PVCC
PIEDMONT VIRGINIA COMMUNITY COLLEGE
Opportunity. Access. Excellence.

CAREER AND TECHNICAL EDUCATION PROGRAMS EMPLOYMENT REPORT: CLASS OF 2015-16

INTRODUCTION

A key part of PVCC's mission is the promotion of student success, including employment that a student obtains after graduation. This report provides details on the impact that PVCC had on students obtaining employment. It looks at the relationship between the career and career and technical education (CTE) academic programs, reviews regional employers who hired PVCC students, and the average salary of the graduates. Essentially, this report seeks to answer three questions:

1. Are PVCC CTE graduates obtaining jobs?
2. Are those eligible for licensure and/or certification receiving licensure and/or certification?
3. Has PVCC contributed to furthering students' academic and/or professional goals?

METHODOLOGY

This report focuses on the employability of CTE graduates at PVCC. A CTE graduate is defined as a student who has completed an award in Associates of Applied Sciences, Certificates, and Career Studies Certificates[1]. In the 2015-2016, 265 students graduated with a CTE award. A professional credential is defined as registered apprenticeship certificates, occupational licenses (typically awarded by State government agencies), certifications from industry or professional associations[2]. Using a triangulated methodology, the data was captured from a series of databases (national, state, and federal[3]), the graduate exit application, and the graduate employment follow-up survey. By utilizing these three sources, the institution receives a clear picture of the employment of the most recent graduating class. Those programs that are non-CTE programs have been excluded from this report. To provide adequate time for graduates to obtain employment, PVCC uses the Bureau of Labor and Statistics standard of six months to obtain employment.

HIGHLIGHTS

- 96% of PVCC CTE graduates have a job in six months
- 93% of licensure and/or eligible certification students have successfully become licensed or obtained certification in their field of study.
- 91% of CTE graduates stated that PVCC had helped them further their academic and/or professional goals.
- Average Full-time Salary of CTE Graduates is $47,600
- 84% of jobs related to the field of study.
- 71% of companies employing PVCC graduates are in the graduates' field of study.

[1] See Appendix C
[2] U.S. Department of Labor Employment and Training Administration (2012). Retrieved from: https://doleta.gov/taaccct/pdf/presenters/Bosworth-Frugoli.pdf
[3] See Appendix B

EMPLOYMENT RESULTS

The results presented provide the reporting details from the three employment databases currently available to PVCC, these include reporting at the state, national, and federal levels. The total number of Career and Technical Education graduates was 265. Of those graduates, 40 were deceased, moved out of the database reporting area, or were enrolled in an institution of higher education making the operable respondent 225 (85%). For 2015-16 CTE graduates, 215 (96%) obtained employment within six months of graduating. CTE awards represented 23% (n= 293) of the overall PVCC awards (n=1,245) for2015-2016.

For institutional effectiveness, PVCC has a target of having 90% of students employed six months after graduation. The table below denotes those programs that are not meeting the institutional effectiveness target of 90% marking the percent of graduates employed in red. The total number of graduates and the total number of employed graduates was not displayed for programs with three or fewer graduates.

Table 1: Employment results by academic plan

Academic plan	Total graduates	Count of graduates in national, state, & federal employment databases	Percent of graduates in national, state, federal employment databases (%)	Total employed	Percent of graduates employed (%)
Accounting-203	8	8	100%	6	**75%**
Administrative Support-221-298-55	18	16	88%	12	**75%**
Building Trades I-221-989-00	*	*	100%	*	**100%**
Central Services Technician	*	*	100%	*	**100%**
Computer and Networking Support: 221-732-07	14	12	85%	10	**83%**
Criminal Justice-221-400-45	15	13	86%	11	**85%**
Culinary Arts-242	9	8	88%	8	**100%**
Diagnostic Medical Sonography- 109	12	12	100%	11	**92%**
Early Childhood Development: I&T-221-636-05	*	*	100%	*	**100%**
Early Childhood Development: Pre-K-221-636-06	5	4	80%	4	**100%**
Electronics and Computer Technology- 981	*	*	100%	*	**100%**
Emergency Medical Services- 146	5	5	100%	5	**100%**
EMS-Paramedic-221-146-05	9	9	100%	8	**89%**
Graphic Design-221-514-35	8	8	100%	7	**88%**
Health and Information Management	*	*	100%	*	**100%**
Horticulture-221-335-01	*	*	100%	*	**67%**
Information Systems Technology-299	13	11	85%	9	**82%**
Management-212	7	6	86%	6	**100%**
Medical Administrative Support Assistant-221-152-10	10	9	90%	9	**100%**
Nursing- 156	79	73	92%	70	**96%**
Police Science-464	14	14	100%	12	**100%**
Practical Nursing-157	19	17	90%	15	**86%**
Radiography-172	16	15	94%	13	**87%**
Surgical Technology-159	12	12	100%	11	**92%**
Web Technology-221-352-04	6	5	83%	5	**100%**
Total Unduplicated Across Academic Programs	**265**	**225**	**85%**	**215**	**96%**

*Denotes programs with less than 3 graduates

EMPLOYERS

Employers are a vital part of the service community. In the area of community vitality, employers provide an indication as to the job preparedness and academic performance of college graduates. The following table details the number of employers and the percent of the employers who are in the academic plans field. Employers within the field were determined by the employers North American Industry Classification System (NAICS) code[4] and if that classification code related to the academic plan using the NAICS to CIP Code crosswalk. Many PVCC graduates are employed by the same employer.

Table 2: Employers by academic plan

Academic Plan	Employers	Number of employers in academic plan field	Percent employers in academic plan field
Accounting-203	7	4	**57%**
Administrative Support-221-298-55	13	12	**92%**
Building Trades 1: 221-989-00	1	1	**100%**
Central Services Technician	1	1	**100%**
Computer and Networking Support: 221-732-07	9	7	**78%**
Criminal Justice-221-400-45	10	3	**30%**
Culinary Arts- 242	9	5	**56%**
Diagnostic Medical Sonography- 109	6	6	**100%**
Early Childhood Development: Infant &Toddler-221-636-05	2	1	**50%**
Early Childhood Development: Pre-K-221-636-06	2	1	**50%**
Electronics and Computer Technology- 981	3	3	**100%**
Emergency Medical Services- 146	2	2	**100%**
EMS-Paramedic-221-146-05	6	5	**83%**
Graphic Design-221-514-35	10	2	**20%**
Health and Information Management	2	2	**100%**
Horticulture-221-335-01	2	0	**0%**
Information Systems Technology-299	10	9	**90%**
Management-212	4	4	**100%**
Medical Administrative Support Assistant-221-152-10	8	4	**50%**
Nursing- 156	18	18	**100%**
Police Science-464	7	4	**57%**
Practical Nursing-157	12	10	**83%**
Radiography-172	5	4	**80%**
Surgical Technology-159	7	4	**57%**
Web Technology-221-352-04	4	1	**25%**
Total	**160**	**113**	**71%**

[4] See Appendix A

AVERAGE SALARY

Employment in the field of study assists program coordinators to determine if the program is a cost benefit to the student. From this study, 84% (n=181) of jobs were indicated to be in the program field of study. Spring 2016 graduates quarter four wages were not available. Therefore, the first three quarters were averaged to calculate an estimated quarter four and annual salary for Spring 2016 graduates. The table below depicts the number of in the field of study jobs, the average full-time salary in the field of study, and the low to high range for full time salaries in the field of study. For in the field of study careers, the average salary was $47,600 per year. The low to high range was $20,000 to $113,000 per year. It should be noted that programs with three or less reported salaries were not reported.

Table 3: Average full-time salaries, salary range, and number of jobs in field of study by academic plan

Academic plan	Total Employed	Number of jobs in the field of study	% employed graduates working in the field of study	Average full-time salary in field of study *	Low-high full-time salary range in field of study
Accounting-203	6	*	33%		
Administrative Support-221-298-55	12	8	67%	39,600	27-61,000
Building Trades I-221-989-00	*	*	100%		
Central Services Technician	*	*	100%		
Computer and Networking Support: 221-732-07	10	6	60%	38,200	33-41,000
Criminal Justice-221-400-45	11	*	27%		
Culinary Arts-242	8	5	63%	29,600	22-36,000
Diagnostic Medical Sonography- 109	11	11	100%	49,000	25-69,000
Early Childhood Development: Infant &Toddler-221-636-05	*	*	50%		
Early Childhood Development: Pre-K-221-636-06	4	*	75%		
Electronics and Computer Technology- 981	*	*	100%		
Emergency Medical Services- 146	5	5	100%	62,500	37-79,000
EMS-Paramedic-221-146-05	8	7	88%	58,400	35-74,000
Graphic Design-221-514-35	7	*	43%		
Health and Information Management	*	*	100%		
Horticulture-221-335-01	*	*	50%		
Information Systems Technology-299	9	7	78%	44,300	20-74,000
Management-212	6	4	100%	39,500	35-43,000
Nursing- 156	70	68	97%	51,400	20-95,000
Medical Administrative Support Assistant-221-152-10	9	6	67%	32,700	25-42,000
Police Science-464	12	9	75%	61,500	31-113,000
Practical Nursing-157	15	12	80%	41,000	22-61,000
Radiography-172	13	12	92%	45,000	21-58,000
Surgical Technology-159	11	8	73%	41,800	33-51,000
Web Technology-221-352-04	5	*	40%		
Total Unduplicated Across Academic Programs	**215**	**181**	**84%**	**47,600**	**20-113,000**

Note: Full time salary is classified as anything above $20,000 per the national standard (BLS, 2016).
*Denotes areas with less than three students

THE PVCC RELATIONSHIP

As a part of a graduation exit survey, students were asked to respond if they had obtained employment and the extent to which their academic program related to this employment opportunity. Of the 182 students who responded to the academic and professional goal section of the graduate survey for CTE programs, 91% (n=166) stated that PVCC had helped them to further their academic and/or professional goals.

Table 4: Respondents from graduate exit survey that stated PVCC had helped them further their academic and/or professional goals.

Academic plan	Total graduates	Total respondents	% of respondents that stated PVCC had helped them to further their academic and/or professional goals
Accounting-203	**8**	6	100%
Administrative Support-221-298-55	**18**	6	83%
Building Trades I-221-989-00	*	*	100%
Central Services Technician	*	*	100%
Computer and Networking Support Technologies: 221-732-07	**14**	7	86%
Criminal Justice-221-400-45	**15**	11	82%
Culinary Arts-242	**9**	*	100%
Diagnostic Medical Sonography-109	**12**	6	83%
Early Childhood Development: Infant & Toddler- 221-636-05	*	*	100%
Early Childhood Development: Pre-K-221-636-06	**5**	*	67%
Electronics and Computer Technology- 981	*	*	100%
Emergency Medical Services- 146	**5**	4	100%
EMS-Paramedic-221-146-05	**9**	8	100%
Graphic Design-221-514-35	**8**	4	100%
Health Information Management	*	*	100%
Horticulture-221-335-01	*	*	100%
Information Systems Technology-299	**13**	10	60%
Management-212	**7**	6	100%
Medical Administrative Support Assistant-221-152-10	**10**	5	100%
Nursing- 156	**79**	18	83%
Police Science-464	**14**	8	100%
Practical Nursing-157	**19**	19	100%
Radiography-172	**16**	6	83%
Surgical Technology-159	**12**	10	100%
Web Technology-221-352-04	**6**	4	100%
Total	**293**	**152**	**91%**

*Denotes areas with less than three students

CREDENTIALS

As a part of PVCC's mission, it prepares students for success and often this occurs through external credentialing agencies. PVCC explored those students who graduated in programs that led to licensure in the state of **Virginia** or a credential from the field of study's national registry. Of the 152 graduates eligible for credentialing, 141 (93%) completed their licensing examinations or certifications. Many of these graduates received multiple credentials, of the 141 who received credentials the average was 1.2.

Academic plan[5]	Number of graduates	Unduplicated number of successfully licensed or certified in the field graduates	Percent of unduplicated number of successfully licensed or certified in the field graduate (%)	Number of licenses or certifications held by graduates	Average number of licenses or certifications per credentialled graduate
Emergency Medical Services- 146	5	4	80%	4	1
EMS-Paramedic-221-146-05	9	8	89%	8	1
Nursing- 156	79	79	100%	88	1.1
Practical Nursing-157	19	15	79%	27	1.8
Radiography-172	16	14	89%	17	1.2
Sonography-109	12	12	100%	17	1.4
Surgical Technology-159	12	9	75%	9	1
Total	**152**	**141**	**93%**	**170**	**1.2**

FINDINGS

This study sought to answer three questions. The first question asked are PVCC CTE graduates obtaining jobs? The results of this study show that 96% PVCC graduates are obtaining jobs within six months. Seventy-one percent (71%) of employers are in the academic plan field of study and 84% of occupations are in the field of study. Thus concluding that PVCC CTE graduates are obtaining employment in their area of academic endeavor.

The second question posed was are those eligible for licensure and/or certification receiving licensure and/or certification? In the area of licensure and credentials, 93% (n=141) of the graduates eligible for credentialing have successfully completed their licensing examinations or certifications. Many of these graduates received multiple credentials with an average of 1.2 credentials per graduate.

The final question asked if PVCC had contributed to furthering students' academic and/or professional goals. Resoundingly, ninety-one percent (91%) of graduates reported that PVCC helped them further their academic and/or professional goals. For institutional effectiveness, the results show PVCC is meeting or exceeding the targets for student employment success.

[5] Central Services Technician excluded due to graduates being less than 3

APPENDIX A: NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM

NAICS is a two- through six-digit hierarchical classification system, offering five levels of detail. Each digit in the code is part of a series of progressively narrower categories, and the more digits in the code signify greater classification detail. The first two digits designate the economic sector, the third digit designates the subsector, the fourth digit designates the industry group, the fifth digit designates the NAICS industry, and the sixth digit designates the national industry. The five-digit NAICS code is the level at which there is comparability in code and definitions for most of the NAICS sectors across the three countries participating in NAICS (the United States, Canada, and Mexico). The six-digit level allows for the United States, Canada, and Mexico each to have country-specific detail. A complete and valid NAICS code contains six digits.

NAICS_CODE	DESCRIPTION
11	Agriculture, Forestry, Fishing and Hunting
111	Crop Production
1111	Oilseed and Grain Farming
11111	Soybean Farming
111110	Soybean Farming
11112	Oilseed (except Soybean) Farming
111120	Oilseed (except Soybean) Farming
11113	Dry Pea and Bean Farming
111130	Dry Pea and Bean Farming
11114	Wheat Farming
…	

Please note: These are industry codes and no information is available regarding person's job function within industry.

APPENDIX B: EMPLOYMENT DATABASES

This study used three databases federal, state, and a multi-state database.

Federal Database

The federal database is collected and maintained by the University of Maryland and is provided four times a year on six-month stagger in reporting. The federal department, agency names, military branches, and addresses are not provided. Employee salaries are provided and the NAICS code for employment is used. Employment data on federal and military employees is provided at the unit level.

Multi-state Database

The multi-state database is collected and maintained by the Bureau of Labor and Statistics and provides data to PVCC four times a year on a six-month stagger in reporting. Federal employees, farmers, incarcerated, and self-employed are excluded. Hawaii and Alaska do not report to the multi-state database.

Virginia Database

All states are required to collect and maintain data on employees from every non-federal wage-paying employer, within their boundaries, covered by that state's unemployment compensation laws. In Virginia, this requirement is satisfied by the Virginia Employment Commission (VEC) collecting and maintaining wage records used to determine employment and earnings of individuals covered by the Virginia unemployment compensation laws. These records populate the VEC Unemployment Insurance (UI) database. Employers submit UI quarterly reports of employee earnings to the VEC. For each employee, an employer reports social security number (SSN) and total earnings received during the quarter. Additionally, employer information is also provided, such as the unique employer federal identification number, business name, mailing address, and industry affiliation code.

Since each state maintains its own UI database, based on reports from employers within its state boundaries, the VEC UI database consists primarily of data on individuals employed in the state of Virginia. Data on individuals employed in neighboring states (MD, NJ, OH, PA, WV, and DC) are also available from the VEC as part of a cooperative agreement with these states. These data, however, are limited to the extent that they include no information about the employers. In addition, the employer mailing addresses for individuals employed in Virginia may or may not be in Virginia, if the employer also operates in other states or countries (e.g., Canada).

Currently, the VCCS provides the VEC with a file containing the SSN for every student who has enrolled in one of the 23 Virginia Community Colleges within the previous five years. The VEC then cross-references this file of SSNs with the VEC UI database and the databases from the neighboring states. All records with matching SSNs from the previous 20 quarters are selected and provided to the VCCS, where the data are mapped to SAS datasets. (Data record format Information is provided below.) This process repeats four times per year resulting in quarterly updates to the VEC UI data.

Advantages of Databases

The databases offers several advantages over other sources of employment and wage information. For example, the data is collected and maintained on most individuals employed throughout the United States (HI and AK excluded, federal and military included)). Since the data is linked to SSN, an individual's employment can be tracked despite changes in name, address, and employment anywhere as indicated above. The databases potentially make available longitudinal data on most students once they leave school, regardless of whether or not they graduated. The availability of the data requires no school staff or resources to collect or maintain.

Limitations of Data

Although the database has its advantages, it also has its limitations which must be considered when using the data.

- Farm workers, incarcerated, and self-employed are excluded
- Only employee quarterly wages and industry of employment are reported, not other employee data that might be of interest such as date of hire, occupation, hourly wages, or time worked.
- The Industry Codes categorize the business of the employer, but does not provide any indication of the role of the employee in the business.
- The employer addresses do not necessarily provide the Virginia location of an individual's employment, but rather a mailing address for the employer which could be in another state or even another country.
- The data are often not available for at least six months after initial collection.
- Students who do not provide their SSN cannot be linked to the data.

APPENDIX C: CTE ACADEMIC PLANS

Academic plan
Accounting-203
Administrative Support-221-298-55
Building Trades I-221-989-00
Central Services Technician
Computer and Networking Support: 221-732-07
Criminal Justice-221-400-45
Culinary Arts-242
Diagnostic Medical Sonography- 109
Early Childhood Development: Infant &Toddler-221-636-05
Early Childhood Development: Pre-K-221-636-06
Electronics and Computer Technology- 981
Emergency Medical Services- 146
EMS-Paramedic-221-146-05
Graphic Design-221-514-35
Health and Information Management
Horticulture-221-335-01
Information Systems Technology-299
Management-212
Nursing- 156
Medical Administrative Support Assistant-221-152-10
Police Science-464
Practical Nursing-157
Radiography-172
Surgical Technology-159
Web Technology-221-352-04