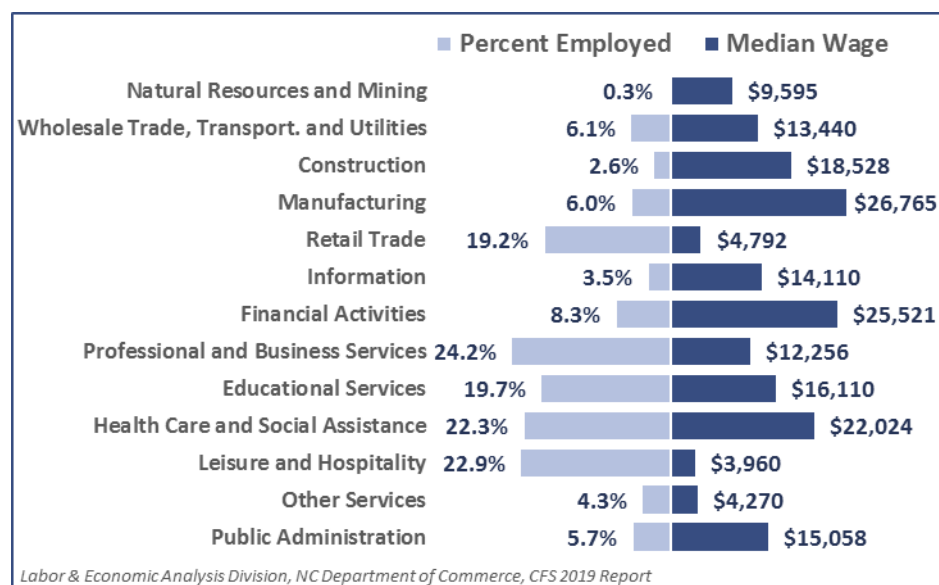


Figure 64. 2016-2017 UNC Bachelor's Program Completers: One-Year Post Outcomes by Industry



Wage and employment outcomes also varied widely by program of study. After one year, 2012-2013 graduates saw median wages ranging from \$11,224 for natural resources and conservation majors to \$37,667 engineering majors, increasing to \$36,185 and \$68,845, respectively, by year five (see Appendix Table 13).

Overall, graduates of UNC's bachelor's programs showed steady rates of employment and positive wage growth over time. However, wages varied considerably by industry.

Table 16. UNC Bachelor's Degree Program Participants and Completers, Outcomes One Through Five Years After Exit, Overall and By Industry

University Of North Carolina System							Common Follow-up System: Evaluative Measures, 2019 Report									
Bachelor's Degree																
All Programs							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Students		180,360	179,458	180,960	182,100	184,628	180,360	179,458	180,960	182,100	180,360	179,458	180,960	180,360	179,458	180,360
Bachelor's Degree Recipients		35,054	35,466	35,628	36,152	37,506	35,054	35,466	35,628	36,152	35,054	35,466	35,628	35,054	35,466	35,054
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Bachelor's Degree Recipients Employed in North Carolina	N	26,454	26,980	27,211	27,705	28,880	24,589	24,983	25,285	25,703	23,705	24,114	24,199	23,041	23,336	22,412
	%	75%	76%	76%	77%	77%	70%	70%	71%	71%	68%	68%	68%	66%	66%	64%
Bachelor's Degree Recipients' Wages in North Carolina	Mean	\$22,783	\$24,043	\$25,690	\$26,585	\$26,931	\$30,098	\$32,104	\$33,830	\$34,022	\$35,314	\$37,052	\$38,360	\$40,082	\$41,327	\$44,589
	Median	\$19,702	\$20,586	\$22,032	\$23,294	\$23,511	\$29,516	\$31,138	\$32,446	\$33,210	\$35,295	\$36,760	\$37,400	\$38,789	\$39,996	\$41,718
Graduates Enrolled in NC Public Higher Education	N	6,208	5,973	6,080	6,275	6,498	6,236	6,070	6,100	6,174	5,395	5,364	5,197	4,532	4,639	3,788
	%	18%	17%	17%	17%	17%	18%	17%	17%	17%	15%	15%	15%	13%	13%	11%
Graduates Enrolled in NC Public Education, Employment, or Training Program	N	7,829	7,731	7,531	7,618	7,945	7,449	7,303	7,135	7,275	6,458	6,376	6,239	5,431	5,640	4,735
	%	22%	22%	21%	21%	21%	21%	21%	20%	20%	18%	18%	18%	15%	16%	14%
Graduates Enrolled or Employed in NC	N	27,891	28,342	28,429	28,903	30,067	25,872	26,222	26,441	26,869	24,709	25,136	25,176	23,798	24,181	23,053
	%	80%	80%	80%	80%	80%	74%	74%	74%	74%	70%	71%	71%	68%	68%	66%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%
Wholesale Trade, Transport. and Utilities		5.4%	5.9%	5.7%	6.2%	6.1%	5.6%	6.0%	5.8%	6.2%	5.9%	6.0%	6.0%	6.3%	6.1%	6.5%
Construction		2.4%	2.5%	2.6%	2.6%	2.6%	2.4%	2.6%	2.5%	2.8%	2.5%	2.6%	2.7%	2.6%	2.7%	2.8%
Manufacturing		5.6%	5.5%	5.6%	5.8%	6.0%	6.4%	6.6%	6.2%	6.5%	7.1%	7.0%	6.7%	7.2%	7.2%	7.1%
Retail Trade		21.9%	22.1%	20.3%	19.6%	19.2%	15.8%	15.4%	14.7%	14.1%	12.8%	12.1%	11.9%	10.9%	10.4%	9.7%
Information		3.2%	3.4%	3.4%	3.6%	3.5%	3.4%	3.7%	3.7%	3.8%	3.6%	3.7%	3.8%	3.6%	3.7%	3.7%
Financial Activities		8.1%	8.4%	8.8%	8.6%	8.3%	9.2%	9.6%	10.1%	9.5%	9.6%	9.9%	10.3%	9.9%	9.9%	10.0%
Professional and Business Services		24.5%	25.3%	24.5%	24.4%	24.2%	23.7%	23.8%	23.2%	23.6%	22.4%	22.7%	22.6%	21.5%	22.2%	21.2%
Educational Services		21.1%	20.2%	19.9%	19.6%	19.7%	21.2%	20.0%	20.1%	19.8%	21.8%	20.8%	20.5%	22.1%	21.2%	22.4%
Health Care and Social Assistance		20.1%	19.4%	21.3%	21.9%	22.3%	20.5%	20.5%	22.3%	22.2%	20.7%	21.4%	22.2%	21.4%	21.4%	21.5%
Leisure and Hospitality		22.6%	22.4%	22.0%	21.8%	22.9%	15.4%	15.3%	15.0%	15.0%	12.4%	12.4%	12.3%	10.8%	10.8%	9.5%
Other Services		4.5%	4.5%	4.5%	4.6%	4.3%	3.6%	3.6%	3.5%	3.5%	3.2%	3.3%	3.2%	2.8%	2.9%	2.5%
Public Administration		5.4%	5.4%	5.7%	5.8%	5.7%	6.2%	6.3%	6.6%	6.6%	6.9%	7.0%	6.9%	7.4%	7.4%	7.5%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$6,600	\$6,403	\$12,112	\$6,497	\$9,595	\$10,417	\$17,536	\$18,288	\$12,274	\$16,000	\$23,400	\$20,032	\$17,350	\$24,000	\$17,838
Wholesale Trade, Transport. and Utilities		\$11,935	\$12,000	\$11,519	\$12,712	\$13,440	\$22,730	\$21,294	\$21,835	\$24,458	\$29,210	\$29,176	\$27,710	\$32,355	\$33,751	\$36,406
Construction		\$14,565	\$15,012	\$13,184	\$15,228	\$18,528	\$24,643	\$25,327	\$27,338	\$27,736	\$33,344	\$31,401	\$33,805	\$39,499	\$39,003	\$43,439
Manufacturing		\$26,561	\$23,894	\$24,941	\$25,510	\$26,765	\$37,983	\$37,141	\$38,167	\$38,453	\$42,087	\$42,875	\$43,075	\$48,140	\$47,380	\$53,683
Retail Trade		\$4,660	\$4,800	\$4,667	\$4,928	\$4,792	\$7,106	\$7,050	\$7,171	\$6,403	\$7,674	\$8,716	\$8,125	\$8,940	\$9,352	\$10,498
Information		\$11,154	\$13,493	\$13,730	\$14,487	\$14,110	\$22,110	\$22,788	\$25,362	\$25,789	\$27,885	\$29,106	\$30,817	\$33,818	\$33,736	\$35,999
Financial Activities		\$17,265	\$20,016	\$22,125	\$24,047	\$25,521	\$27,314	\$30,702	\$32,766	\$34,438	\$33,992	\$36,830	\$38,063	\$38,356	\$40,806	\$42,728
Professional and Business Services		\$10,331	\$11,309	\$12,155	\$12,800	\$12,256	\$18,196	\$19,928	\$21,756	\$22,030	\$24,653	\$26,883	\$27,311	\$29,997	\$31,061	\$35,879
Educational Services		\$16,909	\$15,909	\$14,772	\$15,589	\$16,110	\$28,840	\$29,905	\$26,879	\$25,442	\$34,894	\$34,810	\$34,508	\$36,797	\$37,364	\$38,535
Health Care and Social Assistance		\$18,611	\$19,448	\$20,839	\$21,244	\$22,024	\$25,081	\$26,295	\$26,777	\$27,228	\$28,311	\$28,933	\$30,072	\$31,725	\$32,814	\$35,356
Leisure and Hospitality		\$4,124	\$4,328	\$4,060	\$4,041	\$3,960	\$5,377	\$5,431	\$5,026	\$5,267	\$5,893	\$5,942	\$5,440	\$6,761	\$6,747	\$6,828
Other Services		\$3,217	\$3,249	\$3,414	\$4,197	\$4,270	\$4,960	\$5,174	\$5,262	\$6,232	\$6,000	\$6,472	\$7,819	\$8,207	\$8,737	\$11,000
Public Administration		\$11,554	\$12,746	\$15,157	\$13,682	\$15,058	\$25,934	\$28,549	\$29,171	\$29,977	\$32,228	\$33,106	\$34,172	\$35,445	\$36,121	\$37,805
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		\$13,370	\$12,953	\$22,526	\$15,171	\$15,287	\$16,174	\$22,253	\$34,094	\$19,511	\$21,247	\$25,813	\$23,572	\$23,047	\$28,124	\$23,031
Wholesale Trade, Transport. and Utilities		\$17,933	\$18,529	\$18,463	\$19,426	\$19,212	\$25,989	\$25,934	\$26,460	\$28,626	\$31,834	\$31,904	\$30,690	\$35,263	\$36,900	\$39,273
Construction		\$19,393	\$20,586	\$20,151	\$22,615	\$24,459	\$26,430	\$28,496	\$29,826	\$31,288	\$32,700	\$34,293	\$36,441	\$38,689	\$40,768	\$43,759
Manufacturing		\$29,632	\$29,170	\$30,301	\$30,869	\$31,039	\$37,964	\$37,187	\$38,751	\$39,469	\$42,150	\$42,620	\$42,402	\$47,997	\$46,886	\$53,117
Retail Trade		\$8,230	\$8,261	\$8,533	\$9,205	\$9,027	\$12,101	\$12,613	\$12,744	\$12,567	\$14,696	\$15,430	\$14,863	\$16,994	\$17,102	\$19,368
Information		\$17,905	\$19,191	\$19,583	\$20,631	\$20,018	\$26,022	\$27,709	\$28,550	\$29,099	\$30,698	\$32,479	\$34,433	\$37,400	\$38,903	\$41,292
Financial Activities		\$21,177	\$23,685	\$26,003	\$27,680	\$28,338	\$28,611	\$32,441	\$33,653	\$35,477	\$35,313	\$38,389	\$39,984	\$40,540	\$43,313	\$46,209
Professional and Business Services		\$15,861	\$16,911	\$18,144	\$19,139	\$18,460	\$22,830	\$24,538	\$26,150	\$26,397	\$28,497	\$30,034	\$30,890	\$33,531	\$34,597	\$38,317
Educational Services		\$17,691	\$18,062	\$18,440	\$18,325	\$18,867	\$22,838	\$24,349	\$24,019	\$23,701	\$26,588	\$27,170	\$27,281	\$28,971	\$29,521	\$31,459
Health Care and Social Assistance		\$24,196	\$25,474	\$26,853	\$27,239	\$28,272	\$28,887	\$30,599	\$31,088	\$31,338	\$31,863	\$32,756	\$33,669	\$34,687	\$36,214	\$38,433
Leisure and Hospitality		\$7,222	\$8,195	\$8,375	\$7,638	\$7,696	\$9,924	\$10,941	\$13,397	\$10,419	\$11,634	\$12,786	\$15,877	\$13,445	\$14,390	\$14,795
Other Services		\$7,472	\$7,105	\$7,966	\$8,361	\$8,490	\$10,991	\$10,611	\$11,953	\$12,930	\$13,390	\$13,443	\$14,911	\$15,849	\$15,726	\$19,118
Public Administration		\$16,633	\$17,507	\$19,453	\$19,339	\$19,599	\$24,409	\$25,794	\$26,932	\$27,624	\$28,892	\$29,541	\$31,106	\$31,777	\$32,170	\$34,699

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» UNC Master's Degree Program Outcomes

As shown in Figure 65, enrollment in UNC master's programs showed a slight overall decrease in enrollment and graduation between the 2012-2013 and 2016-2017 program years. Students who were recorded as having graduated from a master's program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion.

Figure 65. UNC Master's Degree Program Participants and Completers by Program Year

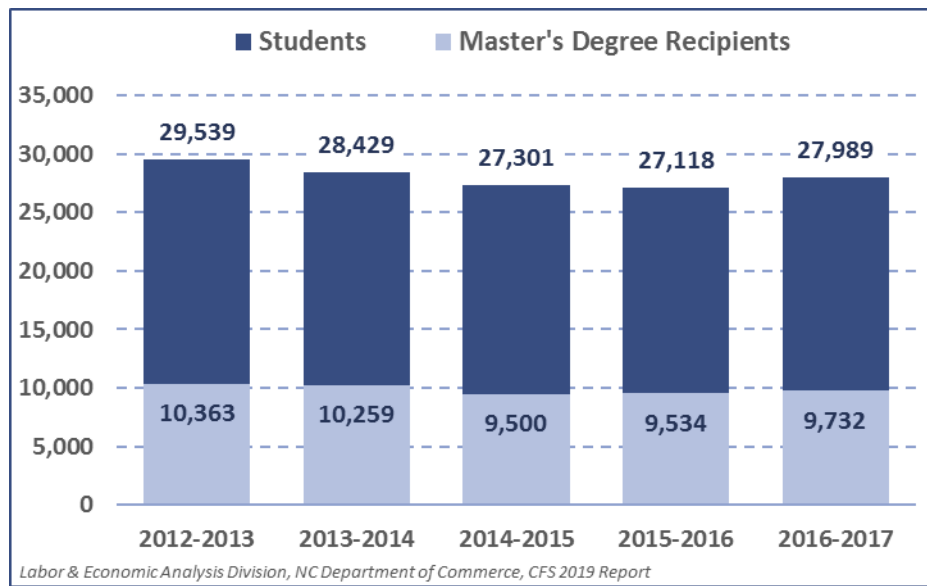
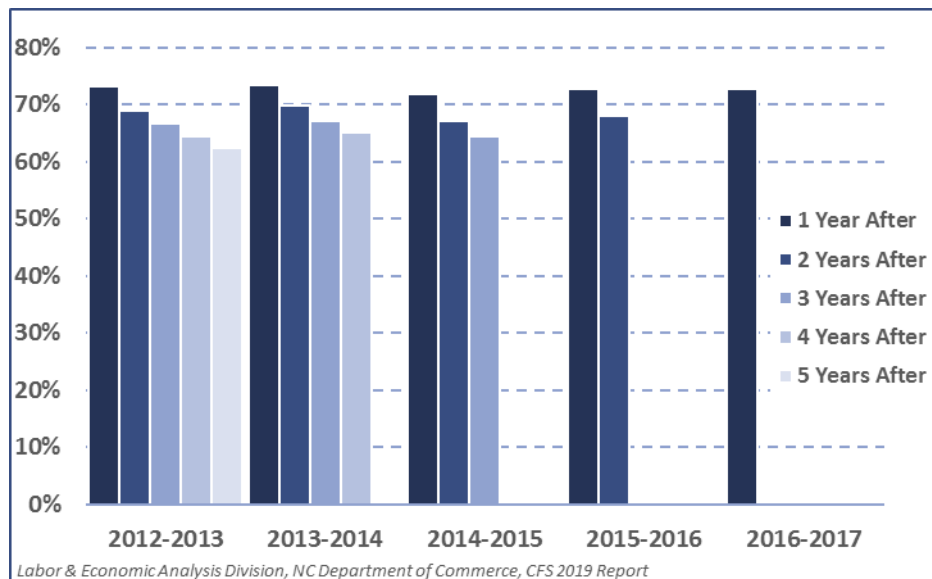


Figure 66. UNC Master's Graduates Employed in North Carolina After Degree Conferral, by Year of Graduation

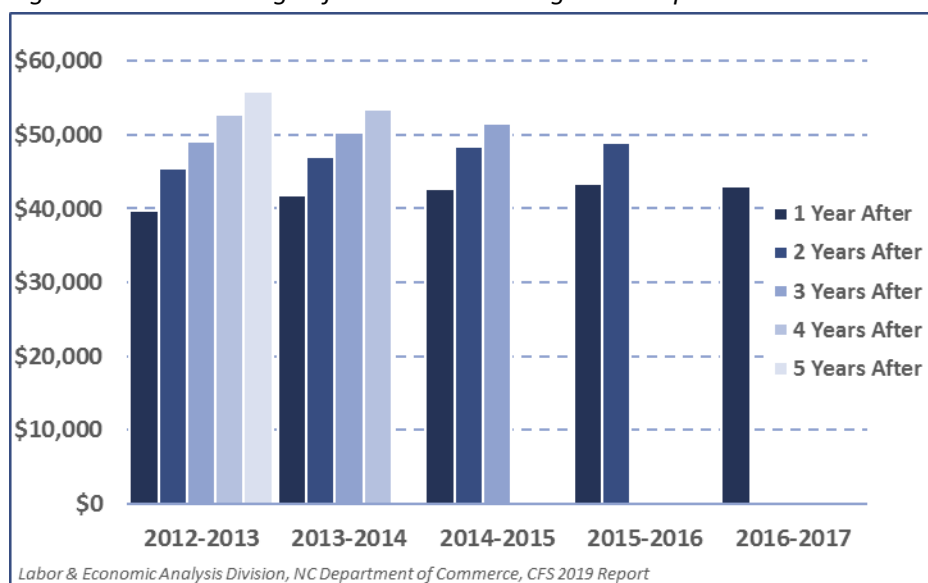


Post-master's employment in North Carolina at one year following completion remained stable across the cohorts examined, with only small fluctuations. However, these employment rates declined with each year

after graduation (Figure 66). Post-graduation enrollment in higher education stayed stable across cohorts at 10%-11% one year after degree completion and declined slightly over time within each cohort (Table 17).

Median wages following degree conferral show only small cohort differences (Figure 67 and Table 17). One-year post-graduation wages increased slightly overall from the 2012-2013 to 2016-2017 graduates. These one-year post-exit median wages ranging from \$39,694 (2012-2013 graduates) to \$43,034 (2016-2017 graduates). For all cohorts, wages increased steadily over time.

Figure 67. Median Wage of UNC Master's Program Completers in North Carolina, by Year of Graduation



Recent master's recipients were most likely to be employed one year after graduation in Educational Services, followed by Health Care and Social Assistance, and Professional and Business Services (Figure 68). Overall, UNC master's graduates showed wage growth over time, but wages varied considerably by industry.

Figure 68. 2016-2017 UNC Master's One-Year Post Outcomes by Industry

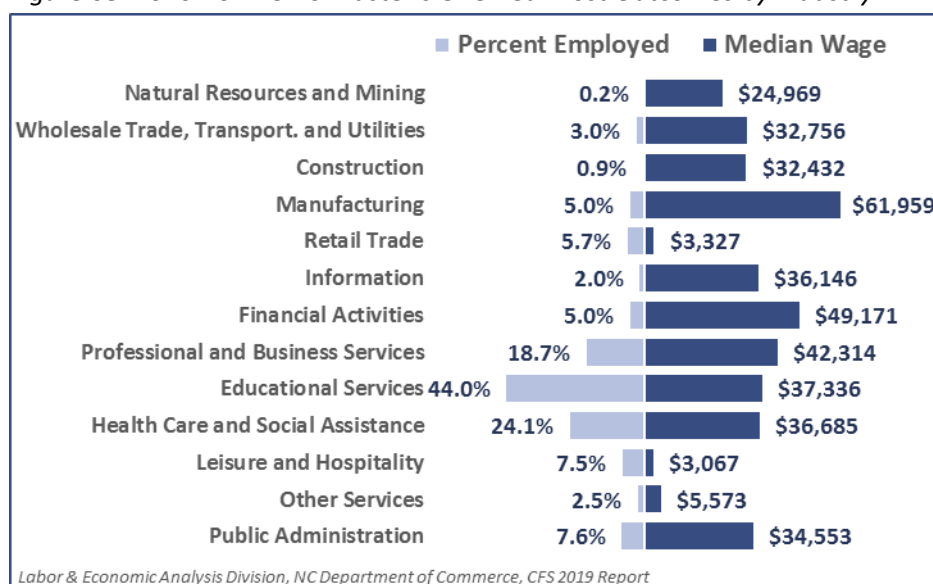


Table 17. UNC Master's Degree Program Participants and Completers, Outcomes One Through Five Years After Exit, Overall and By Industry

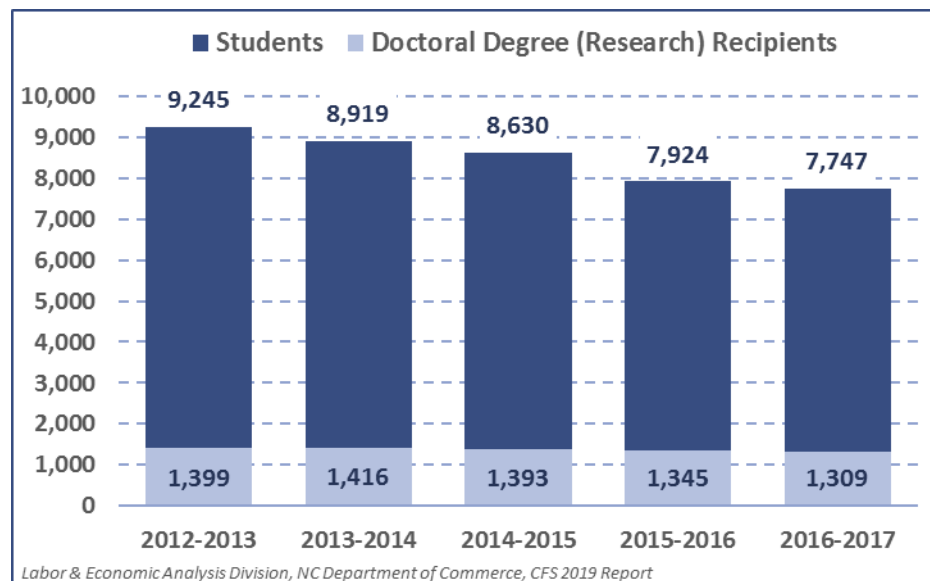
University Of North Carolina System							Common Follow-up System: Evaluative Measures, 2019 Report										
Master's Degree																	
All Programs							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce										
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013	
Students		29,539	28,429	27,301	27,118	27,989	29,539	28,429	27,301	27,118	29,539	28,429	27,301	29,539	28,429	29,539	
Master's Degree Recipients		10,363	10,259	9,500	9,534	9,732	10,363	10,259	9,500	9,534	10,363	10,259	9,500	10,363	10,259	10,363	
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Master's Degree Recipients Employed in North Carolina		N	7,594	7,538	6,835	6,932	7,084	7,150	7,174	6,377	6,495	6,907	6,876	6,119	6,672	6,670	6,462
		%	73%	73%	72%	73%	73%	69%	70%	67%	68%	67%	67%	64%	64%	65%	62%
Master's Degree Recipients' Wages in North Carolina		Mean	\$43,001	\$45,990	\$46,117	\$47,785	\$46,668	\$50,726	\$53,172	\$53,928	\$55,682	\$55,331	\$57,564	\$58,098	\$60,207	\$61,828	\$64,611
		Median	\$39,694	\$41,731	\$42,676	\$43,284	\$43,034	\$45,458	\$47,002	\$48,346	\$48,973	\$49,132	\$50,289	\$51,452	\$52,722	\$53,507	\$55,912
Graduates Enrolled in NC Public Higher Education		N	1,180	1,086	977	911	997	1,084	1,025	897	875	983	968	856	872	829	739
		%	11%	11%	10%	10%	10%	10%	10%	9%	9%	9%	9%	9%	8%	8%	7%
Graduates Enrolled in NC Public Education, Employment, or Training Program		N	1,444	1,386	1,282	1,135	1,284	1,278	1,244	1,101	1,060	1,195	1,142	1,028	1,001	986	895
		%	14%	14%	13%	12%	13%	12%	12%	12%	11%	12%	11%	11%	10%	10%	9%
Graduates Enrolled or Employed in NC		N	7,952	7,847	7,062	7,119	7,294	7,456	7,377	6,566	6,667	7,106	7,062	6,302	6,811	6,822	6,592
		%	77%	76%	74%	75%	75%	72%	72%	69%	70%	69%	69%	66%	66%	66%	64%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			*	0.2%	*	0.2%	0.2%	*	0.2%	*	0.2%	*	0.2%	*	*	0.1%	*
Wholesale Trade, Transport. and Utilities			2.7%	2.5%	2.9%	3.3%	3.0%	2.9%	2.7%	3.1%	3.4%	2.7%	2.8%	3.2%	2.7%	2.9%	2.9%
Construction			1.1%	1.2%	1.1%	0.9%	0.9%	1.2%	1.2%	1.1%	0.9%	1.2%	1.2%	1.3%	1.4%	1.3%	1.5%
Manufacturing			4.6%	4.4%	4.9%	4.7%	5.0%	4.7%	4.6%	5.0%	4.9%	4.6%	5.0%	4.9%	4.7%	4.9%	5.0%
Retail Trade			6.0%	5.5%	5.6%	5.7%	5.7%	4.7%	4.2%	4.0%	4.4%	3.8%	3.4%	3.4%	3.5%	3.0%	3.3%
Information			1.9%	2.0%	2.5%	2.3%	2.0%	2.1%	2.2%	2.4%	2.3%	2.3%	2.2%	2.5%	2.4%	2.6%	2.4%
Financial Activities			4.7%	4.8%	5.1%	4.8%	5.0%	5.2%	4.9%	5.6%	5.1%	5.3%	4.9%	5.9%	5.6%	5.1%	6.1%
Professional and Business Services			17.5%	17.4%	19.8%	19.1%	18.7%	17.7%	16.7%	19.1%	18.5%	16.6%	15.9%	18.6%	15.9%	15.6%	15.7%
Educational Services			46.9%	47.9%	42.9%	42.7%	44.0%	45.6%	46.9%	41.6%	40.6%	46.4%	47.5%	41.3%	46.3%	47.5%	46.2%
Health Care and Social Assistance			22.3%	22.2%	24.1%	26.0%	24.1%	22.1%	22.1%	24.6%	26.1%	21.6%	21.9%	24.1%	21.3%	20.5%	20.9%
Leisure and Hospitality			6.4%	6.1%	6.4%	6.6%	7.5%	4.6%	4.4%	4.8%	5.0%	3.9%	3.7%	4.0%	4.0%	4.0%	3.8%
Other Services			2.5%	2.6%	2.6%	2.9%	2.5%	2.1%	2.1%	2.1%	2.1%	2.0%	2.0%	1.9%	1.9%	1.8%	1.7%
Public Administration			6.9%	7.1%	7.5%	7.0%	7.6%	7.1%	6.9%	7.3%	7.3%	7.1%	7.4%	7.7%	7.2%	7.4%	7.3%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			*	\$22,113	*	\$29,013	\$24,969	*	\$15,178	*	\$30,919	*	\$4,357	*	*	\$24,009	*
Wholesale Trade, Transport. and Utilities			\$33,187	\$38,161	\$31,313	\$32,590	\$32,756	\$43,157	\$44,543	\$46,560	\$44,993	\$51,161	\$51,919	\$53,965	\$57,591	\$52,626	\$60,600
Construction			\$27,208	\$30,730	\$34,535	\$42,891	\$32,432	\$39,138	\$46,310	\$40,753	\$49,537	\$49,596	\$50,631	\$40,762	\$49,594	\$59,508	\$57,315
Manufacturing			\$58,298	\$59,299	\$61,064	\$61,253	\$61,959	\$64,714	\$65,529	\$62,201	\$67,436	\$72,018	\$67,787	\$66,203	\$76,511	\$73,498	\$78,920
Retail Trade			\$3,275	\$3,078	\$2,737	\$3,714	\$3,327	\$3,970	\$4,174	\$4,430	\$4,068	\$4,921	\$4,468	\$5,657	\$5,725	\$4,369	\$6,470
Information			\$33,484	\$35,513	\$31,261	\$36,284	\$36,146	\$42,891	\$44,478	\$44,831	\$48,660	\$41,565	\$54,679	\$46,086	\$53,801	\$51,496	\$59,888
Financial Activities			\$42,237	\$44,776	\$50,061	\$47,720	\$49,171	\$50,060	\$54,233	\$58,088	\$59,311	\$63,170	\$62,035	\$67,768	\$70,018	\$70,560	\$73,181
Professional and Business Services			\$36,541	\$40,093	\$41,865	\$44,245	\$42,314	\$46,009	\$49,050	\$51,202	\$50,849	\$52,597	\$55,168	\$52,354	\$57,559	\$58,707	\$61,319
Educational Services			\$37,269	\$38,955	\$37,546	\$37,798	\$37,336	\$41,026	\$43,400	\$42,389	\$42,745	\$44,247	\$45,518	\$44,975	\$46,741	\$47,788	\$48,864
Health Care and Social Assistance			\$35,916	\$37,094	\$37,555	\$38,688	\$36,685	\$41,625	\$44,051	\$44,092	\$43,853	\$45,080	\$45,720	\$46,206	\$48,653	\$48,850	\$50,115
Leisure and Hospitality			\$2,845	\$2,918	\$3,143	\$2,755	\$3,067	\$4,500	\$3,617	\$3,238	\$2,895	\$4,527	\$3,976	\$2,865	\$3,708	\$3,515	\$5,239
Other Services			\$7,626	\$5,200	\$7,532	\$4,375	\$5,573	\$14,255	\$11,705	\$15,229	\$12,777	\$19,886	\$23,214	\$19,500	\$23,011	\$33,462	\$26,570
Public Administration			\$29,000	\$31,891	\$33,334	\$35,127	\$34,553	\$37,696	\$40,294	\$42,080	\$39,494	\$41,340	\$42,215	\$43,950	\$45,814	\$44,326	\$47,382
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After	
Natural Resources and Mining			*	\$29,540	*	\$33,663	\$41,744	*	\$28,423	*	\$31,935	*	\$23,729	*	*	\$34,180	*
Wholesale Trade, Transport. and Utilities			\$46,907	\$52,775	\$45,905	\$46,832	\$45,570	\$52,035	\$58,489	\$53,792	\$57,904	\$59,350	\$63,344	\$64,732	\$64,451	\$67,215	\$70,339
Construction			\$38,323	\$40,947	\$43,138	\$42,319	\$36,251	\$41,189	\$54,393	\$50,336	\$50,561	\$56,210	\$57,328	\$54,168	\$58,893	\$61,690	\$64,353
Manufacturing			\$60,323	\$68,236	\$64,346	\$62,127	\$67,568	\$64,183	\$73,321	\$67,830	\$70,218	\$75,396	\$72,905	\$71,078	\$81,145	\$79,263	\$81,351
Retail Trade			\$9,783	\$11,750	\$12,474	\$12,035	\$11,696	\$14,258	\$16,727	\$20,475	\$14,785	\$15,625	\$18,188	\$20,602	\$17,994	\$19,531	\$19,023
Information			\$42,742	\$45,653	\$41,566	\$44,707	\$47,188	\$55,784	\$51,433	\$53,246	\$57,769	\$57,064	\$63,956	\$55,253	\$65,192	\$66,604	\$72,439
Financial Activities			\$52,993	\$57,971	\$58,918	\$56,704	\$58,810	\$61,275	\$64,057	\$65,586	\$67,148	\$74,646	\$73,956	\$74,288	\$82,674	\$83,311	\$89,889
Professional and Business Services			\$37,312	\$40,500	\$42,186	\$44,731	\$43,895	\$45,225	\$48,390	\$50,589	\$52,098	\$52,527	\$56,110	\$53,757	\$56,354	\$61,598	\$62,078
Educational Services			\$33,193	\$34,610	\$32,115	\$33,333	\$32,133	\$38,146	\$39,582	\$37,989	\$39,752	\$40,560	\$42,054	\$41,185	\$43,605	\$45,372	\$46,567
Health Care and Social Assistance			\$41,562	\$42,804	\$42,252	\$44,969	\$42,465	\$49,918	\$51,971	\$50,057	\$52,622	\$52,922	\$54,395	\$53,754	\$58,171	\$58,249	\$60,948
Leisure and Hospitality			\$8,400	\$8,626	\$9,926	\$8,679	\$8,788	\$13,186	\$12,106	\$13,632	\$11,449	\$16,449	\$13,624	\$13,573	\$17,408	\$14,514	\$19,443
Other Services			\$17,800	\$14,982	\$15,502	\$14,844	\$16,265	\$23,514	\$22,679	\$23,468	\$23,263	\$26,806	\$29,132	\$26,331	\$30,248	\$36,868	\$33,414
Public Administration			\$28,760	\$29,981	\$31,933	\$32,567	\$33,894	\$34,908	\$37,509	\$39,276	\$36,797	\$38,849	\$39,610	\$41,953	\$44,759	\$42,451	\$46,232

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» UNC Doctoral (Research) Degree Program Outcomes

As shown in Figure 69, enrollment in research-focused doctoral programs declined over time, while graduation rates increased. Between the 2012-2013 and 2016-2017 program years, the program year graduation rate for doctoral students in research programs increased from 15% to 17%.

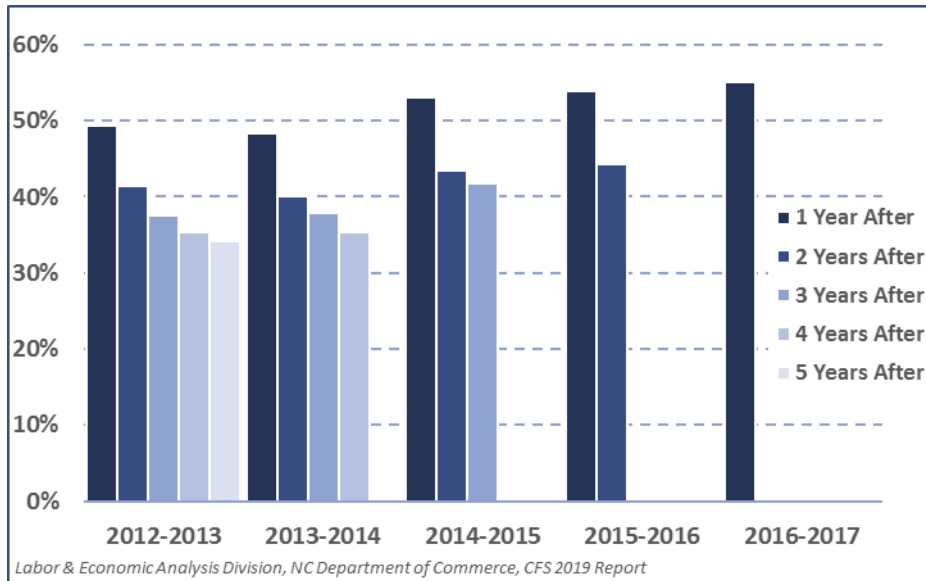
Figure 69. UNC Doctoral (Research) Degree Program Participants and Completers by Program Year



Students who were recorded as having graduated from a doctoral program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion. As measured by one-year post-graduation outcomes, employment rates of research doctorate recipients in North Carolina increased across the cohorts examined (see Figure 70). These rates are low compared to graduates from bachelor's and master's programs, which may be due to the unique employment circumstances of doctoral recipients.

Many short-term academic jobs are not covered by unemployment insurance, which would exclude them from the statistics presented. Additionally, many research doctorate recipients leave the state for academic employment, as academic hiring guidelines typically require universities to conduct a national search. The second year after graduation shows a noticeable drop in employment within North Carolina, followed by much smaller declines in subsequent years. This unique employment outcome may be due to recipients of doctoral degrees finding out-of-state employment following a transitional post-graduate year.

Figure 70. Percentage of UNC Doctoral (Research) Program Completers Employed in North Carolina After Degree Conferal, by Year of Graduation



Short-term wage outcomes in North Carolina show an overall increase across the five cohorts of research doctorates (Figure 71). Within each cohort, wages increase considerably over time. The vast majority of those completing doctoral research programs were employed in Educational Services, which shows a slight overall increase over time across cohorts (Table 18).

Figure 71. Median Wage of UNC Doctoral (Research) Program Completers in North Carolina, by Year of Graduation

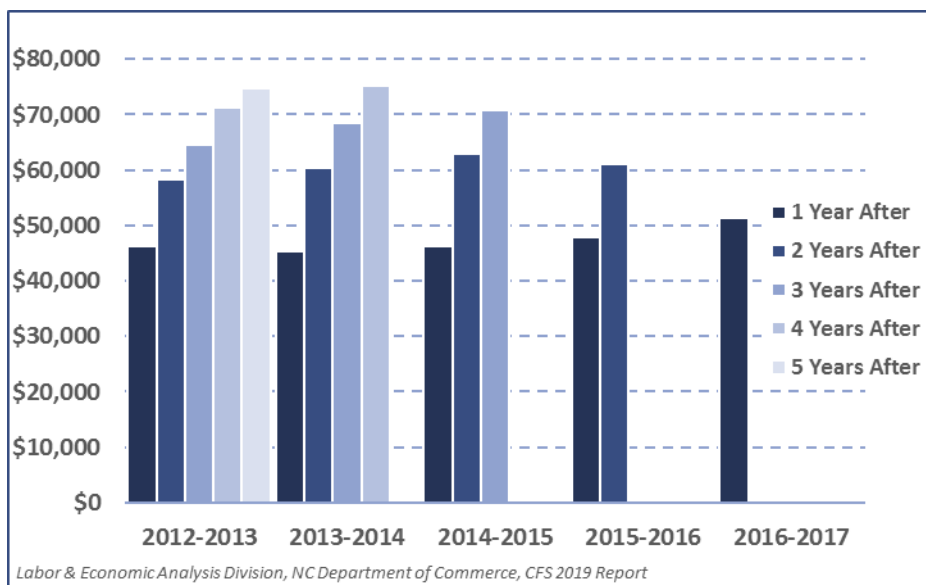
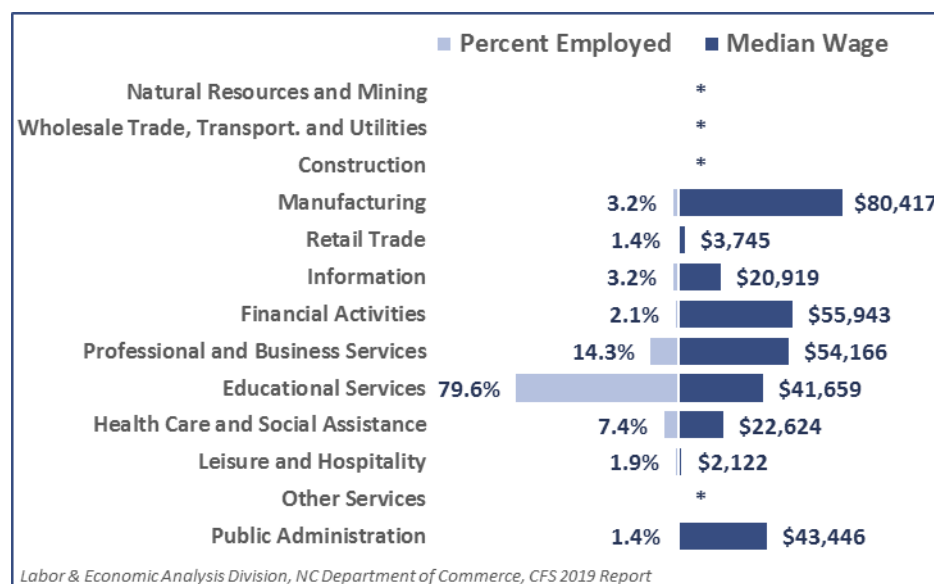


Figure 72. 2016-2017 UNC Doctoral (Research) Program Completers One Year After Graduation: Percentage Employed and Median Wage by Industry



Overall, UNC's doctoral research programs saw small wage increases over time across graduating cohorts, as well as larger median wage growth within each graduating cohort.

Table 18. UNC Doctoral (Research) Degree Program Participants and Completers, One Through Five Years After Exit, Overall and By Industry

University Of North Carolina System Doctoral Degree (Research) All Programs						Common Follow-up System: Evaluative Measures, 2019 Report										
						Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce										
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Students		9,245	8,919	8,630	7,924	7,747	9,245	8,919	8,630	7,924	9,245	8,919	8,630	9,245	8,919	9,245
Doctoral Degree (Research) Recipients		1,399	1,416	1,393	1,345	1,309	1,399	1,416	1,393	1,345	1,399	1,416	1,393	1,399	1,416	1,399
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Doctoral Degree (Research) Recipients	N	691	685	740	725	721	580	567	605	596	525	536	582	494	501	478
Employed in North Carolina	%	49%	48%	53%	54%	55%	41%	40%	43%	44%	38%	38%	42%	35%	35%	34%
Doctoral Degree (Research) Recipients' Wages in North Carolina	Mean	\$50,648	\$50,090	\$49,468	\$51,280	\$52,231	\$60,648	\$62,527	\$64,219	\$64,287	\$66,867	\$70,725	\$74,388	\$73,735	\$76,395	\$79,263
	Median	\$46,348	\$45,277	\$46,301	\$47,873	\$51,255	\$58,284	\$60,397	\$62,821	\$61,146	\$64,454	\$68,434	\$70,723	\$71,277	\$75,208	\$74,776
Graduates Enrolled in NC Public Higher Education	N	43	43	44	32	33	51	35	32	36	21	23	23	26	21	20
	%	3%	3%	3%	2%	3%	4%	2%	2%	3%	2%	2%	2%	2%	1%	1%
Graduates Enrolled in NC Public Education, Employment, or Training Program	N	52	55	56	46	40	56	42	37	45	28	28	32	28	25	22
	%	4%	4%	4%	3%	3%	4%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Graduates Enrolled or Employed in NC	N	700	697	743	717	708	599	581	609	601	530	540	585	498	503	480
	%	50%	49%	53%	53%	54%	43%	41%	44%	45%	38%	38%	42%	36%	36%	34%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade, Transport. and Utilities		2.3%	1.5%	1.4%	*	*	2.1%	*	1.7%	*	2.3%	1.9%	2.1%	2.2%	2.0%	2.1%
Construction		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing		3.8%	3.9%	4.6%	3.3%	3.2%	4.5%	4.1%	5.0%	3.0%	5.5%	4.7%	5.2%	5.3%	4.4%	4.8%
Retail Trade		*	1.9%	*	1.5%	1.4%	*	*	*	*	*	*	*	*	*	*
Information		2.9%	2.6%	2.3%	2.9%	3.2%	2.9%	4.2%	3.0%	3.7%	2.9%	4.1%	3.1%	3.2%	4.2%	3.3%
Financial Activities		1.9%	*	*	2.6%	2.1%	2.2%	*	*	3.2%	2.3%	*	*	2.0%	2.0%	2.3%
Professional and Business Services		11.7%	14.3%	12.0%	12.0%	14.3%	14.0%	16.9%	13.9%	13.1%	15.6%	15.1%	14.3%	16.0%	18.0%	16.9%
Educational Services		77.0%	72.0%	77.6%	76.8%	79.6%	71.0%	66.5%	72.2%	73.7%	68.6%	65.3%	71.5%	67.2%	65.1%	69.2%
Health Care and Social Assistance		9.6%	9.8%	10.4%	9.1%	7.4%	10.9%	10.8%	11.1%	9.2%	9.7%	12.9%	9.6%	10.9%	10.6%	8.8%
Leisure and Hospitality		1.4%	1.6%	1.8%	1.8%	1.9%	*	*	2.0%	1.8%	*	*	2.2%	*	*	*
Other Services		*	*	*	*	*	*	1.8%	*	*	*	*	*	*	*	*
Public Administration		1.7%	3.2%	2.3%	2.5%	1.4%	2.4%	3.2%	2.3%	2.9%	2.5%	3.5%	2.6%	2.4%	3.4%	2.3%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade, Transport. and Utilities		\$54,809	\$46,460	\$33,288	*	*	\$68,602	*	\$47,807	*	\$55,521	\$79,616	\$48,756	\$77,800	\$101,269	\$98,991
Construction		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing		\$57,526	\$72,958	\$72,525	\$52,437	\$80,417	\$78,514	\$82,196	\$83,221	\$87,922	\$84,940	\$79,902	\$84,433	\$89,265	\$92,920	\$105,130
Retail Trade		*	\$4,685	*	\$964	\$3,745	*	*	*	*	*	*	*	*	*	*
Information		\$80,043	\$58,164	\$80,959	\$90,606	\$20,919	\$94,097	\$32,124	\$95,022	\$81,647	\$108,885	\$79,161	\$84,635	\$109,006	\$89,740	\$112,654
Financial Activities		\$48,252	*	*	\$71,584	\$55,943	\$80,259	*	*	\$93,020	\$89,049	*	*	\$93,030	\$92,541	\$84,568
Professional and Business Services		\$43,704	\$53,755	\$45,585	\$49,134	\$54,166	\$55,288	\$70,963	\$67,302	\$67,086	\$66,770	\$84,087	\$78,400	\$86,562	\$81,928	\$90,000
Educational Services		\$40,469	\$38,037	\$36,612	\$40,716	\$41,659	\$49,358	\$51,900	\$55,999	\$51,905	\$55,605	\$58,888	\$64,423	\$59,868	\$64,599	\$63,489
Health Care and Social Assistance		\$36,706	\$39,138	\$30,521	\$44,718	\$22,624	\$36,620	\$48,602	\$33,437	\$47,500	\$46,564	\$36,604	\$38,829	\$50,058	\$40,455	\$37,607
Leisure and Hospitality		\$1,821	\$2,518	\$1,955	\$1,359	\$2,122	*	*	\$1,367	\$2,777	*	*	\$1,147	*	*	*
Other Services		*	*	*	*	*	*	\$32,078	*	*	*	*	*	*	*	*
Public Administration		\$6,105	\$44,335	\$42,369	\$54,530	\$43,446	\$31,543	\$64,731	\$52,471	\$47,020	\$36,296	\$66,223	\$54,580	\$39,018	\$54,236	\$43,835
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade, Transport. and Utilities		\$62,682	\$49,730	\$48,126	*	*	\$62,175	*	\$52,388	*	\$52,321	\$79,041	\$55,696	\$73,450	\$98,388	\$99,411
Construction		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing		\$63,548	\$71,817	\$68,677	\$72,437	\$81,239	\$77,024	\$81,090	\$77,386	\$94,535	\$74,131	\$80,691	\$84,458	\$90,175	\$87,437	\$106,637
Retail Trade		*	\$9,467	*	\$22,955	\$16,878	*	*	*	*	*	*	*	*	*	*
Information		\$59,827	\$51,223	\$72,052	\$70,553	\$45,594	\$76,131	\$49,680	\$76,024	\$71,769	\$89,839	\$65,122	\$78,160	\$90,824	\$75,072	\$93,169
Financial Activities		\$58,076	*	*	\$71,599	\$53,947	\$84,305	*	*	\$87,031	\$82,188	*	*	\$85,114	\$107,919	\$89,523
Professional and Business Services		\$46,759	\$55,037	\$51,093	\$48,786	\$58,944	\$53,534	\$69,605	\$71,663	\$60,609	\$64,550	\$85,297	\$97,410	\$79,060	\$83,634	\$85,366
Educational Services		\$41,454	\$40,572	\$40,020	\$41,101	\$42,795	\$49,831	\$51,448	\$54,834	\$53,177	\$54,802	\$58,682	\$61,820	\$58,685	\$62,542	\$63,271
Health Care and Social Assistance		\$48,073	\$41,575	\$38,226	\$48,120	\$29,097	\$49,000	\$50,834	\$43,148	\$50,717	\$57,218	\$43,837	\$50,026	\$64,569	\$45,826	\$61,312
Leisure and Hospitality		\$2,231	\$9,418	\$3,970	\$16,807	\$6,151	*	*	\$4,036	\$10,303	*	*	\$2,772	*	*	*
Other Services		*	*	*	*	*	*	\$41,942	*	*	*	*	*	*	*	*
Public Administration		\$31,358	\$45,131	\$44,139	\$49,065	\$52,795	\$36,086	\$57,473	\$53,838	\$46,365	\$41,048	\$56,003	\$50,447	\$43,839	\$53,453	\$47,711

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» UNC Doctoral (Professional Practice) Degree Program Outcomes

As shown in Figure 73, enrollment in professional doctoral programs in the UNC system increased substantially between the 2012-2013 and 2016-2017 program years (also see Table 19). Numbers of graduates also increased somewhat during this time period.

Figure 73. UNC Doctoral (Professional Practice) Degree Program Participants and Completers by Program Year

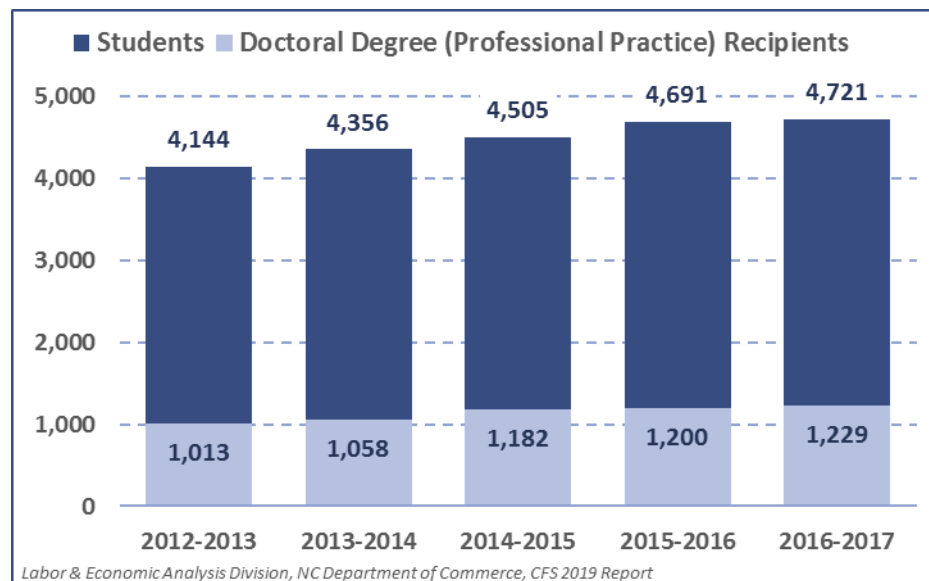
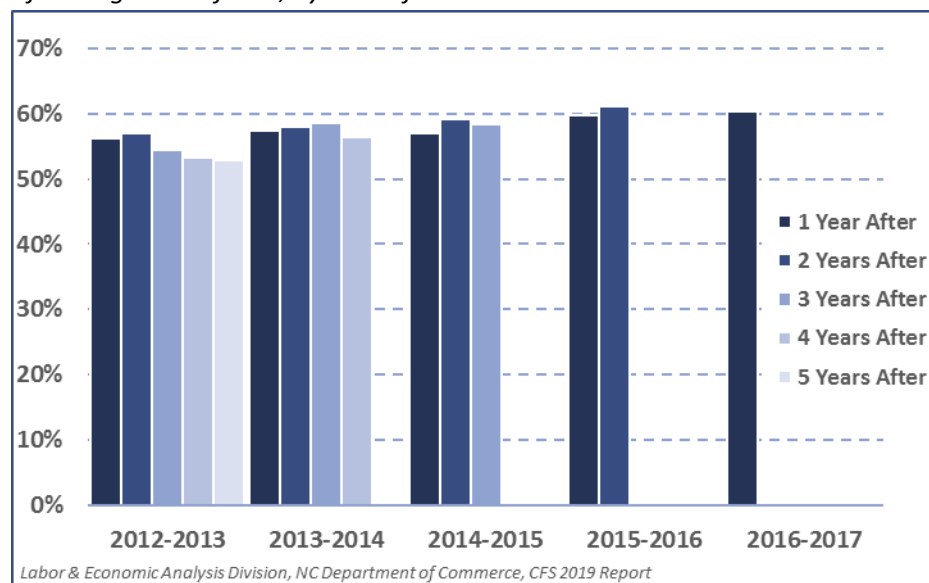


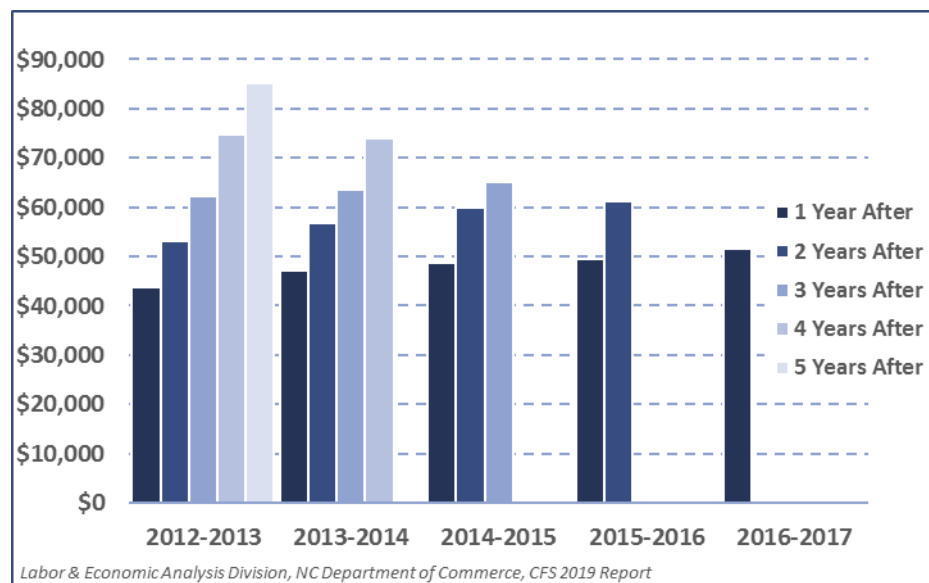
Figure 74. Percentage of UNC Doctoral (Professional Practice) Program Completers Employed in North Carolina After Degree Conferral, by Year of Graduation



Students who were recorded as having graduated from a doctoral program were defined as program completers/graduates, and their subsequent wages and employment outcomes were tracked post completion. Employment rates for professional doctoral graduates are somewhat low compared to other programs below the doctoral level, which may be due in part to graduates of professional practice doctoral programs finding

employment out of state (Figure 74). Employment rates and median wages for professional doctoral graduates within North Carolina show an increase across cohorts and show high wage growth within cohorts (Figure 75).

Figure 75. Median Wage of UNC Professional Doctorate Program Completers in North Carolina, by Year of Graduation



Recent graduates of doctoral practice programs were most likely to be employed within the Health Care and Social Assistance and Professional and Business Services industries (Figure 76). Overall, UNC's professional practice doctoral graduates show steady employment and positive wage outcomes.

Figure 76. 2016-2017 UNC Doctoral (Professional Practice) Program Completers One Year After Graduation: Percentage Employed and Median Wage by Industry

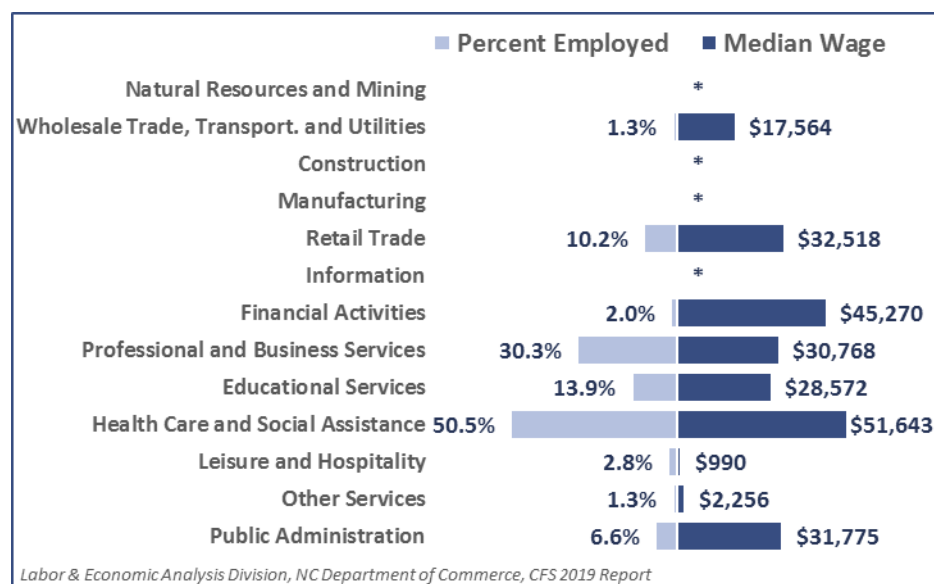


Table 19. UNC Doctoral (Professional) Degree Program Participants and Completers, One Through Five Years After Exit, Overall and By Industry

University Of North Carolina System							Common Follow-up System: Evaluative Measures, 2019 Report									
Doctoral Degree (Professional Practice)																
All Programs							Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce									
Program Year		2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2012-2013	2013-2014	2014-2015	2015-2016	2012-2013	2013-2014	2014-2015	2012-2013	2013-2014	2012-2013
Students		4,144	4,356	4,505	4,691	4,721	4,144	4,356	4,505	4,691	4,144	4,356	4,505	4,144	4,356	4,144
Doctoral Degree (Professional Practice)		1,013	1,058	1,182	1,200	1,229	1,013	1,058	1,182	1,200	1,013	1,058	1,182	1,013	1,058	1,013
Post-Completion Outcome Measures		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Doctoral Degree (Professional Practice)	N	569	608	674	717	742	578	613	699	733	552	619	691	539	598	535
Recipients Employed in North Carolina	%	56%	57%	57%	60%	60%	57%	58%	59%	61%	54%	59%	58%	53%	57%	53%
Doctoral Degree (Professional Practice)	Mean	\$50,850	\$53,879	\$57,008	\$59,621	\$62,044	\$66,837	\$68,987	\$74,280	\$75,178	\$77,602	\$74,561	\$81,856	\$88,866	\$89,887	\$100,917
Recipients' Wages in North Carolina	Median	\$43,777	\$47,049	\$48,733	\$49,557	\$51,643	\$53,005	\$56,824	\$59,911	\$61,127	\$62,214	\$63,514	\$65,095	\$74,768	\$73,841	\$85,056
Graduates Enrolled in NC Public Higher Education	N	22	27	32	25	31	21	33	24	26	23	28	24	19	21	19
	%	2%	3%	3%	2%	3%	2%	3%	2%	2%	2%	3%	2%	2%	2%	2%
Graduates Enrolled in NC Public Education, Employment, or Training Program	N	39	36	45	49	43	28	44	39	43	33	34	35	34	25	26
	%	4%	3%	4%	4%	3%	3%	4%	3%	4%	3%	3%	3%	3%	2%	3%
Graduates Enrolled or Employed in NC	N	577	622	682	728	747	584	619	702	739	557	625	693	542	603	537
	%	57%	59%	58%	61%	61%	58%	59%	59%	62%	55%	59%	59%	54%	57%	53%
Graduates' Employment by Industry*		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade, Transport. and Utilities		*	*	*	*	1.3%	*	*	*	*	*	*	*	*	*	*
Construction		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing		1.8%	2.0%	*	1.4%	*	*	1.8%	*	*	2.0%	2.4%	*	*	2.3%	*
Retail Trade		16.0%	14.5%	13.1%	12.3%	10.2%	13.0%	10.6%	10.0%	10.0%	12.0%	9.2%	9.3%	10.0%	7.9%	9.9%
Information		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Financial Activities		*	*	2.2%	3.1%	2.0%	*	2.3%	2.7%	1.6%	2.0%	2.9%	3.0%	2.4%	2.8%	3.0%
Professional and Business Services		35.9%	34.4%	30.4%	32.8%	30.3%	35.3%	33.1%	30.2%	34.1%	32.1%	31.5%	30.1%	31.2%	29.9%	31.2%
Educational Services		9.7%	7.2%	10.7%	12.7%	13.9%	8.1%	9.5%	10.2%	10.4%	9.6%	11.1%	11.3%	11.9%	14.2%	12.3%
Health Care and Social Assistance		38.5%	43.8%	45.3%	45.2%	50.5%	39.8%	45.4%	48.4%	46.4%	40.4%	45.4%	48.6%	43.8%	46.0%	43.2%
Leisure and Hospitality		5.3%	1.8%	3.3%	3.2%	2.8%	3.1%	*	1.7%	1.5%	*	2.1%	*	*	*	*
Other Services		*	*	2.2%	1.7%	1.3%	*	*	2.1%	*	*	*	1.4%	*	*	*
Public Administration		7.7%	5.6%	7.3%	8.1%	6.6%	8.7%	7.2%	7.4%	9.4%	8.9%	7.1%	7.7%	9.3%	7.4%	8.2%
Graduates' Median Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade, Transport. and Utilities		*	*	*	*	\$17,564	*	*	*	*	*	*	*	*	*	*
Construction		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing		\$24,417	\$71,976	*	\$9,311	*	*	\$83,942	*	*	\$82,178	\$55,326	*	*	\$40,129	*
Retail Trade		\$95,177	\$90,150	\$107,073	\$104,796	\$32,518	\$109,386	\$118,470	\$114,679	\$92,360	\$120,961	\$117,094	\$111,770	\$124,412	\$114,485	\$121,744
Information		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Financial Activities		*	*	\$46,068	\$14,999	\$45,270	*	\$46,291	\$46,217	\$58,238	\$41,406	\$56,241	\$73,871	\$69,156	\$70,332	\$65,689
Professional and Business Services		\$22,346	\$28,384	\$28,998	\$28,717	\$30,768	\$43,641	\$52,331	\$51,666	\$45,576	\$57,487	\$62,471	\$61,157	\$66,044	\$75,714	\$74,876
Educational Services		\$23,542	\$22,641	\$17,272	\$23,335	\$28,572	\$31,138	\$30,465	\$28,482	\$30,121	\$23,184	\$32,117	\$29,852	\$34,410	\$34,744	\$52,025
Health Care and Social Assistance		\$49,013	\$50,961	\$49,656	\$50,840	\$51,643	\$53,476	\$56,554	\$54,888	\$59,356	\$61,536	\$58,931	\$59,473	\$69,978	\$65,888	\$85,056
Leisure and Hospitality		\$2,020	\$2,582	\$1,585	\$2,400	\$990	\$804	*	\$3,648	\$1,538	*	\$1,317	*	*	*	*
Other Services		*	*	\$7,500	\$2,787	\$2,256	*	*	\$21,000	*	*	*	\$39,551	*	*	*
Public Administration		\$25,307	\$23,494	\$29,024	\$25,376	\$31,775	\$41,513	\$42,822	\$45,021	\$46,304	\$44,819	\$50,214	\$48,491	\$48,165	\$53,332	\$57,060
Graduates' Average Wages by Industry of Employment		1 Year After					2 Years After				3 Years After			4 Years After		5 Years After
Natural Resources and Mining		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade, Transport. and Utilities		*	*	*	*	\$26,846	*	*	*	*	*	*	*	*	*	*
Construction		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing		\$53,349	\$71,386	*	\$21,606	*	*	\$68,968	*	*	\$108,365	\$67,823	*	*	\$69,524	*
Retail Trade		\$68,772	\$67,505	\$77,632	\$73,937	\$49,444	\$86,532	\$97,026	\$98,531	\$88,237	\$92,374	\$98,135	\$93,982	\$106,248	\$98,840	\$97,193
Information		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Financial Activities		*	*	\$46,892	\$28,827	\$60,254	*	\$50,997	\$47,837	\$64,383	\$47,394	\$48,834	\$67,652	\$65,248	\$64,268	\$77,424
Professional and Business Services		\$32,835	\$37,130	\$39,559	\$41,046	\$44,417	\$50,139	\$57,725	\$65,502	\$57,447	\$62,007	\$70,158	\$73,732	\$71,806	\$86,845	\$80,072
Educational Services		\$23,087	\$23,008	\$23,825	\$30,320	\$31,356	\$30,019	\$29,216	\$33,420	\$35,675	\$33,511	\$30,984	\$34,244	\$40,858	\$45,763	\$60,258
Health Care and Social Assistance		\$56,593	\$57,947	\$59,550	\$62,260	\$66,161	\$72,769	\$68,326	\$70,565	\$73,434	\$86,293	\$70,922	\$77,189	\$93,091	\$83,489	\$108,130
Leisure and Hospitality		\$4,241	\$9,062	\$9,076	\$4,154	\$2,559	\$3,661	*	\$15,522	\$5,534	*	\$2,859	*	*	*	*
Other Services		*	*	\$23,394	\$17,012	\$21,449	*	*	\$38,153	*	*	*	\$39,939	*	*	*
Public Administration		\$25,661	\$28,105	\$30,013	\$28,617	\$31,061	\$34,233	\$38,259	\$43,122	\$40,345	\$37,196	\$45,403	\$49,194	\$42,393	\$52,806	\$50,503

* Employment percentages by industry total more than 100% due to individuals who were employed, and receiving wages, in more than one industry. See methodology for more information.

» Summary and Recommendations

The outcomes of UNC graduates were generally positive and improved over time. Bachelor's, master's, and doctoral degree recipients have seen their wages increase in each year after graduation, and each cohort tended to earn more in each year than the prior cohort, except for those graduates with research doctorates. Higher-level credentials were associated with better wage outcomes. Post-completion outcome measures show that master's degree recipients earned more than bachelor's degree recipients, and doctoral degree recipients earned more than master's degree recipients, in each year after graduation across all the cohorts examined here.

The share of graduates employed in North Carolina typically declined in each year after graduation, but this wasn't necessarily a negative outcome—individuals not employed in North Carolina might be unemployed but could also be out of the labor force (e.g. full-time parents) or employed in a job not covered by North Carolina's unemployment insurance laws (e.g. jobs in other states).

The wide variation in outcomes between different areas of study and different degree levels may suggest that some programs lead to better labor market outcomes than others. However, more research is needed to determine whether the degree programs themselves caused these outcomes, or if other factors were at play (such as differences in the types of students graduating from these programs). The distribution of outcomes *within* programs—e.g. wage earnings at the 25th and 75th percentiles, rather than just the median—should be assessed to gauge how widely these outcomes vary. Information about the causal returns to degree programs and/or the variation in these returns could then be used to determine which programs provide the best return on investment for UNC students and to strengthen existing program offerings.

Appendices

North Carolina Community College System Appendix

Appendix Table 1. CTE Associate Degree Program Outcomes by Program Area, 2012-2013 Graduates

North Carolina Community College System Associate Degree Programs										Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2012-2013																		
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			5 Years After Completion				
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage		
Agricultural & Natural Resources Technologies	1,812	284	213	75%	\$16,898	202	71%	\$22,660	188	66%	\$27,295	193	68%	\$29,398	193	68%	\$31,643		
Biological and Chemical Technologies	844	125	99	79%	\$17,658	91	73%	\$26,497	98	78%	\$28,338	96	77%	\$31,395	96	77%	\$34,699		
Business Technologies	46,098	4,418	3,461	78%	\$19,376	3,470	79%	\$24,392	3,416	77%	\$27,265	3,374	76%	\$29,750	3,334	75%	\$31,558		
Commercial and Artistic Production Technologies	3,236	356	260	73%	\$12,400	246	69%	\$15,296	238	67%	\$19,550	239	67%	\$22,152	227	64%	\$24,202		
Construction Technologies	3,456	399	333	83%	\$25,861	322	81%	\$32,370	303	76%	\$35,472	302	76%	\$39,469	299	75%	\$42,015		
Engineering Technologies	5,980	683	548	80%	\$24,002	540	79%	\$31,346	537	79%	\$37,886	548	80%	\$40,044	539	79%	\$44,631		
Health Sciences	23,034	4,724	4,221	89%	\$33,346	4,169	88%	\$40,680	4,080	86%	\$43,210	3,974	84%	\$45,334	3,874	82%	\$46,206		
Industrial Technologies	3,979	435	373	86%	\$30,289	371	85%	\$37,770	365	84%	\$42,644	350	80%	\$45,461	343	79%	\$48,371		
Public Service Technologies	29,381	2,835	2,284	81%	\$17,007	2,245	79%	\$20,344	2,228	79%	\$23,039	2,198	78%	\$25,062	2,155	76%	\$27,126		
Transportation Systems Technologies	4,825	459	383	83%	\$22,960	369	80%	\$28,684	363	79%	\$32,374	358	78%	\$35,120	358	78%	\$38,336		

Appendix Table 2. CTE Associate Degree Program Outcomes by Program Area, 2013-2014 Graduates

North Carolina Community College System Associate Degree Programs									Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>						
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2013-2014														
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	
Agricultural & Natural Resources Technologies	1,752	277	203	73%	\$18,126	192	69%	\$23,612	191	69%	\$27,942	188	68%	\$28,659	
Biological and Chemical Technologies	787	123	98	80%	\$18,271	100	81%	\$22,068	99	80%	\$24,628	101	82%	\$29,583	
Business Technologies	44,667	4,463	3,487	78%	\$20,263	3,473	78%	\$25,152	3,423	77%	\$27,787	3,410	76%	\$30,427	
Commercial and Artistic Production Technologies	3,102	380	276	73%	\$12,343	272	72%	\$16,953	274	72%	\$18,177	266	70%	\$21,559	
Construction Technologies	3,367	350	272	78%	\$27,224	264	75%	\$33,789	259	74%	\$38,367	255	73%	\$42,559	
Engineering Technologies	5,972	681	559	82%	\$27,604	567	83%	\$34,360	545	80%	\$38,524	529	78%	\$43,681	
Health Sciences	23,057	4,989	4,455	89%	\$32,834	4,401	88%	\$42,075	4,276	86%	\$44,561	4,206	84%	\$44,819	
Industrial Technologies	4,233	489	418	85%	\$31,144	401	82%	\$38,034	387	79%	\$44,131	382	78%	\$46,627	
Public Service Technologies	27,345	2,701	2,203	82%	\$18,944	2,148	80%	\$21,893	2,107	78%	\$24,361	2,083	77%	\$26,570	
Transportation Systems Technologies	5,007	446	371	83%	\$25,608	366	82%	\$30,371	356	80%	\$34,945	346	78%	\$37,660	

Appendix Table 3. CTE Associate Degree Program Outcomes by Program Area, 2014-2015 Graduates

North Carolina Community College System Associate Degree Programs			Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>								
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2014-2015								
			1 Year After Completion			2 Years After Completion			3 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agricultural & Natural Resources Technologies	1,725	329	258	78%	\$18,013	247	75%	\$23,504	235	71%	\$28,107
Biological and Chemical Technologies	716	102	76	75%	\$21,693	71	70%	\$25,525	71	70%	\$29,886
Business Technologies	42,162	4,738	3,789	80%	\$22,021	3,769	80%	\$26,077	3,691	78%	\$28,902
Commercial and Artistic Production Technologies	2,957	397	291	73%	\$13,565	284	72%	\$18,215	286	72%	\$20,757
Construction Technologies	3,133	400	330	83%	\$32,682	319	80%	\$37,471	300	75%	\$40,510
Engineering Technologies	5,472	691	561	81%	\$27,096	545	79%	\$35,210	537	78%	\$38,965
Health Sciences	22,435	4,939	4,467	90%	\$36,172	4,387	89%	\$44,128	4,267	86%	\$45,492
Industrial Technologies	3,969	543	457	84%	\$32,721	441	81%	\$39,288	437	80%	\$43,589
Public Service Technologies	25,272	2,859	2,319	81%	\$19,164	2,260	79%	\$22,597	2,210	77%	\$24,991
Transportation Systems Technologies	4,792	540	453	84%	\$26,184	446	83%	\$30,549	434	80%	\$34,212

Appendix Table 4. CTE Associate Degree Program Outcomes by Program Area, 2015-2016 and 2016-2017 Graduates

North Carolina Community College System Associate Degree Programs									Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>					
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016								Program Year 2016-2017					
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			Parti cipants	Degree Recipients	1 Year After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage			Employed	%	Med. Wage	
Agricultural & Natural Resources Technologies	1,615	301	222	74%	\$20,429	209	69%	\$25,874	1,500	319	248	78%	\$19,454	
Biological and Chemical Technologies	649	114	91	80%	\$20,559	87	76%	\$29,360	536	87	75	86%	\$19,661	
Business Technologies	38,643	4,594	3,684	80%	\$22,715	3,649	79%	\$26,934	36,619	4,525	3,604	80%	\$22,906	
Commercial and Artistic Production Technologies	2,748	444	327	74%	\$14,933	321	72%	\$19,785	2,710	397	299	75%	\$14,764	
Construction Technologies	2,862	376	301	80%	\$32,033	295	78%	\$36,264	2,829	444	362	82%	\$31,653	
Engineering Technologies	4,984	689	575	83%	\$27,915	562	82%	\$35,897	4,674	677	577	85%	\$31,350	
Health Sciences	20,765	4,893	4,476	91%	\$39,405	4,396	90%	\$44,703	19,988	4,756	4,352	92%	\$40,310	
Industrial Technologies	3,846	551	470	85%	\$32,186	461	84%	\$37,997	3,587	619	528	85%	\$34,703	
Public Service Technologies	22,242	2,749	2,249	82%	\$20,066	2,203	80%	\$23,219	20,135	2,608	2,126	82%	\$20,042	
Transportation Systems Technologies	4,366	550	444	81%	\$27,407	440	80%	\$31,928	4,114	633	531	84%	\$28,387	

Appendix Table 5. CTE Diploma Program Outcomes by Program Area, 2012-2013 Graduates

North Carolina Community College System Postsecondary Diploma Programs									Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2012-2013																	
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			5 Years After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	
Agricultural & Natural Resources Technologies	161	24	18	75%	\$14,632	17	71%	\$16,712	16	67%	\$23,587	17	71%	\$24,550	18	75%	\$28,864	
Biological and Chemical Technologies	140	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Business Technologies	2,657	624	472	76%	\$16,941	479	77%	\$22,260	472	76%	\$25,101	462	74%	\$28,183	464	74%	\$29,462	
Commercial and Artistic Production Technologies	246	32	21	66%	\$12,692	19	59%	\$8,885	19	59%	\$13,054	17	53%	\$13,784	15	47%	\$21,151	
Construction Technologies	1,808	384	291	76%	\$19,682	295	77%	\$25,253	291	76%	\$31,454	281	73%	\$34,959	278	72%	\$37,973	
Engineering Technologies	393	52	37	71%	\$16,068	33	63%	\$34,152	35	67%	\$33,462	39	75%	\$30,743	38	73%	\$35,963	
Health Sciences	4,129	1,964	1,761	90%	\$24,731	1,728	88%	\$28,858	1,693	86%	\$30,900	1,665	85%	\$33,231	1,619	82%	\$34,689	
Industrial Technologies	2,513	277	228	82%	\$21,713	219	79%	\$28,341	217	78%	\$31,922	219	79%	\$32,833	214	77%	\$37,309	
Public Service Technologies	3,587	604	432	72%	\$12,012	409	68%	\$15,541	398	66%	\$18,725	391	65%	\$19,428	383	63%	\$22,005	
Transportation Systems Technologies	1,330	204	159	78%	\$17,645	155	76%	\$21,189	152	75%	\$26,632	147	72%	\$30,945	145	71%	\$34,202	

Appendix Table 6. CTE Diploma Program Outcomes by Program Area, 2013-2014 Graduates

North Carolina Community College System Postsecondary Diploma Programs										Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2013-2014																		
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion							
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage					
Agricultural & Natural Resources Technologies	196	25	18	72%	\$12,681	17	68%	\$18,925	21	84%	\$20,735	20	80%	\$18,050					
Biological and Chemical Technologies	266	*	*	*	*	*	*	*	*	*	*	*	*	*					
Business Technologies	2,806	706	525	74%	\$18,494	536	76%	\$23,694	535	76%	\$26,950	532	75%	\$28,111					
Commercial and Artistic Production Technologies	250	35	19	54%	\$10,644	22	63%	\$14,739	22	63%	\$17,634	20	57%	\$18,403					
Construction Technologies	1,647	351	266	76%	\$23,379	254	72%	\$30,631	248	71%	\$34,862	240	68%	\$37,046					
Engineering Technologies	537	46	31	67%	\$17,357	31	67%	\$24,681	29	63%	\$32,129	29	63%	\$31,133					
Health Sciences	3,903	1,796	1,588	88%	\$25,613	1,571	87%	\$29,258	1,513	84%	\$30,924	1,472	82%	\$32,946					
Industrial Technologies	2,399	357	289	81%	\$24,333	287	80%	\$32,206	275	77%	\$35,888	263	74%	\$40,008					
Public Service Technologies	3,436	595	438	74%	\$13,111	435	73%	\$15,892	407	68%	\$18,840	396	67%	\$21,043					
Transportation Systems Technologies	1,193	189	138	73%	\$20,326	143	76%	\$27,278	144	76%	\$31,623	138	73%	\$33,374					

Appendix Table 7. CTE Diploma Program Outcomes by Program Area, 2014-2015 Graduates

North Carolina Community College System Postsecondary Diploma Programs			Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>								
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2014-2015								
			1 Year After Completion			2 Years After Completion			3 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agricultural & Natural Resources Technologies	208	25	20	80%	\$13,632	16	64%	\$12,714	17	68%	\$19,791
Biological and Chemical Technologies	194	*	*	*	*	*	*	*	*	*	*
Business Technologies	2,613	751	597	79%	\$19,884	603	80%	\$23,115	586	78%	\$26,454
Commercial and Artistic Production Technologies	318	53	39	74%	\$11,817	41	77%	\$11,428	36	68%	\$19,126
Construction Technologies	1,445	333	248	74%	\$24,195	243	73%	\$30,378	232	70%	\$32,831
Engineering Technologies	622	59	44	75%	\$20,716	44	75%	\$33,907	43	73%	\$33,866
Health Sciences	4,390	1,874	1,701	91%	\$26,124	1,653	88%	\$29,464	1,607	86%	\$31,443
Industrial Technologies	2,381	387	317	82%	\$24,902	305	79%	\$32,800	297	77%	\$37,738
Public Service Technologies	3,135	635	464	73%	\$13,660	453	71%	\$16,673	431	68%	\$18,650
Transportation Systems Technologies	1,055	224	172	77%	\$23,637	170	76%	\$29,758	168	75%	\$31,409

Appendix Table 8. CTE Diploma Program Outcomes by Program Area, 2015-2016 and 2016-2017 Graduates

North Carolina Community College System Postsecondary Diploma Programs								Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>						
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016								Program Year 2016-2017					
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			Parti cipants	Degree Recipients	1 Year After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage			Employed	%	Med. Wage	
Agricultural & Natural Resources Technologies	170	17	10	59%	\$11,063	*	*	*	184	34	25	74%	\$16,051	
Biological and Chemical Technologies	275	16	10	63%	\$9,705	*	*	*	326	*	*	*	*	
Business Technologies	2,504	649	511	79%	\$20,985	509	78%	\$25,949	2,235	652	505	77%	\$22,043	
Commercial and Artistic Production Technologies	332	40	25	63%	\$20,395	18	45%	\$26,247	271	53	34	64%	\$11,924	
Construction Technologies	1,211	285	231	81%	\$22,860	218	76%	\$32,074	1,145	342	256	75%	\$27,104	
Engineering Technologies	544	57	46	81%	\$23,260	48	84%	\$33,138	421	67	56	84%	\$24,768	
Health Sciences	4,278	1,726	1,545	90%	\$26,635	1,493	87%	\$29,552	4,851	1,704	1,562	92%	\$28,933	
Industrial Technologies	2,163	363	307	85%	\$24,575	301	83%	\$31,946	2,111	415	346	83%	\$26,198	
Public Service Technologies	2,748	601	451	75%	\$14,363	445	74%	\$18,052	2,433	538	433	80%	\$16,145	
Transportation Systems Technologies	928	201	167	83%	\$22,588	164	82%	\$31,410	954	258	203	79%	\$23,272	

Appendix Table 9. CTE Certificate Program Outcomes by Program Area, 2012-2013 Graduates

North Carolina Community College System Postsecondary Certificate Programs										Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2012-2013																		
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			5 Years After Completion				
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage		
Agricultural & Natural Resources Technologies	319	339	201	59%	\$20,151	203	60%	\$26,688	198	58%	\$27,809	195	58%	\$27,536	197	58%	\$29,774		
Biological and Chemical Technologies	40	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
Business Technologies	5,392	4,795	3,482	73%	\$19,751	3,545	74%	\$24,795	3,517	73%	\$28,901	3,502	73%	\$31,198	3,435	72%	\$33,367		
Commercial and Artistic Production Technologies	569	386	237	61%	\$15,991	240	62%	\$21,715	238	62%	\$24,959	230	60%	\$27,493	224	58%	\$32,495		
Construction Technologies	1,349	967	580	60%	\$17,492	611	63%	\$24,470	607	63%	\$31,327	621	64%	\$33,864	609	63%	\$37,861		
Engineering Technologies	568	477	368	77%	\$19,785	365	77%	\$28,999	361	76%	\$34,876	357	75%	\$38,429	351	74%	\$42,721		
Health Sciences	1,997	926	733	79%	\$17,702	742	80%	\$22,012	733	79%	\$24,928	708	76%	\$26,856	703	76%	\$30,237		
Industrial Technologies	1,410	977	730	75%	\$19,037	775	79%	\$26,906	765	78%	\$32,017	750	77%	\$36,129	746	76%	\$38,475		
Public Service Technologies	6,546	3,960	3,014	76%	\$18,683	3,026	76%	\$22,944	2,999	76%	\$26,331	2,934	74%	\$29,134	2,873	73%	\$31,477		
Transportation Systems Technologies	1,311	954	733	77%	\$17,386	732	77%	\$23,854	698	73%	\$28,959	687	72%	\$32,340	684	72%	\$34,790		

Appendix Table 10. CTE Certificate Program Outcomes by Program Area, 2013-2014 Graduates

North Carolina Community College System Postsecondary Certificate Programs										Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2013-2014																		
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion							
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage					
Agricultural & Natural Resources Technologies	305	228	147	64%	\$16,511	144	63%	\$23,666	141	62%	\$24,663	133	58%	\$27,459					
Biological and Chemical Technologies	43	62	47	76%	\$18,493	50	81%	\$28,499	47	76%	\$36,783	48	77%	\$44,162					
Business Technologies	6,145	4,854	3,482	72%	\$19,073	3,597	74%	\$24,322	3,563	73%	\$27,679	3,516	72%	\$30,627					
Commercial and Artistic Production Technologies	613	410	268	65%	\$12,789	281	69%	\$17,404	276	67%	\$20,828	259	63%	\$26,312					
Construction Technologies	1,250	1,166	742	64%	\$24,957	771	66%	\$31,611	767	66%	\$35,771	750	64%	\$38,948					
Engineering Technologies	621	508	385	76%	\$20,882	403	79%	\$29,201	400	79%	\$34,374	384	76%	\$38,410					
Health Sciences	2,146	787	635	81%	\$17,058	629	80%	\$22,238	634	81%	\$24,939	613	78%	\$26,564					
Industrial Technologies	1,875	1,165	900	77%	\$20,307	913	78%	\$27,297	906	78%	\$32,330	880	76%	\$37,813					
Public Service Technologies	7,106	4,063	3,175	78%	\$19,666	3,186	78%	\$24,544	3,120	77%	\$26,677	3,095	76%	\$29,966					
Transportation Systems Technologies	1,242	1,136	845	74%	\$18,896	845	74%	\$26,778	825	73%	\$30,765	802	71%	\$33,927					

Appendix Table 11. CTE Certificate Program Outcomes by Program Area, 2014-2015 Graduates

North Carolina Community College System Postsecondary Certificate Programs			Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>								
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2014-2015								
			1 Year After Completion			2 Years After Completion			3 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agricultural & Natural Resources Technologies	338	212	147	69%	\$15,507	150	71%	\$21,746	144	68%	\$26,231
Biological and Chemical Technologies	53	54	42	78%	\$29,201	36	67%	\$45,508	37	69%	\$47,448
Business Technologies	6,646	5,396	3,967	74%	\$20,712	4,100	76%	\$24,704	4,033	75%	\$28,254
Commercial and Artistic Production Technologies	560	400	254	64%	\$11,391	253	63%	\$16,734	250	63%	\$21,647
Construction Technologies	1,315	1,264	844	67%	\$24,641	871	69%	\$32,038	849	67%	\$35,927
Engineering Technologies	768	528	396	75%	\$23,397	384	73%	\$31,182	379	72%	\$37,701
Health Sciences	2,365	901	741	82%	\$16,061	735	82%	\$20,711	717	80%	\$24,235
Industrial Technologies	1,917	1,289	1,040	81%	\$21,136	1,056	82%	\$28,578	1,013	79%	\$35,189
Public Service Technologies	7,233	4,692	3,784	81%	\$21,751	3,759	80%	\$26,847	3,676	78%	\$29,913
Transportation Systems Technologies	1,368	1,169	878	75%	\$20,924	888	76%	\$26,627	891	76%	\$29,823

Appendix Table 12. CTE Certificate Program Outcomes by Program Area, 2015-2016 and 2016-2017 Graduates

North Carolina Community College System Postsecondary Certificate Programs									Common Follow-up System: Evaluative Measures <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>					
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016								Program Year 2016-2017					
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			Parti cipants	Degree Recipients	1 Year After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage			Employed	%	Med. Wage	
Agricultural & Natural Resources Technologies	349	244	169	69%	\$13,239	162	66%	\$16,997	453	246	184	75%	\$16,440	
Biological and Chemical Technologies	70	61	43	70%	\$25,081	43	70%	\$35,449	86	78	64	82%	\$32,708	
Business Technologies	6,988	5,380	3,640	68%	\$19,987	3,669	68%	\$24,970	8,041	6,207	4,551	73%	\$22,265	
Commercial and Artistic Production Technologies	673	465	325	70%	\$12,429	334	72%	\$17,530	650	539	371	69%	\$13,387	
Construction Technologies	1,282	1,161	779	67%	\$24,277	798	69%	\$32,157	1,508	1,252	828	66%	\$23,732	
Engineering Technologies	731	459	362	79%	\$23,065	367	80%	\$33,739	910	640	527	82%	\$23,004	
Health Sciences	2,702	1,037	816	79%	\$16,032	813	78%	\$19,751	2,991	1,063	885	83%	\$17,193	
Industrial Technologies	2,225	1,682	1,318	78%	\$22,077	1,307	78%	\$31,324	2,652	1,430	1,139	80%	\$22,113	
Public Service Technologies	7,373	4,312	3,298	76%	\$20,402	3,255	75%	\$24,999	7,928	4,740	3,791	80%	\$21,390	
Transportation Systems Technologies	1,429	1,067	840	79%	\$18,699	818	77%	\$27,070	1,446	1,118	877	78%	\$21,329	

University of North Carolina System Appendix

Appendix Table 13. UNC Bachelor's Degree Program Outcomes by Program Area, 2012-2013 Graduates

University Of North Carolina System Bachelor's Degree Programs				Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>													
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2012-2013																
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			5 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	1,236	419	335	80%	\$18,941	329	79%	\$27,697	311	74%	\$32,550	300	72%	\$37,175	293	70%	\$41,892
Natural Resources and Conservation	1,525	435	298	69%	\$11,224	239	55%	\$19,366	227	52%	\$26,480	215	49%	\$34,271	210	48%	\$36,185
Architecture and Related Services	369	149	104	70%	\$12,103	98	66%	\$29,831	93	62%	\$40,221	90	60%	\$46,420	84	56%	\$51,816
Area, Ethnic, Cultural, Gender, and Group Studies	812	312	177	57%	\$12,002	151	48%	\$21,106	144	46%	\$21,629	130	42%	\$27,246	123	39%	\$33,367
Communication, Journalism, and Related Programs	5,920	2,251	1,598	71%	\$16,568	1,405	62%	\$25,315	1,362	61%	\$31,439	1,303	58%	\$34,828	1,238	55%	\$38,401
Computer and Information Sciences and Support Services	3,139	815	622	76%	\$35,757	597	73%	\$48,087	577	71%	\$57,159	553	68%	\$61,569	548	67%	\$68,268
Education	9,736	2,892	2,573	89%	\$31,230	2,506	87%	\$34,992	2,451	85%	\$38,183	2,365	82%	\$39,368	2,293	79%	\$40,533
Engineering	5,974	1,688	1,145	68%	\$37,667	1,054	62%	\$51,380	1,006	60%	\$58,647	974	58%	\$63,953	967	57%	\$68,845
Engineering Technologies and Engineering-Related Fields	2,435	697	561	80%	\$30,511	541	78%	\$41,289	526	75%	\$47,500	518	74%	\$54,126	510	73%	\$56,929
Foreign Languages, Literatures, and Linguistics	1,074	388	280	72%	\$15,121	249	64%	\$23,854	235	61%	\$28,331	219	56%	\$33,297	205	53%	\$38,186
Family and Consumer Sciences/Human Sciences	1,574	485	381	79%	\$18,151	361	74%	\$22,948	335	69%	\$26,626	335	69%	\$29,460	318	66%	\$34,403
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	2,671	1,051	782	74%	\$13,467	709	67%	\$21,558	692	66%	\$26,393	677	64%	\$30,756	651	62%	\$33,513
Liberal Arts and Sciences, General Studies, and Humanities	1,286	423	325	77%	\$16,219	295	70%	\$21,938	273	65%	\$26,292	257	61%	\$29,501	255	60%	\$34,575
Library Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	7,249	2,195	1,588	72%	\$13,963	1,363	62%	\$19,678	1,277	58%	\$25,394	1,250	57%	\$32,940	1,237	56%	\$39,808
Mathematics and Statistics	1,276	439	288	66%	\$20,322	272	62%	\$34,915	265	60%	\$39,844	260	59%	\$42,590	252	57%	\$46,833
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	1,283	423	315	74%	\$16,046	285	67%	\$21,875	268	63%	\$28,725	248	59%	\$35,678	243	57%	\$39,770
Parks, Recreation, Leisure, and Fitness Studies	4,928	1,477	1,129	76%	\$13,746	1,020	69%	\$19,403	969	66%	\$25,195	975	66%	\$30,996	949	64%	\$36,765
Philosophy and Religious Studies	573	219	149	68%	\$11,316	119	54%	\$17,158	119	54%	\$22,174	119	54%	\$29,266	118	54%	\$30,254
Physical Sciences	2,967	770	494	64%	\$13,355	428	56%	\$23,567	413	54%	\$30,322	397	52%	\$38,056	382	50%	\$43,046
Science Technologies/Technicians	22	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Psychology	6,864	2,441	1,793	73%	\$14,146	1,651	68%	\$19,723	1,619	66%	\$24,578	1,564	64%	\$31,209	1,555	64%	\$35,865
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	3,712	1,258	995	79%	\$16,700	949	75%	\$25,868	895	71%	\$32,998	892	71%	\$36,231	882	70%	\$37,615
Public Administration and Social Service Professions	2,210	763	577	76%	\$16,324	571	75%	\$25,698	559	73%	\$31,304	562	74%	\$36,066	549	72%	\$38,887
Social Sciences	7,678	2,745	1,970	72%	\$16,221	1,813	66%	\$22,751	1,721	63%	\$28,411	1,691	62%	\$32,939	1,658	60%	\$37,474
Transportation and Materials Moving	52	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Visual and Performing Arts	5,101	1,646	1,135	69%	\$11,350	1,007	61%	\$17,366	950	58%	\$21,903	886	54%	\$27,721	828	50%	\$32,556
Health Professions and Related Programs	9,800	3,442	2,909	85%	\$37,023	2,774	81%	\$45,959	2,723	79%	\$48,062	2,655	77%	\$50,585	2,569	75%	\$53,122
Business, Management, Marketing, and Related Support Services	15,659	5,008	3,779	75%	\$23,740	3,637	73%	\$34,499	3,519	70%	\$41,202	3,419	68%	\$45,072	3,312	66%	\$49,429
History	2,041	777	555	71%	\$13,930	520	67%	\$21,556	519	67%	\$27,422	512	66%	\$33,011	503	65%	\$37,290

Appendix Table 14. UNC Bachelor's Degree Program Outcomes by Program Area, 2013-2014 Graduates

University Of North Carolina System Bachelor's Degree Programs			Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce											
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2013-2014											
			1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	1,271	437	343	78%	\$20,750	324	74%	\$29,537	310	71%	\$34,463	293	67%	\$37,408
Natural Resources and Conservation	1,581	537	376	70%	\$12,232	333	62%	\$23,538	313	58%	\$29,600	288	54%	\$34,894
Architecture and Related Services	362	152	104	68%	\$10,079	96	63%	\$29,757	89	59%	\$42,287	84	55%	\$47,872
Area, Ethnic, Cultural, Gender, and Group Studies	762	279	168	60%	\$11,534	137	49%	\$22,622	124	44%	\$23,431	114	41%	\$32,815
Communication, Journalism, and Related Programs	5,929	2,237	1,599	71%	\$17,582	1,448	65%	\$25,666	1,389	62%	\$31,580	1,322	59%	\$35,735
Computer and Information Sciences and Support Services	3,468	879	685	78%	\$39,750	649	74%	\$55,560	638	73%	\$61,410	614	70%	\$65,687
Education	8,793	2,646	2,364	89%	\$33,360	2,287	86%	\$37,920	2,244	85%	\$39,085	2,200	83%	\$40,611
Engineering	6,262	1,748	1,258	72%	\$39,970	1,131	65%	\$52,899	1,098	63%	\$59,261	1,058	61%	\$64,734
Engineering Technologies and Engineering-Related Fields	2,333	636	498	78%	\$32,468	472	74%	\$42,890	464	73%	\$50,325	457	72%	\$55,504
Foreign Languages, Literatures, and Linguistics	1,062	376	280	74%	\$13,349	241	64%	\$19,496	224	60%	\$28,687	211	56%	\$30,156
Family and Consumer Sciences/Human Sciences	1,595	506	393	78%	\$16,383	380	75%	\$24,112	372	74%	\$27,015	363	72%	\$29,772
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	2,294	874	648	74%	\$13,285	588	67%	\$20,825	551	63%	\$26,301	549	63%	\$30,955
Liberal Arts and Sciences, General Studies, and Humanities	1,376	495	374	76%	\$16,624	347	70%	\$23,068	321	65%	\$28,971	307	62%	\$30,663
Library Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	7,672	2,225	1,592	72%	\$14,289	1,448	65%	\$21,091	1,337	60%	\$26,966	1,253	56%	\$33,857
Mathematics and Statistics	1,336	402	295	73%	\$23,248	274	68%	\$38,534	267	66%	\$41,259	258	64%	\$44,750
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	1,331	415	292	70%	\$12,122	234	56%	\$20,676	227	55%	\$28,929	224	54%	\$33,357
Parks, Recreation, Leisure, and Fitness Studies	5,196	1,658	1,255	76%	\$13,806	1,121	68%	\$21,591	1,066	64%	\$27,053	1,045	63%	\$32,720
Philosophy and Religious Studies	558	189	135	71%	\$13,375	117	62%	\$19,979	116	61%	\$20,170	110	58%	\$21,368
Physical Sciences	3,096	828	540	65%	\$12,610	441	53%	\$26,704	438	53%	\$33,215	431	52%	\$38,307
Science Technologies/Technicians	29	*	*	*	*	*	*	*	*	*	*	*	*	*
Psychology	6,832	2,466	1,849	75%	\$14,432	1,716	70%	\$20,640	1,651	67%	\$26,062	1,623	66%	\$30,094
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	3,753	1,302	1,056	81%	\$17,726	1,011	78%	\$29,054	983	75%	\$33,799	965	74%	\$37,380
Public Administration and Social Service Professions	2,454	768	576	75%	\$17,996	573	75%	\$25,967	580	76%	\$32,248	569	74%	\$36,985
Social Sciences	7,511	2,809	2,034	72%	\$15,243	1,862	66%	\$24,943	1,786	64%	\$31,018	1,708	61%	\$35,127
Transportation and Materials Moving	56	29	17	59%	\$19,906	14	48%	\$26,997	14	48%	\$19,562	11	38%	\$22,737
Visual and Performing Arts	5,003	1,627	1,129	69%	\$11,338	981	60%	\$19,503	916	56%	\$24,858	890	55%	\$27,599
Health Professions and Related Programs	10,290	3,665	3,107	85%	\$39,407	2,935	80%	\$48,887	2,887	79%	\$49,932	2,792	76%	\$52,104
Business, Management, Marketing, and Related Support Services	15,955	5,147	3,916	76%	\$25,469	3,720	72%	\$36,663	3,602	70%	\$43,233	3,493	68%	\$47,295
History	1,870	695	503	72%	\$15,214	466	67%	\$22,702	454	65%	\$27,444	433	62%	\$32,886

Appendix Table 15. UNC Bachelor's Degree Program Outcomes by Program Area, 2014-2015 Graduates

University Of North Carolina System Bachelor's Degree Programs			Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>								
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2014-2015										
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	1,289	439	359	82%	\$23,022	335	76%	\$32,187	320	73%	\$34,982
Natural Resources and Conservation	1,561	494	344	70%	\$15,288	298	60%	\$23,751	260	53%	\$29,942
Architecture and Related Services	317	150	101	67%	\$18,979	93	62%	\$40,586	90	60%	\$46,008
Area, Ethnic, Cultural, Gender, and Group Studies	736	276	174	63%	\$13,982	152	55%	\$19,121	152	55%	\$23,433
Communication, Journalism, and Related Programs	6,096	2,280	1,695	74%	\$18,130	1,504	66%	\$28,587	1,409	62%	\$33,342
Computer and Information Sciences and Support Services	3,779	926	693	75%	\$43,769	660	71%	\$57,540	641	69%	\$65,140
Education	7,925	2,385	2,119	89%	\$36,131	2,075	87%	\$38,442	2,021	85%	\$39,671
Engineering	6,843	1,806	1,203	67%	\$42,414	1,081	60%	\$53,676	1,041	58%	\$58,747
Engineering Technologies and Engineering-Related Fields	2,289	581	451	78%	\$35,296	427	73%	\$47,138	428	74%	\$52,071
Foreign Languages, Literatures, and Linguistics	1,049	401	303	76%	\$13,544	266	66%	\$22,395	254	63%	\$27,532
Family and Consumer Sciences/Human Sciences	1,631	543	447	82%	\$18,640	422	78%	\$24,278	402	74%	\$27,504
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	2,153	777	582	75%	\$15,255	531	68%	\$22,172	506	65%	\$27,043
Liberal Arts and Sciences, General Studies, and Humanities	1,626	478	371	78%	\$18,386	349	73%	\$24,977	335	70%	\$28,754
Library Science	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	8,022	2,357	1,717	73%	\$15,620	1,545	66%	\$21,789	1,414	60%	\$26,944
Mathematics and Statistics	1,440	463	324	70%	\$21,991	309	67%	\$37,001	302	65%	\$41,688
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	1,387	427	298	70%	\$15,765	264	62%	\$23,529	246	58%	\$29,775
Parks, Recreation, Leisure, and Fitness Studies	5,559	1,658	1,287	78%	\$14,462	1,153	70%	\$21,234	1,067	64%	\$27,343
Philosophy and Religious Studies	554	208	139	67%	\$11,637	117	56%	\$19,471	122	59%	\$22,282
Physical Sciences	3,202	837	568	68%	\$14,664	489	58%	\$27,070	456	54%	\$33,124
Science Technologies/Technicians	36	*	*	*	*	*	*	*	*	*	*
Psychology	6,638	2,427	1,867	77%	\$14,807	1,715	71%	\$21,057	1,637	67%	\$25,243
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	3,855	1,283	1,075	84%	\$20,478	1,019	79%	\$31,869	995	78%	\$35,513
Public Administration and Social Service Professions	2,555	895	692	77%	\$17,027	703	79%	\$28,435	689	77%	\$36,122
Social Sciences	7,129	2,759	2,002	73%	\$17,266	1,817	66%	\$25,602	1,744	63%	\$31,139
Transportation and Materials Moving	40	18	*	*	*	10	56%	\$16,446	10	56%	\$20,951
Visual and Performing Arts	4,959	1,638	1,077	66%	\$13,021	952	58%	\$20,335	902	55%	\$24,270
Health Professions and Related Programs	10,949	3,860	3,269	85%	\$42,799	3,112	81%	\$49,598	3,006	78%	\$51,324
Business, Management, Marketing, and Related Support Services	16,503	5,219	4,007	77%	\$27,809	3,840	74%	\$39,147	3,700	71%	\$45,002
History	1,700	640	477	75%	\$14,479	439	69%	\$23,304	428	67%	\$30,413

Appendix Table 16. UNC Bachelor's Degree Program Outcomes by Program Area, 2015-2016 and 2016-2017 Graduates

University Of North Carolina System Bachelor's Degree Programs			Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>											
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016									Program Year 2016-2017				
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			Parti cipants	Degree Recipients	1 Year After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage			Employed	%	Med. Wage	
Agriculture, Agriculture Operations, and Related Sciences	2,212	396	310	78%	\$23,447	292	74%	\$31,478	2,249	471	373	79%	\$22,265	
Natural Resources and Conservation	2,371	541	387	72%	\$15,302	342	63%	\$24,301	2,520	544	394	72%	\$15,308	
Architecture and Related Services	475	128	97	76%	\$22,154	88	69%	\$41,748	454	116	89	77%	\$17,585	
Area, Ethnic, Cultural, Gender, and Group Studies	946	290	176	61%	\$12,783	161	56%	\$15,915	919	243	153	63%	\$14,889	
Communication, Journalism, and Related Programs	9,443	2,306	1,664	72%	\$18,506	1,462	63%	\$28,597	9,944	2,427	1,769	73%	\$18,805	
Computer and Information Sciences and Support Services	6,505	1,074	823	77%	\$41,955	777	72%	\$55,743	7,007	1,127	839	74%	\$42,078	
Education	11,454	2,040	1,793	88%	\$35,315	1,725	85%	\$38,688	10,793	2,036	1,802	89%	\$35,767	
Engineering	11,258	2,040	1,381	68%	\$43,185	1,262	62%	\$55,372	11,198	2,088	1,426	68%	\$44,797	
Engineering Technologies and Engineering-Related Fields	3,443	620	515	83%	\$38,944	491	79%	\$49,391	3,535	613	495	81%	\$41,823	
Foreign Languages, Literatures, and Linguistics	1,217	420	310	74%	\$17,281	279	66%	\$22,840	1,163	410	314	77%	\$14,133	
Family and Consumer Sciences/Human Sciences	2,673	548	450	82%	\$19,942	422	77%	\$25,233	2,766	555	474	85%	\$20,075	
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	2,981	750	564	75%	\$15,732	515	69%	\$22,448	2,851	739	570	77%	\$15,601	
Liberal Arts and Sciences, General Studies, and Humanities	15,945	570	436	76%	\$19,803	416	73%	\$26,490	19,682	657	517	79%	\$21,540	
Library Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	14,181	2,466	1,829	74%	\$17,007	1,626	66%	\$22,497	14,845	2,604	1,988	76%	\$17,014	
Mathematics and Statistics	2,064	483	342	71%	\$30,126	328	68%	\$39,506	2,164	467	321	69%	\$24,228	
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	1,923	469	342	73%	\$18,669	303	65%	\$27,343	1,936	484	326	67%	\$18,159	
Parks, Recreation, Leisure, and Fitness Studies	9,470	1,933	1,501	78%	\$15,399	1,358	70%	\$22,758	9,640	2,024	1,571	78%	\$15,574	
Philosophy and Religious Studies	667	198	132	67%	\$13,700	118	60%	\$20,850	624	164	120	73%	\$14,250	
Physical Sciences	4,925	826	554	67%	\$17,433	473	57%	\$27,526	4,724	910	624	69%	\$16,043	
Science Technologies/Technicians	50	11	*	*	*	*	*	*	43	12	*	*	*	*
Psychology	9,879	2,395	1,879	78%	\$16,102	1,744	73%	\$21,275	10,119	2,385	1,814	76%	\$16,349	
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	5,692	1,277	1,062	83%	\$20,672	993	78%	\$30,948	5,635	1,268	1,044	82%	\$22,989	
Public Administration and Social Service Professions	3,818	898	701	78%	\$17,385	693	77%	\$28,840	3,883	856	659	77%	\$17,582	
Social Sciences	9,574	2,527	1,874	74%	\$17,613	1,679	66%	\$26,538	10,059	2,528	1,850	73%	\$18,096	
Transportation and Materials Moving	55	14	*	*	*	*	*	*	49	*	*	*	*	*
Visual and Performing Arts	8,390	1,588	1,077	68%	\$13,662	972	61%	\$20,846	8,437	1,633	1,095	67%	\$12,912	
Health Professions and Related Programs	17,624	3,993	3,380	85%	\$44,431	3,216	81%	\$50,499	20,303	4,427	3,803	86%	\$45,709	
Business, Management, Marketing, and Related Support Services	27,126	5,416	4,163	77%	\$29,068	3,999	74%	\$38,984	28,553	5,919	4,565	77%	\$28,762	
History	2,056	583	447	77%	\$16,125	410	70%	\$23,254	1,999	531	408	77%	\$16,550	

Appendix Table 17. UNC Master's Degree Program Outcomes by Program Area, 2012-2013 Graduates

University Of North Carolina System Master's Degree Programs							Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>											
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2012-2013																	
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			5 Years After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	
Agriculture, Agriculture Operations, and Related Sciences	261	98	57	58%	\$18,650	53	54%	\$32,207	49	50%	\$34,819	42	43%	\$41,870	35	36%	\$52,454	
Natural Resources and Conservation	292	84	46	55%	\$21,818	42	50%	\$35,509	37	44%	\$43,652	35	42%	\$52,591	29	35%	\$57,441	
Architecture and Related Services	263	92	59	64%	\$31,753	51	55%	\$44,734	47	51%	\$50,820	48	52%	\$53,004	48	52%	\$58,868	
Area, Ethnic, Cultural, Gender, and Group Studies	86	22	14	64%	\$17,554	11	50%	\$24,600	*	*	*	*	*	*	*	*	*	
Communication, Journalism, and Related Programs	205	75	51	68%	\$34,067	46	61%	\$38,638	44	59%	\$42,603	44	59%	\$47,414	44	59%	\$49,020	
Computer and Information Sciences and Support Services	716	317	181	57%	\$60,402	160	50%	\$73,831	167	53%	\$77,735	161	51%	\$85,402	156	49%	\$94,967	
Education	7,118	2,563	2,314	90%	\$39,495	2,211	86%	\$42,993	2,136	83%	\$46,500	2,058	80%	\$48,793	2,008	78%	\$51,045	
Engineering	1,526	554	287	52%	\$48,404	268	48%	\$58,100	263	47%	\$64,781	240	43%	\$71,939	228	41%	\$76,910	
Engineering Technologies and Engineering-Related Fields	418	100	75	75%	\$41,134	74	74%	\$48,706	71	71%	\$60,495	70	70%	\$66,886	70	70%	\$69,925	
Foreign Languages, Literatures, and Linguistics	149	52	30	58%	\$30,628	32	62%	\$33,379	32	62%	\$33,715	36	69%	\$29,524	31	60%	\$37,658	
Family and Consumer Sciences/Human Sciences	241	69	52	75%	\$31,652	48	70%	\$34,074	47	68%	\$36,500	48	70%	\$40,871	47	68%	\$44,023	
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
English Language and Literature/Letters	675	225	171	76%	\$29,921	152	68%	\$36,836	139	62%	\$41,246	135	60%	\$45,354	127	56%	\$48,942	
Liberal Arts and Sciences, General Studies, and Humanities	333	89	55	62%	\$34,767	52	58%	\$37,327	50	56%	\$43,776	50	56%	\$40,239	47	53%	\$47,842	
Library Science	1,076	376	285	76%	\$36,228	273	73%	\$41,255	264	70%	\$44,187	253	67%	\$46,432	241	64%	\$48,959	
Biological and Biomedical Sciences	792	261	169	65%	\$26,421	150	57%	\$37,688	150	57%	\$40,504	141	54%	\$46,905	138	53%	\$52,053	
Mathematics and Statistics	332	160	105	66%	\$30,625	92	58%	\$41,556	86	54%	\$46,138	84	53%	\$56,929	77	48%	\$62,069	
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Multi/Interdisciplinary Studies	521	134	90	67%	\$33,029	81	60%	\$40,735	73	54%	\$41,637	67	50%	\$48,531	67	50%	\$52,516	
Parks, Recreation, Leisure, and Fitness Studies	392	129	76	59%	\$25,857	66	51%	\$32,506	58	45%	\$40,806	59	46%	\$41,880	56	43%	\$46,074	
Philosophy and Religious Studies	48	20	11	55%	\$7,000	10	50%	\$26,168	11	55%	\$14,649	11	55%	\$14,165	*	*	*	
Physical Sciences	591	197	92	47%	\$33,290	88	45%	\$43,145	87	44%	\$46,337	88	45%	\$49,770	72	37%	\$58,566	
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Psychology	430	144	66	46%	\$20,857	57	40%	\$35,879	64	44%	\$40,818	63	44%	\$47,254	59	41%	\$49,165	
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	161	39	29	74%	\$20,307	27	69%	\$39,834	27	69%	\$48,517	27	69%	\$52,921	30	77%	\$53,256	
Public Administration and Social Service Professions	2,175	841	676	80%	\$35,244	650	77%	\$40,080	617	73%	\$44,186	580	69%	\$47,755	562	67%	\$49,511	
Social Sciences	589	245	130	53%	\$22,993	112	46%	\$34,464	128	52%	\$28,010	118	48%	\$39,599	114	47%	\$43,716	
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Visual and Performing Arts	550	216	100	46%	\$12,075	83	38%	\$19,050	83	38%	\$24,249	81	38%	\$24,864	74	34%	\$25,677	
Health Professions and Related Programs	4,534	1,524	1,129	74%	\$50,161	1,071	70%	\$58,258	1,021	67%	\$62,015	994	65%	\$66,509	973	64%	\$70,821	
Business, Management, Marketing, and Related Support Services	4,849	1,684	1,219	72%	\$50,553	1,172	70%	\$56,895	1,124	67%	\$65,713	1,105	66%	\$72,111	1,084	64%	\$78,315	
History	382	102	58	57%	\$21,369	48	47%	\$33,191	54	53%	\$34,515	54	53%	\$38,031	54	53%	\$39,288	

Appendix Table 18. UNC Master's Degree Program Outcomes by Program Area, 2013-2014 Graduates

University Of North Carolina System Master's Degree Programs			Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>											
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2013-2014													
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	276	80	49	61%	\$32,013	49	61%	\$39,259	43	54%	\$43,822	44	55%	\$44,891
Natural Resources and Conservation	300	96	55	57%	\$37,024	51	53%	\$44,093	49	51%	\$45,751	46	48%	\$50,440
Architecture and Related Services	265	102	68	67%	\$33,946	60	59%	\$45,407	58	57%	\$48,622	60	59%	\$55,003
Area, Ethnic, Cultural, Gender, and Group Studies	80	28	12	43%	\$12,067	10	36%	\$23,937	10	36%	\$11,011	*	*	*
Communication, Journalism, and Related Programs	188	72	52	72%	\$35,344	49	68%	\$49,105	47	65%	\$56,180	46	64%	\$55,968
Computer and Information Sciences and Support Services	802	311	215	69%	\$64,131	204	66%	\$74,078	192	62%	\$81,741	194	62%	\$81,491
Education	6,303	2,639	2,359	89%	\$41,607	2,272	86%	\$45,253	2,197	83%	\$47,523	2,130	81%	\$49,842
Engineering	1,412	448	216	48%	\$48,323	205	46%	\$58,898	207	46%	\$64,839	197	44%	\$70,650
Engineering Technologies and Engineering-Related Fields	348	103	68	66%	\$49,440	64	62%	\$60,623	59	57%	\$65,971	58	56%	\$71,313
Foreign Languages, Literatures, and Linguistics	154	62	44	71%	\$32,149	49	79%	\$38,489	46	74%	\$42,443	46	74%	\$47,795
Family and Consumer Sciences/Human Sciences	238	56	41	73%	\$34,209	35	63%	\$39,105	32	57%	\$43,434	30	54%	\$45,725
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	643	204	140	69%	\$24,346	130	64%	\$33,897	119	58%	\$36,893	114	56%	\$43,762
Liberal Arts and Sciences, General Studies, and Humanities	324	78	43	55%	\$36,517	39	50%	\$42,667	39	50%	\$42,598	39	50%	\$46,346
Library Science	947	305	217	71%	\$37,617	196	64%	\$42,827	195	64%	\$44,831	191	63%	\$46,987
Biological and Biomedical Sciences	774	260	171	66%	\$28,391	161	62%	\$36,834	140	54%	\$43,909	134	52%	\$46,749
Mathematics and Statistics	308	140	100	71%	\$32,906	84	60%	\$41,340	77	55%	\$47,419	68	49%	\$54,696
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	503	119	64	54%	\$31,572	65	55%	\$37,792	63	53%	\$43,523	59	50%	\$45,134
Parks, Recreation, Leisure, and Fitness Studies	406	144	86	60%	\$31,334	78	54%	\$38,152	71	49%	\$44,588	69	48%	\$46,884
Philosophy and Religious Studies	40	18	11	61%	\$10,083	12	67%	\$20,572	10	56%	\$14,382	11	61%	\$17,357
Physical Sciences	575	194	88	45%	\$33,859	90	46%	\$35,619	84	43%	\$41,119	82	42%	\$47,973
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Psychology	410	146	83	57%	\$14,479	77	53%	\$26,439	70	48%	\$37,717	65	45%	\$48,315
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	175	42	34	81%	\$37,295	32	76%	\$43,494	33	79%	\$43,671	30	71%	\$46,483
Public Administration and Social Service Professions	2,174	885	729	82%	\$36,037	686	78%	\$42,001	679	77%	\$46,175	660	75%	\$47,960
Social Sciences	493	211	124	59%	\$22,418	127	60%	\$30,310	116	55%	\$34,562	108	51%	\$38,852
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Visual and Performing Arts	474	187	90	48%	\$8,349	67	36%	\$14,252	60	32%	\$28,302	59	32%	\$29,710
Health Professions and Related Programs	4,454	1,500	1,113	74%	\$54,175	1,050	70%	\$63,664	1,011	67%	\$68,011	1,000	67%	\$70,067
Business, Management, Marketing, and Related Support Services	5,130	1,748	1,217	70%	\$52,690	1,183	68%	\$57,662	1,119	64%	\$65,870	1,080	62%	\$71,912
History	349	118	72	61%	\$17,510	70	59%	\$30,033	72	61%	\$26,815	66	56%	\$35,161

Appendix Table 19. UNC Master's Degree Program Outcomes by Program Area, 2014-2015 Graduates

University Of North Carolina System Master's Degree Programs		Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2014-2015								
			1 Year After Completion			2 Years After Completion			3 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	274	74	53	72%	\$22,472	46	62%	\$40,211	47	64%	\$41,361
Natural Resources and Conservation	282	89	53	60%	\$19,869	49	55%	\$34,505	44	49%	\$37,339
Architecture and Related Services	256	107	72	67%	\$34,645	61	57%	\$45,682	56	52%	\$53,898
Area, Ethnic, Cultural, Gender, and Group Studies	64	20	13	65%	\$11,097	10	50%	\$22,320	11	55%	\$27,506
Communication, Journalism, and Related Programs	188	70	51	73%	\$41,619	47	67%	\$47,474	44	63%	\$55,495
Computer and Information Sciences and Support Services	818	337	236	70%	\$72,338	227	67%	\$77,292	214	64%	\$83,113
Education	5,281	1,822	1,601	88%	\$42,797	1,514	83%	\$45,763	1,464	80%	\$47,570
Engineering	1,377	435	227	52%	\$50,738	202	46%	\$63,459	194	45%	\$67,419
Engineering Technologies and Engineering-Related Fields	315	89	57	64%	\$56,032	56	63%	\$68,126	56	63%	\$70,962
Foreign Languages, Literatures, and Linguistics	114	57	40	70%	\$24,471	37	65%	\$33,651	35	61%	\$36,448
Family and Consumer Sciences/Human Sciences	250	80	53	66%	\$32,742	52	65%	\$38,910	48	60%	\$44,792
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	588	224	150	67%	\$22,476	138	62%	\$33,288	119	53%	\$38,386
Liberal Arts and Sciences, General Studies, and Humanities	299	86	52	60%	\$33,840	51	59%	\$35,702	48	56%	\$38,475
Library Science	939	295	229	78%	\$39,135	212	72%	\$43,195	212	72%	\$46,058
Biological and Biomedical Sciences	851	262	177	68%	\$28,945	161	61%	\$37,457	145	55%	\$46,336
Mathematics and Statistics	285	138	94	68%	\$22,916	83	60%	\$36,347	69	50%	\$57,600
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	508	149	83	56%	\$23,330	78	52%	\$40,533	79	53%	\$42,240
Parks, Recreation, Leisure, and Fitness Studies	414	133	94	71%	\$29,095	76	57%	\$41,072	75	56%	\$42,798
Philosophy and Religious Studies	38	14	13	93%	\$19,151	12	86%	\$20,783	*	*	*
Physical Sciences	571	202	104	51%	\$26,511	89	44%	\$41,807	85	42%	\$44,702
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*
Psychology	407	151	85	56%	\$17,545	70	46%	\$33,258	65	43%	\$36,739
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	166	49	36	73%	\$34,642	36	73%	\$40,174	34	69%	\$45,750
Public Administration and Social Service Professions	2,273	860	702	82%	\$37,247	671	78%	\$44,001	645	75%	\$46,091
Social Sciences	492	190	115	61%	\$23,562	99	52%	\$35,549	94	49%	\$34,493
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*
Visual and Performing Arts	460	158	93	59%	\$15,038	74	47%	\$22,476	73	46%	\$25,335
Health Professions and Related Programs	4,274	1,489	1,087	73%	\$52,709	1,019	68%	\$62,745	981	66%	\$66,806
Business, Management, Marketing, and Related Support Services	5,312	1,878	1,244	66%	\$52,395	1,181	63%	\$58,632	1,152	61%	\$66,078
History	322	97	59	61%	\$16,621	56	58%	\$19,289	51	53%	\$27,798

Appendix Table 20. UNC Master's Degree Program Outcomes by Program Area, 2015-2016 and 2016-2017 Graduates

University Of North Carolina System Master's Degree Programs										Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce				
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016									Program Year 2016-2017				
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion				Parti cipants	Degree Recipients	1 Year After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage				Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	264	88	49	56%	\$36,121	44	50%	\$43,770		259	87	50	57%	\$36,613
Natural Resources and Conservation	245	90	59	66%	\$26,090	48	53%	\$42,074		222	89	54	61%	\$28,803
Architecture and Related Services	258	85	64	75%	\$40,514	55	65%	\$49,857		275	111	71	64%	\$44,625
Area, Ethnic, Cultural, Gender, and Group Studies	54	23	14	61%	\$16,034	11	48%	\$16,500		69	21	17	81%	\$17,609
Communication, Journalism, and Related Programs	205	77	53	69%	\$32,185	42	55%	\$45,113		176	68	57	84%	\$35,062
Computer and Information Sciences and Support Services	811	354	228	64%	\$66,688	211	60%	\$75,302		828	354	241	68%	\$63,977
Education	5,518	1,810	1,575	87%	\$43,408	1,518	84%	\$45,772		5,675	1,975	1,699	86%	\$42,835
Engineering	1,190	402	194	48%	\$55,553	184	46%	\$65,082		1,071	395	220	56%	\$53,536
Engineering Technologies and Engineering-Related Fields	330	110	81	74%	\$60,092	77	70%	\$61,928		300	79	54	68%	\$55,927
Foreign Languages, Literatures, and Linguistics	80	27	19	70%	\$14,566	18	67%	\$20,276		105	56	38	68%	\$15,944
Family and Consumer Sciences/Human Sciences	248	82	59	72%	\$35,759	57	70%	\$36,153		235	70	49	70%	\$32,773
Legal Professions and Studies	*	*	*	*	*	*	*	*		*	*	*	*	*
English Language and Literature/Letters	530	195	141	72%	\$29,593	118	61%	\$39,944		502	162	101	62%	\$27,385
Liberal Arts and Sciences, General Studies, and Humanities	268	86	55	64%	\$38,350	56	65%	\$43,742		239	59	41	69%	\$31,798
Library Science	922	256	196	77%	\$39,511	186	73%	\$43,184		935	267	221	83%	\$43,296
Biological and Biomedical Sciences	812	300	204	68%	\$24,742	179	60%	\$35,769		843	302	217	72%	\$27,000
Mathematics and Statistics	258	121	83	69%	\$34,008	70	58%	\$56,660		320	145	112	77%	\$36,124
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*		*	*	*	*	*
Multi/Interdisciplinary Studies	517	157	93	59%	\$32,717	83	53%	\$42,102		548	183	119	65%	\$31,430
Parks, Recreation, Leisure, and Fitness Studies	406	169	111	66%	\$28,154	101	60%	\$33,998		427	149	96	64%	\$30,899
Philosophy and Religious Studies	30	11	*	*	*	*	*	*		33	24	21	88%	\$7,594
Physical Sciences	491	203	116	57%	\$26,477	100	49%	\$48,244		467	185	111	60%	\$26,246
Science Technologies/Technicians	*	*	*	*	*	*	*	*		*	*	*	*	*
Psychology	376	172	99	58%	\$34,985	90	52%	\$44,579		397	170	104	61%	\$28,874
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	191	34	27	79%	\$29,993	27	79%	\$40,131		228	67	54	81%	\$29,071
Public Administration and Social Service Professions	2,596	967	819	85%	\$37,706	770	80%	\$42,893		2,523	979	797	81%	\$38,562
Social Sciences	423	177	125	71%	\$24,674	112	63%	\$30,046		457	200	121	61%	\$16,032
Transportation and Materials Moving	*	*	*	*	*	*	*	*		*	*	*	*	*
Visual and Performing Arts	448	181	106	59%	\$15,547	84	46%	\$22,053		448	157	87	55%	\$10,934
Health Professions and Related Programs	3,941	1,501	1,125	75%	\$57,451	1,066	71%	\$64,625		3,980	1,377	1,062	77%	\$53,327
Business, Management, Marketing, and Related Support Services	5,547	1,823	1,206	66%	\$54,115	1,158	64%	\$58,770		6,232	1,971	1,249	63%	\$53,071
History	294	89	60	67%	\$16,713	52	58%	\$27,504		293	91	63	69%	\$25,188

Appendix Table 21. UNC Doctoral (Research) Degree Program Outcomes by Program Area, 2012-2013 Graduates

University Of North Carolina System			Common Follow-up System: Evaluative Measures, 2019 Report														
Doctoral Degree (Research) Programs			Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce														
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2012-2013														
			1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion			5 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	140	17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Natural Resources and Conservation	199	28	16	57%	\$42,010	15	54%	\$38,730	11	39%	\$34,985	*	*	*	*	*	*
Architecture and Related Services	54	12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Area, Ethnic, Cultural, Gender, and Group Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Communication, Journalism, and Related Programs	90	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Computer and Information Sciences and Support Services	411	59	19	32%	\$73,996	21	36%	\$63,511	18	31%	\$87,408	16	27%	\$99,454	17	29%	\$108,330
Education	1,641	229	167	73%	\$66,155	153	67%	\$70,879	142	62%	\$72,865	139	61%	\$75,182	132	58%	\$76,628
Engineering	1,193	213	97	46%	\$44,176	69	32%	\$70,730	62	29%	\$84,966	54	25%	\$91,017	52	24%	\$94,869
Engineering Technologies and Engineering-Related Fields	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Foreign Languages, Literatures, and Linguistics	157	20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Family and Consumer Sciences/Human Sciences	40	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	223	38	22	58%	\$38,945	15	39%	\$42,589	15	39%	\$39,301	13	34%	\$52,065	13	34%	\$46,960
Liberal Arts and Sciences, General Studies, and Humanities	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Library Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	1,409	215	95	44%	\$40,155	79	37%	\$45,072	73	34%	\$50,080	73	34%	\$65,284	71	33%	\$69,994
Mathematics and Statistics	445	50	17	34%	\$49,637	15	30%	\$81,244	13	26%	\$93,401	12	24%	\$99,310	13	26%	\$90,176
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	310	41	21	51%	\$45,450	19	46%	\$67,205	17	41%	\$81,924	15	37%	\$92,371	16	39%	\$87,691
Parks, Recreation, Leisure, and Fitness Studies	60	10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Philosophy and Religious Studies	75	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Physical Sciences	754	110	53	48%	\$31,500	35	32%	\$45,485	32	29%	\$44,500	28	25%	\$57,800	23	21%	\$75,734
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Psychology	411	59	26	44%	\$41,675	17	29%	\$52,863	15	25%	\$62,607	15	25%	\$65,145	17	29%	\$59,261
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Public Administration and Social Service Professions	132	17	12	71%	\$49,284	11	65%	\$61,949	10	59%	\$70,630	11	65%	\$67,721	11	65%	\$65,532
Social Sciences	522	74	25	34%	\$41,306	23	31%	\$42,185	17	23%	\$55,830	16	22%	\$61,256	16	22%	\$68,444
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Visual and Performing Arts	127	24	15	63%	\$22,650	14	58%	\$30,837	13	54%	\$32,885	11	46%	\$44,036	10	42%	\$43,771
Health Professions and Related Programs	595	111	54	49%	\$68,058	51	46%	\$80,344	49	44%	\$83,223	47	42%	\$84,168	44	40%	\$85,386
Business, Management, Marketing, and Related Support Services	101	16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
History	162	21	10	48%	\$25,650	*	*	*	*	*	*	*	*	*	*	*	*

Appendix Table 22. UNC Doctoral (Research) Degree Program Outcomes by Program Area, 2013-2014 Graduates

University of North Carolina System Doctoral Degree (Research) Programs			Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>											
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2013-2014													
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	149	27	12	44%	\$36,329	*	*	*	*	*	*	*	*	*
Natural Resources and Conservation	200	38	22	58%	\$40,826	18	47%	\$47,619	18	47%	\$53,903	16	42%	\$68,055
Architecture and Related Services	45	*	*	*	*	*	*	*	*	*	*	*	*	*
Area, Ethnic, Cultural, Gender, and Group Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Communication, Journalism, and Related Programs	85	13	*	*	*	*	*	*	*	*	*	*	*	*
Computer and Information Sciences and Support Services	374	60	19	32%	\$68,267	16	27%	\$83,735	16	27%	\$86,597	13	22%	\$111,179
Education	1,632	217	177	82%	\$63,962	162	75%	\$71,453	154	71%	\$73,577	152	70%	\$76,624
Engineering	1,049	224	106	47%	\$41,937	78	35%	\$53,048	66	29%	\$77,613	59	26%	\$91,400
Engineering Technologies and Engineering-Related Fields	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Foreign Languages, Literatures, and Linguistics	152	18	*	*	*	*	*	*	*	*	*	*	*	*
Family and Consumer Sciences/Human Sciences	36	*	*	*	*	*	*	*	*	*	*	*	*	*
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	202	26	18	69%	\$39,950	13	50%	\$50,571	13	50%	\$48,983	12	46%	\$53,705
Liberal Arts and Sciences, General Studies, and Humanities	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Library Science	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	1,386	230	113	49%	\$38,000	87	38%	\$46,010	81	35%	\$56,689	80	35%	\$61,500
Mathematics and Statistics	406	69	19	28%	\$33,998	15	22%	\$59,999	14	20%	\$81,995	15	22%	\$95,020
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	322	42	22	52%	\$55,915	18	43%	\$59,725	19	45%	\$68,964	20	48%	\$71,303
Parks, Recreation, Leisure, and Fitness Studies	53	13	*	*	*	*	*	*	*	*	*	*	*	*
Philosophy and Religious Studies	75	13	*	*	*	*	*	*	*	*	*	*	*	*
Physical Sciences	739	110	35	32%	\$40,497	25	23%	\$52,379	22	20%	\$69,519	17	15%	\$77,996
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Psychology	428	58	20	34%	\$34,229	19	33%	\$42,325	20	34%	\$48,402	17	29%	\$62,219
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Public Administration and Social Service Professions	127	20	11	55%	\$64,937	10	50%	\$70,013	10	50%	\$72,247	*	*	*
Social Sciences	504	65	15	23%	\$45,351	13	20%	\$50,030	15	23%	\$61,611	15	23%	\$66,098
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Visual and Performing Arts	132	20	13	65%	\$32,250	11	55%	\$39,452	11	55%	\$25,083	*	*	*
Health Professions and Related Programs	590	101	53	52%	\$61,572	48	48%	\$65,972	44	44%	\$81,958	40	40%	\$84,456
Business, Management, Marketing, and Related Support Services	92	20	*	*	*	*	*	*	*	*	*	*	*	*
History	143	24	10	42%	\$25,732	*	*	*	*	*	*	*	*	*

Appendix Table 23. UNC Doctoral (Research) Degree Program Outcomes by Program Area, 2014-2015 Graduates

University Of North Carolina System Doctoral Degree (Research) Programs		Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Parti cipants	Degree Recipients	Program Year 2014-2015								
			1 Year After Completion			2 Years After Completion			3 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Agriculture, Agriculture Operations, and Related Sciences	141	33	19	58%	\$58,427	14	42%	\$67,382	16	48%	\$76,478
Natural Resources and Conservation	186	41	17	41%	\$38,783	15	37%	\$46,102	12	29%	\$66,223
Architecture and Related Services	45	*	*	*	*	*	*	*	*	*	*
Area, Ethnic, Cultural, Gender, and Group Studies	12	*	*	*	*	*	*	*	*	*	*
Communication, Journalism, and Related Programs	81	13	*	*	*	*	*	*	*	*	*
Computer and Information Sciences and Support Services	345	54	17	31%	\$58,087	13	24%	\$71,911	11	20%	\$105,645
Education	1,643	250	211	84%	\$65,819	189	76%	\$72,428	189	76%	\$76,533
Engineering	941	197	81	41%	\$48,335	56	28%	\$71,891	50	25%	\$78,456
Engineering Technologies and Engineering-Related Fields	*	*	*	*	*	*	*	*	*	*	*
Foreign Languages, Literatures, and Linguistics	139	19	10	53%	\$33,936	*	*	*	*	*	*
Family and Consumer Sciences/Human Sciences	38	*	*	*	*	*	*	*	*	*	*
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*
English Language and Literature/Letters	198	26	16	62%	\$37,149	16	62%	\$42,688	16	62%	\$45,085
Liberal Arts and Sciences, General Studies, and Humanities	*	*	*	*	*	*	*	*	*	*	*
Library Science	*	*	*	*	*	*	*	*	*	*	*
Biological and Biomedical Sciences	1,317	214	102	48%	\$34,842	77	36%	\$52,849	77	36%	\$65,816
Mathematics and Statistics	372	62	21	34%	\$80,959	17	27%	\$95,991	18	29%	\$92,541
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*
Multi/Interdisciplinary Studies	324	45	33	73%	\$47,215	27	60%	\$65,513	28	62%	\$58,599
Parks, Recreation, Leisure, and Fitness Studies	68	*	*	*	*	*	*	*	*	*	*
Philosophy and Religious Studies	71	*	*	*	*	*	*	*	*	*	*
Physical Sciences	728	107	46	43%	\$38,814	36	34%	\$48,935	31	29%	\$54,532
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*
Psychology	421	65	26	40%	\$43,985	25	38%	\$58,184	22	34%	\$62,965
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	*	*	*	*	*	*	*	*	*	*	*
Public Administration and Social Service Professions	126	23	11	48%	\$6,575	*	*	*	*	*	*
Social Sciences	480	74	28	38%	\$24,430	19	26%	\$37,608	16	22%	\$65,518
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*
Visual and Performing Arts	130	27	23	85%	\$22,359	22	81%	\$22,227	20	74%	\$38,662
Health Professions and Related Programs	600	100	57	57%	\$54,118	51	51%	\$71,208	49	49%	\$91,653
Business, Management, Marketing, and Related Support Services	82	15	*	*	*	*	*	*	*	*	*
History	143	13	*	*	*	*	*	*	*	*	*

Appendix Table 24. UNC Doctoral (Research) Degree Program Outcomes by Program Area, 2015-2016 and 2016-2017 Graduates

University Of North Carolina System Doctoral Degree (Research) Programs						Common Follow-up System: Evaluative Measures, 2019 Report <i>Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce</i>									
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016									Program Year 2016-2017					
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			Parti cipants	Degree Recipients	1 Year After Completion				
			Employed	%	Med. Wage	Employed	%	Med. Wage			Employed	%	Med. Wage		
Agriculture, Agriculture Operations, and Related Sciences	118	20	*	*	*	*	*	*	98	23	12	52%	\$75,477		
Natural Resources and Conservation	163	31	21	68%	\$31,266	12	39%	\$54,827	144	32	16	50%	\$47,183		
Architecture and Related Services	42	*	*	*	*	*	*	*	44	11	*	*	*		
Area, Ethnic, Cultural, Gender, and Group Studies	13	*	*	*	*	*	*	*	18	*	*	*	*		
Communication, Journalism, and Related Programs	71	15	11	73%	\$18,449	*	*	*	66	15	*	*	*		
Computer and Information Sciences and Support Services	293	57	16	28%	\$100,297	15	26%	\$91,142	246	45	18	40%	\$77,366		
Education	1,572	237	188	79%	\$63,157	180	76%	\$67,212	1,593	230	190	83%	\$71,613		
Engineering	760	177	75	42%	\$44,056	63	36%	\$67,145	707	136	66	49%	\$46,165		
Engineering Technologies and Engineering-Related Fields	15	*	*	*	*	*	*	*	*	*	*	*	*		
Foreign Languages, Literatures, and Linguistics	133	31	16	52%	\$34,191	11	35%	\$42,029	110	15	*	*	*		
Family and Consumer Sciences/Human Sciences	34	12	*	*	*	*	*	*	27	*	*	*	*		
Legal Professions and Studies	*	*	*	*	*	*	*	*	*	*	*	*	*		
English Language and Literature/Letters	193	28	17	61%	\$37,483	13	46%	\$45,713	192	21	16	76%	\$39,268		
Liberal Arts and Sciences, General Studies, and Humanities	*	*	*	*	*	*	*	*	*	*	*	*	*		
Library Science	*	*	*	*	*	*	*	*	*	*	*	*	*		
Biological and Biomedical Sciences	1,206	195	107	55%	\$42,000	75	38%	\$48,593	1,200	204	106	52%	\$42,812		
Mathematics and Statistics	333	65	19	29%	\$81,318	18	28%	\$92,559	301	55	27	49%	\$36,239		
Military Technologies and Applied Sciences	*	*	*	*	*	*	*	*	*	*	*	*	*		
Multi/Interdisciplinary Studies	314	49	24	49%	\$49,282	21	43%	\$57,339	330	46	34	74%	\$37,370		
Parks, Recreation, Leisure, and Fitness Studies	82	10	*	*	*	*	*	*	94	*	*	*	*		
Philosophy and Religious Studies	71	*	*	*	*	*	*	*	72	14	*	*	*		
Physical Sciences	693	102	45	44%	\$32,025	28	27%	\$54,319	685	124	52	42%	\$39,470		
Science Technologies/Technicians	*	*	*	*	*	*	*	*	*	*	*	*	*		
Psychology	378	56	29	52%	\$44,242	25	45%	\$54,338	405	65	28	43%	\$47,418		
Homeland Security, Law Enforcement, Firefighting, and Related Protective Services	*	*	*	*	*	*	*	*	*	*	*	*	*		
Public Administration and Social Service Professions	109	24	16	67%	\$44,520	16	67%	\$56,202	101	17	*	*	*		
Social Sciences	416	58	25	43%	\$44,000	19	33%	\$48,699	386	59	26	44%	\$50,565		
Transportation and Materials Moving	*	*	*	*	*	*	*	*	*	*	*	*	*		
Visual and Performing Arts	111	15	*	*	*	*	*	*	120	24	15	63%	\$4,827		
Health Professions and Related Programs	606	106	59	56%	\$65,767	53	50%	\$76,995	616	115	60	52%	\$62,244		
Business, Management, Marketing, and Related Support Services	77	18	*	*	*	*	*	*	65	15	*	*	*		
History	139	26	13	50%	\$31,881	*	*	*	133	24	12	50%	\$28,881		

Appendix Table 25. UNC Doctoral (Professional) Degree Program Outcomes by Program Area

University Of North Carolina System Doctoral Degree (Professional Practice) Programs														
Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce														
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2012-2013													
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Legal Professions and Studies	1,317	413	246	60%	\$25,840	246	60%	\$42,791	220	53%	\$50,075	207	50%	\$57,695
Health Professions and Related Programs	2,827	600	323	54%	\$51,841	332	55%	\$65,516	332	55%	\$69,806	332	55%	\$95,477

University Of North Carolina System Doctoral Degree (Professional Practice) Programs														
Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce														
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2013-2014													
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion			4 Years After Completion		
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage
Legal Professions and Studies	1,335	383	239	62%	\$27,518	229	60%	\$50,127	232	61%	\$56,912	226	59%	\$67,899
Health Professions and Related Programs	3,021	675	369	55%	\$52,614	384	57%	\$63,693	387	57%	\$67,269	372	55%	\$81,945

University Of North Carolina System Doctoral Degree (Professional Practice) Programs														
Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce														
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2014-2015													
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			3 Years After Completion					
			Employed	%	Med. Wage	Employed	%	Med. Wage	Employed	%	Med. Wage			
Legal Professions and Studies	1,270	406	242	60%	\$29,830	248	61%	\$48,981	244	60%	\$55,478			
Health Professions and Related Programs	3,235	776	432	56%	\$53,026	451	58%	\$65,180	447	58%	\$70,324			

University Of North Carolina System Doctoral Degree (Professional Practice) Programs														
Common Follow-up System: Evaluative Measures, 2019 Report Data prepared by the Labor & Economic Analysis Division, NC Department of Commerce														
Post-Completion Outcome Employment and Wage Measures by Program Area	Program Year 2015-2016								Program Year 2016-2017					
	Parti cipants	Degree Recipients	1 Year After Completion			2 Years After Completion			Parti cipants	Degree Recipients	1 Year After Completion			
			Employed	%	Med. Wage	Employed	%	Med. Wage			Employed	%	Med. Wage	
Legal Professions and Studies	1,264	402	257	64%	\$29,322	263	65%	\$48,512	1,186	366	231	63%	\$34,245	
Health Professions and Related Programs	3,427	798	460	58%	\$55,194	470	59%	\$71,611	3,535	863	511	59%	\$56,502	



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