

# State Council of Higher Education for Virginia



## New Economy Workforce Credential Grant Annual Report 2021



February 2022

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## PURPOSE OF THIS REPORT

During the 2016 session, the General Assembly and Governor established the New Economy Workforce Grant Program. This grant program, the first of its kind in the nation, provides a pay-for-performance model for funding noncredit workforce training that leads to a credential in a high-demand field. The program also includes requirements for students to complete the program in order to avoid paying additional costs. A summary of the major components of the program is included below. Additional information is available through the Code of Virginia.

The purpose of this report is to provide an annual review of FY 2021 activities of the New Economy Workforce Credential Grant to the General Assembly and the Virginia Board for Workforce Development as outlined in § 23.1-627.7 of the Code of Virginia.

### Summary of Findings for FY 2021

In FY 2021, the Virginia Community College System and the Southern Virginia Higher Education Center offered training aligned to high-demand occupations and fields as identified by the Virginia Board for Workforce Development. Below are summary findings from FY 2021:

- Institutions offered training in nine high-demand occupational fields.
- Collectively, these institutions reported 8,904 enrollments, a 19% increase from FY 2020 and the most since the inception of the program.
- Of the 8,904 enrollments included in this report, 8,591 (96%) completed training. Among program completers, 6,151 (72%) went on to earn the credential.
- While gaps in program completion by race/ethnicity appeared to have closed, gaps in credential completion remain: Black or African American students were nine points less likely to earn their program's credential compared to white students. Hispanic students were four points less likely.
- The average student cost of the program was \$766, an \$89 increase from FY 2020. The average state cost per credential attained was \$1,848, a \$221 increase from FY 2020.
- The program with the highest enrollments was Commercial Driver's License (class A) with over 18% of enrollments. Highway Construction Programs had the second highest enrollments accounting for 13% of all enrollments in FY 2021.
- Most students who earned their credential saw an increase in earnings. Median annual wages increased approximately \$7,000 or 31%.
- Students in the bottom quartile (with wages less than \$8,200 before completing their credential) saw the highest median wage increase.

## Program Purpose

The Governor and the General Assembly outlined three primary purposes of program based on the requirements outlined in § 23.1-627.2. of the Code of Virginia:

*The New Economy Workforce Credential Grant is established for the purpose of (i) creating and sustaining a demand-driven supply of credentialed workers for high-demand occupations in the Commonwealth by addressing and closing the gap between the skills needed by workers in the Commonwealth and the skills of the available workforce in the Commonwealth; (ii) expanding the affordability of workforce training and credentialing; and (iii) increasing the interest of current and future Virginia workers in technician, technologist, and trade-level positions to fill the available and emerging jobs in the Commonwealth that require less than a bachelor's degree but more than a high school diploma.*

The program also defines two key elements:

- *High-demand field:* a “discipline or field in which there is a shortage of skilled workers to fill current job vacancies or anticipated additional job openings.”
- *Noncredit workforce credential:* a “competency-based, industry-recognized, portable, and third-party-validated certification or occupational license in a high-demand field.”

## Program Requirements and Pay-for-Performance Model

The program focuses on a pay-for-performance model that provides payments for costs to institutions only when an individual completes training and when an individual completes a credential.

The following is a brief overview of the program requirements.

- *Eligible institutions and type of training:* Eligible institutions are community colleges, higher education centers and Richard Bland College. The type of training those institutions are required to offer is noncredit training.
- *Alignment to high-demand fields:* Training programs should align with the high-demand fields set by the Virginia Board for Workforce Development. Boards of eligible institutions are required to approve the aligned training programs.
- *Funding:*

<b>Fiscal Year</b>	<b>Amount</b>
2017	\$5 million
2018	\$7.5 million
2019	\$9.5 million
2020	\$13.5 million
2021	\$13.5 million

- *Payments and cost of the program:* The student, the institution and the state, as described below, share the program’s cost. In addition, the table below illustrates the pay-for-performance model.
  - Student responsibility: Students are required to pay one-third of the total cost of the program upon enrollment. Students may use third-party funds, such as noncredit financial aid, training vouchers or employer payment to cover this cost. If the student does not complete the program, then the student is required to pay an additional one-third of the cost of the program.
  - State: If the student completes the training, then the state provides one-third of the cost of the program, up to \$1,500, to the institution. If the student earns and reports a credential, then the state pays an additional one-third of the cost of the program, up to \$1,500.
  - Institution: If a student does not report a credential earned, then the institution does not receive state funding for one-third of the cost of the program.
- *Reporting and payments:* Eligible institutions must provide student-level data to SCHEV to receive funding.
- *Administration:* SCHEV is responsible for administering the program, conducting periodic assessments of the program, collecting student data and making final decisions on disputes between eligible institutions and grant recipients.

**Table 1: Program Pay-for-Performance Model**

<b>Payment Scenario if a student...</b>	<b>Student Pays ...</b>	<b>State Pays Training Institution...*</b>
... Completed training and credential	1/3 program cost	2/3 program cost*
... Completed training but did not earn or report credential to the training institution	1/3 program cost	1/3 program cost*
... Did not complete training and did not earn or report a credential	2/3 program cost	No cost

\*Maximum contribution is \$3,000 from the state.



## HIGH-DEMAND FIELD AND TRAINING ALIGNMENT PROCESS

### Identification of High-Demand Fields

The Code requires that the Virginia Board for Workforce Development identify high-demand occupational fields. In 2017, the Virginia Board for Workforce Development developed a methodology to identify high-demand programs, using the following criteria:

- The relevance of the occupational group to the state's economic development strategy as outlined in Governor McAuliffe's *New Virginia Economy* strategy document.
- Annual statewide job openings, based on Virginia Employment Commission/Bureau of Labor Statistics 10-year employment projections. Jobs were considered if they had more than 50 annual openings.
- The degree to which the occupations require advanced skills as measured by entry-level education.

The board also allows a petition process for regions to request adding an occupational field to the list if the region can demonstrate sufficient demand. A complete list of training programs offered is on the [Virginia Career Works website](#).

Based on a review of the occupations meeting the criteria above, the Virginia Board for Workforce Development identified high-demand occupations in 11 fields.

### Training Programs Offered by Eligible Institutions

Once the Virginia Board for Workforce Development identifies the high-demand fields, the eligible institutions develop or align existing noncredit training programs to meet the new credential criteria and their boards approve the programs. To date, the Virginia Community College System and the Southern Virginia Higher Education Center and the New College Institute are the only eligible training institutions offering programs in the high-demand fields.

The boards of the institutions submit their approved lists to the Virginia Board for Workforce Development. A full list of high-demand occupations and aligned training programs offered by eligible training institutions is maintained and updated on the Career Works website.

Table 2 is a sample list by occupational field of the types of training and credentials students could attain upon completion. A full list of credentials by type is in the Appendix.



**Table 2: Sample Workforce Training and Certifications Offered by Occupational Field**

<b>Occupational Field (Occupation Number)</b>	<b>Sample Workforce Training/Certification Offered</b>
Computer and Mathematical (15)	CompTIA A+, Network+ and Server+ Computer Entry Level (CISCO Networking Technician and Associate, CompTIA IT Fundamentals); Information Systems Security Project Management Professional
Construction and Extraction (47)	Construction (Project Management, Carpentry, Contractor's License), Plumbing and Electrical, Highway Construction, Welding
Education, Training and Library (25)	Career Switcher/Teaching License
Healthcare Practitioners and Technical (29)	Emergency Medical, Pharmacy, EKG Technician
Healthcare Support (31)	Certified Nurse Aide, Medical Assistant, Medication Aide, Phlebotomy Technician
Installation, Maintenance and Repair (49)	Electrical and Electrical Systems, Engine Repair, HVAC, Power Line Worker
Office and Administrative Support (43)	Billing and Coding Specialist, Customer Services and Sales, Medical Administrative Assistant, Professional Coder, Society for Human Resource Management Certified Professional
Production (51)	Backflow Prevention, Electronics Assembly (JSTD-001 Certification), Machine Tool Operations, Manufacturing Technician 1 (MT1), Manufacturing Entry Level (specialist and production technician), Mechatronics, Six Sigma, Millwright (industrial machine installation, maintenance, troubleshooting and repair), Welding (flux, gas and general)
Transportation and Material Moving (53)	Commercial Driver's License, Logistics Associate, Logistics Technician, Remote Pilot Airman Certification



## ENROLLMENT, TRAINING AND CREDENTIAL COMPLETIONS AND COSTS

In FY 2021, 8,904 individuals were enrolled in training and 8,591 (96%) completed training. Among program completers, 6,151 (72%) went on to earn the credential. FY 2021 data are based on all students completing a training course between July 1, 2020, and June 30, 2021. Eligible institutions are allowed up to 180 days after the completion of training to obtain verification that a student earned a credential. Training institutions may verify this information either through receiving information from a student or through a record match with the entity issuing the credential.

During the history of the program, nearly 32,821 students have enrolled, 31,033 completed the program, and 23,025 have earned their credential or license. FY 2021 saw a record number of students enrolled, completing the program, and earning their credential or license. The growth of the program is notable as enrollments in for-credit academic programs at Virginia Community Colleges have [declined](#) in recent years.

**Table 3: Workforce Credential Grant Enrollments, Program Completions, and Credentials, History of the Program**

Fiscal Year	Enrollments	Completed Training	Earned Credential
2017	5,206	4,957	3,465
2018	4,299	3,997	3,075
2019	6,935	6,552	5,038
2020	7,477	6,936	5,296
2021	8,904	8,591	6,151
<b>Grand Total</b>	<b>32,821</b>	<b>31,033</b>	<b>23,025</b>

The following section provides data for FY 2021 by occupational field, credential type and institution.

### Training Offered in Nine High-Demand Occupational Fields

Construction, production, healthcare support and transportation had the highest number of enrollments, accounting for three-quarters of the program. Table 4 summarizes enrollments, completions, reported credentials, average costs to students, total payments by the state and average costs to the state per credential attained, by occupational field.





**Table 4: FY 2021 Data on Enrollment, Training Completion and Reported Credentials by Occupational Field**

Occupational Field	Enrolled	Completed Training	Reported a Credential Attained	Average Cost to Student*	Total State Payments for Training and Credential Completion*	Average State Payments per Credential Attained
Computer and Mathematical	829	823	214	\$691	\$706,267	\$3,300
Construction and Extraction	1,912	1,883	1,531	\$284	\$997,427	\$651
Education, Training and Library	99	94	90	\$1,330	\$244,720	\$2,719
Healthcare Practitioners and Technical	444	408	163	\$563	\$324,601	\$1,991
Healthcare Support	1,137	1,098	805	\$861	\$1,637,991	\$2,035
Installation, Maintenance and Repair	821	800	617	\$843	\$1,244,107	\$2,016
Office and Administrative Support	587	538	383	\$849	\$777,904	\$2,031
Production	1,089	1,078	851	\$573	\$1,104,411	\$1,298
Transportation and Material Moving	1,986	1,869	1,497	\$1,274	\$4,327,647	\$2,891
<b>All</b>	<b>8,904</b>	<b>8,591</b>	<b>6,151</b>	<b>\$766</b>	<b>\$11,365,075</b>	<b>\$1,848</b>

\*Average costs per student are based on the charges of 1/3 of the cost of the program if the student completes training.

Total state payments do not equal the allocation for FY 2021 of \$13.5 million due to how funds are obligated when a student enrolls. Payments are made at the time the training or credential completion are submitted to SCHEV.

### **The Average Student Cost of the Program was \$766. The Average State Cost per Credential Attained was \$1,848.**

As shown in Table 4, the average cost of the program to a student (reflecting 1/3 of the cost) was \$766. SCHEV provided reimbursements to institutions through state general fund in the amount of \$11.3 million for training completions and credentials. This figure is lower than the general fund appropriation for FY 2021 due to the pay-for-performance model where funds are obligated when a student enrolls, but are paid when an institution submits reimbursement upon completion of training and earning of a credential.

Based on the attainment data and the total payments through state general fund, the average state payment per credential attained in FY 2021 was \$1,848 (total payments/credentials attained).

### **Top Training Programs and Alignment to Annual Job Openings**

While many certifications are offered, nearly three-quarters of students enrolled in the top 10 program clusters. Of the over 50 programs offered, four programs accounted for nearly half

of enrollments: Commercial Drivers' License, Medical Assistant, Highway Construction, and Entry level computer programs.

This analysis de-duplicates individual records, so that one student pursuing multiple road construction certifications, for example, is not counted twice, as that individual would theoretically take up a single job opening.

In comparing enrollments in these programs to the annual job openings provided by the Virginia Employment Commission (VEC), the certifications appear to meet an annual need. For example, VEC projects annual openings for truck drivers to be about 5,819. In FY 2021, about 1,493 individuals enrolled in the credential program to attain a commercial driver's license. Similarly, VEC projects annual openings for nursing assistants to be 5,484, but only 198 students enrolled in Certified Nursing Aide (CNA) programs.

The difference between the annual openings and enrollments does not necessarily indicate a shortage, as training programs offered by private providers are not included in this analysis. At the same time, not all students go on to earn their credential, and may not pursue the exact occupation aligned with their program.

**Table 5: Top 10 Credentials and Annual Openings by Related Occupational Field FY 2021**

Occupation	Annual Job Openings by Field*	Program	Individuals** Enrolled FY 2021
Heavy and Tractor-Trailer Truck Drivers	5,819	Commercial Driver's License A	1,493
Medical Assistants	2,122	Medical Assistant	517
Highway Maintenance Workers + Paving, Surfacing, and Tamping Equipment Operators	751	Highway Construction	487
Computer User Support Specialists	2,085	Computer Entry Level (CISCO Networking Technician and Associate, CompTIA IT Fundamentals, C	401
Welders, Cutters, Solderers, and Brazers	1,080	Welding	382
Carpenters	2,941	Core - Introductory Craft Skills	254
Phlebotomists	566	Phlebotomy Technician	252
Pharmacy Technicians	907	Pharmacy Technician	250
Medical Records and Health Information Technicians	369	Billing and Coding Specialist	231
Nursing Assistants	5,484	Certified Nurse Aide (CNA)	198

\*Review based on Virginia Employment Commission long-term 2018-2028 projections.

<https://virginiaworks.com/occupational-projections?page80257=1&size80257=12&page79862=1&size79862=12&page81630=1&size81630=12>

Differences may not represent a shortage as other individuals may complete certification through non-WCG programs.

\*\*Enrollments figures can include individuals completing multiple credentials. The figures provided for individuals represents unduplicated count of the enrollments.

## Training Completion Rates Averaged 96% and Credential Completion Rates Averaged 72%

While completion rates for training vary by field and credential type, the average completion for the last four years remains relatively stable. About 96% of enrolled individuals complete their training. Of those who complete their training, about 72% earn a credential. Some credential rates, such as IT certification, are much lower. A full list of completion rates by credential type is in the Appendix. Rates may vary because some credentialing and licensing bodies offer testing on-site while others are located elsewhere. Some students also might be able to start employment before earning a credential.

**Table 6: Average Completion Rates - FY 2021**

<b>Occupational Field</b>	<b>Training Completion Rate</b>	<b>Credential Completion Rate</b>
Computer and Mathematical	99%	26%
Construction and Extraction	98%	81%
Education, Training, and Library	95%	96%
Healthcare Practitioners and Technical	92%	40%
Healthcare Support	97%	73%
Installation, Maintenance and Repair	97%	77%
Office and Administrative Support	92%	71%
Production	99%	79%
Transportation and Material Moving	94%	80%
<b>All</b>	<b>96%</b>	<b>72%</b>

\*30 students have enrolled in the teaching license programs. 21 completed the coursework, but 23 successfully earned a teaching license, thus producing a credential completion rate over 100%.

## Participation and Completion Rates by Institution

The number of students enrolling across training institutions varies. Table 7 provides enrollments and completions by institution. Half of enrollments in FY 2021 were at institutions in rural areas of the state. The remaining enrollments occurred at urban institutions, including Germanna, Northern Virginia, Tidewater and Reynolds/Tyler community colleges.

**Table 7: FY 2021 Enrollment, Training Completion and Reported Credentials by Eligible Training Institution**

<b>Training Institution</b>	<b>Enrolled</b>	<b>Completed Training</b>	<b>Credential Attained</b>
Blue Ridge	307	303	237
Central Virginia CC	126	118	89
Dabney Lancaster CC	154	133	98
Danville CC	86	82	25
Eastern Shore CC	62	58	45
Germanna CC	1,494	1,464	1,011
John Tyler/Reynolds CC (CCWA)	1,822	1,743	1,192
Lord Fairfax CC	711	678	627
Mountain Empire CC	187	181	149
New River CC	151	144	111
Northern Virginia CC	767	759	417
Patrick Henry CC	135	129	98
Paul D. Camp CC	296	255	169
Piedmont CC	376	371	221
Rappahannock CC	144	143	130
Southern Virginia Higher Ed Center	59	53	44
Southside Virginia CC	386	376	297
Southwest Virginia CC	220	214	148
Thomas Nelson CC	395	381	166
Tidewater CC	381	371	318
Virginia Highlands CC	93	93	77
Virginia Western CC	381	376	323
Wytheville CC	171	166	159
<b>Total</b>	<b>8,904</b>	<b>8,591</b>	<b>6,151</b>

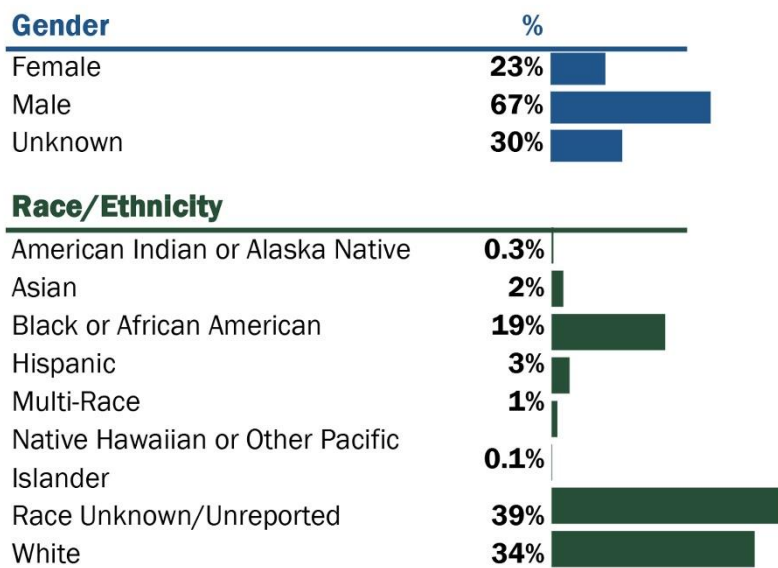


## STUDENT DEMOGRAPHICS

### Enrollment

The Workforce Credential Grant program tends to serve a nontraditional, older adult student whose average age is 35. Only 25% of students are 24 years-old or younger. Half of students are male, 23% female and 30% unknown. In previous years males accounted for 67% of program enrollments. Similarly, an increased number of records without race or ethnicity reported complicates analysis.

**Table 8: Student Demographics by Sex and Race/Ethnicity, FY 2021**



### Success

Using the data as reported, credential completion varies by race and ethnicity. (Training completion rates do not vary significantly.) Black or African American students are 14 points less likely to earn their program’s credential compared to white students. Hispanic students are seven points less likely. The increased prevalence of unreported racial and ethnic demographics makes it difficult to interpret too much for this analysis.



**Table 9: Training Completion and Credentials by Race & Ethnicity, FY 2021**

<b>Race/Ethnicity</b>	<b>Enrollment</b>	<b>Training Completion</b>	<b>Credential Completion</b>	<b>% Complete Training</b>	<b>% Complete Credential</b>
American Indian or Alaska Native	25	20	12	80%	60%
Asian	220	217	146	99%	67%
Black or African American	1,717	1,603	1,056	93%	66%
Hispanic	301	286	202	95%	71%
Multi-Race	129	122	93	95%	76%
Native Hawaiian or Other Pacific Islander	8	8	8	100%	100%
Race Unknown/Unreported	3,453	3,396	2,289	73%	53%
White	3,051	2,939	2,345	96%	80%
<b>Total</b>	<b>8,904</b>	<b>6,879</b>	<b>4,906</b>	<b>92%</b>	<b>71%</b>



## EARNINGS OUTCOMES

### Methodology

When the General Assembly established the program in 2016, an important component was to align training to high-demand fields where there was an unmet need for workers. Code also requires SCHEV to report “information on the wages, including average wage and other relevant information, of students who have completed noncredit workforce training programs by credential name and relevant industry sectors.” To better evaluate the impact of the program on an individuals’ job prospects, it is also important to measure wages before completing the program as well as after.

Wages were matched through the Virginia Longitudinal Data System with Virginia Employment Commission (VEC) wage records. While a valuable and unique source of post-program wages, these records still suffer from a few flaws. Some people are exempt from reporting, such as individuals who are self-employed, work for the federal government or those who meet other exemption qualifications. Wages also are collected on a quarterly basis, without any indication of the hours worked. This makes it impossible to know whether an individuals’ quarterly wage was based on full-time or part-time work. Matching individual records from their training to their incomes also takes time, resulting in wage outcomes that are not as up to date as information about the program itself.

To accurately assess programs’ impact on wages, SCHEV staff only compared students who had at least four quarters of wages before and four quarters of wage records after completing the program. SCHEV staff summed those four quarters to serve as a proxy for annual income, despite the fact that those individuals might be earning additional income not counted in that quarterly wage, or that they could be choosing to work part-time.

Given the need to restrict analysis to students with wages before and after completing the program, the analysis below includes students throughout the history of the program, and not just for FY 2021. The most recent wage data currently available is FY 2020. SCHEV staff then analyzed earnings of the remaining 15,209 students with wage records before and after enrolling in the program. Of these, 14,349 students completed their program and 10,700 earned their credential.

### Earnings Analysis

Before enrolling in WCG programs, students who completed their program earned a median annual wage of \$24,610. After completion, students earned a median wage of \$32,880. This



represents a 34% increase compared to the media pre-wage. The median wage increase was \$6,122.

Students who went on to earn the credential saw a greater increase to their wages: an increase in median earnings of 36% or nearly \$7,000 annually. Notably, students who would go on to earn their credential started at similar starting wages as students who did not go on to earn a credential, suggesting that post-wages have more to do with credential attainment than the students' socio-economic background.

**Table 10: Wages Pre- and Post-Program of WCG Completers, by Credential Status**

	# of Students w/ pre- and post- wages successfully matched	Median Pre-wage	Median Post-wage	Median Wage Change
<b>Did Not Earn Credential</b>	3,649	\$21,689	\$26,405	\$3,928
<b>Earned Credential</b>	10,700	\$25,665	\$34,928	\$6,956
<b>Total</b>	<b>14,349</b>	<b>\$24,610</b>	<b>\$32,880</b>	<b>\$6,122</b>

### Median Wages Increased in all Occupational Fields

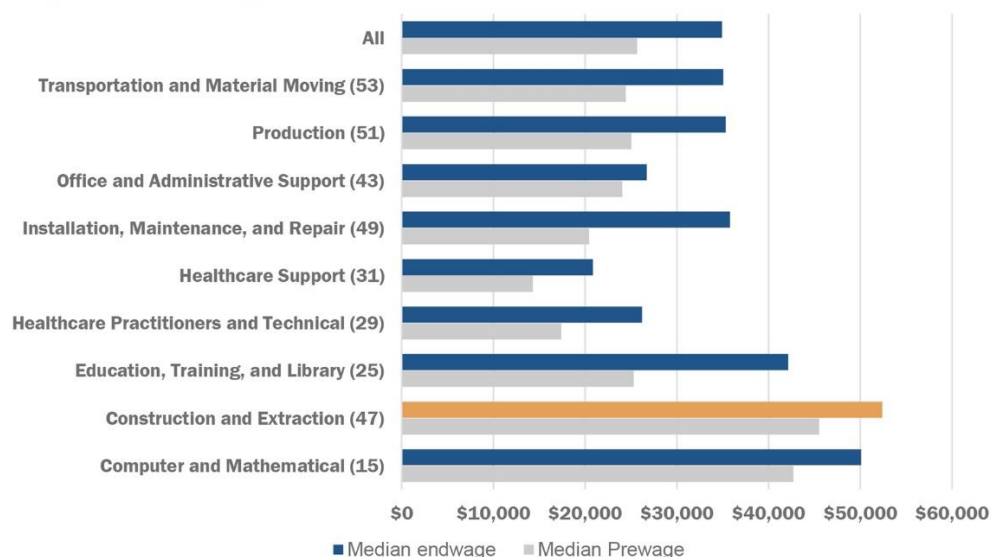
To more effectively measure specific credentials' impact on wages, Table 10 only examines the 10,700 students who earned their credential and successfully had their pre- and post-program wages matched. In all occupational fields, median wages increased after attaining the credential. Students who earned credentials in construction and extraction earned the highest median wages at \$52,395. These students also started with a higher pre-wage however out of any other group. Students who earned credentials in Installation, Maintenance, and Repair fields saw the largest median wage increases of nearly \$13,000.





**Table 10: WCG Training Median Wages Before & After Earning Credential**

**In all occupational fields, median wages increased after attaining the credential. Students who earned credentials in construction and extraction earned the highest median wages.**



Students who earned credentials in Installation, Maintenance saw the highest dollar increase in median wages (\$11,601). Students with Healthcare Practitioner and technical credentials saw the highest percentage increase in wages (57%). Notably these students started with the lowest median wage just over \$14,000.

**Table 11: Wages Pre- and Post-Program for Credentialed Students by Industry**

	# of Students w/ pre- and post- wages successfully matched	Median Pre-wage	Median Post-wage	Median Wage Change	Students receiving positive wage premium
Computer and Mathematical (15)	424	\$46,564	\$51,201	\$7,313	45%
Construction and Extraction (47)	2,122	\$33,261	\$43,725	\$9,101	70%
Education, Training, and Library (25)	156	\$25,306	\$42,124	\$8,692	52%
Healthcare Practitioners and Technical (29)	230	\$14,294	\$22,627	\$8,148	61%
Healthcare Support (31)	1,583	\$14,136	\$20,824	\$4,664	57%
Installation, Maintenance, and Repair (49)	845	\$22,737	\$33,372	\$11,601	61%
Office and Administrative Support (43)	452	\$25,205	\$26,886	\$3,508	54%
Production (51)	1,726	\$25,066	\$37,411	\$9,362	61%
Transportation and Material Moving (53)	3,162	\$24,841	\$34,928	\$7,190	53%
<b>Grand Total</b>	<b>10,700</b>	<b>\$22,895</b>	<b>\$31,607</b>	<b>\$7,050</b>	<b>57%</b>

## Wages by Race & Ethnicity

All credentialed racial and ethnic groups saw increases in their median wages. The wage analysis by race and ethnicity is complicated by the high numbers of unknown and unreported, and some groups having relatively small cell sizes (see the enrollments and success rates by race and ethnicity above).

**Table 12: Wages Pre- and Post-Program for Credentialed Students by Race & Ethnicity**

	# of Students w/ pre- and post- wages successfully matched	Median Pre-wage	Median Post-wage	Median Wage Change
American Indian or Alaska Native	41	22,111	37,163	11,473
Asian	253	31,250	34,698	6,857
Black or African American	2,330	21,235	28,211	6,623
Hispanic	428	23,210	31,397	7,313
Multi-Race	168	14,933	24,954	4,913
Native Hawaiian or Other Pacific Islander	18	16,519	38,752	26,080
Unknown	1,023	32,185	41,901	6,130
Unreported	686	31,161	38,704	6,061
White	5,753	26,687	37,433	7,372
<b>Grand Total</b>	<b>10,700</b>	<b>25,784</b>	<b>35,060</b>	<b>6,951</b>

## Wage Increase by Income Range

To better understand WCG's impact on social mobility, Table 13 measures students' wages by pre-wage quartile. Usually in this type of analysis there is an equal number of records in each group. However, students still needed to have their post-program wages matched, so the number of students in each quartile varies.

All income groups' median wages increased after completing their credential. Students in the bottom quartile (with wages less than \$8,600 before completing their credential) saw the highest median wage increase. These lowest income students saw median wage increases of over \$12,000, or over 400%.

**Table 13: Wages Pre- and Post-Program for Credentialed Students by Income Quartile**

<b>Pre-Wage Quartile</b>	<b>Median Pre-wage</b>	<b>Median Post-wage</b>	<b>Median Wage Change</b>
<b>1<sup>st</sup></b> (\$0 - \$8,605)	\$2,708	\$16,391	\$12,435
<b>2<sup>nd</sup></b> (\$8,606 - \$22,268)	\$15,380	\$23,045	\$7,126
<b>3<sup>rd</sup></b> (\$22,269 - \$39,788)	\$30,262	\$35,221	\$4,329
<b>4<sup>th</sup></b> (\$39,789 and Up)	\$57,000	\$60,258	\$2,988



## **ADDITIONAL OBSERVATIONS AND NEXT STEPS**

Since the inception of the Workforce Credential Grant in 2016, the program has continued to grow based on student demand. The largest areas of enrollment occur in occupational fields with annual job openings that exceed training completions. In addition, median earnings continue to grow post-training completion.

The Virginia Board for Workforce Development is expected to update the list of high-demand occupations this year. The Virginia Community College System and other WCG providers will then match program offerings to this updated list of high-demand occupations. The newly created Virginia Office of Education Economics also will start contributing to analysis and policy related to education's alignment with workforce demand.



**APPENDIX: FY 2021 TRAINING CREDENTIAL ENROLLMENT, COMPLETIONS AND COSTS**

	<b>Enrollments</b>	<b>Training Completions</b>	<b>Credential Completions</b>	<b>% Complete Training</b>	<b>% Complete Credential</b>	<b>Average Tuition</b>	<b>Sum of GF reimbursed</b>	<b>Average of GF Reimbursed</b>
<b>Computer and Mathematical (15)</b>	<b>829</b>	<b>823</b>	<b>214</b>	<b>99%</b>	<b>26%</b>	<b>\$691</b>	<b>\$706,267</b>	<b>\$852</b>
AWS Certified Cloud Practitioner	46	46	15	100%	33%	\$482	\$28,457	\$619
AWS Certified Solutions Architect	36	36	9	100%	25%	\$669	\$30,660	\$852
CompTIA Linux+ Certification	17	17	5	100%	29%	\$769	\$17,068	\$1,004
CompTIA Network+	107	106	29	99%	27%	\$561	\$74,142	\$693
CompTIA Server+	6	4	4	67%	100%	\$250	\$2,000	\$333
Information Systems Security (CompTIA Security, Certified professional and ethical hacker)	148	148	45	100%	30%	\$697	\$138,515	\$936
Project Management Professional (PMP)	12	12	1	100%	8%	\$800	\$10,400	\$867
Computer Entry Level (CISCO Networking Technician and Associate, CompTIA IT Fundamentals, C	457	454	106	99%	23%	\$743	\$405,025	\$886
<b>Construction and Extraction (47)</b>	<b>1,912</b>	<b>1,883</b>	<b>1,531</b>	<b>98%</b>	<b>81%</b>	<b>\$284</b>	<b>\$997,427</b>	<b>\$522</b>
Construction (Project Management, Carpentry, Contractor's License)	52	49	22	94%	45%	\$471	\$44,410	\$854
Core - Introductory Craft Skills	337	326	284	97%	87%	\$335	\$208,577	\$619
Electrical and electrical systems	19	19	19	100%	100%	\$302	\$11,489	\$605
Heavy Equipment Operations	155	152	142	98%	93%	\$1,030	\$299,148	\$1,930
Highway Construction	1,186	1,180	917	99%	78%	\$129	\$270,993	\$228
HVAC (includes license renewal)	31	31	20	100%	65%	\$454	\$23,100	\$745
Marine Trade Training	102	98	99	96%	101%	\$526	\$101,690	\$997
Plumbing (including license renewal)	30	28	28	93%	100%	\$678	\$38,020	\$1,267
<b>Education, Training, and Library (25)</b>	<b>99</b>	<b>94</b>	<b>90</b>	<b>95%</b>	<b>96%</b>	<b>\$1,330</b>	<b>\$244,720</b>	<b>\$2,472</b>
Teaching License	99	94	90	95%	96%	\$1,330	\$244,720	\$2,472
<b>Healthcare Practitioners and Technical (29)</b>	<b>444</b>	<b>408</b>	<b>163</b>	<b>92%</b>	<b>40%</b>	<b>\$563</b>	<b>\$324,601</b>	<b>\$731</b>
EKG Technician	68	68	50	100%	74%	\$499	\$59,731	\$878
Emergency Medical Technician	106	92	52	87%	57%	\$520	\$77,630	\$732

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Pharmacy Technician	270	248	61	92%	25%	\$596	\$187,240	\$693
<b>Healthcare Support (31)</b>	<b>1,137</b>	<b>1,098</b>	<b>805</b>	<b>97%</b>	<b>73%</b>	<b>\$861</b>	<b>\$1,637,991</b>	<b>\$1,441</b>
Certified Nurse Aide (CNA)	209	203	109	97%	54%	\$703	\$216,703	\$1,037
Massage Therapist	10	8	-	80%	0%	\$1,500	\$12,000	\$1,200
Medical Assistant	558	538	427	96%	79%	\$1,061	\$1,023,441	\$1,834
Medication Aide	13	13	8	100%	62%	\$367	\$7,707	\$593
Phlebotomy Technician	347	336	261	97%	78%	\$634	\$378,140	\$1,090
<b>Installation, Maintenance, and Repair (49)</b>	<b>821</b>	<b>800</b>	<b>617</b>	<b>97%</b>	<b>77%</b>	<b>\$843</b>	<b>\$1,244,107</b>	<b>\$1,515</b>
Driveline/Hydraulics Certification	4	4	4	100%	100%	\$932	\$7,456	\$1,864
Electrical and electrical systems	224	218	142	97%	65%	\$542	\$196,229	\$876
Engine Repair	12	12	7	100%	58%	\$162	\$3,065	\$255
Facilities Maintenance	14	14	9	100%	64%	\$750	\$16,345	\$1,168
HVAC (includes license renewal)	239	232	171	97%	74%	\$658	\$273,607	\$1,145
Power Industry Fundamentals	85	83	83	98%	100%	\$1,204	\$199,800	\$2,351
Power Line Worker	151	145	146	96%	101%	\$1,438	\$418,500	\$2,772
Automotive	88	88	52	100%	59%	\$866	\$126,774	\$1,441
Industrial Maintenance Mechanic	4	4	3	100%	75%	\$333	\$2,331	\$583
<b>Office and Administrative Support (43)</b>	<b>587</b>	<b>538</b>	<b>383</b>	<b>92%</b>	<b>71%</b>	<b>\$849</b>	<b>\$777,904</b>	<b>\$1,318</b>
Billing and Coding Specialist	243	240	213	99%	89%	\$1,014	\$459,212	\$1,867
Customer Services and Sales	61	55	46	90%	84%	\$280	\$28,280	\$464
Medical Administrative Assistant	100	95	77	95%	81%	\$673	\$114,392	\$1,144
Professional Coder	171	136	46	80%	34%	\$928	\$167,050	\$977
SHRM Certified Professional	12	12	1	100%	8%	\$690	\$8,970	\$748
<b>Production (51)</b>	<b>1,089</b>	<b>1,078</b>	<b>851</b>	<b>99%</b>	<b>79%</b>	<b>\$573</b>	<b>\$1,104,411</b>	<b>\$1,014</b>
Backflow Prevention	13	13	13	100%	100%	\$100	\$2,600	\$200
Machining	147	147	135	100%	92%	\$621	\$176,349	\$1,200
Manufacturing entry level (specialist and production technician)	129	129	90	100%	70%	\$394	\$89,524	\$694
Mechatronics (Siemens Certifications)	5	5	3	100%	60%	\$1,410	\$11,250	\$2,250
Photovoltaic	21	21	6	100%	29%	\$475	\$12,825	\$611
Welding	636	625	476	98%	76%	\$637	\$701,863	\$1,104

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Six Sigma / Lean Practitioner	138	138	128	100%	93%	\$417	\$110,000	\$797
<b>Transportation and Material Moving (53)</b>	<b>1,986</b>	<b>1,869</b>	<b>1,497</b>	<b>94%</b>	<b>80%</b>	<b>\$1,274</b>	<b>\$4,327,647</b>	<b>\$2,177</b>
Commercial Driver's License A	1,641	1,561	1,271	95%	81%	\$1,466	\$4,149,443	\$2,526
Remote Pilot Airman Certification	35	35	13	100%	37%	\$158	\$7,104	\$203
Logistics	310	273	213	88%	78%	\$384	\$171,100	\$552
<b>Grand Total</b>	<b>8,904</b>	<b>8,591</b>	<b>6,151</b>	<b>96%</b>	<b>72%</b>	<b>\$766</b>	<b>\$11,365,075</b>	<b>\$1,276</b>