North Carolina Career and Technical Education
Credential Attainment Report 2023-2024

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EXECUTIVE SUMMARY

Credentials in North Carolina Secondary Career and Technical Education (CTE)

Industry certifications and credentials are offered through multiple CTE courses. Credentials recognized by NC CTE are a valid proof of learning typically endorsed by business and industry partners and provide documentation for student mastery of skills required for employment and advancement in a career.

North Carolina CTE experienced a steady increase in credential attainment between academic years 2010-2011 and 2018-2019; however, a two-year decline began in Spring 2020 and can be directly related to three distinct factors.

- The COVID-19 pandemic negatively impacted credential administration and reporting.
- The new Strengthening Career and Technical Education for the 21st Century Act (Perkins V) required pathway realignments with a more focused definition of recognized credentials.
- The exclusion of ACT WorkKeys® credentials in the total count of credentials reduced the overall attainment count. Only credentials aligned to CTE courses are included in the attainment data. However, ACT WorkKeys® data is provided separately in the report.

The trend has shifted to consistent increases since the 2020-2021 school year. The 2023-2024 academic year saw 358,069 individual credentials earned and reported statewide, which represents the highest attainment over the 14 years NC CTE has collected and reported industry-recognized credentials.

Credential Potential

During the 2021-2022 academic year, NC CTE initiated a transition to the concept of *Credential Potential.* Credential Potential is the total number of credentials available to students in a Public School Unit (PSU). PSU CTE leadership is encouraged to establish a goal for the percentage of the PSU Credential Potential to achieve each year. Many factors impact a PSU's possible Credential Potential attainment.

- Courses that offer multiple credentials for the same content, such as Career Management, will reasonably only see attainment with one of the available credentials,
- Credentials that are in the process of being implemented for the first time in a PSU may see lower attainment until fully implemented, and
- Students who take a course over multiple semesters typically attempt the credential during the last portion of the course.

Data Collection

Educators and business and industry representatives recommend credentials each year that are aligned to the CTE curriculum and valued by employers. Proposed credentials are researched to ensure they meet requirements for reporting.

Credential attainment data was collected for each student and matched to enrollment information. Much of the NC CTE credential attainment data was collected directly from the credentialing agency. Additional results were collected from students using third-party software. Care was taken to protect the confidentiality of student information during the collection and analysis process.

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INTRODUCTION

Of adults ages 25 and older, 41% have no more than a high school education, contributing to the talent shortage across multiple industries in the United States (Hawkins, 2019). Career pathways through CTE programs should include options for dual-enrollment, work-based learning and credentialing (Meeder, 2016). Industry-recognized credentials are of utmost importance today, providing labor market currency and serving as opportunities for economic momentum for high school students, especially for underserved students (Education Strategy Group et al., 2018). Reforms to state policies are aimed at increasing the number of students earning credentials and certificates, at both the high school and community college level (Guth, 2017). High-quality CTE programs include qualified educators with strong understanding of industry trends, work-site learning experiences for students, and student access to industry-recognized credentialing opportunities (Gordo & Shultz, 2020). The benefits of students earning industry-recognized credentials includes aspects impacting the students, businesses and communities. For students, industry-recognized credentials offer long-term financial benefits through increased wages and long-term earnings (Dougherty, 2018).

Additionally, benefits to students go beyond monetary impact and include positive increases in psychological characteristics, such as increased feelings of self-worth (Dougherty, 2018). Students who earn industry-recognized credentials build capacity for the completion of tasks and develop a relational connection between an investment of time and work to positive outcomes. For businesses that hire credentialed students, the benefits include reductions in on-the-job training costs and employees with value-added skill sets (Fletcher & Tyson, 2017). When students enter the workforce with industry-recognized credentials, businesses save the resources of time and money needed to provide credentials to new employees. For communities, positive credentialing data communicates a value in workforce skills and contributes to the economic well-being of the community by drawing future industries to the area (Education Strategy Group et al., 2018).

For this report, industry-recognized credentials are industry credentials that serve as validations of qualifications demonstrated by individuals and are used to verify specific technical competencies or capabilities aligned to industry needs (Murawski, 2019). A credential can be based on a written, oral or performance-based examination, or a combination of the three, and may require supervised work-based learning experience in addition to successfully passing the credentialing exam. Credentials differ from licenses, which are generally issued by a governmental entity. Licenses frequently are required for a practitioner to enter a field, while credentials help potential employees get hired or qualify them for a higher pay level but are not legally mandated.

Credential Trend Data

Across North Carolina, CTE students have earned and reported 2,609,867 credentials since the 2010-2011 academic year. Of that number, 358,069 credentials were earned and reported during the 2023-2024 academic school year. The chart below depicts the trend data from the 2016-2017 academic year through the 2023-2024 academic year.

- The sharp increase in credentials reported from 2016-2017 to 2017-2018 is attributed to the reporting of individual credentials in courses with combined credentials.

- The slight decrease in credentials reported from 2018-2019 to 2019-2020 is attributed to the initial impact of COVID-19 and the transition to virtual instruction in March 2020.
- The decrease in credentials reported during 2020-2021 is attributed to the continued impact of COVID-19 and virtual instruction, the realignment of pathways and credentials due to changes associated with the Strengthening Career and Technical Education for the 21st Century Act (Perkins V), and the decision to no longer include ACT WorkKeys® results in the overall credential attainment number. ACT WorkKeys® results are reported through the Office of Accountability and Testing. While ACT WorkKeys® is an important Career Readiness Credential offered to CTE Concentrators, it is not aligned to a specific CTE course. Beginning with the 2020-2021 academic year, all individual credentials reported are aligned with NC CTE courses.
- The increase in credentials reported in the 2021-2022 school year is attributed to the return to in-person instruction as a transition through COVID-19 and increased credential funding provided by the North Carolina General Assembly
    - In 2020-2021 and prior years, local districts received approximately 10% of the needed funding to offer all students credentialing opportunities.
    - In 2021-2022, funding increased to accommodate approximately 43% of the funding needed to offer all students the opportunity to earn credentials aligned to their CTE courses.
    - During the 2022-2023 academic year, funding increased again, reaching $15.8 million, and local districts were funded over 98% of the needed amount to offer all students the opportunity to earn credentials aligned to their CTE courses. As a result, 41% of available credentials were earned and reported, which is an increase of 13 percentage points from the 28% credential attainment achieved in 2021-2022.
    - Funding during the 2023-2024 academic year remained at $15.8 million, and local districts were funded 100% of the needed amount to offer all students the opportunity to earn credentials aligned to their CTE courses. With continued funding from the North Carolina General Assembly and an increased focus on credential attainment by local CTE leadership, NC CTE students achieved an all-time high of 358,069 credentials earned and reported (53% of available credentials).

Chart 1. NC CTE Credential Attainment by Academic Year

NC CTE Credential Attainment by Academic Year
2016-2017 through 2023-2024
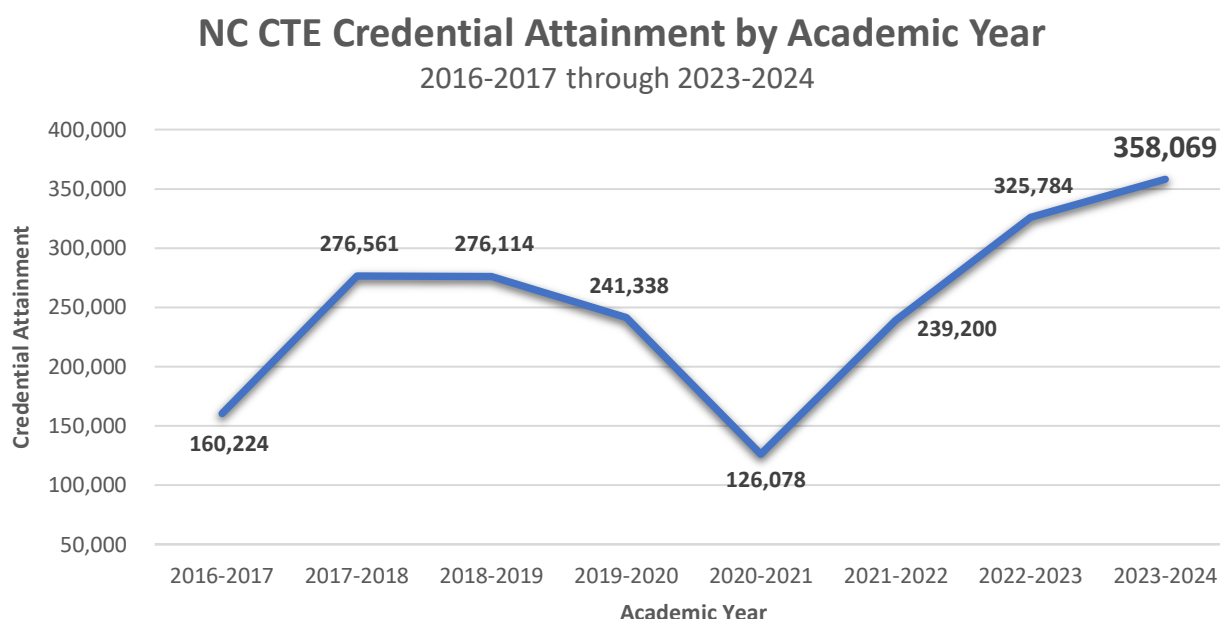
STATEWIDE RESULTS

Overview

During the 2023-2024 academic year, 363 different individual credentials measuring workplace readiness skills or proficiency in career-specific skills were available to students across North Carolina. Credentials related to workplace readiness skills represent general job skills applicable to many different careers such as Microsoft Office Specialist (MOS) certifications in MOS Word, MOS Excel, MOS PowerPoint, and MOS Access. Examples of credentials that are indicative of career-specific skills include the North Carolina Nurse Aide certificate and the Certified Veterinary Assistant certificate.

Table 1. 2023-2024 Credentials by CTE Course

AGRICULTURAL EDUCATION	
Course	**Credential Name**
AA21-Animal Science I	Youth for the Quality Care of Animals (YQCA)
AA22-Animal Science II - Food Animal	Beef Quality Assurance Program Cow/Calf Certification
AA22-Animal Science II - Food Animal	North Carolina Beef Quality Assurance
AA32-Equine Science II	Equine Management and Evaluation Certification
AA41-Veterinary Assisting	Certified Veterinary Assistant
AA41-Veterinary Assisting	Elanco Veterinary Medical Applications
AN52-Natural Resources II	North Carolina Hunter Education Training
AP43-Turfgrass Management	NC Private Pesticide Applicator
AS31-Agricultural Mechanics I	OSHA 10-hour General Industry Safety and Health
AS32-Agricultural Mechanics II	Certified Welders per Welding Code AWS D1.1

Course	Credential Name
AS32-Agricultural Mechanics II	National Safe Tractor and Machinery Operation Certification
AS33-Agricultural Mechanics II - Small Engines	North Carolina State Competency Exam
AU11-Agricultural Production I	North Carolina Beef Quality Assurance
AU11-Agricultural Production I	Youth for the Quality Care of Animals (YQCA)
AU12-Agricultural Production II	North Carolina Beef Quality Assurance
AU12-Agricultural Production II	Youth for the Quality Care of Animals (YQCA)
AU22-Sustainable Agriculture Production II	Certified Beekeeper
IL41-Aquaculture II	North Carolina Boater Education Certificate

BUSINESS, FINANCE AND MARKETING EDUCATION

Course	Credential Name
BA20-Accounting II	Intuit QuickBooks Certified User
CS12-Project Management II	PMI Project Management Ready
MA52-Marketing Applications	Customer Service and Sales Certification
MA52-Marketing Applications	Fundamental Marketing Concepts
ME11-Entrepreneurship I	Venture Entrepreneurial Expedition
ME12-Entrepreneurship II	Entrepreneurship and Small Business
MH42-Hospitality and Tourism	American Hotel and Lodging Association Certified Guest Service Professional
ML05-Introduction to Salesforce CRM	Salesforce Administrator Certification

CAREER DEVELOPMENT EDUCATION

Course	Credential Name
CC45-Career Management	Conover Credential Workplace Readiness Job Readiness
CC45-Career Management	Express Employment Professionals Career Preparedness Certification
CC45-Career Management	Microburst Learning Soft Skills for Success

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY EDUCATION

Course	Credential Name
BI12-CompTIA IT Fundamentals	CompTIA IT Fundamentals+ (ITF+)
BL52-Develop in Swift Explorations	App Development with Swift Associate
BL53-Develop in Swift Fundamentals	App Development with Swift Certified User
BL66-Fundamentals of Information Security I	CompTIA A+ (Core 1)
BL66-Fundamentals of Information Security I	CompTIA A+ (Core 2)
BL66-Fundamentals of Information Security I	CompTIA IT Fundamentals+ (ITF+)
BM10-Microsoft Word and PowerPoint	Microsoft Office Specialist PowerPoint
BM10-Microsoft Word and PowerPoint	Microsoft Office Specialist Word
BM20-Microsoft Excel	Microsoft Office Specialist Excel
BM20-Microsoft Excel	Microsoft Office Specialist Excel Expert
BN22-Network Administration II	CompTIA Network+
BN32-Network Security II	CompTIA Security+
BP16-Python Programming II	PCAP Certified Associate in Python Programming

Course	Credential Name
BP20-SAS Base Programming	SAS Certified Specialist Programming Fundamentals Using SAS 9.4
IA11-Introduction to Graphic Communications	PrintED Introduction to Graphic Communication
IA13-Advertising and Design	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator
IA13-Advertising and Design	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign
IA13-Advertising and Design	Adobe Certified Professional - Visual Communication Using Adobe Photoshop
IA32-Digital Media II	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
IA32-Digital Media II	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator
IA32-Digital Media II	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign
IA32-Digital Media II	Adobe Certified Professional - Visual Communication Using Adobe Photoshop
IA32-Digital Media II	Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver
II12-Cisco Network Engineering Technology II	Cisco Certified Technician (CCT) Routing and Switching
II21-Computer Engineering Technology I	CompTIA A+ (Core 1)
II22-Computer Engineering Technology II	CompTIA A+ (Core 2)
II41-Adobe Visual Design I	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator
II41-Adobe Visual Design I	Adobe Certified Professional - Visual Communication Using Adobe Photoshop
II42-Adobe Visual Design II	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign
II43-Adobe Digital Design I	Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver
II45-Adobe Video Design I	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
IK66-Film, Television, and Video Production I	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
IK67-Film, Television, and Video Production II: News Production	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
TE21-Principles of Technology I	OSHA 10-hour General Industry Safety and Health
TE22-Principles of Technology II	OSHA 10-hour General Industry Safety and Health
TL51-3D Modeling II	Autodesk Certified User 3DS Max
TL52-Unity 3D Programming II	Unity Certified User: Programmer
TR18-SREB AC IST Creativity and Innovations	NI Certified LabVIEW Associate Developer (CLAD)
TS25-Digital Design and Animation II	Autodesk Certified User 3DS Max
TS25-Digital Design and Animation II	Autodesk Certified User Maya

FAMILY AND CONSUMER SCIENCES EDUCATION

Course	Credential Name
FA32-Apparel and Textile Production II	Pre-Professional Certification in Fashion, Textiles, and Apparel
FC14-Counseling and Mental Health II	Pre-Professional Certification in Family and Community Services
FE11-Early Childhood Education I	First Aid/CPR/AED
FE11-Early Childhood Education I	North Carolina Early Childhood Credential
FE21-Teaching as a Profession I	Basic School Age Care (BSAC)
FH11-Culinary Arts and Hospitality II App	ANSI - Accredited Food Protection Manager Certification
FH12-Culinary Arts and Hospitality II Internship	ANSI - Accredited Food Protection Manager Certification
FH13-Culinary Arts and Hospitality III	Certified Fundamentals Cook (CFC)
FH13-Culinary Arts and Hospitality III	Pre-Professional Certification in Culinary Arts
FH13-Culinary Arts and Hospitality III	ProStart National Certificate of Achievement (COA)
FI22-Interior Design Studio	Pre-Professional Certification in Interior Design Fundamentals
FI23-Interior Design Technology	Autodesk Certified User Revit
FN41-Food and Nutrition I	ANSI - Accredited Food Handler Certificate
FN42-Food and Nutrition II	ANSI - Accredited Food Protection Manager Certification
FN42-Food and Nutrition II	Pre-Professional Certification in Nutrition, Food, and Wellness
FN43-Food Science and Technology	Food Safety and Science Certification
FN43-Food Science and Technology	Pre-Professional Certification in Food Science Fundamentals

HEALTH SCIENCES EDUCATION

Course	Credential Name
HB12-Biomedical Technology II	OSHA 10-hour General Industry Safety and Health
HH32-Pharmacy Technician	CPhT Certified Pharmacy Technician
HL21-Biomedical Innovations	OSHA 10-hour General Industry Safety and Health
HN43-Nursing Fundamentals and Practicum	North Carolina Nurse Aide I
HN44-Fundamentals of Gerontology	Nurse Aide I - Geriatric Aide Endorsement
HN45-Public Health Fundamentals	Nurse Aide I - Home Care Aide Endorsement
HP70-PLTW Principles of Biomedical Sciences	Stop the Bleed
HP71-PLTW Human Body Systems	First Aid
HP72-PLTW Medical Interventions	CPR/AED
HU40-Health Science I	First Aid
HU42-Health Science II	BLS Provider
HU42-Health Science II	OSHA 10-hour General Industry Safety and Health
HU42-Health Science II	Stop the Bleed

TRADE AND INDUSTRIAL EDUCATION

Course	Credential Name
IC00-Construction Core	NC NCCER - Construction Core
IC00-Construction Core	OSHA 10-hour Construction Safety and Health
IC11-Masonry I	NC NCCER - Masonry I
IC12-Masonry II	NC NCCER - Masonry II
IC13-Masonry III	NC NCCER - Masonry III
IC21-Carpentry I	NC NCCER - Carpentry I
IC22-Carpentry II	NC NCCER - Carpentry II
IC23-Carpentry III	NC NCCER - Carpentry III
IC41-Electrical Trades I	NC NCCER - Electrical Trades I
IC42-Electrical Trades II	NC NCCER - Electrical Trades II
IC43-Electrical Trades III	NC NCCER - Electrical Trades III
IC61-Drafting I	Autodesk Certified User AutoCAD
IC62-Drafting II - Architectural	Autodesk Certified User Revit
IC63-Drafting III - Architectural	Autodesk Certified Professional Revit
IC71-Solar Photovoltaics I	NC NCCER - Solar Photovoltaics I
IC72-Solar Photovoltaics II	NC NCCER - Solar Photovoltaics II
ID10-Drone Technology Fundamentals	FAA Trust
ID11-Drone Technology I	CFR 14 Part 107 UAS Remote Pilot Certification
ID11-Drone Technology I	NCDOT NC UAS Operator Permit
ID12-Drone Technology II	ESRI Drone2Map
ID12-Drone Technology II	NFPA 2400
IK26-Advanced Transportation Technology	ASE Entry-Level Certification - Maintenance and Light Repair
IK49-Advanced Criminal Justice II	Expandable Baton Certification
IK68-Industrial, Trade, and Technology Applications	Certified Manufacturing Associate (CMfgA)
IK68-Industrial, Trade, and Technology Applications	OSHA 10-hour General Industry Safety and Health
IL53-Marine Occupations I	North Carolina Boater Education Certificate
IL54-Marine Occupations II	NC NCCER - Maritime Pipefitting Level 1
IL55-HVAC/R I	NC NCCER - HVAC/R I
IL56-HVAC/R II	NC NCCER - HVAC/R II
IL57-HVAC/R III	NC NCCER - HVAC/R III
IL58-Plumbing I	NC NCCER - Plumbing I
IL59-Plumbing II	NC NCCER - Plumbing II
IL60-Plumbing III	NC NCCER - Plumbing III
IL73-Marine Occupations III	NC NCCER - Maritime Structural Fitting
IL80-Construction Technology I	NC NCCER - Construction Technology I
IL80-Construction Technology I	OSHA 10-hour Construction Safety and Health
IL81-Construction Technology II	NC NCCER - Construction Technology II
IM11-Advanced Manufacturing I	Certified Production Technician (CPT) - Maintenance Awareness

Course	Credential Name
IM11-Advanced Manufacturing I	Certified Production Technician (CPT) - Safety
IM11-Advanced Manufacturing I	OSHA 10-hour General Industry Safety and Health
IM12-Advanced Manufacturing II	Certified Production Technician (CPT) - Manufacturing Processes and Production
IM12-Advanced Manufacturing II	Certified Production Technician (CPT) - Quality Practices and Measurement
IM14-Manufacturing Robotics	FANUC Certified Robot Operator
IM21-Woodworking I	OSHA 10-hour Construction Safety and Health
IM22-Woodworking II	Woodwork Career Alliance (WCA) Sawblade Certificate
IM31-Electronics I	ETA EM1
IM32-Electronics II	ETA EM4
IM33-Electronics III	ETA EM2
IM41-Metals Manufacturing Technology I	NIMS Measurement, Materials, and Safety
IM42-Metals Manufacturing Technology II	NIMS Job Planning, Benchwork, and Layout
IM43-Metals Manufacturing Technology III	NIMS Milling I
IM61-Welding Technology I	AWS SENSE Entry Welder Program - Thermal Cutting Process
IM61-Welding Technology I	OSHA 10-hour Construction Safety and Health
IM61-Welding Technology I	S/P2 Welding Safety and Pollution Prevention
IM62-Welding Technology II	AWS SENSE Entry Welder Program - Shielded Metal Arc Welding Process
IM62-Welding Technology II	Certified Welder per Welding Code AWS D1.1 (SMAW)
IM63-Welding Technology III	AWS SENSE Entry Welder Program - Flux Cored Arc Welding Process
IM63-Welding Technology III	AWS SENSE Entry Welder Program - Gas Metal Arc Welding Process
IM63-Welding Technology III	Certified Welder per Welding Code AWS D1.1 (FCAW)
IM63-Welding Technology III	Certified Welder per Welding Code AWS D1.1 (GMAW)
IM74-SREB AC Proj in Automated Materials Join	NI Certified LabVIEW Associate Developer (CLAD)
IP11-Public Safety I	Law and Public Safety Introductory Competency
IP11-Public Safety I	National Incident Management System
IP12-Public Safety II	Community Emergency Response Team (CERT)
IP12-Public Safety II	National Basic 9-1-1 Dispatch Certification
IP21-Emergency Medical Technology I	BLS Provider
IP21-Emergency Medical Technology I	Emergency Medical Responder (EMR)
IP21-Emergency Medical Technology I	National Incident Management System
IP21-Emergency Medical Technology I	Stop the Bleed
IP22-Emergency Medical Technology II	Emergency Medical Technician (EMT)
IP31-Firefighter Technology I	NCOSFM - Firefighter Technology I
IP32-Firefighter Technology II	NCOSFM - Firefighter Technology II
IP33-Firefighter Technology III	NCOSFM - Firefighter Technology III
IP41-Law and Justice I	National Law Enforcement Certification SPSS

Course	Credential Name
IP42-Law and Justice II	Certified Protection Officer (CPO)
IP51-Emergency Management I	NC Emergency Management I Certification
IP52-Emergency Management II	NC Emergency Management II Certification
IT11-Automotive Service Fundamentals	S/P2 Automotive Service Pollution Prevention
IT11-Automotive Service Fundamentals	S/P2 Automotive Service Safety
IT17-Automotive Service II	ASE Entry-Level Certification - Brakes
IT17-Automotive Service II	ASE Entry-Level Certification - Maintenance and Light Repair
IT18-Automotive Service III	ASE - Auto Maintenance and Light Repair (Test G1)
IT18-Automotive Service III	ASE Entry-Level Certification - Electrical/Electronic Systems
IT30-Collision Repair Fundamentals	S/P2 Collision Repair and Refinish Pollution Prevention
IT30-Collision Repair Fundamentals	S/P2 Collision Repair and Refinish Safety
IT32-Collision Repair II - Non-Structural	I-CAR Platinum ProLevel 1 for Non-Structural
IT33-Collision Repair II - Refinishing	ASE Entry-Level Certification - Painting and Refinishing
IT33-Collision Repair II - Refinishing	I-CAR Platinum ProLevel 1 for Refinishing
IV22-Drafting II - Engineering	Autodesk Certified User Inventor
IV22-Drafting II - Engineering	Certified SolidWorks Associate (CSWA)
IV23-Drafting III - Engineering	Autodesk Certified Professional Inventor
IV23-Drafting III - Engineering	Certified SolidWorks Professional (CSWP)
TR14-SREB AC Design for the Prod of Adv Prod	NI Certified LabVIEW Associate Developer (CLAD)
TV14-SREB AC Clean Energy Innovations	NI Certified LabVIEW Associate Developer (CLAD)
TV24-SREB AC Adv Science and Eng Systems	NI Certified LabVIEW Associate Developer (CLAD)

Individual Credentials and Combined Credentials

Credentials are reported in two distinct categories, individual and combined. Individual credentials include specific modules within a more comprehensive credential. An example of individual credentials that create a combined credential is Conover Workplace Readiness which is aligned to CC45-Career Management. There are eight individual modules that each count as an individual credential and, when all eight are successfully earned, join to make a combined credential. When reporting these credentials, a student who earns the credential for all modules counts as eight individual credentials and one combined credential. During the 2023-2024 academic year, individual credentials that form combined credentials were earned in 32 CTE courses as shown in the following table.

Table 2. 2023-2024 Individual to Combined Credentials Crosswalk and Attainment

Course Name	Course Code-Individual Credential Name	Individual Credentials Earned	Combined Credentials Name	Combined Credentials Earned
Career Management	CC45-CCWR-Career Mgmt- Int/Soc Skills	5,801	Conover Credential Workplace Readiness Job Readiness	4,288
	CC45-CCWR - Career Mgt Attitude	5,417		
	CC45-CCWR-Career Mgmt- Comm	5,966		
	CC45-CCWR-Career Mgmt- Media Rules	5,880		
	CC45-CCWR-Career Mgmt- Plan/Org	5,246		
	CC45-CCWR-Career Mgmt- Professional	5,047		
	CC45-CCWR - Career Mgmt Teamwork	5,793		
	CC45-CCWR-Career Mgmt- Crit Thinking	5,012		
Construction Core	IC00-NC NCCER Module 00101 (w PP)	8,884	NC NCCER - Construction Core	6,841
	IC00-NC NCCER Module 00102 (w PP)	8,588		
	IC00-NC NCCER Module 00103 (w PP)	8,463		
	IC00-NC NCCER Module 00104 (w PP)	8,465		
	IC00-NC NCCER Module 00105 (w PP)	8,440		
	IC00-NC NCCER Module 00107 (w PP)	9,114		
	IC00-NC NCCER Module 00108	9,592		
	IC00-NC NCCER Module 00109 (w PP)	8,706		
Masonry I	IC11-NC NCCER Module 28101 (w PP)	1,324	NC NCCER - Masonry I	1,070
	IC11-NC NCCER Module 28102 (w PP)	1,235		
	IC11-NC NCCER Module 28103 (w PP)	1,224		
	IC11-NC NCCER Module 28104 (w PP)	1,233		
	IC11-NC NCCER Module 28105 (w PP)	1,174		
	IC11-NC NCCER Module 28106 (w PP)	1,258		
Masonry II	IC12-NC NCCER Module 28201 (w PP)	583	NC NCCER - Masonry II	524
	IC12-NC NCCER Module 28202 (w PP)	557		
	IC12-NC NCCER Module 28203 (w PP)	550		
	IC12-NC NCCER Module 28204 (w PP)	548		
Masonry III	IC13-NC NCCER Module 28205 (w PP)	130	NC NCCER - Masonry III	124
	IC13-NC NCCER Module 28206 (w PP)	131		
	IC13-NC NCCER Module 28207 (w PP)	126		
Carpentry I	IC21-NC NCCER Module 27101	3,816	NC NCCER - Carpentry I	2,065
	IC21-NC NCCER Module 27102 (w PP)	3,237		
	IC21-NC NCCER Module 27103 (w PP)	2,862		
	IC21-NC NCCER Module 27104 (w PP)	2,715		
	IC21-NC NCCER Module 27105 (w PP)	2,866		
	IC21-NC NCCER Module 27110 (w PP)	2,695		
	IC21-NC NCCER Module 27111 (w PP)	2,835		

Course Name	Course Code-Individual Credential Name	Individual Credentials Earned	Combined Credentials Name	Combined Credentials Earned
Carpentry II	IC22-NC NCCER Module 27109 (w PP)	1,189	NC NCCER - Carpentry II	889
	IC22-NC NCCER Module 27112 (w PP)	1,139		
	IC22-NC NCCER Module 27202 (w PP)	1,189		
	IC22-NC NCCER Module 27203 (w PP)	1,100		
	IC22-NC NCCER Module 27204 (w PP)	1,156		
Carpentry III	IC23-NC NCCER Module 27201 (w PP)	202	NC NCCER - Carpentry III	171
	IC23-NC NCCER Module 27205 (w PP)	189		
	IC23-NC NCCER Module 27206 (w PP)	197		
	IC23-NC NCCER Module 27207 (w PP)	190		
	IC23-NC NCCER Module 27208 (w PP)	193		
	IC23-NC NCCER Module 27210 (w PP)	199		
Electrical Trades I	IC41-NC NCCER Module 26101	937	NC NCCER - Electrical Trades I	662
	IC41-NC NCCER Module 26102 (w PP)	836		
	IC41-NC NCCER Module 26103	884		
	IC41-NC NCCER Module 26104	798		
	IC41-NC NCCER Module 26105 (w PP)	814		
	IC41-NC NCCER Module 26106 (w PP)	819		
	IC41-NC NCCER Module 26107 (w PP)	763		
	IC41-NC NCCER Module 26108 (w PP)	781		
Electrical Trades II	IC42-NC NCCER Module 26109 (w PP)	274	NC NCCER - Electrical Trades II	210
	IC42-NC NCCER Module 26110 (w PP)	277		
	IC42-NC NCCER Module 26111 (w PP)	272		
	IC42-NC NCCER Module 26112 (w PP)	282		
	IC42-NC NCCER Module 26201	330		
	IC42-NC NCCER Module 26202 (w PP)	260		
	IC42-NC NCCER Module 26203 (w PP)	285		
	IC42-NC NCCER Module 26209 (w PP)	232		
Electrical Trades III	IC43-NC NCCER Module 26204 (w PP)	45	NC NCCER - Electrical Trades III	36
	IC43-NC NCCER Module 26205 (w PP)	43		
	IC43-NC NCCER Module 26206 (w PP)	49		
	IC43-NC NCCER Module 26207 (w PP)	44		
	IC43-NC NCCER Module 26208 (w PP)	44		
	IC43-NC NCCER Module 26210 (w PP)	46		
	IC43-NC NCCER Module 26211 (w PP)	42		

Course Name	Course Code-Individual Credential Name	Individual Credentials Earned	Combined Credentials Name	Combined Credentials Earned
Marine Occupations II	IL54-NC NCCER Module 29101 (w PP)	17	NC NCCER - Maritime Pipefitting Level 1	0
	IL54-NC NCCER Module 29102 (w PP)	19		
	IL54-NC NCCER Module 29105 (w PP)	17		
	IL54-NC NCCER Module 29108 (w PP)	10		
	IL54-NC NCCER Module 84101 (w PP)	21		
	IL54-NC NCCER Module 85101 (w PP)	19		
	IL54-NC NCCER Module 85102 (w PP)	17		
	IL54-NC NCCER Module 85103 (w PP)	21		
	IL54-NC NCCER Module 85104 (w PP)	13		
	IL54-NC NCCER Module 85105 (w PP)	24		
	IL54-NC NCCER Module 85106 (w PP)	23		
HVAC/R I	IL55-NC NCCER Module 03101	108	NC NCCER - HVACR I	47
	IL55-NC NCCER Module 03102	98		
	IL55-NC NCCER Module 03103 (w PP)	75		
	IL55-NC NCCER Module 03104 (w PP)	72		
	IL55-NC NCCER Module 03105 (w PP)	57		
	IL55-NC NCCER Module 03106 (w PP)	65		
	IL55-NC NCCER Module 03107 (w PP)	75		
	IL55-NC NCCER Module 03108 (w PP)	80		
	IL55-NC NCCER Module 03109 (w PP)	59		
HVAC/R II	IL56-NC NCCER Module 03205 (w PP)	15	NC NCCER - HVACR II	7
	IL56-NC NCCER Module 03206 (w PP)	16		
	IL56-NC NCCER Module 03210 (w PP)	11		
	IL56-NC NCCER Module 03211 (w PP)	10		
	IL56-NC NCCER Module 03301 (w PP)	16		
	IL56-NC NCCER Module 03311 (w PP)	12		
Plumbing I	IL58-NC NCCER Module 02101	97	NC NCCER - Plumbing I	74
	IL58-NC NCCER Module 02102 (w PP)	85		
	IL58-NC NCCER Module 02103 (w PP)	89		
	IL58-NC NCCER Module 02104 (w PP)	82		
	IL58-NC NCCER Module 02105 (w PP)	82		
	IL58-NC NCCER Module 02106 (w PP)	84		
	IL58-NC NCCER Module 02107 (w PP)	81		
	IL58-NC NCCER Module 02108 (w PP)	81		
	IL58-NC NCCER Module 02109 (w PP)	82		
	IL58-NC NCCER Module 02110 (w PP)	83		

Course Name	Course Code-Individual Credential Name	Individual Credentials Earned	Combined Credentials Name	Combined Credentials Earned
Plumbing II	IL59-NC NCCER Module 02111 (w PP)	9	NC NCCER - Plumbing II	7
	IL59-NC NCCER Module 02112 (w PP)	9		
	IL59-NC NCCER Module 02201 (w PP)	9		
	IL59-NC NCCER Module 02202 (w PP)	8		
	IL59-NC NCCER Module 02203 (w PP)	9		
	IL59-NC NCCER Module 02204 (w PP)	8		
	IL59-NC NCCER Module 02205 (w PP)	8		
	IL59-NC NCCER Module 02207 (w PP)	8		
Welding Technology I	IM61-AWS SENSE Module 2: Safety	94	AWS SENSE Entry Welder Program - Thermal Cutting Process	74
	IM61-AWS SENSE Mod 8: Thermal Cut	102		
Welding Technology II	IM62-AWS SENSE Mod 3: Draw and Weld	148	AWS SENSE Entry Welder Program - Shielded Metal Arc Welding Process	115
	IM62-AWS SENSE Module 4: SMAW	129		
	IM62-AWS SENSE Mod 9: Inspect Test	150		
Public Safety I	IP11-NIMS (DHS/FEMA) IS-100	4,498	National Incident Management System	3,884
	IP11-NIMS (DHS/FEMA) IS-200	4,347		
	IP11-NIMS (DHS/FEMA) IS-700	4,518		
	IP11-NIMS (DHS/FEMA) IS-800	4,186		
Emergency Medical Technology I	IP21-(DHS/FEMA) IS-100	149	Emergency Medical Responder (EMR)	82
	IP21-(DHS/FEMA) IS-200	142		
	IP21-(DHS/FEMA) IS-700	130		
	IP21-(DHS/FEMA) IS-800	132		
Firefighter Technology I	IP31-NCOSFM FF Fire Ops 1 FIP 3041	592	NCOSFM Credential - Firefighter Technology I	263
	IP31-NCOSFM FF Fire Ops 2 FIP 3042	570		
	IP31-NCOSFM FF Fire Ops 3 FIP 3043	539		
	IP31-NCOSFM FF Fire Ops 4 FIP 3044	380		
	IP31-NCOSFM FF Gen and Com FIP 3040	486		
Firefighter Technology II	IP32-NCOSFM Emerg Med Care FIP 7001	320	NCOSFM - Firefighter Technology II	161
	IP32-NCOSFM FF Fire Ops 5 FIP 3045	341		
	IP32-NCOSFM FF Fire Ops 6 FIP 3046	336		
	IP32-NCOSFM FF Fire Ops 7 FIP 3047	278		
	IP32-NCOSFM FF Fire Ops 8 FIP 3048	206		

Course Name	Course Code-Individual Credential Name	Individual Credentials Earned	Combined Credentials Name	Combined Credentials Earned
Firefighter Technology III	IP33-FF Fire and Life Safety FIP 3051	137	NCOSFM - Firefighter Technology III	122
	IP33-FF RIC Mayday Safety Sur FIP 6413	144		
	IP33-NCOSFM FF Rescue Ops1 FIP 3050	155		
	IP33-NCOSFM HM Ops FIP 3556	119		
	IP33-NCOSFM TIMS FIP 7000	160		
Emergency Management I	IP51-NC Emergency Mgmt I IS-120	110	NC Emergency Management I Certification	105
	IP51-NC Emergency Mgmt I IS-2200	109		
	IP51-NC Emergency Mgmt I IS-230	111		
	IP51-NC Emergency Mgmt I IS-235	111		
	IP51-NC Emergency Mgmt I IS-240	111		
	IP51-NC Emergency Mgmt I IS-241	110		
	IP51-NC Emergency Mgmt I IS-242	111		
	IP51-NC Emergency Mgmt I IS-244	111		
	IP51-NC Emergency Mgmt I IS-288	110		
	IP51-NC Emergency Mgmt I IS-559	107		
	IP51-NC Emergency Mgmt I IS-703	110		
	IP51-NC Emergency Mgmt I IS-706	110		
	IP51-NC Emergency Mgmt I IS-909	110		
Emergency Management II	IP52-NC Emergency Mgmt II G0271	10	NC Emergency Management II Certification	10
	IP52-NC Emergency Mgmt II G0272	10		
	IP52-NC Emergency Mgmt II G0393	10		
	IP52-NC Emergency Mgmt II G0775	10		
	IP52-NC Emergency Mgmt II G-191	10		
	IP52-NC Emergency Mgmt II G-386	10		
	IP52-NC Emergency Mgmt II G-393	10		
	IP52-NC Emergency Mgmt II G-557	10		
	IP52-NC Emergency Mgmt II IS-247	10		
	IP52-NC Emergency Mgmt II IS271	10		

Credential Tiers

North Carolina CTE partners with the North Carolina Department of Commerce for the assignment of tier ranking to each industry-recognized credential. Consideration is given to academic rigor, employment value and industry demand as part of the credential tier assignment process.

- Tier 1 credentials, considered foundational certifications, offer students the opportunity to experience the process of earning an industry-recognized credential and establish a starting point for earning additional, stackable credentials.
- Tier 2 credentials are springboard or door-opener certifications which are sometimes included in industry vacancy notices and potentially provide an advantage for students

when seeking employment in a related career. Teachers are awarded a $25.00 bonus for each Tier 2 credential earned by students enrolled in their courses.

- Tier 3 credentials are advanced certifications which are often required for employment and used to leverage higher starting and long-term salaries for employees. Teachers are awarded a $50.00 bonus for each Tier 3 credential earned by students enrolled in their courses.

The table below shows combined credentials aligned to courses by program area and their tier classification.

Table 3. 2023-2024 Credentials Available by Tiers

2023-2024 TIER 1 CREDENTIALS Teacher Credential Payment = $0.00	
Agricultural Education	
Course	**Credential Name**
AA21-Animal Science I	Youth for the Quality Care of Animals (YQCA)
AA22-Animal Science II - Food Animal	Beef Quality Assurance Program Cow/Calf Certification
AA22-Animal Science II - Food Animal	North Carolina Beef Quality Assurance
AN52-Natural Resources II	North Carolina Hunter Education Training
AS31-Agricultural Mechanics I	OSHA 10-hour General Industry Safety and Health
AS32-Agricultural Mechanics II	National Safe Tractor and Machinery Operation Certification
AU11-Agricultural Production I	North Carolina Beef Quality Assurance
AU11-Agricultural Production I	Youth for the Quality Care of Animals (YQCA)
AU12-Agricultural Production II	North Carolina Beef Quality Assurance
AU12-Agricultural Production II	Youth for the Quality Care of Animals (YQCA)
AU22-Sustainable Agriculture Production II	Certified Beekeeper
IL41-Aquaculture II	North Carolina Boater Education Certificate
Business, Finance and Marketing Education	
Course	**Credential Name**
CS12-Project Management II	PMI Project Management Ready
ME11-Entrepreneurship I	Venture Entrepreneurial Expedition
ME12-Entrepreneurship II	Entrepreneurship and Small Business
Career Development Education	
Course	**Credential Name**
CC45-Career Management	Conover Credential Workplace Readiness Job Readiness
CC45-Career Management	Express Employment Professionals Career Preparedness Cert
CC45-Career Management	Microburst Learning Soft Skills for Success
Computer Science and Information Technology Education	
Course	**Credential Name**
BM10-Microsoft Word and PowerPoint	Microsoft Office Specialist PowerPoint
BM10-Microsoft Word and PowerPoint	Microsoft Office Specialist Word
BM20-Microsoft Excel	Microsoft Office Specialist Excel
TE21-Principles of Technology I	OSHA 10-hour General Industry Safety and Health
TE22-Principles of Technology II	OSHA 10-hour General Industry Safety and Health

Family and Consumer Sciences Education	
Course	**Credential Name**
FA32-Apparel and Textile Production II	Pre-Professional Certification in Fashion, Textiles, and Apparel
FC14-Counseling and Mental Health II	Pre-Professional Certification in Family and Community Serv
FE11-Early Childhood Education I	First Aid/CPR/AED
FE21-Teaching as a Profession I	Basic School Age Care (BSAC)
FH13-Culinary Arts and Hospitality III	Pre-Professional Certification in Culinary Arts
FI22-Interior Design Studio	Pre-Professional Certification in Interior Design Fundamentals
FN41-Food and Nutrition I	ANSI - Accredited Food Handler Certificate
FN42-Food and Nutrition II	Pre-Professional Certification in Nutrition, Food, and Wellness
FN43-Food Science and Technology	Pre-Professional Certification in Food Science Fundamentals
Health Sciences Education	
Course	**Credential Name**
HB12-Biomedical Technology II	OSHA 10-hour General Industry Safety and Health
HL21-Biomedical Innovations	OSHA 10-hour General Industry Safety and Health
HP70-PLTW Principles of Biomedical Sci	Stop the Bleed
HP71-PLTW Human Body Systems	First Aid
HP72-PLTW Medical Interventions	CPR/AED
HU40-Health Science I	First Aid
HU42-Health Science II	BLS Provider
HU42-Health Science II	OSHA 10-hour General Industry Safety and Health
HU42-Health Science II	Stop the Bleed
Trade and Industrial Education	
Course	**Credential Name**
IC00-Construction Core	OSHA 10-hour Construction Safety and Health
ID10-Drone Technology Fundamentals	FAA Trust
ID11-Drone Technology I	NCDOT NC UAS Operator Permit
ID12-Drone Technology II	ESRI Drone2Map
IK68-Industrial, Trade, and Technology App	OSHA 10-hour General Industry Safety and Health
IL53-Marine Occupations I	North Carolina Boater Education Certificate
IL80-Construction Technology I	OSHA 10-hour Construction Safety and Health
IM11-Advanced Manufacturing I	OSHA 10-hour General Industry Safety and Health
IM21-Woodworking I	OSHA 10-hour Construction Safety and Health
IM61-Welding Technology I	OSHA 10-hour Construction Safety and Health
IM61-Welding Technology I	S/P2 Welding Safety and Pollution Prevention
IP11-Public Safety I	Law and Public Safety Introductory Competency
IP11-Public Safety I	National Incident Management System
IP12-Public Safety II	Community Emergency Response Team (CERT)
IP21-Emergency Medical Technology I	BLS Provider
IP21-Emergency Medical Technology I	National Incident Management System
IP21-Emergency Medical Technology I	Stop the Bleed
IP31-Firefighter Technology I	NCOSFM - Firefighter Technology I

Course	Credential Name
IP32-Firefighter Technology II	NCOSFM - Firefighter Technology II
IP33-Firefighter Technology III	NCOSFM - Firefighter Technology III
IT11-Automotive Service Fundamentals	S/P2 Automotive Service Pollution Prevention
IT11-Automotive Service Fundamentals	S/P2 Automotive Service Safety
IT30-Collision Repair Fundamentals	S/P2 Collision Repair and Refinish Pollution Prevention
IT30-Collision Repair Fundamentals	S/P2 Collision Repair and Refinish Safety
2023-2024 TIER 2 CREDENTIALS **Teacher Credential Payment = $25.00**	
Agricultural Education	
Course	**Credential Name**
AS33-Agricultural Mechanics II - Small Engines	North Carolina State Competency Exam
Business, Finance and Marketing Education	
Course	**Credential Name**
BA20-Accounting II	Intuit QuickBooks Certified User
MA52-Marketing Applications	Customer Service and Sales Certification
MA52-Marketing Applications	Fundamental Marketing Concepts
MH42-Hospitality and Tourism	American Hotel and Lodging Association Certified Guest Service Professional
Computer Science and Information Technology Education	
Course	**Credential Name**
BN32-Network Security II	CompTIA Security+
BP16-Python Programming II	PCAP Certified Associate in Python Programming
IA11-Intro to Graphic Communications	PrintED Introduction to Graphic Communication
IA13-Advertising and Design	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator
IA13-Advertising and Design	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign
IA13-Advertising and Design	Adobe Certified Professional - Visual Communication Using Adobe Photoshop
IA32-Digital Media II	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator
IA32-Digital Media II	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign
IA32-Digital Media II	Adobe Certified Professional - Visual Communication Using Adobe Photoshop
II12-Cisco Network Engineering Technology II	Cisco Certified Technician (CCT) Routing and Switching
II41-Adobe Visual Design I	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator
II41-Adobe Visual Design I	Adobe Certified Professional - Visual Communication Using Adobe Photoshop
II42-Adobe Visual Design II	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign
TL52-Unity 3D Programming II	Unity Certified User: Programmer

Family and Consumer Sciences Education	
Course	**Credential Name**
FH11-Culinary Arts and Hospitality II App	ANSI - Accredited Food Protection Manager Certification
FH12-Culinary Arts and Hospitality II Intern	ANSI - Accredited Food Protection Manager Certification
FI23-Interior Design Technology	Autodesk Certified User Revit
FN42-Food and Nutrition II	ANSI - Accredited Food Protection Manager Certification
FN43-Food Science and Technology	Food Safety and Science Certification
Health Sciences Education	
Course	**Credential Name**
HN43-Nursing Fundamentals and Practicum	North Carolina Nurse Aide I
HN44-Fundamentals of Gerontology	Nurse Aide I - Geriatric Aide Endorsement
HN45-Public Health Fundamentals	Nurse Aide I - Home Care Aide Endorsement
Trade and Industrial Education	
Course	**Credential Name**
IC00-Construction Core	NC NCCER - Construction Core
IC11-Masonry I	NC NCCER - Masonry I
IC12-Masonry II	NC NCCER - Masonry II
IC21-Carpentry I	NC NCCER - Carpentry I
IC22-Carpentry II	NC NCCER - Carpentry II
IC41-Electrical Trades I	NC NCCER - Electrical Trades I
IC42-Electrical Trades II	NC NCCER - Electrical Trades II
IC61-Drafting I	Autodesk Certified User AutoCAD
IC62-Drafting II - Architectural	Autodesk Certified User Revit
IC71-Solar Photovoltaics I	NC NCCER - Solar Photovoltaics I
IC72-Solar Photovoltaics II	NC NCCER - Solar Photovoltaics II
ID11-Drone Technology I	CFR 14 Part 107 UAS Remote Pilot Certification
ID12-Drone Technology II	NFPA 2400
IK26-Advanced Transportation Technology	ASE Entry-Level Certification - Maintenance and Light Repair
IK49-Advanced Criminal Justice II	Expandable Baton Certification
IK68-Industrial, Trade, and Technology App	Certified Manufacturing Associate (CMfgA)
IL54-Marine Occupations II	NC NCCER - Maritime Pipefitting Level 1
IL55-HVAC/R I	NC NCCER - HVAC/R I
IL56-HVAC/R II	NC NCCER - HVAC/R II
IL58-Plumbing I	NC NCCER - Plumbing I
IL59-Plumbing II	NC NCCER - Plumbing II
IL73-Marine Occupations III	NC NCCER - Maritime Structural Fitting
IL80-Construction Technology I	NC NCCER - Construction Technology I
IL81-Construction Technology II	NC NCCER - Construction Technology II
IM11-Advanced Manufacturing I	Certified Production Technician (CPT) - Maintenance Awareness
IM11-Advanced Manufacturing I	Certified Production Technician (CPT) - Safety
IM12-Advanced Manufacturing II	Certified Production Technician (CPT) - Manufacturing Processes and Production

Course	Credential Name
IM12-Advanced Manufacturing II	Certified Production Technician (CPT) - Quality Practices and Measurement
IM22-Woodworking II	Woodwork Career Alliance (WCA) Sawblade Certificate
IM31-Electronics I	ETA EM1
IM32-Electronics II	ETA EM4
IM33-Electronics III	ETA EM2
IM41-Metals Manufacturing Technology I	NIMS Measurement, Materials, and Safety
IM42-Metals Manufacturing Technology II	NIMS Job Planning, Benchwork, and Layout
IM43-Metals Manufacturing Technology III	NIMS Milling I
IM61-Welding Technology I	AWS SENSE Entry Welder Program - Thermal Cutting Process
IM62-Welding Technology II	AWS SENSE Entry Welder Program - Shielded Metal Arc Welding Process
IM63-Welding Technology III	AWS SENSE Entry Welder Program - Flux Cored Arc Welding Process
IM63-Welding Technology III	AWS SENSE Entry Welder Program - Gas Metal Arc Welding Process
IP12-Public Safety II	National Basic 9-1-1 Dispatch Certification
IP42-Law and Justice II	Certified Protection Officer (CPO)
IP51-Emergency Management I	NC Emergency Management I Certification
IP52-Emergency Management II	NC Emergency Management II Certification
IT17-Automotive Service II	ASE Entry-Level Certification - Brakes
IT17-Automotive Service II	ASE Entry-Level Certification - Maintenance and Light Repair
IT18-Automotive Service III	ASE Entry-Level Certification - Electrical/Electronic Systems
IT33-Collision Repair II - Refinishing	ASE Entry-Level Certification - Painting and Refinishing
IV22-Drafting II - Engineering	Autodesk Certified User Inventor
IV22-Drafting II - Engineering	Certified SolidWorks Associate (CSWA)

2023-2024 TIER 3 CREDENTIALS
Teacher Credential Payment = $50.00

Agricultural Education

Course	Credential Name
AA32-Equine Science II	Equine Management and Evaluation Certification
AA41-Veterinary Assisting	Certified Veterinary Assistant
AA41-Veterinary Assisting	Elanco Veterinary Medical Applications
AP43-Turfgrass Management	NC Private Pesticide Applicator
AS32-Agricultural Mechanics II	Certified Welders per Welding Code AWS D1.1

Business, Finance and Marketing Education

Course	Credential Name
ML05-Introduction to Salesforce CRM	Salesforce Administrator Certification

Computer Science and Information Technology Education

Course	Credential Name
BI12-CompTIA IT Fundamentals	CompTIA IT Fundamentals+ (ITF+)
BL52-Develop in Swift Explorations	App Development with Swift Associate

Course	Credential Name
BL53-Develop in Swift Fundamentals	App Development with Swift Certified User
BL66-Fundamentals of Information Security I	CompTIA A+ (Core 1)
BL66-Fundamentals of Information Security I	CompTIA A+ (Core 2)
BL66-Fundamentals of Information Security I	CompTIA IT Fundamentals+ (ITF+)
BM20-Microsoft Excel	Microsoft Office Specialist Excel Expert
BN22-Network Administration II	CompTIA Network+
BP20-SAS Base Programming	SAS Certified Specialist Programming Fundamentals Using SAS 9.4
IA32-Digital Media II	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
IA32-Digital Media II	Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver
II21-Computer Engineering Technology I	CompTIA A+ (Core 1)
II22-Computer Engineering Technology II	CompTIA A+ (Core 2)
II43-Adobe Digital Design I	Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver
II45-Adobe Video Design I	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
IK66-Film, Television, and Video Production I	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
IK67-Film, Television, and Video Production II: News Production	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro
TL51-3D Modeling II	Autodesk Certified User 3DS Max
TR18-SREB AC IST Creativity and Innovations	NI Certified LabVIEW Associate Developer (CLAD)
TS25-Digital Design and Animation II	Autodesk Certified User 3DS Max
TS25-Digital Design and Animation II	Autodesk Certified User Maya
Family and Consumer Sciences Education	
Course	**Credential Name**
FE11-Early Childhood Education I	North Carolina Early Childhood Credential
FH13-Culinary Arts and Hospitality III	Certified Fundamentals Cook (CFC)
FH13-Culinary Arts and Hospitality III	ProStart National Certificate of Achievement (COA)
Health Sciences Education	
Course	**Credential Name**
HH32-Pharmacy Technician	CPhT Certified Pharmacy Technician
Trade and Industrial Education	
Course	**Credential Name**
IC13-Masonry III	NC NCCER - Masonry III
IC23-Carpentry III	NC NCCER - Carpentry III
IC43-Electrical Trades III	NC NCCER - Electrical Trades III
IC63-Drafting III - Architectural	Autodesk Certified Professional Revit
IL57-HVAC/R III	NC NCCER - HVAC/R III
IL60-Plumbing III	NC NCCER - Plumbing III
IM14-Manufacturing Robotics	FANUC Certified Robot Operator

Course	Credential Name
IM62-Welding Technology II	Certified Welder per Welding Code AWS D1.1 (SMAW)
IM63-Welding Technology III	Certified Welder per Welding Code AWS D1.1 (FCAW)
IM63-Welding Technology III	Certified Welder per Welding Code AWS D1.1 (GMAW)
IM74-SREB AC Proj in Automated Materials Join	NI Certified LabVIEW Associate Developer (CLAD)
IP21-Emergency Medical Technology I	Emergency Medical Responder (EMR)
IP22-Emergency Medical Technology II	Emergency Medical Technician (EMT)
IP41-Law and Justice I	National Law Enforcement Certification SPSS
IT18-Automotive Service III	ASE - Auto Maintenance and Light Repair (Test G1)
IT32-Collision Repair II - Non-Structural	I-CAR Platinum ProLevel 1 for Non-Structural
IT33-Collision Repair II - Refinishing	I-CAR Platinum ProLevel 1 for Refinishing
IV23-Drafting III - Engineering	Autodesk Certified Professional Inventor
IV23-Drafting III - Engineering	Certified SolidWorks Professional (CSWP)
TR14-SREB AC Design for the Prod of Adv Prod	NI Certified LabVIEW Associate Developer (CLAD)
TV14-SREB AC Clean Energy Innovations	NI Certified LabVIEW Associate Developer (CLAD)
TV24-SREB AC Adv Science and Eng Systems	NI Certified LabVIEW Associate Developer (CLAD)

The chart below illustrates the number of individual credentials earned, available credentials and credential attainment rate at each tier level for 2023-2024.

Chart 2. 2023-2024 Individual Credentials Attainment by Tier

2023-2024 Individual Credential Attainment by Tier
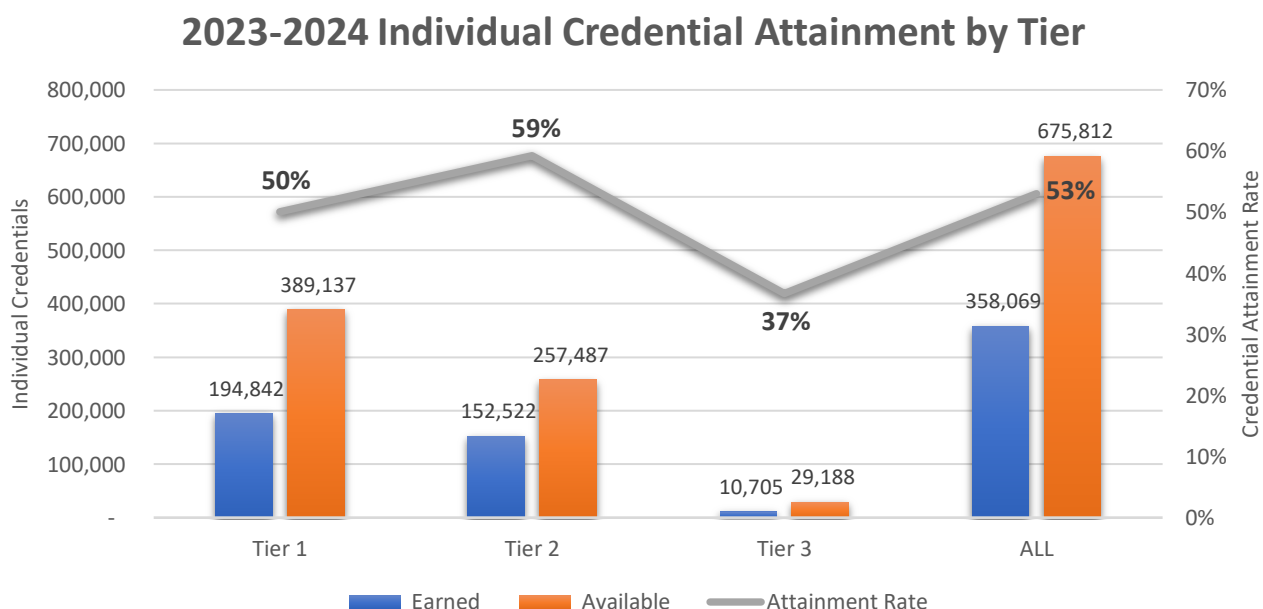
Equity and Access

North Carolina CTE is committed to closing opportunity gaps across all aspects of the CTE program. Advance CTE's premise that "we have a critical responsibility to ensure that each learner has opportunities for career success and is supported in identifying and realizing their goals" is embraced across the state in the work to construct high-quality CTE programs of study. Critical to this work is data analysis to explore where gaps exist, careful reflection to identify root causes for opportunity gaps, and intentional action plan implementation to address causes that lead to opportunity gaps.

The table below shows a breakdown of credential results by multiple student groups.

- The green column reports the percentage of students in CTE courses with credential opportunities from each student group and is used as the comparison data.
- Data points highlighted in orange are student groups with an underrepresentation of 10 or more percentage points when compared to the comparison data.
- Data points highlighted in blue are student groups with an overrepresentation of 10 or more percentage points when compared to the comparison data.

Table 4. 2023-2024 Individual Credential Attainment by Student Group

Student Group	NC Public Schools	NC CTE Enrollment	CTE Enrollment with Credential Opportunities	Overall Credential Attainment	Tier 1 Credential Attainment	Tier 2 Credential Attainment	Tier 3 Credential Attainment
Female	49%	46%	36%	36%	50%	18%	36%
Male	51%	54%	64%	64%	50%	82%	64%
AmerInd	1%	1%	1%	1%	1%	1%	0%
Asian	4%	4%	2%	3%	3%	2%	8%
Black	24%	25%	23%	19%	24%	13%	14%
Hispanic	22%	21%	22%	21%	20%	22%	16%
PacIsl	0%	0%	0%	0%	0%	0%	0%
Two or More	6%	5%	5%	5%	5%	4%	5%
White	43%	43%	46%	51%	46%	57%	57%
EL/ML	12%	8%	7%	6%	6%	7%	3%
EDS	51%	51%	53%	49%	49%	49%	33%
SWD	14%	16%	17%	14%	13%	15%	11%

Observations

- Female students are underrepresented in CTE enrollment with credential opportunities by 10 percentage points compared to all NC CTE enrollment. Likewise, male students are overrepresented in CTE enrollment with credential opportunities by 10 percentage points. The gaps in credential attainment described below could be attributed to the

opportunity gaps in CTE enrollment with credential opportunities for female and male students.

- Female students are overrepresented in Tier 1 credential attainment by 14 percentage points while male students are underrepresented in Tier 1 credential attainment by 14 percentage points.
- Female students are underrepresented in Tier 2 credential attainment by 18 percentage points while male students are overrepresented in Tier 2 credential attainment by 18 percentage points.
- Black students are underrepresented in Tier 2 credential attainment by 10 percentage points.
- Students who are economically disadvantaged are underrepresented in Tier 3 credential attainment by 20 percentage points.

Trend Data

North Carolina CTE monitors data to identify trends over time. The last three years have shown that opportunity gaps in Tier 2 credentials persist with an underrepresentation of female students earning those credentials of value. However, the percentage of Tier 3 credentials being earned by female students has increased over the three-year window and reached the expected value to mirror the comparison population during the 2023-2024 academic year. Similarly, opportunity gaps across racial groups have continued to improve over the same window of time.

The table below outlines credential attainment trend data by student group over the last three years.

Table 5. Credential Attainment Trend Data by Student Group

Student Group	Tier 1			Comparison Population 2023-2024
	2021-2022	2022-2023	2023-2024	
American Indian/ Alaskan Native	1%	1%	1%	1%
Asian	4%	4%	3%	2%
Black or African American	18%	20%	24%	23%
Hispanic	18%	19%	20%	22%
Native Hawaiian/ Pacific Islander	0%	0%	0%	0%
Two or More	4%	5%	5%	5%
White	56%	51%	46%	46%
Female	49%	52%	50%	36%
Male	51%	48%	50%	64%

Student Group	Tier 2			Comparison Population 2023-2024
	2021-2022	2022-2023	2023-2024	
American Indian/ Alaskan Native	1%	1%	1%	1%
Asian	4%	4%	2%	2%
Black or African American	12%	14%	13%	23%
Hispanic	17%	18%	22%	22%
Native Hawaiian/ Pacific Islander	0%	0%	0%	0%
Two or More	4%	5%	4%	5%
White	62%	58%	57%	46%
Female	29%	34%	18%	36%
Male	71%	66%	82%	64%

Student Group	Tier 3			Comparison Population 2023-2024
	2021-2022	2022-2023	2023-2024	
American Indian/ Alaskan Native	0%	0%	0%	1%
Asian	13%	9%	8%	2%
Black or African American	10%	12%	14%	23%
Hispanic	12%	14%	16%	22%
Native Hawaiian/ Pacific Islander	0%	0%	0%	0%
Two or More	4%	4%	5%	5%
White	61%	60%	57%	46%
Female	30%	38%	36%	36%
Male	70%	62%	64%	64%

Stackable Credentials

Stackable credentials provide a method of supporting the incremental building of work skills and are designed to maximize skill acquisition while enabling seamless transitions to careers (Murawski, 2019). Benefits of stackable credentials are best realized when the credentials are aligned to structured and well-designed career pathways that progress through the curriculum and build a resumé of portable skills and competencies needed in the labor market (Giani & Fox, 2017). As an example, CTE students in North Carolina have an opportunity to stack credentials in health sciences by earning the American Red Cross First Aid certification in Health Science I; the American Heart Association certification in CPR/AED, the Occupational Safety and Health Association (OSHA) Healthcare certification, and the American Red Cross Stop the Bleed certification in Health Science II; and North Carolina Nurse Aide I in Nursing Fundamentals.

Image 1. Healthcare Professional Pathway Courses and Stackable Credentials

Major Level Course

Nursing Fundamentals
NC Nurse Aide I (Tier 2)

Pharmacy Technician
CPhT Certified Pharmacy Technician (Tier 3)

Concentrator Level Course

Health Science II
CPR/AED (Tier 1)
OSHA-Healthcare (Tier 1)
Stop the Bleed (Tier 1)

Fundamentals of Gerontology
Nurse Aide I-Geriatric Aide Endorsement (Tier 2)

Public Health Fundamentals
Nurse Aide I-Home Care Aide Endorsement (Tier 2)

Prerequisite Level Course

Health Science I
First Aid (Tier 1)

While multiple perspectives concerning workforce issues exist, there is agreement related to the impact of sub-baccalaureate credentials such as associate degrees, certificates and industry-recognized credentials. One point of consensus among those working to close the supply and demand gap in the labor force is the need to increase the number of potential employees holding high-quality credentials (Giani & Fox, 2017). With embedded stackable credentials aligned to pathways reflective of the community's labor market needs, a local pipeline into a broad range of professions can be provided by CTE programs (Reader et al., 2021).

CAREER READINESS CREDENTIALS AND DURABLE SKILLS

North Carolina recognizes four specific credentials that address a student's career readiness. Also referred to as durable skills, career readiness credentials indicate the credential holder's competency across multiple characteristics needed for success across all careers. Three such credentials are aligned to CC45-Career Management: Conover Workplace Readiness, Microburst Learning Employers' Choice: EmployABILITY Soft Skills for Job Success, and Express Employment Professionals Career Preparedness Certification. These credentials measure knowledge in areas such as social media and the workplace, attitude, critical thinking and acceptable workplace behaviors.

The fourth career readiness credential is the ACT WorkKeys®. While not aligned with any one CTE course, this assessment is used to measure student employability skills in three areas: Applied Mathematics, Graphic Literacy and Workplace Documents. The ACT WorkKeys® assessment is administered to CTE concentrators in their anticipated graduation year. CTE

concentrators are students who successfully complete a second- or third-level course that builds upon skills acquired in a prerequisite course or courses.

Test-takers who reach benchmark scores on the ACT WorkKeys® assessment receive a National Career Readiness Certificate™ (NCRC™), which is available at four levels: Platinum, Gold, Silver and Bronze. Employers use the NCRC™ as a screening tool when hiring to improve the quality of their workforce and to help potential employees understand the level of performance necessary to be successful in a career field.

ACT WorkKeys® National Career Readiness Credential Attainment

- In 2021-2022, over 37,000 students participated in the ACT WorkKeys® assessment administration and 70% of those students earned a National Career Readiness Certificate of Silver or above.
- In 2022-2023, over 41,000 students participated in the ACT WorkKeys® assessment administration and 70% of those students earned a National Career Readiness Certificate of Silver or above.
- In 2023-2024, over 43,000 students participated in the ACT WorkKeys® assessment administration and 68% of those students earned a National Career Readiness Certificate of Silver or above.

The chart below shows a three-year comparison in ACT WorkKeys® performance.

Chart 3. ACT WorkKeys® Performance by Certificate Level, 2021-2022 through 2023-2024

ACTE WorkKeys® Performance by Certificate Level
2021-2022 through 2023-2024
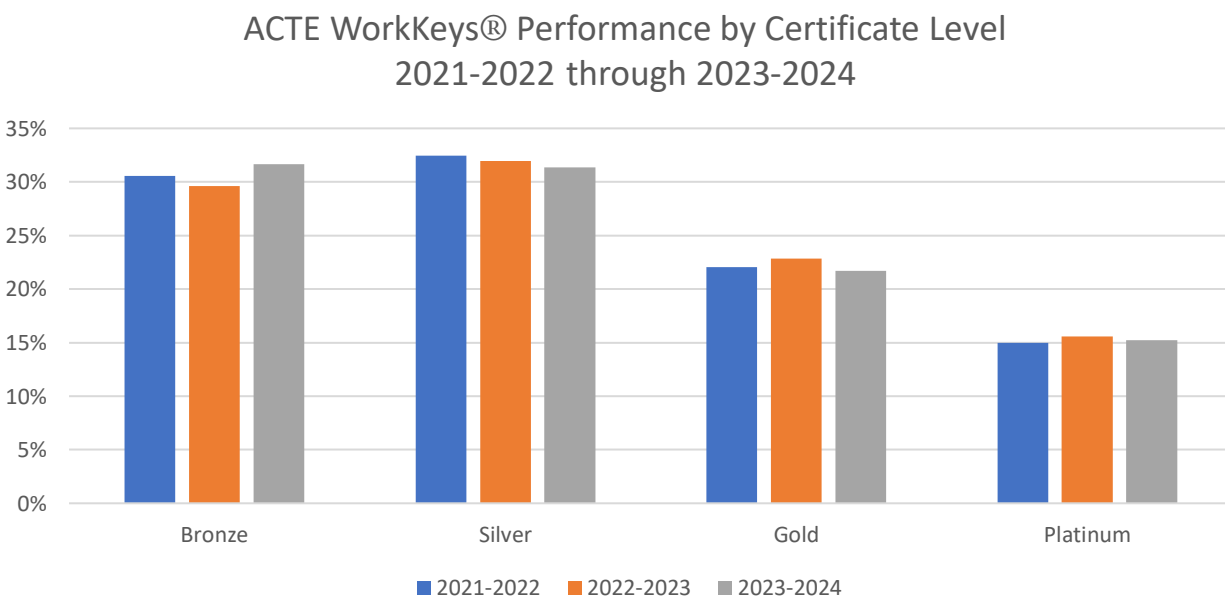
Career Readiness Credential Attainment

The chart below outlines trend data for credential attainment in CC45-Career Management.

Table 6. Career Readiness Credential Attainment

Career Readiness Credential	2021-2022	2022-2023	2023-2024
Conover Credential Workplace Readiness	3,161	4,381	4,288
Microburst Learning Employers' Choice: EmployABILITY Soft Skills for Job Success	860	713	1,013
Express Employment Professionals Career Preparedness Certification	101	660	631
Total Career Readiness Credentials	**4,122**	**5,754**	**5,932**

CONNECTION TO NC WORKFORCE CREDENTIALS

Many credentials earned by NC CTE secondary students are identified by the NC Workforce Credentials (NCWFC) partners as "priority non-degree credentials that are valued by employers and put those who earn them on a path to a sustainable wage career" (NC Careers). The table below highlights the credential attainment by NC CTE students across the credentials offered in high school courses and identified by the NCWFC. Additionally, the PSU with the highest attainment is displayed. Three important data points are listed below.

- For the 2023-2024 academic year, NC CTE students earned 69,746 industry-recognized credentials that are aligned to the NCWFC credential list. This number represents an increase of 17.8% over the 59,199 NCWFC credentials earned by NC CTE students in 2022-2023.
- NC CTE offers 72 of the approximately 165 NCWFC credentials and reported earned credentials across 70 of those credentials.
- Of the 191,565 combined credentials earned by NC CTE students, 36.3% (69,552) are credentials from the NCWFC list.

Table 7. NC Workforce Credentials and NC CTE Attainment

Career Cluster	NCWFC Level (NC CTE Tier)	Credential Name	NC CTE Earned	PSU with Highest Credential Attainment
Agriculture, Food & Natural Resources	Career (3)	Certified Veterinary Assistant	38	8 (21%) Johnston County Schools
Agriculture, Food & Natural Resources	Essential (3)	Equine Management and Evaluation Certification	45	14 (31%) Nash County Public Schools
Agriculture, Food & Natural Resources	Essential (3)	NC Pesticide Applicator	16	16 (100%) Perquimans County Schools

Career Cluster	NCWFC Level (NC CTE Tier)	Credential Name	NC CTE Earned	PSU with Highest Credential Attainment
Agriculture, Food & Natural Resources	Essential (2)	Small Engine Repair	217	54 (25%) Randolph County Schools
Agriculture, Food & Natural Resources	Foundation (3)	The Elanco Veterinary Medical Applications Certification	248	32 (13%) Union County Schools
Architecture & Construction	Career (3)	Autodesk Certified Professional Inventor	3	1 (33%) Cumberland County Schools, Iredell-Statesville County Schools, Onslow County Schools
Architecture & Construction	Career (3)	Autodesk Certified Professional Revit	1	1 (100%) Iredell-Statesville County Schools
Architecture & Construction	Career (2)	Autodesk Certified User AutoCAD	3,314	522 (16%) Wake County Schools
Architecture & Construction	Career (2)	Autodesk Certified User Inventor	516	78 (15%) Wake County Schools
Architecture & Construction	Career (2)	Autodesk Certified User Revit	975	175 (18%) Wake County Schools
Architecture & Construction	Career (3)	AWS Certified Welder	154	45 (29%) Randolph County Schools
Architecture & Construction	Essential (2)	AWS SENSE - Thermal Cutting Process	74	24 (32%) Carteret County Schools
Architecture & Construction	Essential (2)	AWS SENSE- Flux Cored Arc Welding (FCAW)	21	14 (67%) Davidson County Schools
Architecture & Construction	Essential (2)	AWS SENSE- Gas Metal Arc Welding (GMAW)	28	15 (54%) Davidson County Schools
Architecture & Construction	Essential (2)	AWS SENSE- Shielded Metal Arc Welding (SMAW)	115	34 (30%) Gaston County Schools
Architecture & Construction	Essential (2)	Certified SolidWorks Associate (CSWA)	48	18 (38%) Davidson County Schools
Architecture & Construction	Career (3)	Certified SolidWorks Professional (CSWP)	1	1 (100%) NC School for the Deaf
Architecture & Construction	Career (2)	NCCER Carpentry Level I	2,065	150 (7%) Wake County Schools
Architecture & Construction	Career (2)	NCCER Carpentry Level II	889	93 (10%) Wake County Schools
Architecture & Construction	Career (3)	NCCER Carpentry Level III	171	26 (15%) Burke County Schools
Architecture & Construction	Career (2)	NCCER Electrical Trades I	662	102 (15%) Harnett County Schools
Architecture & Construction	Career (2)	NCCER Electrical Trades II	210	40 (19%) Harnett County Schools

Career Cluster	NCWFC Level (NC CTE Tier)	Credential Name	NC CTE Earned	PSU with Highest Credential Attainment
Architecture & Construction	Career (3)	NCCER Electrical Trades III	36	10 (28%) Winston-Salem/Forsyth County Schools
Architecture & Construction	Career (2)	NCCER HVAC Level I	47	35 (74%) Wayne County Schools
Architecture & Construction	Career (2)	NCCER HVAC Level II	7	7 (100%) Mooresville City Schools
Architecture & Construction	Career (2)	NCCER Masonry Level I	1,070	131 (12%) Rowan-Salisbury County Schools
Architecture & Construction	Career (2)	NCCER Masonry Level II	524	67 (13%) Rowan-Salisbury County Schools
Architecture & Construction	Career (3)	NCCER Masonry Level III	124	24 (19%) Caldwell County Schools
Architecture & Construction	Career (2)	NCCER Plumbing Level I	74	37 (50%) Harnett County Schools
Architecture & Construction	Career (2)	NCCER Plumbing Level II	7	7 (100%) Scotland County Schools
Architecture & Construction	Career (2)	WCA Sawblade Certificate	409	90 (22%) Buncombe County Schools
Arts, A/V Technology & Communications	Career (3)	Adobe Certified Professional - Digital Video Using Adobe Premiere Pro	2,018	511 (25%) Wake County Schools
Arts, A/V Technology & Communications	Career (2)	Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator	6,983	1,457 (21%) Wake County Schools
Arts, A/V Technology & Communications	Career (2)	Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign	1,757	388 (22%) Wake County Schools
Arts, A/V Technology & Communications	Career (2)	Adobe Certified Professional - Visual Communication Using Adobe Photoshop	8,321	1,589 (19%) Wake County Schools
Arts, A/V Technology & Communications	Career (3)	Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver	179	71 (40%) Wake County Schools
Business, Management & Administration	Essential (2)	Intuit QuickBooks Certified User	153	49 (32%) Wake County Schools
Business, Management & Administration	Essential (1)	Microsoft Office Specialist 2016 or above Excel Core	4,140	1,383 (33%) Wake County Schools

Career Cluster	NCWFC Level (NC CTE Tier)	Credential Name	NC CTE Earned	PSU with Highest Credential Attainment
Business, Management & Administration	Essential (3)	Microsoft Office Specialist 2016 or above Excel Expert	3,225	1,286 (40%) Wake County Schools
Education and Training	Essential (3)	NC: Early Childhood Credential (NCECC) Equivalency	503	127 (25%) Guilford County Schools
Health Sciences	Essential (2)	NC: Nurse Aide I	1,672	144 (9%) Guilford County Schools
Health Sciences	Essential (3)	NC: Pharmacy Technician Certification	102	50 (49%) Wake County Schools
Hospitality & Tourism	Essential (2)	Certified Food Protection Manager (CFPM)	3,237	367 (11%) Wake County Schools
Hospitality & Tourism	Essential (3)	Certified Fundamentals Cook (CFC)	13	9 (69%) Transylvania County Schools
Hospitality & Tourism	Career (3)	ProStart National Certificate of Achievement (COA)	6	3 (50%) Asheville City Schools, Charlotte-Mecklenburg Schools
Hospitality and Tourism	Foundation (1)	ServSafe Food Handler	16,817	2,473 (15%) Wake County Schools
Information Technology	Career (3)	CompTIA A+	130	75 (58%) Wake County Schools
Information Technology	Career (3)	CompTIA IT Fundamentals	184	88 (48%) Wake County Schools
Information Technology	Career (3)	CompTIA Network +	10	10 (100%) Wake County Schools
Information Technology	Career (3)	CompTIA Security +	13	5 (38%) Guilford County Schools
Law, Public, Safety, Corrections & Security	Essential (3)	Emergency Medical Technician (EMT)	39	12 (31%) Cleveland County Schools
Law, Public, Safety, Corrections & Security	Career (1)	Fire Fighter I	263	67 (25%) Burke County Schools
Law, Public, Safety, Corrections & Security	Career (1)	Fire Fighter II	161	38 (24%) Burke County Schools
Law, Public, Safety, Corrections & Security	Career (1)	Fire Fighter III	122	27 (22%) Burke County Schools

Career Cluster	NCWFC Level (NC CTE Tier)	Credential Name	NC CTE Earned	PSU with Highest Credential Attainment
Law, Public, Safety, Corrections & Security	Essential (1)	National Incident Management System	3,884	668 (17%) Cumberland County Schools
Law, Public, Safety, Corrections & Security	Essential (2)	NC: Emergency Management Certification I & II	115	25 (22%) Charlotte-Mecklenburg Schools
Law, Public, Safety, Corrections & Security	Essential (2)	NECI: Basic 911 Communication Certification	796	235 (30%) Cumberland County Schools
Manufacturing	Career (2)	Certified Production Technician (CPT) - Maintenance Awareness	207	64 (31%) Wake County Schools
Manufacturing	Career (2)	Certified Production Technician (CPT) - Manufacturing Processes and Production	88	25 (28%) Johnston County Schools
Manufacturing	Career (2)	Certified Production Technician (CPT) - Quality Practices and Measurement	116	28 (24%) Johnston County Schools
Manufacturing	Career (2)	Certified Production Technician (CPT) - Safety	420	123 (29%) Wake County Schools
Manufacturing	Essential (2)	ETA Associate Certified Electronics Technician (CETa)	126	100 (79%) Randolph County Schools
Manufacturing	Essential (2)	NIMS Job Planning, Benchmark, and Layout	57	38 (67%) Randolph County Schools
Manufacturing	Essential (2)	NIMS Machining Level I - Measurement, Materials, and Safety Certification	96	37 (39%) Randolph County Schools
Transportation, Distribution, & Logistics	Career (3)	ASE - Auto Maintenance and Light Repair (Test G1)	44	8 (18%) Durham County Schools
Transportation, Distribution, & Logistics	Career (2)	ASE - Entry-Level Certification: Automobile	1,046	119 (11%) Charlotte-Mecklenburg Schools
Transportation, Distribution, & Logistics	Career (2)	ASE - Entry-Level Certification: Collision Repair & Refinish	3	3 (100%) Onslow County Schools
Transportation, Distribution, & Logistics	Essential (2)	FAA Remote Pilot Certificate (Part 107)	312	33 (11%) Moore County Schools

Career Cluster	NCWFC Level (NC CTE Tier)	Credential Name	NC CTE Earned	PSU with Highest Credential Attainment
Transportation, Distribution, & Logistics	Essential (3)	ICAR Non-Structural Technician ProLevel I	42	16 (38%) Winston-Salem/Forsyth County Schools
Transportation, Distribution, & Logistics	Essential (3)	ICAR Refinish Technician ProLevel I	43	16 (37%) Winston-Salem/Forsyth County Schools

STATEWIDE CREDENTIAL RESULTS

Credentials earned and reported by students during the 2023-2024 academic year can be examined by region, by PSU, and by course-credential. Statewide results include the number of credentials earned, total number of credentials available (credential potential), and attainment rate.

Statewide Regional Results

The following chart shows the earned credentials, credential potential and credential attainment rate by region.

- The highest number of earned credentials by region was 73,615 in the North Central Region. (For 2022-2023, the highest number of earned credentials by region was 68,330 in the North Central Region.)
- The highest credential attainment rate by region was 67% in the Northwest Region. (For 2022-2023, the highest credential attainment rate by region was 55% in the Northwest Region.)
- All regions reported a credential attainment rate between 39% and 67%. (For 2022-2023, the credential attainment rate ranged between 30% and 55%.)
- The statewide credential attainment rate for 2023-2024 was 53%, which is an increase of 12 percentage points over the previous year. (For 2022-2023, the statewide credential attainment rate was 41%, which was an increase of nearly 13 percentage points over the previous year.

Chart 3. Credential Attainment by Region

2023-2024 Credential Attainment by Region

	North Central	Northeast	Northwest	Piedmont Triad	Sandhills	Southeast	Southwest	Western
Earned	73,615	25,351	33,533	53,337	43,790	47,870	64,656	15,917
Potential	141,141	45,223	49,781	103,035	81,105	83,327	131,967	40,233
CredAttRate	52.2%	56.1%	67.4%	51.8%	54.0%	57.4%	49.0%	39.6%
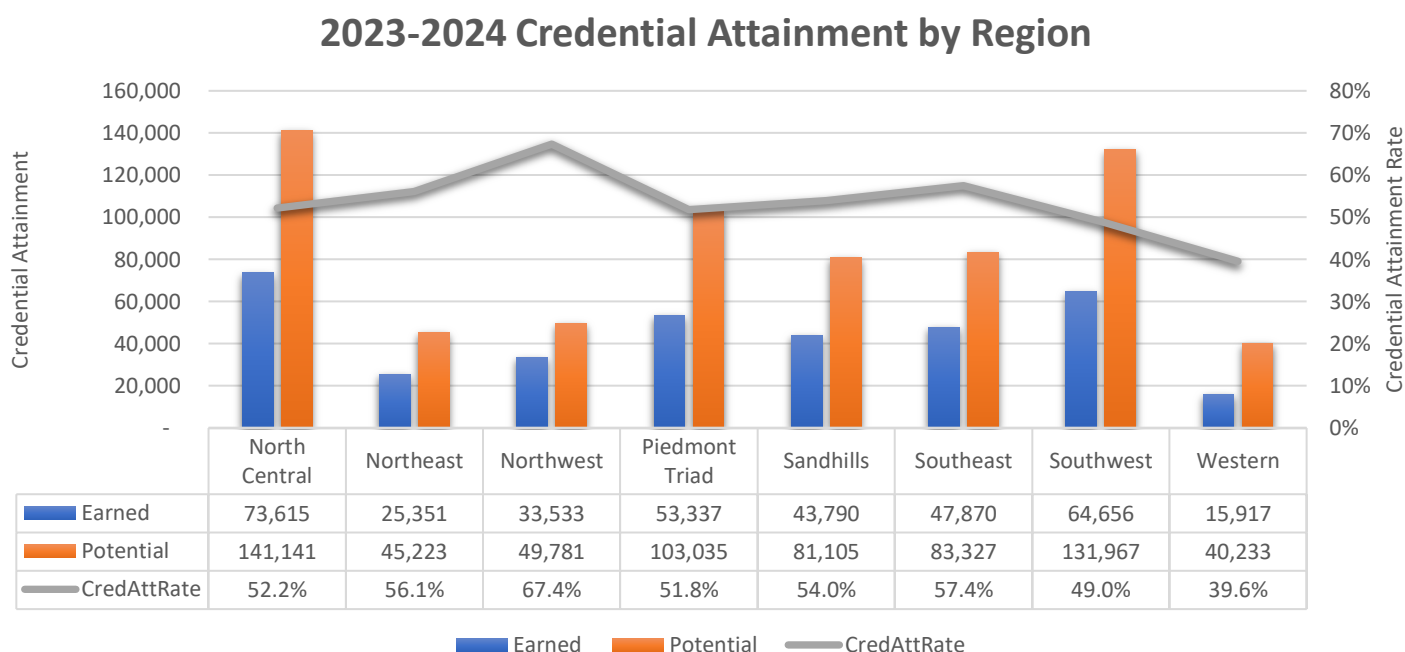
Public School Unit Results Overview

Students in 154 Public School Units (PSUs), including 115 traditional and 39 charter and specialty schools, had the opportunity to earn credentials in the 2023-2024 academic year. The following charts highlight the top ten PSUs based on the number of individual credentials earned and individual credential attainment rate. The comparison of credential attainment rate, or credential potential, creates a consistent analysis point by comparing the available credentials to the earned credentials in each PSU. The three-year comparison data indicates that the additional funding, focus on intentional credentialing of students, and attention to credential potential attainment rate has yielded tremendous results in credential attainment across multiple PSUs.

Table 8. 2023-2024 Highest Number of Earned Credentials

Public School Unit (PSU)	Region	2023-2024	2022-2023	2021-2022
Wake County Schools - 920	North Central	29,424	28,135	16,489
Cumberland County Schools - 260	Sandhills	16,944	16,012	7,933
Union County Schools - 900	Southwest	13,161	12,985	11,135
Charlotte-Mecklenburg Schools - 600	Southwest	11,517	9,833	8,980
Guilford County Schools - 410	Piedmont Triad	10,768	8,250	7,118
Harnett County Schools - 430	North Central	9,470	8,769	4,846
Onslow County Schools - 670	Southeast	9,390	5,925	3,782
Gaston County Schools - 360	Southwest	8,900	7,720	8,195
Pender County Schools - 710	Southeast	8,137	5,218	3,675
Pitt County Schools - 740	Northeast	8,047	6,020	3,405

Table 9. 2023-2024 Highest Credential Attainment Rate

Public School Unit (PSU)	Region	Earned	Potential	CredAttRate
Yancey County Schools - 995	Northwest	1,443	1,554	92.9%
Transylvania County Schools - 880	Western	1,754	2,100	83.5%
Burke County Schools - 120	Northwest	6,901	8,369	82.5%
Caldwell County Schools - 140	Northwest	6,245	7,739	80.7%
Lincoln County Schools - 550	Southwest	2,841	3,524	80.6%
Stokes County Schools - 850	Piedmont Triad	2,427	3,015	80.5%
Pender County Schools - 710	Southeast	8,137	10,218	79.6%
Dare County Schools - 280	Northeast	2,862	3,599	79.5%
Duplin County Schools - 310	Southeast	3,920	4,957	79.1%
Moore County Schools - 630	Sandhills	4,646	6,101	76.2%

Credential Attainment Rate by PSU

Credential attainment rate is the percentage of students who earned credentials available to them through their CTE coursework. The table below outlines credential attainment rate by PSU.

Table 10. 2023-2024 Credential Attainment Rate by PSU

Public School Unit (PSU)	Earned	Potential	CredAttRate
Alamance-Burlington Schools - 10	5,925	14,925	39.7%
Alexander County Schools - 20	2,318	3,734	62.1%
Alleghany County Schools - 30	993	1,387	71.6%
American Leadership Academy - Johnston - 51C	3	75	4.0%
Anson County Schools - 40	796	2,275	35.0%
Arapahoe Charter School - 69A	14	152	9.2%
Ascend Leadership Academy: Lee County - 53B	18	227	7.9%
Ashe County Schools - 50	2,111	3,247	65.0%
Asheboro City Schools - 761	552	1,181	46.7%
Asheville City Schools - 111	296	621	47.7%
Avery County Schools - 60	534	1,012	52.8%
Bear Grass Charter School - 58B	34	178	19.1%
Beaufort County Schools - 70	3,045	5,923	51.4%
Bertie County Schools - 80	218	858	25.4%
Bladen County Schools - 90	2,442	4,027	60.6%
Brunswick County Schools - 100	5,014	7,598	66.0%
Buncombe County Schools - 110	1,193	6,587	18.1%
Burke County Schools - 120	6,901	8,369	82.5%
Cabarrus County Schools - 130	5,425	12,671	42.8%
Caldwell County Schools - 140	6,245	7,739	80.7%
Camden County Schools - 150	1,041	1,470	70.8%

Public School Unit (PSU)	Earned	Potential	CredAttRate
Carteret County Schools - 160	3,167	5,335	59.4%
Caswell County Schools - 170	445	1,116	39.9%
Catawba County Schools - 180	4,511	7,923	56.9%
Chapel Hill/Carrboro City Schools - 681	1,273	1,841	69.1%
Charlotte Lab School - 61M	0	24	0.0%
Charlotte/Mecklenburg County Schools - 600	11,517	33,799	34.1%
Chatham Charter - 19A	0	30	0.0%
Chatham County Schools - 190	4,818	8,021	60.1%
Cherokee - 209	34	401	8.5%
Cherokee County Schools - 200	1,483	2,562	57.9%
Clay County Schools - 220	458	759	60.3%
Cleveland County Schools - 230	2,817	8,435	33.4%
Clinton City Schools - 821	848	1,375	61.7%
Columbus County Schools - 240	1,475	4,532	32.5%
Craven County Schools - 250	2,537	7,551	33.6%
Cumberland County Schools - 260	16,944	27,112	62.5%
Currituck County Schools - 270	1,371	3,196	42.9%
Dare County Schools - 280	2,862	3,599	79.5%
Davidson County Schools - 290	7,100	21,220	33.5%
Davie County Schools - 300	2,205	3,092	71.3%
Duplin County Schools - 310	3,920	4,957	79.1%
Durham Charter School - 32B	20	65	30.8%
Durham County Schools - 320	2,816	6,715	41.9%
East Wake Academy - 92G	152	186	81.7%
Edenton/Chowan Schools - 210	899	1,631	55.1%
Edgecombe County Schools - 330	961	3,060	31.4%
Elkin City Schools - 861	366	484	75.6%
Eno River Academy - 68A	0	2	0.0%
Franklin Academy - 92F	0	9	0.0%
Franklin County Schools - 350	3,469	6,794	51.1%
Gaston County Schools - 360	8,900	12,962	68.7%
Gates County Schools - 370	795	1,075	74.0%
Girls Leadership Academy of Wilmington - 65G	9	132	6.8%
Governor Morehead School for the Blind - 298	1	39	2.6%
Graham County Schools - 380	260	872	29.8%
Granville County Schools - 390	2,517	3,718	67.7%
Greene County Schools - 400	1,520	2,294	66.3%
Guilford County Schools - 410	10,768	17,054	63.1%
Halifax County Schools - 420	510	1,822	28.0%
Harnett County Schools - 430	9,470	15,251	62.1%
Haywood County Schools - 440	1,013	4,256	23.8%

Public School Unit (PSU)	Earned	Potential	CredAttRate
Henderson County Public Schools - 450	2,155	5,088	42.4%
Hertford County Public Schools - 460	285	782	36.4%
Hickory Public Schools - 181	1,173	1,927	60.9%
Hobgood Charter School - 42B	0	57	0.0%
Hoke County Schools - 470	5,457	9,193	59.4%
Hyde County Schools - 480	390	650	60.0%
Iredell-Statesville County Schools - 490	4,558	11,704	38.9%
Jackson County Public Schools - 500	739	1,414	52.3%
Johnston County Schools - 510	5,929	15,334	38.7%
Jones County Schools - 520	521	704	74.0%
Kannapolis City Schools - 132	513	2,802	18.3%
Lake Lure Classical Academy - 81B	3	3	100.0%
Lee County Schools - 530	2,157	6,278	34.4%
Lenoir County Schools - 540	2,782	5,656	49.2%
Lexington City Schools - 291	276	2,324	11.9%
Lincoln County Schools - 550	2,841	3,524	80.6%
Macon County Schools - 560	1,419	3,207	44.2%
Madison County Schools - 570	873	1,258	69.4%
Martin County Schools - 580	374	890	42.0%
McDowell County Schools - 590	1,668	2,940	56.7%
Mitchell County Schools - 610	605	866	69.9%
Montgomery County Schools - 620	700	1,306	53.6%
Moore County Schools - 630	4,646	6,101	76.2%
Mooresville City Schools - 491	2,114	3,224	65.6%
Mount Airy City Schools - 862	526	775	67.9%
Nash County Public Schools - 640	4,018	9,198	43.7%
NC Leadership Charter Academy - 34H	21	47	44.7%
NC Schools - 0	358,069	675,812	53.0%
NC Virtual Academy - 00B	0	228	0.0%
NCDPS Juvenile Education Services - 998	117	168	69.6%
NERSBA Early College - 94Z	0	15	0.0%
Neuse Charter School - 51A	0	7	0.0%
New Hanover County Schools - 650	3,097	8,569	36.1%
Newton-Conover City Schools - 182	1,554	2,224	69.9%
North Carolina Cyber Academy - 00A	113	726	15.6%
North East Carolina Prep - 33A	0	116	0.0%
Northampton County Schools - 660	536	941	57.0%
Onslow County Schools - 670	9,390	18,105	51.9%
Orange County Schools - 680	1,216	2,345	51.9%
Pamlico County Schools - 690	465	916	50.8%
Pasquotank County Schools - 700	1,866	2,596	71.9%

Public School Unit (PSU)	Earned	Potential	CredAttRate
Pender County Schools - 710	8,137	10,218	79.6%
Perquimans County Schools - 720	325	463	70.2%
Person County Schools - 730	1,470	2,866	51.3%
Piedmont Community Charter School - 36B	102	194	52.6%
Pine Lake Preparatory - 49	0	80	0.0%
Pinnacle Classical Academy - 23A	40	84	47.6%
Pitt County Schools - 740	8,047	14,789	54.4%
Polk County Schools - 750	1,012	2,645	38.3%
Randolph County Schools - 760	7,369	10,518	70.1%
Richmond County Schools - 770	3,521	5,046	69.8%
Roanoke Rapids City Schools - 421	1,675	2,651	63.2%
Robeson County Schools - 780	2,468	10,887	22.7%
Rockingham County Schools - 790	2,637	3,673	71.8%
Rowan-Salisbury County Schools - 800	6,873	11,900	57.8%
Rutherford County Schools - 810	2,984	7,854	38.0%
Sallie B Howard School - 98A	144	478	30.1%
Sampson County Schools - 820	1,975	3,895	50.7%
Scotland County Schools - 830	2,581	5,328	48.4%
Southern Wake Academy - 92P	75	156	48.1%
Stanly County Schools - 840	4,906	7,593	64.6%
Stokes County Schools - 850	2,427	3,015	80.5%
Surry County Schools - 860	2,626	4,228	62.1%
Swain County Schools - 870	241	606	39.8%
The Capitol Encore Academy - 26C	12	56	21.4%
The Hawbridge School - 01D	1	1	100.0%
Thomasville City Schools - 292	171	1,024	16.7%
Transylvania County Schools - 880	1,754	2,100	83.5%
Triad Math and Science Academy - 41F	1	61	1.6%
Triangle Math and Science Academy - 92T	20	151	13.2%
Tyrrell County Schools - 890	145	275	52.7%
Union Academy - 90A	0	28	0.0%
Union County Schools - 900	13,161	20,559	64.0%
Vance Charter School - 91A	5	71	7.0%
Vance County Schools - 910	395	3,099	12.7%
Voyager Academy - 32L	0	881	0.0%
Wake County Schools - 920	29,424	44,006	66.9%
Wake Preparatory Academy - 35C	2	126	1.6%
Warren County Schools - 930	364	778	46.8%
Washington County Schools - 940	518	813	63.7%
Watauga County Schools - 950	1,008	1,744	57.8%
Wayne County Schools - 960	7,215	10,850	66.5%

Public School Unit (PSU)	Earned	Potential	CredAttRate
Wayne Preparatory Academy - 96F	82	290	28.3%
Weldon City Schools - 422	415	549	75.6%
Whiteville City Schools - 241	721	2,247	32.1%
Wilkes County Schools - 970	2,469	5,115	48.3%
Wilson County Schools - 980	2,741	8,205	33.4%
Winston-Salem/Forsyth County Schools - 340	6,743	14,049	48.0%
Yadkin County Schools - 990	3,178	4,248	74.8%
Yancey County Schools - 995	1,443	1,554	92.9%

Credential Attainment Rate by Course-Credential

The table below outlines the credential attainment rate by course and credential name.

Table 11. 2023-2024 Credential Attainment Rate by Course and Credential

Course Code - Credential Name	Earned	Potential	CredAttRate
AA21 - Youth for the Quality Care of Animals (YQCA)	7,802	15,765	49.5%
AA22 - National Beef Quality Assurance Cow/Calf Certification	618	2,320	26.6%
AA22 - North Carolina Beef Quality Assurance	741	2,229	33.2%
AA32 - Equine Management and Evaluation Certification	45	57	78.9%
AA41 - Certified Veterinary Assistant	38	314	12.1%
AA41 - Elanco Veterinary Medical Applications	248	311	79.7%
AN52 - North Carolina Hunter Education Training	44	229	19.2%
AP43 - NC Private Pesticide Applicator	0	22	0.0%
AS31 - OSHA 10-hour General Industry Safety and Health	2,577	5,034	51.2%
AS32 - Certified Welders per Welding Code AWS D1.1	128	1,949	6.6%
AS32 - National Safe Tractor and Machinery Operation Certification	188	1,942	9.7%
AS33 - North Carolina State Competency Exam	217	284	76.4%
AU11 - North Carolina Beef Quality Assurance	0	186	0.0%
AU11 - Youth for the Quality Care of Animals (YQCA)	93	178	52.2%
AU12 - North Carolina Beef Quality Assurance	0	53	0.0%
AU12 - Youth for the Quality Care of Animals (YQCA)	18	43	41.9%
AU22 - Certified Beekeeper	12	296	4.1%
BA20 - Intuit QuickBooks Certified User	153	546	28.0%
BI12 - CompTIA IT Fundamentals+ (ITF+)	183	1,520	12.0%
BL52 - App Development with Swift Associate	27	56	48.2%
BL53 - App Development with Swift Certified User	3	9	33.3%
BL66 - CompTIA A+ (Core 1)	0	29	0.0%
BL66 - CompTIA A+ (Core 2)	0	29	0.0%
BL66 - CompTIA IT Fundamentals+ (ITF+)	1	29	3.4%
BM10 - Microsoft Office Specialist PowerPoint	4,686	8,018	58.4%

Course Code - Credential Name	Earned	Potential	CredAttRate
BM10 - Microsoft Office Specialist Word	4,443	8,019	55.4%
BM20 - Microsoft Office Specialist Excel	4,140	7,063	58.6%
BM20 - Microsoft Office Specialist Excel Expert	3,225	7,055	45.7%
BN22 - CompTIA Network+	10	76	13.2%
BN32 - CompTIA Security+	13	84	15.5%
BP16 - PCAP Certified Associate in Python Programming	246	694	35.4%
BP20 - SAS Certified Specialist Programming Fundamentals Using SAS 9.4	9	34	26.5%
CC45 - CCWR - Career Management (Interpersonal/Social Skills)	5,801	13,446	43.1%
CC45 - CCWR - Career Management (Attitude)	5,417	13,446	40.3%
CC45 - CCWR - Career Management (Communication)	5,966	13,446	44.4%
CC45 - CCWR - Career Management (Media Rules)	5,880	13,446	43.7%
CC45 - CCWR - Career Management (Planning and Organizing)	5,246	13,446	39.0%
CC45 - CCWR - Career Management (Professionalism)	5,047	13,446	37.5%
CC45 - CCWR - Career Management (Teamwork)	5,793	13,446	43.1%
CC45 - CCWR - Career Management (Critical Thinking)	5,012	13,446	37.3%
CC45 - Express Employment Professionals Career Preparedness Certification	631	10,227	6.2%
CC45 - Microburst Learning Soft Skills for Success	1,013	10,061	10.1%
CS12 - PMI Project Management Ready	574	793	72.4%
FA32 - Pre-Professional Certification in Fashion, Textiles, and Apparel	78	1,193	6.5%
FC14 - Pre-Professional Certification in Family and Community Services	684	929	73.6%
FE11 - First Aid/CPR/AED	973	1,741	55.9%
FE11 - North Carolina Early Childhood Credential	503	1,756	28.6%
FE21 - Basic School Age Care (BSAC)	317	543	58.4%
FH11 - ANSI - Accredited Food Protection Manager Certification	634	2,669	23.8%
FH12 - ANSI - Accredited Food Protection Manager Certification	64	304	21.1%
FH13 - Certified Fundamentals Cook (CFC)	13	594	2.2%
FH13 - Pre-Professional Certification in Culinary Arts	464	1,135	40.9%
FH13 - ProStart National Certificate of Achievement (COA)	6	1,039	0.6%
FI22 - Pre-Professional Certification in Interior Design Fundamentals	414	1,865	22.2%
FI23 - Autodesk Certified User Revit	73	226	32.3%
FN41 - ANSI - Accredited Food Handler Certificate	16,817	28,639	58.7%
FN42 - ANSI - Accredited Food Protection Manager Certification	2,539	9,999	25.4%
FN42 - Pre-Professional Certification in Nutrition, Food, and Wellness	366	10,003	3.7%
FN43 - Food Safety and Science Certification	15	289	5.2%
FN43 - Pre-Professional Certification in Food Science Fundamentals	2	289	0.7%
HB12 - OSHA 10-hour General Industry Safety and Health	41	66	62.1%

Course Code - Credential Name	Earned	Potential	CredAttRate
HH32 - CPhT Certified Pharmacy Technician	102	366	27.9%
HL21 - OSHA 10-hour General Industry Safety and Health	11	11	100.0%
HN43 - North Carolina Nurse Aide I	1,672	2,075	80.6%
HN44 - Nurse Aide I - Geriatric Aide Endorsement	19	21	90.5%
HN45 - Nurse Aide I - Home Care Aide Endorsement	20	22	90.9%
HP70 - Stop the Bleed	2,128	2,932	72.6%
HP71 - First Aid	899	1,797	50.0%
HP72 - CPR/AED	194	524	37.0%
HU40 - First Aid	13,746	22,034	62.4%
HU42 - BLS Provider	9,394	10,457	89.8%
HU42 - OSHA 10-hour General Industry Safety and Health	8,064	10,487	76.9%
HU42 - Stop the Bleed	7,996	10,490	76.2%
IA11 - PrintED Introduction to Graphic Communication	13	61	21.3%
IA13 - Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator	1	49	2.0%
IA13 - Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign	10	48	20.8%
IA13 - Adobe Certified Professional - Visual Communication Using Adobe Photoshop	5	49	10.2%
IA32 - Adobe Certified Professional - Digital Video Using Adobe Premiere Pro	0	17	0.0%
IA32 - Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator	9	17	52.9%
IA32 - Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign	0	17	0.0%
IA32 - Adobe Certified Professional - Visual Communication Using Adobe Photoshop	15	17	88.2%
IA32 - Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver	0	17	0.0%
IC00 - NC NCCER Module 00101 (with Performance Profile)	8,884	13,237	67.1%
IC00 - NC NCCER Module 00102 (with Performance Profile)	8,588	13,239	64.9%
IC00 - NC NCCER Module 00103 (with Performance Profile)	8,463	13,239	63.9%
IC00 - NC NCCER Module 00104 (with Performance Profile)	8,465	13,238	63.9%
IC00 - NC NCCER Module 00105 (with Performance Profile)	8,440	13,240	63.7%
IC00 - NC NCCER Module 00107 (with Performance Profile)	9,114	13,240	68.8%
IC00 - NC NCCER Module 00108	9,592	13,234	72.5%
IC00 - NC NCCER Module 00109 (with Performance Profile)	8,706	13,241	65.8%
IC00 - OSHA 10-hour Construction Safety and Health	6,887	13,225	52.1%
IC11 - NC NCCER Module 28101 (with Performance Profile)	1,324	1,603	82.6%
IC11 - NC NCCER Module 28102 (with Performance Profile)	1,235	1,603	77.0%
IC11 - NC NCCER Module 28103 (with Performance Profile)	1,224	1,602	76.4%
IC11 - NC NCCER Module 28104 (with Performance Profile)	1,233	1,603	76.9%
IC11 - NC NCCER Module 28105 (with Performance Profile)	1,174	1,603	73.2%

Course Code - Credential Name	Earned	Potential	CredAttRate
IC11 - NC NCCER Module 28106 (with Performance Profile)	1,258	1,602	78.5%
IC12 - NC NCCER Module 28201 (with Performance Profile)	583	718	81.2%
IC12 - NC NCCER Module 28202 (with Performance Profile)	557	718	77.6%
IC12 - NC NCCER Module 28203 (with Performance Profile)	550	718	76.6%
IC12 - NC NCCER Module 28204 (with Performance Profile)	548	718	76.3%
IC13 - NC NCCER Module 28205 (with Performance Profile)	130	150	86.7%
IC13 - NC NCCER Module 28206 (with Performance Profile)	131	150	87.3%
IC13 - NC NCCER Module 28207 (with Performance Profile)	126	150	84.0%
IC21 - NC NCCER Module 27101	3,816	4,872	78.3%
IC21 - NC NCCER Module 27102 (with Performance Profile)	3,237	4,876	66.4%
IC21 - NC NCCER Module 27103 (with Performance Profile)	2,862	4,876	58.7%
IC21 - NC NCCER Module 27104 (with Performance Profile)	2,715	4,877	55.7%
IC21 - NC NCCER Module 27105 (with Performance Profile)	2,866	4,876	58.8%
IC21 - NC NCCER Module 27110 (with Performance Profile)	2,695	4,877	55.3%
IC21 - NC NCCER Module 27111 (with Performance Profile)	2,835	4,877	58.1%
IC22 - NC NCCER Module 27109 (with Performance Profile)	1,189	1,875	63.4%
IC22 - NC NCCER Module 27112 (with Performance Profile)	1,139	1,875	60.7%
IC22 - NC NCCER Module 27202 (with Performance Profile)	1,189	1,876	63.4%
IC22 - NC NCCER Module 27203 (with Performance Profile)	1,100	1,876	58.6%
IC22 - NC NCCER Module 27204 (with Performance Profile)	1,156	1,875	61.7%
IC23 - NC NCCER Module 27201 (with Performance Profile)	202	299	67.6%
IC23 - NC NCCER Module 27205 (with Performance Profile)	189	299	63.2%
IC23 - NC NCCER Module 27206 (with Performance Profile)	197	299	65.9%
IC23 - NC NCCER Module 27207 (with Performance Profile)	190	299	63.5%
IC23 - NC NCCER Module 27208 (with Performance Profile)	193	299	64.5%
IC23 - NC NCCER Module 27210 (with Performance Profile)	199	299	66.6%
IC41 - NC NCCER Module 26101	937	1,181	79.3%
IC41 - NC NCCER Module 26102 (with Performance Profile)	836	1,181	70.8%
IC41 - NC NCCER Module 26103	884	1,181	74.9%
IC41 - NC NCCER Module 26104	798	1,181	67.6%
IC41 - NC NCCER Module 26105 (with Performance Profile)	814	1,181	68.9%
IC41 - NC NCCER Module 26106 (with Performance Profile)	819	1,181	69.3%
IC41 - NC NCCER Module 26107 (with Performance Profile)	763	1,181	64.6%
IC41 - NC NCCER Module 26108 (with Performance Profile)	781	1,181	66.1%
IC42 - NC NCCER Module 26109 (with Performance Profile)	274	466	58.8%
IC42 - NC NCCER Module 26110 (with Performance Profile)	277	466	59.4%
IC42 - NC NCCER Module 26111 (with Performance Profile)	272	466	58.4%
IC42 - NC NCCER Module 26112 (with Performance Profile)	282	466	60.5%
IC42 - NC NCCER Module 26201	330	466	70.8%
IC42 - NC NCCER Module 26202 (with Performance Profile)	260	466	55.8%
IC42 - NC NCCER Module 26203 (with Performance Profile)	285	466	61.2%

Course Code - Credential Name	Earned	Potential	CredAttRate
IC42 - NC NCCER Module 26209 (with Performance Profile)	232	466	49.8%
IC43 - NC NCCER Module 26204 (with Performance Profile)	45	69	65.2%
IC43 - NC NCCER Module 26205 (with Performance Profile)	43	69	62.3%
IC43 - NC NCCER Module 26206 (with Performance Profile)	49	69	71.0%
IC43 - NC NCCER Module 26207 (with Performance Profile)	44	69	63.8%
IC43 - NC NCCER Module 26208 (with Performance Profile)	44	69	63.8%
IC43 - NC NCCER Module 26210 (with Performance Profile)	46	69	66.7%
IC43 - NC NCCER Module 26211 (with Performance Profile)	42	69	60.9%
IC61 - Autodesk Certified User AutoCAD	3,314	6,509	50.9%
IC62 - Autodesk Certified User Revit	902	1,353	66.7%
IC63 - Autodesk Certified Professional Revit	1	242	0.4%
ID10 - FAA Trust	1,258	1,559	80.7%
ID11 - CFR 14 Part 107 UAS Remote Pilot Certification	312	1,235	25.3%
ID11 - NCDOT NC UAS Operator Permit	542	1,236	43.9%
ID12 - ESRI Drone2Map	129	226	57.1%
ID12 - NFPA 2400	153	226	67.7%
II12 - Cisco Certified Technician (CCT) Routing and Switching	24	117	20.5%
II21 - CompTIA A+ (Core 1)	89	494	18.0%
II22 - CompTIA A+ (Core 2)	41	191	21.5%
II41 - Adobe Certified Professional - Graphic Design and Illustration Using Adobe Illustrator	6,973	13,366	52.2%
II41 - Adobe Certified Professional - Visual Communication Using Adobe Photoshop	8,301	13,366	62.1%
II42 - Adobe Certified Professional - Print and Digital Media Publication Using Adobe InDesign	1,747	2,439	71.6%
II43 - Adobe Certified Professional - Web Authoring Using Adobe Dreamweaver	179	431	41.5%
II45 - Adobe Certified Professional - Digital Video Using Adobe Premiere Pro	1,957	3,084	63.5%
IK26 - ASE Entry-Level Certification - Maintenance and Light Repair	0	35	0.0%
IK49 - Expandable Baton Certification	0	50	0.0%
IK66 - Adobe Certified Professional - Digital Video Using Adobe Premiere Pro	33	267	12.4%
IK67 - Adobe Certified Professional - Digital Video Using Adobe Premiere Pro	28	75	37.3%
IK68 - Certified Manufacturing Associate (CMfgA)	6	28	21.4%
IK68 - OSHA 10-hour General Industry Safety and Health	23	28	82.1%
IL41 - NC Private Pesticide Applicator	16	17	94.1%
IL53 - North Carolina Boater Education Certificate	80	129	62.0%
IL54 - NC NCCER Module 29101 (with Performance Profile)	17	47	36.2%
IL54 - NC NCCER Module 29102 (with Performance Profile)	19	47	40.4%
IL54 - NC NCCER Module 29105 (with Performance Profile)	17	47	36.2%
IL54 - NC NCCER Module 29108 (with Performance Profile)	10	47	21.3%

Course Code - Credential Name	Earned	Potential	CredAttRate
IL54 - NC NCCER Module 84101 (with Performance Profile)	21	47	44.7%
IL54 - NC NCCER Module 85101 (with Performance Profile)	19	47	40.4%
IL54 - NC NCCER Module 85102 (with Performance Profile)	17	47	36.2%
IL54 - NC NCCER Module 85103 (with Performance Profile)	21	47	44.7%
IL54 - NC NCCER Module 85104 (with Performance Profile)	13	47	27.7%
IL54 - NC NCCER Module 85105 (with Performance Profile)	24	47	51.1%
IL54 - NC NCCER Module 85106 (with Performance Profile)	23	47	48.9%
IL55 - NC NCCER Module 03101	108	172	62.8%
IL55 - NC NCCER Module 03102	98	172	57.0%
IL55 - NC NCCER Module 03103 (with Performance Profile)	75	172	43.6%
IL55 - NC NCCER Module 03104 (with Performance Profile)	72	172	41.9%
IL55 - NC NCCER Module 03105 (with Performance Profile)	57	172	33.1%
IL55 - NC NCCER Module 03106 (with Performance Profile)	65	172	37.8%
IL55 - NC NCCER Module 03107 (with Performance Profile)	75	172	43.6%
IL55 - NC NCCER Module 03108 (with Performance Profile)	80	172	46.5%
IL55 - NC NCCER Module 03109 (with Performance Profile)	59	172	34.3%
IL56 - NC NCCER Module 03205 (with Performance Profile)	15	67	22.4%
IL56 - NC NCCER Module 03206 (with Performance Profile)	16	67	23.9%
IL56 - NC NCCER Module 03210 (with Performance Profile)	11	67	16.4%
IL56 - NC NCCER Module 03211 (with Performance Profile)	10	67	14.9%
IL56 - NC NCCER Module 03301 (with Performance Profile)	16	67	23.9%
IL56 - NC NCCER Module 03311 (with Performance Profile)	12	67	17.9%
IL58 - NC NCCER Module 02101	97	115	84.3%
IL58 - NC NCCER Module 02102 (with Performance Profile)	85	115	73.9%
IL58 - NC NCCER Module 02103 (with Performance Profile)	89	115	77.4%
IL58 - NC NCCER Module 02104 (with Performance Profile)	82	115	71.3%
IL58 - NC NCCER Module 02105 (with Performance Profile)	82	115	71.3%
IL58 - NC NCCER Module 02106 (with Performance Profile)	84	115	73.0%
IL58 - NC NCCER Module 02107 (with Performance Profile)	81	115	70.4%
IL58 - NC NCCER Module 02108 (with Performance Profile)	81	115	70.4%
IL58 - NC NCCER Module 02109 (with Performance Profile)	82	115	71.3%
IL58 - NC NCCER Module 02110 (with Performance Profile)	83	115	72.2%
IL59 - NC NCCER Module 02111 (with Performance Profile)	9	23	39.1%
IL59 - NC NCCER Module 02112 (with Performance Profile)	9	23	39.1%
IL59 - NC NCCER Module 02201 (with Performance Profile)	9	23	39.1%
IL59 - NC NCCER Module 02202 (with Performance Profile)	8	23	34.8%
IL59 - NC NCCER Module 02203 (with Performance Profile)	9	23	39.1%
IL59 - NC NCCER Module 02204 (with Performance Profile)	8	23	34.8%
IL59 - NC NCCER Module 02205 (with Performance Profile)	8	23	34.8%
IL59 - NC NCCER Module 02207 (with Performance Profile)	8	23	34.8%
IL60 - NC NCCER Module 02206 (with Performance Profile)	0	2	0.0%

Course Code - Credential Name	Earned	Potential	CredAttRate
IL60 - NC NCCER Module 02208 (with Performance Profile)	0	2	0.0%
IL60 - NC NCCER Module 02209 (with Performance Profile)	0	2	0.0%
IL60 - NC NCCER Module 02210 (with Performance Profile)	0	2	0.0%
IL60 - NC NCCER Module 02211 (with Performance Profile)	0	2	0.0%
IM11 - Certified Production Technician (CPT) - Maintenance Awareness	207	1,189	17.4%
IM11 - Certified Production Technician (CPT) - Safety	420	1,189	35.3%
IM11 - OSHA 10-hour General Industry Safety and Health	579	1,189	48.7%
IM12 - Certified Production Technician (CPT) - Manufacturing Processes and Production	88	262	33.6%
IM12 - Certified Production Technician (CPT) - Quality Practices and Measurement	116	262	44.3%
IM14 - FANUC Certified Robot Operator	8	35	22.9%
IM21 - OSHA 10-hour Construction Safety and Health	965	2,239	43.1%
IM22 - Woodwork Career Alliance (WCA) Sawblade Certificate	409	875	46.7%
IM31 - ETA EM1	89	312	28.5%
IM32 - ETA EM4	37	122	30.3%
IM33 - ETA EM2	0	46	0.0%
IM41 - NIMS Measurement, Materials, and Safety	96	574	16.7%
IM42 - NIMS Job Planning, Benchwork, and Layout	57	269	21.2%
IM43 - NIMS Milling I	0	38	0.0%
IM61 - AWS SENSE Module 2: Safety	94	1,015	9.3%
IM61 - AWS SENSE Module 8: Thermal Cutting Process	102	1,015	10.0%
IM61 - OSHA 10-hour Construction Safety and Health	160	959	16.7%
IM61 - S/P2 Welding Safety and Pollution Prevention	63	1,015	6.2%
IM62 - AWS SENSE Module 3: Drawing and Welding Interpretation	148	530	27.9%
IM62 - AWS SENSE Module 4: SMAW	129	530	24.3%
IM62 - AWS SENSE Module 9: Welding Inspection and Testing	150	530	28.3%
IM62 - Certified Welder per Welding Code AWS D1.1 (SMAW)	20	530	3.8%
IM63 - AWS SENSE Entry Welder Program - Flux Cored Arc Welding Process	21	171	12.3%
IM63 - AWS SENSE Entry Welder Program - Gas Metal Arc Welding Process	28	171	16.4%
IM63 - Certified Welder per Welding Code AWS D1.1 (FCAW)	0	171	0.0%
IM63 - Certified Welder per Welding Code AWS D1.1 (GMAW)	6	171	3.5%
IP11 - Law and Public Safety Introductory Competency	4,483	6,633	67.6%
IP11 - NIMS (DHS/FEMA) IS-100	4,498	6,629	67.9%
IP11 - NIMS (DHS/FEMA) IS-200	4,347	6,629	65.6%
IP11 - NIMS (DHS/FEMA) IS-700	4,518	6,629	68.2%
IP11 - NIMS (DHS/FEMA) IS-800	4,186	6,629	63.1%
IP12 - Community Emergency Response Team (CERT)	1,076	1,379	78.0%
IP12 - National Basic 9-1-1 Dispatch Certification	796	1,379	57.7%

Course Code - Credential Name	Earned	Potential	CredAttRate
IP21 - (DHS/FEMA) IS-100	149	283	52.7%
IP21 - (DHS/FEMA) IS-200	142	281	50.5%
IP21 - (DHS/FEMA) IS-700	130	283	45.9%
IP21 - (DHS/FEMA) IS-800	132	283	46.6%
IP21 - BLS Provider	223	282	79.1%
IP21 - Emergency Medical Responder (EMR)	82	298	27.5%
IP21 - Stop the Bleed	208	298	69.8%
IP22 - Emergency Medical Technician (EMT)	39	176	22.2%
IP31 - NCOSFM - FF Fireground Ops 1 (FIP 3041)	592	1,157	51.2%
IP31 - NCOSFM - FF Fireground Ops 2 (FIP 3042)	570	1,157	49.3%
IP31 - NCOSFM - FF Fireground Ops 3 (FIP 3043)	539	1,157	46.6%
IP31 - NCOSFM - FF Fireground Ops 4 (FIP 3044)	380	1,157	32.8%
IP31 - NCOSFM - FF General and Communications (FIP 3040)	486	1,157	42.0%
IP32 - NCOSFM Emergency Medical Care (FIP 7001)	320	552	58.0%
IP32 - NCOSFM FF Fireground Ops 5 (FIP 3045)	341	552	61.8%
IP32 - NCOSFM FF Fireground Ops 6 (FIP 3046)	336	552	60.9%
IP32 - NCOSFM FF Fireground Ops 7 (FIP 3047)	278	552	50.4%
IP32 - NCOSFM FF Fireground Ops 8 (FIP 3048)	206	552	37.3%
IP33 - NCOSFM FF and Life Safety (FIP 3051)	137	213	64.3%
IP33 - NCOSFM FF Mayday and Safety (FIP 6413)	144	213	67.6%
IP33 - NCOSFM FF Rescue Ops 1 (FIP 3050)	155	213	72.8%
IP33 - NCOSFM HM Ops (FIP 3556)	119	213	55.9%
IP33 - NCOSFM TIMS (FIP 7000)	160	213	75.1%
IP41 - National Law Enforcement Certification SPSS	1,363	2,201	61.9%
IP42 - Certified Protection Officer (CPO)	320	556	57.6%
IP51 - NC Emergency Management I IS-120	110	117	94.0%
IP51 - NC Emergency Management I IS-2200	109	117	93.2%
IP51 - NC Emergency Management I IS-230	111	117	94.9%
IP51 - NC Emergency Management I IS-235	111	117	94.9%
IP51 - NC Emergency Management I IS-240	111	117	94.9%
IP51 - NC Emergency Management I IS-241	110	117	94.0%
IP51 - NC Emergency Management I IS-242	111	117	94.9%
IP51 - NC Emergency Management I IS-244	111	117	94.9%
IP51 - NC Emergency Management I IS-288	110	117	94.0%
IP51 - NC Emergency Management I IS-559	107	117	91.5%
IP51 - NC Emergency Management I IS-703	110	117	94.0%
IP51 - NC Emergency Management I IS-706	110	117	94.0%
IP51 - NC Emergency Management I IS-909	110	117	94.0%
IP52 - NC Emergency Management II G0271	10	10	100.0%
IP52 - NC Emergency Management II G0272	10	10	100.0%
IP52 - NC Emergency Management II G0393	10	10	100.0%

Course Code - Credential Name	Earned	Potential	CredAttRate
IP52 - NC Emergency Management II G0775	10	10	100.0%
IP52 - NC Emergency Management II G-191	10	10	100.0%
IP52 - NC Emergency Management II G-386	10	10	100.0%
IP52 - NC Emergency Management II G-393	10	10	100.0%
IP52 - NC Emergency Management II G-557	10	10	100.0%
IP52 - NC Emergency Management II IS-247	10	10	100.0%
IP52 - NC Emergency Management II IS271	10	10	100.0%
IT11 - S/P2 Automotive Service Pollution Prevention	4,369	7,070	61.8%
IT11 - S/P2 Automotive Service Safety	4,553	7,071	64.4%
IT17 - ASE Entry-Level Certification - Maintenance and Light Repair	501	1,432	35.0%
IT17 - ASE Entry-Level Certification-Brakes	369	1,433	25.8%
IT18 - ASE - Auto Maintenance and Light Repair (Test G1)	44	444	9.9%
IT18 - ASE Entry-Level Certification - Electrical/Electronic Systems	176	443	39.7%
IT30 - S/P2 Collision Repair and Refinish Pollution Prevention	111	380	29.2%
IT30 - S/P2 Collision Repair and Refinish Safety	111	380	29.2%
IT32 - I-CAR Platinum ProLevel 1 for Non-Structural	42	63	66.7%
IT33 - ASE Entry-Level Certification - Painting and Refinishing	3	55	5.5%
IT33 - I-CAR Platinum ProLevel 1 for Refinishing	43	55	78.2%
IV22 - Autodesk Certified User Inventor	516	834	61.9%
IV22 - Certified SolidWorks Associate (CSWA)	48	413	11.6%
IV23 - Autodesk Certified Professional Inventor	3	167	1.8%
IV23 - Certified SolidWorks Professional (CSWP)	1	89	1.1%
MA52 - Customer Service and Sales Certification	261	1,381	18.9%
MA52 - Fundamental Marketing Concepts	19	1,381	1.4%
ME11 - Venture Entrepreneurial Expedition	9,870	18,344	53.8%
ME12 - Entrepreneurship and Small Business	1,957	3,043	64.3%
MH42 - American Hotel and Lodging Association Certified Guest Service Professional	867	2,312	37.5%
ML05 - Salesforce Administrator Certification	7	8	87.5%
TE21 - OSHA 10-hour General Industry Safety and Health	0	24	0.0%
TE22 - OSHA 10-hour General Industry Safety and Health	0	16	0.0%
TL51 - Autodesk Certified User 3DS Max	0	139	0.0%
TL52 - Unity Certified User: Programmer	9	71	12.7%
TR14 - NI Certified LabVIEW Associate Developer (CLAD)	0	8	0.0%
TS25 - Autodesk Certified User 3DS Max	288	976	29.5%
TS25 - Autodesk Certified User Maya	4	836	0.5%
TV14 - NI Certified LabVIEW Associate Developer (CLAD)	0	4	0.0%

STRATEGIC PLANNING FOR CREDENTIAL ATTAINMENT IMPROVEMENT

Based on research, best practices for improving credential attainment include the following strategies.

1. **Creating a clear communication plan.** Providing clear, credible information that communicates career, postsecondary education and economic benefits is a priority for improving credential opportunities and attainment (Education Strategy Group et al., 2018). Reeves (2009) shared that the role of leadership of an organization is to communicate the essential message of change. CTE leadership should develop an intentional communication plan to share with stakeholders the benefits and importance of high school students earning industry-recognized credentials. Networks of teachers, administrators, counselors, industry partners and community organizations should be formed to help deliver and perpetuate the message of credentialing throughout the school community. Any efforts to improve credential attainment will be less effective without community involvement and engagement.

2. **Forming CTE/counseling collaborative teams.** According to Rosen and Milano (2019), the need exists across secondary education for better advising to explain immediate and long-term benefits for specific opportunities to students as they make decisions that impact their futures. A major challenge for access in high-quality CTE and related to counseling and advising is the information available to students and parents. School counselors influence which students receive messages about specific opportunities and need to have the most up-to-date information about what is available and which courses form pathways aligned to industry-recognized credentials (Rosen & Milano, 2019). Establishing CTE/counseling collaborative teams should allow CTE leadership and school counselors to regularly communicate regarding opportunities available to students through CTE, pathways and courses, and postsecondary paths open to students based on CTE experiences in high school. Additionally, CTE leadership and school counselors will be able to collaborate on the creation of program marketing and recruitment tools to help share opportunities with students and parents. Creating and using resources to distribute messages about CTE opportunities equitably and widely is important to improving credential attainment and should be an aim of the CTE/counseling collaborative teams (Rosen & Molina, 2019).

3. **Identifying high-quality industry-recognized credentials and intentionally aligning those credentials to CTE pathways.** By delineating between low-value and high-value credentials, students can make wise choices about which credentials to earn for the greatest long-term impact. The process to identify high-value credentials includes identifying occupations that are high-skill and high-wage and then connecting the associated credentials to include in high school programming (Mathers, 2018). Establishing high-quality credentials requires industry and education leaders to come together and collaborate, determining which credentials are valuable and where the credentials align to the curriculum. When respected industry leaders and organizations unite to establish and promote high-quality credentials, others are motivated to get involved in the work of credentialing students (Rimland & Raish, 2019). Three intentional actions are suggested to propel the work of identifying high-quality credentials and include

a. building stronger employer use of credentialing through job postings, higher wages for high-quality credentials, and the utilization of common credentials across an industry sector;

b. identifying credentials aligned to postsecondary education and training to potential credit for students with college-level course hours in core areas; and

c. building a crosswalk of prioritized industry-recognized credentials that span both the education system and the workforce system (Education Strategy Group et al., 2018).

State education leaders, business and industry executives, and community workforce development agencies have power to produce improvement in credentialing efforts when united in the implementation of these strategies (Education Strategy Group et al., 2018).

CONCLUSION

The positive trend in credential attainment beginning with the 2021-2022 academic year has continued through the 2023-2024 academic year with 53% of available credentials being earned by students across the state. NC CTE is committed to continuous improvement by creating expanded opportunities for students to earn credentials, while supporting PSU leaders and teachers to make the industry-recognized credentials of value available across the state.

North Carolina CTE priorities for improving the secondary credentialing efforts include the following actions.

- Incorporating credentialing information with the newly legislated Career Development Plans as a best practice.
- Enhancing the CTE data and information portal, NCCTE Admin, with an electronic, searchable Credential Directory.
- Continuing to improve the process for vetting and approving new credentials, while focusing on an alignment to the NC Workforce credentials of value.
- Supporting PSUs in the implementation of existing credential opportunities. A dedicated Special Populations Consultant will provide additional support for PSUs in addressing equity in CTE and, therefore, credential opportunities.
- Continuing to increase the efficiency and accuracy in the process for collecting and reporting earned credentials.
- Continuing to support PSUs to interpret and utilize credential data. Through an Opportunity Gap Analysis Workshop, PSUs will learn to implement data analysis and improvement planning that involves a cyclical approach of gathering data, identifying gaps, exploring root causes, and developing and implementing action plans to close opportunity gaps.
- Developing a NCCTE Data Dashboard to assist PSUs with data analysis to identify gaps and missed opportunities to credential students.

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