



## COMMONWEALTH of VIRGINIA

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December 19, 2008

The Honorable R. Edward Houck  
Chairman, Senate Education and Health Committee  
P.O. Box 7  
Spotsylvania, VA 22553-0007

The Honorable Robert Tata  
Chairman, House Education Committee  
4536 Gleneagle Drive  
Virginia Beach, VA 23462

Dear Senator Houck and Delegate Tata:

Item 138.E, 2008 Appropriation Act, requires an examination by the Virginia Department of Education in conjunction with the Inter-Industry Conference on Auto Collision Repair (I-CAR) on the issue of I-CAR standards for entry-level students.

The report of that required review is attached to this letter.

If you have questions or require additional information, please do not hesitate to contact Elizabeth M. Russell, Director, Career and Technical Education, at (804) 225-2847 or [Elizabeth.Russell@doe.virginia.gov](mailto:Elizabeth.Russell@doe.virginia.gov).

Sincerely,

A handwritten signature in black ink that reads "Patricia I. Wright".

Patricia I. Wright

PIW/AR/sgj

Enclosure

C. The Honorable Timothy M. Kaine  
The Honorable Thomas R. Morris



VIRGINIA DEPARTMENT OF EDUCATION

REPORT

# **VIRGINIA'S EXAMINATION OF THE INTER-INDUSTRY CONFERENCE ON AUTO COLLISION REPAIR (I-CAR)**

**A REVIEW IN RESPONSE TO ITEM 138.E OF  
THE 2008 APPROPRIATION ACT**

September 24, 2008

## VIRGINIA'S EXAMINATION OF THE INTER-INDUSTRY CONFERENCE ON AUTO INDUSTRY REPAIR (I-CAR)

### ❑ LEGISLATION

#### **Item 138, 2008 Appropriation Act**

E. The Department of Education, in conjunction with the Inter-Industry Conference on Auto Collision Repair (I-CAR), shall examine the issue of I-CAR standards for entry-level students and report their findings to the Chairman of the Senate and House Education Committees no later than December 1, 2008.

The mission of the I-CAR program is to develop strong educational programs related to collision repair. See ([www.i-car.com](http://www.i-car.com)).

### ❑ BACKGROUND

The Virginia Department of Education includes automotive repair courses in its Career and Technical Education Administrative Planning Guide. Individual school divisions choose curriculum that may target an industry certification. A number of Virginia Automotive Body Technology programs utilize the "I-CAR Enhanced Delivery" curriculum. I-CAR indicates that its comprehensive collision repair curriculum can lead to a certification in the collision repair and refinishing area. Programs using any specific curricular approach normally target one or more of the National Institute for Automotive Service Excellence (ASE) Collision Repair & Refinish Test Series examinations to provide students with both student-selected verified credit eligibility and enhanced job market value.

In Virginia, the Path to Industry Credentialing initiated under former Governor Mark Warner encourages students to work toward earning an industry certification, achieving a state licensure, or passing an occupational competency assessment while pursuing a high school diploma. Students who earn a credential and complete a Career and Technical program may earn up to two student-selected verified credits to meet graduation requirements. The industry credentials earned by students are a measurement standard utilized on the Virginia School Report Card and also are a means of documenting the state's performance on preparing students to achieve the Technical Skills Standard for the federal Carl D. Perkins Act of 2006.

A credential is defined as:

- a complete industry certification program, e.g., Certified Nursing Assistant (CNA).
- a pathway examination that leads to a completed industry certification, e.g., automotive technician examinations from ASE.

- a state-issued professional license, e.g., Cosmetology.
- an occupational competency assessment, e.g., technical skill assessments from the National Occupational Competency Institute (NOCTI).

The Virginia Board of Education approves for student-selected verified credit only those credentials that meet the following criteria:

- They must prepare students for an occupation or occupational area.
- They must be knowledge-based, as opposed to performance-based. Credentials may contain a performance-based component, but it is not required.
- They must be in a career and technical education field that confers a credential from a recognized industry, trade, or professional association or entity.
- They must be administered on a multi-state or international basis.
- They must be standardized and graded independent of the school in which the test is given.

As of January 10, 2008, the Virginia Board of Education has approved 151 credentials for career and technical education (CTE) courses or course sequences. The current list approved by the Virginia Board of Education is attached for your information.

In addition to providing student-selected verified credit(s) and adding value to a student's résumé for obtaining entry-level positions in today's technical job market, credentials provide the following benefits to students:

- Evidence that the student has completed advanced educational preparation by verifying competency in career and technical education skill areas in demand by business and industry.
- Increased job opportunities for advancement in a chosen career path.
- Enhanced self-esteem for students through achieving national occupational competency standards recognized by business and industry.

When the Virginia Department of Education began identifying industry credentials in 2002, only a small percentage of Virginia students were enrolled in courses with the potential for achieving an industry credential. In 2008, most career and technical education course(s) offer training for one or more industry credentials. During the 2007 – 2008 school year, 15,430 Virginia students passed either industry certification exams, occupational competency exams, or achieved state licensure in areas eligible for student-selected verified credit. To date, thirty (30) students have participated in automotive collision industry certifications.

Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification; or earn an occupational competency credential

from a recognized industry, trade, or professional organization; or acquire a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student-selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Virginia Board of Education as an additional test to verify student achievement. If approved, the I-CAR assessment would provide students in Auto Body Repair with a recognized industry credential that would allow the students to earn a verified credit.

Virginia continues to be a national leader in aligning career and technical education programs with business and industry expectations. Students who earn one or more external credentials have a distinct advantage in entering their chosen field of employment and/or in continuing their career preparation through higher education.

## ❑ **EXAMINATION OF INTER-INDUSTRY CONFERENCE ON AUTO COLLISION REPAIR (I-CAR)**

The I-CAR tests are a complicated system which is set up in modules for business and industry with “x” number of points being awarded each time a module is passed. These points accumulate to give the auto body collision repair shop a level, such as “platinum level or gold level” as their certification for I-CAR. This testing would have to be adjusted so that a module could be developed that would assure enough competencies/skills were tested to warrant an industry certification that could be approved by the Virginia Board of Education. If this type of testing could be developed with the national I-CAR system then it would be eligible to be part of the Virginia Board of Education approved list. In meetings with teachers of Virginia’s Automotive Body programs the teachers indicated that they would prefer to use the I-CAR training rather than Automotive Service Excellence (ASE – an industry recognized credentialing program.). As part of curriculum development and industry credentialing reviews, business partners that represented the auto body collision repair shops indicated their preference to have their employees have taken I-CAR.

I-CAR does not grade their tests externally for secondary students. The instruction comes on a CD ROM with the exam. I-CAR will grade the tests at the adult level, the teachers of adult programs can send the tests to I-CAR and they will grade the tests, but to this point they are not open to grading at the secondary level. The Office of Career and Technical Education has been working with I-CAR at the national level to secure grading of the tests externally at the secondary level which would meet the requirements of the Virginia Board of Education so that the Board could consider it for approval as a student-selected test. In addition, secure grading would meet the requirements for the Carl D. Perkins Career and Technical Education Act of 2006 for the Technical Skills Attainment performance standard.

**CONCLUSION**

The Virginia Department of Education will continue to work with I-CAR so that the Virginia Board of Education can consider I-CAR as an alternate test for the awarding of verified credits as soon as possible.



## **Section 10: Course Index and Descriptions of Certifications, Licenses, and Assessments 2008-2009**

- Index by Course and Program Area
- Index of Certifications and Descriptions
- Award Criteria
- Providers
- Preparatory Courses

September 2008







## Section 10: Course Index and Descriptions of Certifications, Licenses, and Assessments

This section presents two indexes of the credentials approved for student-selected verified credit by the Virginia Board of Education in January 2008. The first index presents certifications by course and program area. The second alphabetical index provides a brief description of the credential, how to earn it, credential provider, and a list of possible courses that may prepare a student for the approved examinations. **The relationships between these credentials (industry certifications, licenses, and other assessments), and the criteria for earning verified credit and diploma seals are explained in Section 9: Verified Credits, Diploma Seals, and Board-Approved Credentials.** Section 9 also fully explains the requirements for teacher/program certification.

### Course Index

#### Agricultural Education

Course	Certification, License, Assessment Available
Agricultural Business Fundamentals III 8022	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Business Management V 8026	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Business Operations IV 8024	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Education Dual Enrollment with Postsecondary 8095	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Education for Students with Disabilities 8053	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Education for the Disadvantaged 8050	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Fabrication and Emerging Technologies 8019	Agriculture Mechanics Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Mechanics and Basic Animal Science 8008	
Agricultural Mechanics and Basic Plant Science 8006	
Agricultural Power Systems 8018	Agriculture Mechanics Assessment (NOCTI)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Power Systems, Advanced 8020	Agricultural Mechanics Assessment (NOCTI)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Production Management IV 8012	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Production Agriculture Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agricultural Production Technology III 8010	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Production Agriculture Assessment (NOCTI)
Agricultural Structural Systems 8017	Agriculture Mechanics Assessment (NOCTI)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Agriscience and Technology 8004	
Agriscience Exploration 8003	

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Applied Agricultural Concepts 8072/8073	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Biological Applications in Agriculture 8086	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Biotechnology Applications in Agriculture 8087	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Biotechnology Foundations 8085	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Ecology and Environmental Management 8045/8046	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Entrepreneurship Education 9094	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Equine Management and Production 8015/8080	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Exploring Entrepreneurship 9093*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Farm Equipment Operator 8052	Agriculture Mechanics Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6120	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6121*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Floral Design I 8055	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Greenhouse Operators Certification Program (SGGA/VFGA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Floral Design II 8056	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Greenhouse Operators Certification Program (SGGA/VFGA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Floriculture 8038	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Floriculture Assessment (NOCTI)
	Floriculture–Greenhouse Assessment (NOCTI)
	Greenhouse Operators Certification Program (SGGA/VFGA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Forestry, Wildlife, and Soil Management IV 8042	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Forestry Products and Processing Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
General Mechanics for the Disadvantaged 8070	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Greenhouse Plant Production and Management 8035	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Greenhouse Operators Certification Program (SGGA/VFGA)
	Horticulture–Olericulture and Pomology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Horticulture Sciences 8034	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Floriculture Assessment (NOCTI)
	Floriculture–Greenhouse Assessment (NOCTI)
	Greenhouse Operators Certification Program (SGGA/VFGA)
	Horticulture–Landscaping Assessment (NOCTI)
	Horticulture–Olericulture and Pomology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Agriscience 8002	
Introduction to Leadership 9091*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Natural Resources III 8040	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Forestry Products and Processing Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Power, Structural, and Technical Systems 8016	Agriculture Mechanics Assessment (NOCTI)
	Outdoor Power Equipment Certifications (Equipment and Engine Training Council—EETC)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Landscaping 8036	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Horticulture–Landscaping Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Leadership Development 9096*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Natural Resources Business Management V 8044	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Forestry Products and Processing Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Operating the Farm Business V 8014	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Small Animal Care I 8083	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Small Animal Care II 8084	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Small Engine Repair 8021*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Small Engine Repair 8082	Outdoor Power Equipment Certifications (Equipment and Engine Training Council—EETC)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Specialty Horticulture Arts 8037	Greenhouse Operators Certification Program (SGGA/VFGA)
	Horticulture–Olericulture and Pomology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Turf Grass Establishment and Maintenance 8051	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Turf Grass Applications, Advanced 8054	Commercial Pesticide Applicator Certification Examination (Virginia Department of Agriculture and Consumer Services)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Veterinary Science 8088	Small Animal Science Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Business and Information Technology

Course	Certification, License, Assessment Available
Accounting 6320	Accounting (Basic) Assessment (NOCTI)
	Accounting (Complete) Assessment (NOCTI)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Accounting, Advanced 6321	Accounting (Basic) Assessment (NOCTI)
	Accounting (Complete) Assessment (NOCTI)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Business and Information Technology Dual Enrollment 6810	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Business Individualized Program 6745	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Business Law 6131	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Business Law 6132*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Business Management 6135	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Business Management 6136*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Applications 6611	Administrative Assisting Assessment (NOCTI)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Applications 6617*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Information Systems 6612	Administrative Assisting Assessment (NOCTI)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Information Systems 6614*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Information Systems, Advanced 6613	Administrative Assisting Assessment (NOCTI)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Information Systems, Advanced 6615*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Network Software Operations 6650	A+ Certifications (2006 Objectives) (CompTIA)
	Brainbench Network Administration Certifications (Brainbench)
	Brainbench Systems Administration Certifications (Brainbench)
	Brainbench Technical Support Certifications (Brainbench)

Course	Certification, License, Assessment Available
	Certified Internet Webmaster Associate (ProSoft Learning) Certified Novell Administrator (Novell) Computer Networking Fundamentals Assessment (NOCTI) Computer Repair Technology Assessment (NOCTI) Fundamentals of Wireless LANs Examination (Cisco Systems) IC <sup>3</sup> Certification (Certiport) IT Essentials 1 Examination (PC Hardware and Software) (Cisco Systems) IT Essentials 2 Examination (Network Operating Systems) (Cisco Systems) Linux+ Certification (CompTIA) Microsoft Certified Professional (Microsoft) Microsoft Office Specialist (MOS) (Microsoft) Network+ Certification (CompTIA) Unix Examination (Cisco Systems) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Network Software Operations, Advanced 6651	A+ Certifications (2006 Objectives) (CompTIA) Brainbench Network Administration Certifications (Brainbench) Brainbench Systems Administration Certifications(Brainbench) Brainbench Technical Support Certifications (Brainbench) Certified Internet Webmaster Associate (ProSoft Learning) Certified Novell Administrator (Novell) Computer Networking Fundamentals Assessment (NOCTI) Computer Repair Technology Assessment (NOCTI) Fundamentals of Wireless LANs Examination (Cisco Systems) IC <sup>3</sup> Certification (Certiport) IT Essentials 1 Examination (PC Hardware and Software) (Cisco Systems) IT Essentials 2 Examination (Network Operating Systems) (Cisco Systems) Linux+ Certification (CompTIA) Microsoft Certified Professional (Microsoft) Microsoft Office Specialist (MOS) (Microsoft) Network+ Certification (CompTIA) Unix Examination (Cisco Systems) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Solutions 6610	
Computer Solutions 6609*	
Database Design and Management (Oracle) 6660	IC <sup>3</sup> Certification (Certiport) Microsoft Office Specialist (MOS) (Microsoft) Oracle Certification Program Examinations (Oracle) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Database Design and Management (Oracle), Advanced 6661	Brainbench Software Development Certifications (Brainbench)
	Brainbench Web Administration Certifications (Brainbench)
	IC <sup>3</sup> Certification (Certiport)
	Java Programming Examination (Cisco Systems)
	Microsoft Office Specialist (MOS) (Microsoft)
	Oracle Certification Program Examinations (Oracle)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Database Design and Management with PL/SQL (Oracle) 6662	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Oracle Certification Program Examinations (Oracle)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Design, Multimedia, and Web Technologies 6630	Adobe Certified Associate (Adobe Systems, Inc.)
	Apple Pro Certification Program (Apple, Inc.)
	Brainbench Desktop Publishing Certifications (Brainbench)
	Brainbench Software Development Certifications (Brainbench)
	Brainbench Web Administration Certifications (Brainbench)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified Internet Webmaster Associate (ProSoft Learning)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
	Design, Multimedia, and Web Technologies 6632*
Design, Multimedia, and Web Technologies, Advanced 6631	Adobe Certified Associate (Adobe Systems, Inc.)
	Apple Pro Certification Program (Apple, Inc.)
	Brainbench Desktop Publishing Certifications (Brainbench)
	Brainbench Software Development Certifications (Brainbench)
	Brainbench Web Administration Certifications (Brainbench)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified Internet Webmaster Associate (ProSoft Learning)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Design, Multimedia, and Web Technologies, Advanced 6633*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Digital Input Technologies 6161	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Digital Input Technologies 6160*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Exploring Entrepreneurship 9093*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Entrepreneurship Education 9094	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6120	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6121*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Information Technology Fundamentals 6670	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
International Baccalaureate Business and Management IB6135	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
International Baccalaureate Information Technology in a Global Society IB6613	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Keyboarding 6150	
Keyboarding (Secondary) 6151*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Keyboarding Applications 6152	Microsoft Office Specialist (MOS) (Microsoft)
Keyboarding Applications 6153*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Legal Systems Administration 6735	Administrative Assisting Assessment (NOCTI)
	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Legal Systems Administration 6736*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Make It Your Business 6110/6111*	
Medical Systems Administration 6730	Administrative Assisting Assessment (NOCTI)
	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Medical Systems Administration 6731*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Notetaking 6241	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Notetaking 6242*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Office Administration 6621	Administrative Assisting Assessment (NOCTI)
	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Office Administration 6622*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)



<b>Course</b>	<b>Certification, License, Assessment Available</b>
Office Specialist I 6740 Office Specialist II 6741 Office Specialist III 6742	Administrative Assisting Assessment (NOCTI)
	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Principles of Business and Marketing 6115	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Principles of Business and Marketing 6116*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Programming 6640	Brainbench Software Development Certifications (Brainbench)
	Certified Internet Webmaster Associate (ProSoft Learning)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Certified Professional (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Programming, Advanced 6641	Brainbench Software Development Certifications (Brainbench)
	Certified Internet Webmaster Associate (ProSoft Learning)
	IC <sup>3</sup> Certification (Certiport)
	Java Programming Examination (Cisco Systems)
	Microsoft Certified Professional (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Word Processing 6625	Administrative Assisting Assessment (NOCTI)
	IC <sup>3</sup> Certification (Certiport)
	Microsoft Office Specialist (MOS) (Microsoft)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Word Processing 6626*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Career Connections

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Career Investigation Phase I 9070	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Career Interpretation Phase II 9071	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Career Application Phase III 9072	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
EFE Introduction 9075*/9076/9082*/9083	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
EFE Level I 9077*/9078/9084*/9085	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
EFE Level II 9079*/9080/9086*/9087	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
EFE Cooperative Education I, II 9020/9021/9030/9031	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Entrepreneurship Education 9094	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Exploring Entrepreneurship 9093*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Leadership 9091*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Leadership Development 9097/9096*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science I 7913	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science II 7916	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science III 7918	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science IV 7919	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science V 7920	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science VI 7922	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science VII 7924	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Military Science VIII 7926	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
ProTeam 9061/9060*	
Virginia Teachers for Tomorrow 9062	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Family and Consumer Sciences

Course	Certification, License, Assessment Available
Culinary Arts I 8275	ACCESS Certification (American Culinary Foundation)
	Commercial Foods Assessment (NOCTI)
	Culinary Arts Prep Cook Level 1 (NOCTI)
	Culinary Arts Prep Cook Level 2 (NOCTI)
	ProStart Program Certification (Levels 1 and/or 2) (National Restaurant Association Educational Foundation)
	Retail Commercial Baking Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Culinary Arts II 8276	ACCESS Certification (American Culinary Foundation)
	Commercial Foods Assessment (NOCTI)
	Culinary Arts Prep Cook Level 1 (NOCTI)
	Culinary Arts Prep Cook Level 2 (NOCTI)
	ProStart Program Certification (Levels 1 and/or 2) (National Restaurant Association Educational Foundation)
	Retail Commercial Baking Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Culinary Arts III 8279	ACCESS Certification (American Culinary Foundation)
	Commercial Foods Assessment (NOCTI)
	Culinary Arts Prep Cook Level 1 (NOCTI)
	Culinary Arts Prep Cook Level 2 (NOCTI)
	ProStart Program Certification (Levels 1 and/or 2) (National Restaurant Association Educational Foundation)
	Retail Commercial Baking Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Early Childhood, Education, and Services I 8285	Early Childhood Care and Education Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Early Childhood, Education, and Services II 8286	Early Childhood Care and Education Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Exploring Entrepreneurship 9093*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Entrepreneurship Education 9094	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Family and Consumer Sciences Exploratory I 8204/8206/8207/8208	
Family and Consumer Sciences Exploratory II 8260/8261/8262/8263	
Family and Consumer Sciences Exploratory III 8241/8242/8243/8244/8245	
Family and Human Services I 8264	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Family and Human Services II 8265	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Family Relations 8225/8223	
Fashion Design I 8280	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Fashion Design II 8281	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6120	Fundamental Business Concepts (ASK Institute, DECA/MarkED)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6121*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
GRADS (Graduation, Reality, and Dual-Role Skills): Family Focus 8278/8277*	
GRADS (Graduation, Reality, and Dual-Role Skills): Work Focus 8213	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Hospitality, Tourism, and Recreation I 8202	Hospitality Management–Food and Beverage Option Assessment (NOCTI)
	Hospitality Management–Lodging Option Assessment (NOCTI)
	Lodging Management Program Certification, Level 1 (AH & LA)
	Lodging Management Program Certification, Level 2 (AH & LA)
	START Certification (Hospitality Skills) (AH & LA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Hospitality, Tourism, and Recreation II 8203	Hospitality Management–Food and Beverage Option Assessment (NOCTI)
	Hospitality Management–Lodging Option Assessment (NOCTI)
	Lodging Management Program Certification, Level 1 (AH & LA)
	Lodging Management Program Certification, Level 2 (AH & LA)
	START Certification (Hospitality Skills) (AH & LA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Individual Development 8210/8209*	
Interior Design I 8295	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Interior Design II 8296	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Culinary Arts 8250/8249*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Early Childhood, Education, and Services 8234/8233*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Family and Human Services 8238/8237*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Fashion Design and Marketing 8248/8247*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Hospitality, Tourism, and Recreation 8259/8258*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Interior Design 8255/8254*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Leadership 9091*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Leadership Development 9096*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Life Planning 8227/8226*	
Nutrition and Wellness 8229/8228*	
Parenting 8232/8231*	
Resource Management 8219/8214*	
Virginia Teachers for Tomorrow 9062	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Work and Family Management 8282/8205*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Health and Medical Sciences

Course	Certification, License, Assessment Available
Biomedical Technician 8347	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Biotechnology Foundations 8344	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Dental Assistant I 8328	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Dental Assistant II 8329	Certified Dental Assistant: Infection Control Examination (ICE) (Dental Assisting National Board, Inc.)
	Certified Dental Assistant: Radiation Health and Safety Examination (RHS) (Dental Assisting National Board, Inc.)
	Dental Assisting Assessment (NOCTI)
	NRDA Certification (National Allied Health Registry/National Association for Health Professionals)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Emergency Medical Technician I 8333	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Emergency Medical Technician II 8334	Emergency Medical Technician (Virginia Department of Health, Office of Emergency Medical Services)
	EMS First Responder Certification (Virginia Department of Health, Office of Emergency Medical Services)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Emergency Medical Technician III 8335	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Health and Medical Sciences Dual Enrollment with Postsecondary 8394	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Health and Medical Sciences Exploratory 8370	
Health Assistant I 8331	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Health Assistant II (Psychiatric Aide) 8332	Health Assisting Assessment (NOCTI)
	Home Health Aide Assessment (NOCTI)
	National Health Care Foundation Skill Standards Assessment (National Consortium on Health Science and Technology Education/NOCTI)
	Nurse Aide (Virginia Board of Nursing)
	Nursing Assistant Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Home Health Aide 8364	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Health and Medical Sciences 8302	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Medical Assistant I 8345	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Medical Assistant II 8346	Medical Assisting Assessment (NOCTI)
	NRCMA Certification (National Allied Health Registry/National Association for Health Professionals)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Medical Terminology 8383	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Nurse Aide I 8360	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Nurse Aide II 8362	Health Assisting Assessment (NOCTI)
	Home Health Aide Assessment (NOCTI)
	National Health Care Foundation Skill Standards Assessment (National Consortium on Health Science and Technology Education/NOCTI)
	Nurse Aide (Virginia Board of Nursing)
	Nursing Assisting Assessment (NOCTI)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Pharmacy Technician I 8305*	Virginia Pharmacy Technician Examination (Virginia Board of Pharmacy) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Pharmacy Technician II 8306*	Virginia Pharmacy Technician Examination (Virginia Board of Pharmacy) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Physical/Occupational Therapy 8365	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Practical Nursing I 8357	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Practical Nursing II 8358	Health Assisting Assessment (NOCTI) Home Health Aide Assessment (NOCTI) National Health Care Foundation Skill Standards Assessment (National Consortium on Health Science and Technology Education/NOCTI) Nurse Aide (Virginia Board of Nursing) Nursing Assisting Assessment (NOCTI) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Practical Nursing III 8359	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Radiologic Technology 8375	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Sports Medicine I 7660	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Sports Medicine II 7662	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Surgical Technologist I 8351	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Surgical Technologist II 8352	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Veterinary Assistant I 8310	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Veterinary Assistant II 8311	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Veterinary Assistant III 8312	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Marketing

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Entrepreneurship Education 9094	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Exploring Entrepreneurship 9093*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Fashion Marketing 8140 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Fashion Marketing, Advanced 8145 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Retail Trades Assessment (NOCTI)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6120	Fundamental Business Concepts (ASK Institute, DECA/MarkED)
	IC <sup>3</sup> Certification (Certiport)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Finance 6121*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Financial Services Marketing 8180 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Global Marketing and Commerce 8135	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Global Marketing and Commerce, Advanced 8136	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Retail Trades Assessment (NOCTI)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Hotel Marketing 8160 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	Lodging Management Program Certification, Level 1 (AH & LA)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	START Certification (Hospitality Skills) (AH & LA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Hotel Marketing, Advanced 8162 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	Hospitality Management–Food and Beverage Option Assessment (NOCTI)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	Hospitality Management–Lodging Option Assessment (NOCTI)
	Lodging Management Program Certification, Level 2 (AH & LA)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	START Certification (Hospitality Skills) (AH & LA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Internet Marketing 8125	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Fashion Design and Marketing 8149/8148*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Marketing 8110/8111*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Make It Your Business 8109/8112/8113/8114*	
Marketing 8120 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Marketing, Advanced 8130 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Retail Trades Assessment (NOCTI)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Marketing Dual Enrollment with Postsecondary 8198	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Marketing Management 8132 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Principles of Business and Marketing 8115/8116*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Real Estate Marketing 8191	Real Estate Salesperson (Virginia Real Estate Board)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Sports, Entertainment, and Recreation Marketing 8175 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Sports, Entertainment, and Recreation Marketing, Advanced 8177(co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)



<b>Course</b>	<b>Certification, License, Assessment Available</b>
Travel and Tourism Marketing 8165 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Travel and Tourism Marketing, Advanced 8167 (co-op available)	Fundamental Marketing Concepts (ASK Institute)
	National Professional Certification in Customer Service (National Retail Federation Foundation)
	Sales Certification (National Retail Federation Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Technology Education

Course	Certification, License, Assessment Available
Advanced Drawing and Design 8438	AutoCAD Certifications (Brainbench)
	Autodesk Application Certification Program (Autodesk)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Pre-Skills Assessment for Mastercam Certification (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Advanced Engineering 8491	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Advanced Technology Studies 8466	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Aerospace Technology I 8487	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Aerospace Technology II 8488	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Architectural Drawing and Design 8437	AutoCAD Certifications (Brainbench)
	Autodesk Application Certification Program (Autodesk)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Pre-Skills Assessment for Mastercam Certification (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Architectural Drawing and Design 8492*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Bioengineering 8467	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Biotechnology Foundations 8468	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Communication Systems 8415	Brainbench Desktop Publishing Certifications (Brainbench)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Communication Systems 8418*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Control and Automation 8421	IT Essentials 1 Examination (PC Hardware and Software) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Control and Automation 8420*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Integrated Manufacturing 8442	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Construction Technology 8431/8432*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Digital Electronics 8440	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Digital Visualization 8459	AutoCAD Certifications (Brainbench)
	Autodesk Application Certification Program (Autodesk)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Pre-Skills Assessment for Mastercam Certification (NOCTI)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electronics Systems I 8417*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electronics Systems I 8416	A+ Certifications (2006 Objectives) (CompTIA)
Electronics Systems II 8412	Basic Installer Exam, Mobile Electronics Certified Professional (Consumer Electronics Association)
Electronics Systems III 8413	Certified Electronics Technician (CET) Associate (ETA)
	Computer Networking Fundamentals Assessment (NOCTI)
	Computer Repair Technology Assessment (NOCTI)
	Electronic Technology Assessment (NOCTI)
	Student Electronics Technician (SET) Certification (ETA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Energy and Power 8448/8495*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Analysis and Applications 8451	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Concepts and Processes 8452	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Design and Development 8443	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Drawing and Design 8436	AutoCAD Certifications (Brainbench)
	Autodesk Application Certification Program (Autodesk)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Pre-Skills Assessment for Mastercam Certification (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Drawing and Design 8493*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Explorations 8450	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Engineering Practicum 8453	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Geospatial Technology I 8423	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Graphic Communications Systems 8458	Brainbench Desktop Publishing Certifications (Brainbench)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Graphic Communications Systems 8494*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Imaging Technology 8455	Brainbench Desktop Publishing Certifications (Brainbench)
	Brainbench Web Administration Certifications (Brainbench)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Industrial Occupational Exploration 8472/8473	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Information Technology in Production Systems 8496	A+ Certifications (2006 Objectives) (CompTIA)
	Computer Networking Fundamentals Assessment (NOCTI)
	Computer Repair Technology Assessment (NOCTI)
	IT Essentials 1 Examination (PC Hardware and Software) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Introduction to Engineering 8490	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Engineering Design 8439	CAD Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Introduction to Technology 8483/8482/8484/8581	
Inventions and Innovations 8461/8464/8485	
Manufacturing Systems 8425	Manufacturing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Manufacturing Systems 8426*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Manufacturing Systems, Advanced 8427	Manufacturing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Materials and Processes Technology 8433/8478*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Power and Transportation 8445/8444*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Principles of Engineering 8441	Pre-Engineering Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Principles of Technology I 9811	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Principles of Technology II 9812	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Production Systems 8447/8446*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technical Drawing and Design 8435	AutoCAD Certifications (Brainbench)
	Autodesk Application Certification Program (Autodesk)
	Brainbench Web Design and Development Certifications (Brainbench)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Pre-Skills Assessment for Mastercam Certification (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technical Drawing and Design 8434*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technological Systems 8462/8463/8486	
Technology Assessment 8407/8406*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technology Education–Disabled 8471	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technology Education–Disadvantaged 8469	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technology Education Dual Enrollment with Postsecondary 8498	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technology Foundations 8403/8402*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technology Studies 8465	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Technology Transfer 8405/8404*	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Video and Media Technology 8497	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

\*18-week course

## Trade and Industrial Education

Course	Certification, License, Assessment Available
Advertising Design I 8570	Advertising and Design Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Advertising Design II 8571	Advertising and Design Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Advertising Design III 8572 (This course is in transition.)</b>	
Aircraft Pilot Training I 8731	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Aircraft Pilot Training II 8732	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Body Repair I–Collision and Repair (Non-Certified) 8679	Collision Repair Assessment (NOCTI)
	Collision Repair and Refinishing Technician (ASE) (National Institute for Automotive Service Excellence)
	Collision Repair and Refinishing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Body Repair II–Painting and Refinishing (Non-Certified) 8680	Collision Repair Assessment (NOCTI)
	Collision Repair and Refinishing Technician (ASE) (National Institute for Automotive Service Excellence)
	Collision Repair and Refinishing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Body Repair III–Collision and Repair and Painting and Refinishing (Non-Certified) 8681	Collision Repair Assessment (NOCTI)
	Collision Repair and Refinishing Technician (ASE) (National Institute for Automotive Service Excellence)
	Collision Repair and Refinishing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Body Technology I–Collision and Repair (Certified) 8676	Collision Repair Assessment (NOCTI)
	Collision Repair and Refinishing Technician (ASE) (National Institute for Automotive Service Excellence)
	Collision Repair and Refinishing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Body Technology II–Painting and Refinishing (Certified) 8677	Collision Repair Assessment (NOCTI)
	Collision Repair and Refinishing Technician (ASE) (National Institute for Automotive Service Excellence)
	Collision Repair and Refinishing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Body Technology III–Collision and Repair and Painting and Refinishing (Certified) 8678	Collision Repair Assessment (NOCTI)
	Collision Repair and Refinishing Technician (ASE) (National Institute for Automotive Service Excellence)
	Collision Repair and Refinishing Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Maintenance 8709	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Servicing I (Non-Certified) 8710	Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence)
	Automotive Youth Educational Systems Exit Examinations (AYES)
	National Automotive Technicians Education Foundation End of Program Test Series Examinations (NATEF)
	Parts Specialist (ASE) (National Institute for Automotive Service Excellence)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Servicing II (Non-Certified) 8711	Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence)
	Automotive Youth Educational Systems Exit Examinations (AYES)
	National Automotive Technicians Education Foundation End of Program Test Series Examinations (NATEF)
	Parts Specialist (ASE) (National Institute for Automotive Service Excellence)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Servicing III (Non-Certified) 8712	Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence)
	Automotive Youth Educational Systems Exit Examinations (AYES)
	National Automotive Technicians Education Foundation End of Program Test Series Examinations (NATEF)
	Parts Specialist (ASE) (National Institute for Automotive Service Excellence)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Technology I (Certified) 8506	Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence)
	Automotive Youth Educational Systems Exit Examinations (AYES)
	National Automotive Technicians Education Foundation End of Program Test Series Examinations (NATEF)
	Parts Specialist (ASE) (National Institute for Automotive Service Excellence)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Technology II (Certified) 8507	Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence)
	Automotive Youth Educational Systems Exit Examinations (AYES)
	National Automotive Technicians Education Foundation End of Program Test Series Examinations (NATEF)
	Parts Specialist (ASE) (National Institute for Automotive Service Excellence)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Automotive Technology III (Certified) 8508	Automotive Technician Examination (ASE) (National Institute for Automotive Service Excellence)
	Automotive Youth Educational Systems (AYES) Exit Examinations
	National Automotive Technicians Education Foundation End of Program Test Series Examinations (NATEF)
	Parts Specialist (ASE) (National Institute for Automotive Service Excellence)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Aviation Maintenance Technology I 8728	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Aviation Maintenance Technology II 8729	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Barbering I 8740	Barbers (Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Barbering II 8741	Barbers (Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Barbering III 8742 (This course is in transition.)</b>	
Basic Automotive Body Repair 8675	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Basic Carpentry 8600	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Basic Photography 8610	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Beauty Salon Assistant 8546	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Bricklayer 8549	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Building Management I 8590	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Building Management II 8591	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Building Management III 8592	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Building Trades I 8515	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Carpentry Level One, National Construction Career Test (NCCER)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Construction Technology Test Assessment (NCCER)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Electrical Construction Assessment (NOCTI)
	Electrical, National Construction Career Test (NCCER)
	Electrical Occupations Assessment (NOCTI)
	Electrical Principles: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	House Wiring: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Plumbing Assessment (NOCTI)
	Plumbing: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Building Trades II 8516	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Carpentry Level One, National Construction Career Test (NCCER)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Construction Technology Test Assessment (NCCER)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Electrical Construction Assessment (NOCTI)
	Electrical, National Construction Career Test (NCCER)
	Electrical Occupations Assessment (NOCTI)
	Electrical Principles: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	House Wiring: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Plumbing Assessment (NOCTI)
	Plumbing: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Building Trades III 8517 (This course is in transition.)</b>	
Cabinetmaking I 8604	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Cabinetmaking Assessment (NOCTI)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Cabinetmaking II 8605	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Cabinetmaking Assessment (NOCTI)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Cabinetmaking III 8606 (This course is in transition.)</b>	
Carpentry I 8601	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Carpentry Assessment (NOCTI)
	Carpentry Level One, National Construction Career Test (NCCER)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Carpentry II 8602	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Carpentry Assessment (NOCTI)
	Carpentry Level One, National Construction Career Test (NCCER)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Carpentry III 8603	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Carpentry Assessment (NOCTI)
	Carpentry Level One, National Construction Career Test (NCCER)
	Carpentry: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Commercial Photography I 8607	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Commercial Photography II 8608	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Commercial Photography III 8609 (This course is in transition.)</b>	
Computer Maintenance 8621	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Networking Hardware Operations I 8542	Cisco CCNA Academy Certificate (CCNA:1) (Cisco Systems)
	Cisco Certified Networking Associate (CCNA) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Networking Hardware Operations II 8543	Cisco CCNA Academy Certificate (CCNA:2) (Cisco Systems)
	Cisco Certified Networking Associate (CCNA) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Networking Hardware Operations III 8544	Cisco CCNA Academy Certificate (CCNA:3) (Cisco Systems)
	Cisco Certified Networking Associate (CCNA) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Networking Hardware Operations IV 8545	Cisco CCNA Academy Certificate (CCNA:4) (Cisco Systems)
	Cisco Certified Networking Associate (CCNA) (Cisco Systems)
	IT Essentials 2 Examination (Network Operating Systems) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)



<b>Course</b>	<b>Certification, License, Assessment Available</b>
Computer Systems Technology I 8622	A+ Certifications (2006 Objectives) (CompTIA)
	Brainbench Systems Administration Certifications (Brainbench)
	Brainbench Technical Support Certifications (Brainbench)
	Certified Computer Service Technician (CST) (Electronics Technicians Association, International—ETA)
	Computer Networking Fundamentals Assessment (NOCTI)
	Computer Repair Technology Assessment (NOCTI)
	Fundamentals of Wireless LANs Examination (Cisco Systems)
	IT Essentials 1 Examination (PC Hardware and Software) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Computer Systems Technology II 8623	A+ Certifications (2006 Objectives) (CompTIA)
	Brainbench Systems Administration Certifications (Brainbench)
	Brainbench Technical Support Certifications (Brainbench)
	Certified Computer Service Technician (CST) (Electronics Technicians Association, International—ETA)
	Computer Networking Fundamentals Assessment (NOCTI)
	Computer Repair Technology Assessment (NOCTI)
	Fundamentals of Wireless LANs Examination (Cisco Systems)
	IT Essentials 1 Examination (PC Hardware and Software) (Cisco Systems)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Computer Systems Technology III 8624 (This course is in transition.)</b>	
Cosmetology I 8527	Cosmetology Assessment (NOCTI)
	Cosmetology (Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Cosmetology II 8528	Cosmetology Assessment (NOCTI)
	Cosmetology (Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Cosmetology III 8529 (This course is in transition.)</b>	
Criminal Justice I 8702	Criminal Justice Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Criminal Justice II 8703	Criminal Justice Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Criminal Justice III 8704 (This course is in transition.)</b>	
Diesel Equipment Technology I 8613	Diesel Engine Mechanics Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Diesel Equipment Technology II 8614	Diesel Engine Mechanics Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Diesel Equipment Technology III 8615 (This course is in transition.)</b>	
Drafting I 8530	Architectural Drafting Assessment (NOCTI)
	AutoCAD Certifications (Brainbench)

Course	Certification, License, Assessment Available
	Autodesk Application Certification Program (Autodesk)
	CAD Assessment (NOCTI)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Drafter Certification (American Design Drafting Association)
	General Drafting and Design Assessment (NOCTI)
	Pre-Skills Assessment for Mastercam Certification (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Drafting II 8531	Architectural Drafting Assessment (NOCTI)
	AutoCAD Certifications (Brainbench)
	Autodesk Application Certification Program (Autodesk)
	CAD Assessment (NOCTI)
	Certified SolidWorks Professional (SolidWorks Corporation)
	Drafter Certification (American Design Drafting Association)
	General Drafting and Design Assessment (NOCTI)
	Pre-Skills Assessment for Mastercam Certification (NOCTI) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Drafting III 8532 (This course is in transition.)</b>	
Electricity I 8533	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Certified Satellite Dish Installer (Electronics Technicians Association, International—ETA)
	Copper-Based Cabling Certification (RBT Systems, Inc.)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Data Cabling Installer Certification (DCIC) (Electronics Technicians Association, International—ETA)
	Electrical, National Construction Career Test (NCCER)
	Electrical Occupations Assessment (NOCTI)
	Electrical Principles: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Fiber Optic Network Cabling Certification (RBT Systems, Inc.)
	Fiber Optics Installer Certification (Electronics Technicians Association, International—ETA)
	Graymark Cable Installation Certification (Graymark International)
	House Wiring: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electricity II 8534	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Certified Satellite Dish Installer (Electronics Technicians Association, International—ETA)
	Copper-Based Cabling Certification (RBT Systems, Inc.)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Data Cabling Installer Certification (DCIC) (Electronics Technicians Association, International—ETA)
	Electrical, National Construction Career Test (NCCER)
	Electrical Occupations Assessment (NOCTI)
	Electrical Principles: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)

Course	Certification, License, Assessment Available
	Fiber Optic Network Cabling Certification (RBT Systems, Inc.) Fiber Optics Installer Certification (Electronics Technicians Association, International—ETA) Graymark Cable Installation Certification (Graymark International) House Wiring: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electricity III 8535	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute) Certified Satellite Dish Installer (Electronics Technicians Association, International—ETA) Copper-Based Cabling Certification (RBT Systems, Inc.) Core: Introductory Craft Skills, National Construction Career Test (NCCER) Data Cabling Installer Certification (DCIC) (Electronics Technicians Association, International—ETA) Electrical, National Construction Career Test (NCCER) Electrical Occupations Assessment (NOCTI) Electrical Principles: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute) Fiber Optic Network Cabling Certification (RBT Systems, Inc.) Fiber Optics Installer Certification (Electronics Technicians Association, International—ETA) Graymark Cable Installation Certification (Graymark International) House Wiring: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electronics Technology I 8536	Basic Installer Exam, Mobile Electronics Certified Professional (Consumer Electronics Association) Certified Computer Service Technician (CST) (Electronics Technicians Association, International—ETA) Certified Electronics Technician (CET) Associate (Electronics Technicians Association, International—ETA) Certified Satellite Dish Installer (Electronics Technicians Association, International—ETA) Electronics Assessment (NOCTI) Electronic Technology Assessment (NOCTI) Student Electronics Technician (SET) Certification (Electronics Technicians Association, International—ETA) Telecommunications Electronics Technician Certification (Electronics Technicians Association, International—ETA) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electronics Technology II 8537	Basic Installer Exam, Mobile Electronics Certified Professional (Consumer Electronics Association) Certified Computer Service Technician (CST) (Electronics Technicians Association, International—ETA) Certified Electronics Technician (CET) Associate (Electronics Technicians Association, International—ETA) Certified Satellite Dish Installer (Electronics Technicians Association, International—ETA) Electronics Assessment (NOCTI) Electronic Technology Assessment (NOCTI) Student Electronics Technician (SET) Certification (Electronics Technicians Association, International—ETA) Telecommunications Electronics Technician Certification (Electronics Technicians Association, International—ETA) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Electronics Technology III 8538	Basic Installer Exam, Mobile Electronics Certified Professional (Consumer Electronics Association) Certified Computer Service Technician (CST) (Electronics Technicians Association, International—ETA)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
	Certified Electronics Technician (CET) Associate (Electronics Technicians Association, International—ETA)
	Certified Satellite Dish Installer (Electronics Technicians Association, International—ETA)
	Electronics Assessment (NOCTI)
	Electronic Technology Assessment (NOCTI)
	Student Electronics Technician (SET) Certification (Electronics Technicians Association, International—ETA)
	Telecommunications Electronics Technician Certification (Electronics Technicians Association, International—ETA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Entrepreneurship Education 9094	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Firefighting I 8705	Firefighter I Certification (Virginia Department of Fire Programs)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Firefighting II 8706	Firefighter I Certification (Virginia Department of Fire Programs)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Graphic Imaging Technology I 8660	Adobe Certified Associate (Adobe Systems, Inc.)
	Apple Pro Certification Program (Apple, Inc.)
	Brainbench Desktop Publishing Certifications (Brainbench)
	Graphic Communication Technology Assessment (NOCTI)
	PrintED Certification (all exams) (Graphic Arts Education and Research Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Graphic Imaging Technology II 8661	Adobe Certified Associate (Adobe Systems, Inc.)
	Apple Pro Certification Program (Apple, Inc.)
	Brainbench Desktop Publishing Certifications (Brainbench)
	Graphic Communication Technology Assessment (NOCTI)
	PrintED Certification (all exams) (Graphic Arts Education and Research Foundation)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Graphic Imaging Technology III 8662 (This course is in transition.)</b>	
Heating, Ventilation, Air Conditioning, and Refrigeration I 8503	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Electrical Certification (HVAC Excellence)
	EPA Technician Certification (Exams: Core I, II, or III) (Environmental Protection Agency)
	Heating, Electrical, Air Conditioning Technology (HEAT) Examination (HVAC Excellence)
	Heating, Ventilation, Air Conditioning (HVAC) Assessment (NOCTI)
	Heating, Ventilation, Air Conditioning and Refrigeration Assessment (HVAC/R) Assessment (NOCTI)
	HVAC, National Construction Career Test (NCCER)
	HVAC: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Installer (or Service) Core Certification (HVAC) (NATE)
	Residential Air Conditioning and Heating Certification (Air Conditioning and Refrigeration Institute—ARI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Heating, Ventilation, Air Conditioning, and Refrigeration II 8504	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Electrical Certification (HVAC Excellence)
	EPA Technician Certification (Exams: Core I, II, or III) (Environmental Protection Agency)
	Heating, Electrical, Air Conditioning Technology (HEAT) Examination (HVAC Excellence)
	Heating, Ventilation, Air Conditioning (HVAC) Assessment (NOCTI)
	Heating, Ventilation, Air Conditioning and Refrigeration Assessment (HVAC/R) Assessment (NOCTI)
	HVAC, National Construction Career Test (NCCER)
	HVAC: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Installer (or Service) Core Certification (HVAC) (NATE)
	Residential Air Conditioning and Heating Certification (Air Conditioning and Refrigeration Institute—ARI)
Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)	
<b>Heating, Ventilation, Air Conditioning, and Refrigeration III 8505 (This course is in transition.)</b>	
Industrial Cooperative Training I (non co-op) 8901	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Industrial Cooperative Training II (co-op) 8902	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Industrial Cooperative Training III (co-op) 8903	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Industrial Cooperative Training Senior Intensified Program (co-op) 8904	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Industrial Maintenance Technology I 8575	EPA Technician Certification (Exams: Core I, II, or III) (Environmental Protection Agency)
	Industrial Maintenance Mechanic Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Industrial Maintenance Technology II 8576	EPA Technician Certification (Exams: Core I, II, or III) (Environmental Protection Agency)
	Industrial Maintenance Mechanic Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Industrial Maintenance Technology III 8577 (This course is in transition.)</b>	
Marine Service Technology I 8750	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Marine Service Technology II 8751	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Marine Service Technology III 8752 (This course is in transition.)</b>	
Masonry I 8512	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Construction Masonry—Blocklaying Assessment (NOCTI)
	Construction Masonry—Bricklaying Assessment (NOCTI)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Masonry II 8513	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Construction Masonry—Blocklaying Assessment (NOCTI)
	Construction Masonry—Bricklaying Assessment (NOCTI)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Masonry III 8514	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Construction Masonry—Blocklaying Assessment (NOCTI)
	Construction Masonry—Bricklaying Assessment (NOCTI)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER) Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Motorsports Technology I 8509	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Motorsports Technology II 8510	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Motorsports Technology III 8511	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Nail Technician I 8692	Nail Technician (Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Nail Technician II 8693	Nail Technician (Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Plumbing I 8551	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Plumbing Assessment (NOCTI)
	Plumbing: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Plumbing II 8552	Basic Principles of Construction: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	Plumbing Assessment (NOCTI)
	Plumbing: Residential Construction Academy Examination (Thomson Delmar Learning/Home Builders Institute)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Plumbing III 8553 (This course is in transition.)</b>	
Precision Machining Technology I 8539	Machining Skills—Level 1 (NIMS)
	Precision Machining Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Precision Machining Technology II 8540	Machining Skills—Level 1 (NIMS)
	Precision Machining Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Precision Machining Technology III 8541 (This course is in transition.)</b>	
Public Safety I 8700	Protective Services Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Public Safety II 8701	Protective Services Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Radio Communications I 8640	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Radio Communications II 8641	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Radio Communications III 8642 (This course is in transition.)</b>	
Robotic Workcell Technology I 8557	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)

<b>Course</b>	<b>Certification, License, Assessment Available</b>
Robotic Workcell Technology II 8558	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Robotic Workcell Technology III 8559 (This course is in transition.)</b>	
Sheet Metal I 8663	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Sheet Metal II 8664	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Sheet Metal III 8665 (This course is in transition.)</b>	
Small Engine Repair 8724	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Small Engine Technology I 8725	Outdoor Power Equipment Certifications (Equipment and Engine Training Council—EETC)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Small Engine Technology II 8726	Outdoor Power Equipment Certifications (Equipment and Engine Training Council—EETC)
	Small Engine Technology Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Small Engine Technology III 8727 (This course is in transition.)</b>	
Telecommunications I 8650	Telecommunications Electronics Technician Certification (Electronics Technicians Association, International—ETA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Telecommunications II 8651	Telecommunications Electronics Technician Certification (Electronics Technicians Association, International—ETA)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Television Production I 8688	Apple Pro Certification Program (Apple, Inc.)
	Audio-Visual Communications Assessment (NOCTI)
	Television Broadcasting Assessment (NOCTI)
	Visual Communications Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Television Production II 8689	Apple Pro Certification Program (Apple, Inc.)
	Audio-Visual Communications Assessment (NOCTI)
	Television Broadcasting Assessment (NOCTI)
	Visual Communications Assessment (NOCTI)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Television Production III 8690 (This course is in transition.)</b>	
Trade and Industrial Education Dual Enrollment with Postsecondary 8801	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Utility/Heavy Construction Technology I 8616	Heavy Equipment Operations, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Utility/Heavy Construction Technology II 8617	Heavy Equipment Operations, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
<b>Utility/Heavy Construction Technology III 8618 (This course is in transition.)</b>	
Welding I 8672	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	SENSE Training Program Certification (Level 1, Entry-level Welder) (American Welding Society)
	Welding Assessment (NOCTI)
	Welding, National Construction Career Test (NCCER)

Course	Certification, License, Assessment Available
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Welding II 8673	Core: Introductory Craft Skills, National Construction Career Test (NCCER)
	SENSE Training Program Certification (Level 1, Entry-level Welder) (American Welding Society)
	Welding Assessment (NOCTI)
	Welding, National Construction Career Test (NCCER)
	Virginia Workplace Readiness Assessment (NOCTI) and IC <sup>3</sup> Certification (Certiport)
Welding III 8674 (This course is in transition.)	



## Descriptions of Certifications, Licenses, and Assessments

\*Specific approved Brainbench assessments by cluster can be found at <http://www.brainbench.com/xml/bb/common/testcenter/subcat.xml?cat1=9>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>A+ Certification (2006 Objectives)</b>            Certification of competency of entry-level computer service technicians. This is a popular first certification, especially for people who want to enter the information technology (IT) job market.</p>	<p>Pass <b>two</b> of the following examinations for full CompTIA A+ Certification:</p> <ul style="list-style-type: none"> <li>• CompTIA A+ Essentials</li> <li>• CompTIA A+ 220-602 (IT Technician)</li> <li>• CompTIA A+ 220-603 (Remote Support Technician)</li> <li>• CompTIA A+ 220-604 (Depot Technician)</li> </ul> <p>Pass <b>one</b> of the above examinations for Virginia's student-selected verified credit option.</p>	CompTIA	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8622</li> <li>• Computer Systems Technology II 8623</li> <li>• Electronics Systems I 8416</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> <li>• Information Technology in Production Systems 8496</li> </ul>
<p><b>ACCESS Certification</b>            Certification of knowledge and skill in culinary arts</p>	Pass a written exam focusing on application of concepts and tasks performed by chefs and cooks (either food/meal or pastry specialty).	American Culinary Federation, Inc. (ACF)	<ul style="list-style-type: none"> <li>• Culinary Arts I 8275</li> <li>• Culinary Arts II 8276</li> <li>• Culinary Arts III 8279</li> </ul>
<p><b>Accounting (Basic) Assessment</b>            Occupational competency assessment of skills and knowledge covered in a basic secondary level accounting program</p>	Pass the NOCTI knowledge-based exam, Accounting (Basic) Assessment (2000), consisting of 114 test items. Test includes journalizing and posting, payroll preparation, banking and banking procedures, automated accounting, merchandise inventory, and completing the accounting cycle.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Accounting 6320</li> <li>• Accounting, Advanced 6321</li> </ul>
<p><b>Accounting (Complete) Assessment</b>            Occupational competency assessment of skills and knowledge covered in an advanced secondary level accounting program</p>	Pass the NOCTI knowledge-based exam, Accounting (Complete) Assessment (2900), consisting of 159 test items. Test includes journalizing and posting, payroll preparation, banking and banking procedures, automated accounting, merchandise inventory, completing the accounting cycle, and advanced accounting principles.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Accounting 6320</li> <li>• Accounting, Advanced 6321</li> </ul>
<p><b>Administrative Assisting Assessment</b>            Occupational competency assessment of skills and knowledge covered in courses covering office procedures and office/computer applications</p>	Pass the NOCTI knowledge-based exam, Administrative Assisting (3001), consisting of 181 test items. Test includes keyboarding/computer applications, interpersonal/employability skills, records management, office procedures, communication skills, computational skills/accounting, and mail processing.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Computer Applications 6611</li> <li>• Computer Information Systems 6612</li> <li>• Computer Information Systems, Advanced 6613</li> <li>• Legal Systems Administration 6735</li> <li>• Medical Systems Administration 6730</li> <li>• Office Administration 6621</li> <li>• Office Specialist I 6740</li> <li>• Office Specialist II 6741</li> <li>• Office Specialist III 6742</li> <li>• Word Processing 6625</li> </ul>
<p><b>Adobe Certified Associate</b>            Certification of a candidate who has passed at least one exam for a specific Adobe software product. The certified test taker is considered to be a proficient user of the software product related to the specific exam passed.</p>	Pass at least one exam that is part of the Adobe Certified Associate program. Skill set exams currently available are Dreamweaver 8 and Flash 8. New examinations available in 2008 include Adobe Dreamweaver CS3, Adobe Flash CS3, and Adobe Photoshop CS3.	Adobe Systems, Inc.	<ul style="list-style-type: none"> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Graphic Imaging Technology I 8660</li> <li>• Graphic Imaging Technology II 8661</li> </ul>

<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<b><i>Advertising and Design Assessment</i></b> Occupational competency assessment of skills and knowledge covered for an instructional program focusing on the advertising design job market sector	Pass the NOCTI knowledge-based exam (3019) consisting of 175 test items. Test includes color, reproduction, typography, tools and equipment, printing surfaces, drawing/illustration, production, computer literacy, photography, communication, skills, and design.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Advertising Design I 8570</li> <li>• Advertising Design II 8571</li> </ul>
<b><i>Agriculture Mechanics Assessment</i></b> Occupational competency assessment of skills and knowledge covered in a typical Agricultural Mechanics course	Pass the NOCTI knowledge-based exam (1002) consisting of 175 test items. Test includes orientation and safety, agricultural mechanic skills, agricultural power and machinery, agricultural electrical power and processing, agricultural structures, and soil and water treatment.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Agricultural Power Systems 8018</li> <li>• Agricultural Power Systems, Advanced 8020</li> <li>• Introduction to Power, Structural, and Technical Systems 8016</li> </ul>
<b><i>Apple Pro Certification Program</i></b> Certification of a candidate who has passed at least one exam for a specific Apple Pro software product. The certified test taker is considered to be a proficient user of the Apple Pro application related to the specific exam passed.	Pass at least one exam that is part of the Apple Pro Certification program. Skill set exam considered entry-level for secondary level programs is the Final Cut Pro End User Certification (Level One) exam.	Apple, Inc.	<ul style="list-style-type: none"> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Graphic Imaging Technology I 8660</li> <li>• Graphic Imaging Technology II 8661</li> <li>• Television Production I 8688</li> <li>• Television Production II 8689</li> </ul>
<b><i>Architectural Drafting Assessment</i></b> Occupational competency assessment of skills and knowledge covered in secondary design/drafting programs focusing on architectural drafting.	Pass the NOCTI knowledge-based exam (3004) consisting of 185 test items. Test includes basic drawing skills, performing architectural activities, site/plot plans, sections and details, terms, symbols and abbreviations, supplemental architectural activities, interpreting construction documents, Computer Aided Drafting (CAD), accessibility (ADA) and safety concerns, plans and elevations.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> </ul>
<b><i>Audio-Visual Communications Assessment</i></b> Occupational competency assessment of skills and knowledge covered in a secondary course that includes audiovisual production and communication content	Pass the NOCTI knowledge-based exam, Audio-Visual Technology Communications Assessment (2005) consisting of 196 test items. Test includes getting started/organization, creating objects, drawing, editing, layers, color and line types, text, dimensioning, blocks, attributes and Xrefs, printing and plotting, and utilities.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Television Production I 8688</li> <li>• Television Production II 8689</li> </ul>
<b><i>AutoCAD 2000 Certification</i></b> Hands-on measure of ability and knowledge to design in two dimensions, using the AutoCAD 2000 software program	Pass an online knowledge and software use assessment that covers getting started/organization, creating objects, drawing, editing, layers, color and line types, text, dimensioning, blocks, attributes and Xrefs, printing and plotting, and utilities.	Brainbench	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Digital Visualization 8459</li> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Engineering Drawing and Design 8436/8493</li> <li>• Technical Drawing and Design 8435/8434</li> </ul>
<b><i>AutoCAD 2002 Certification</i></b> Certification of skills and knowledge in using the design/drafting software program, AutoCAD 2002	Pass an interactive, online assessment that measures the ability to design in two and three dimensions, using AutoCAD 2002. The test covers annotation, drawing, drawing shapes, drawing view, editing, editing objects, file management, format, inserting objects, and utilities and settings.	Brainbench	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Digital Visualization 8459</li> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Engineering Drawing and Design 8436/8493</li> <li>• Technical Drawing and Design 8435/8434</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>AutoCAD 2004 Certification</b>            Certification of skills and knowledge in using the design/drafting software program AutoCAD 2004</p>	<p>Pass an interactive, online assessment that measures the ability to design in two dimensions using AutoCAD 2004. Some of the items in the test contain drawing files that must be opened and manipulated in the AutoCAD software. The test covers Annotation, Drawing, Drawing Shapes, Drawing View, Editing, Editing Objects, File Management, Format, Inserting Objects, and Utilities and Settings.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Digital Visualization 8459</li> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Engineering Drawing and Design 8436/8493</li> <li>• Technical Drawing and Design 8435/8434</li> </ul>
<p><b>Autodesk Application Certification Program</b>            Certification of a candidate who has passed at least one exam for a specific Autodesk software application. The certified test taker is considered to be a proficient user of the software product related to the specific exam passed.</p>	<p>Pass at least one skill set exam that is part of the Autodesk Application Certification program. Certification is available for the following Autodesk products: AutoCAD, AutoCAD Architecture, AutoCAD Civil 3D, and Autodesk Inventor.</p>	<p>Autodesk</p>	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Digital Visualization 8459</li> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Engineering Drawing and Design 8436/8493</li> <li>• Technical Drawing and Design 8435/8434</li> </ul>
<p><b>Automotive Technician Examination (ASE)</b>            Certification of skill in automobile service and repair. Examination is considered a “pathway” examination to full ASE certification in a specialty area upon completion of required work experience.</p>	<p>Pass at least <b>one</b> of the following eight specialty exams: engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, or engine performance. Verified credit will be awarded for the passing of each certification specialty examination (up to a maximum of four credits).</p>	<p>National Institute for Automotive Service Excellence (ASE)</p>	<ul style="list-style-type: none"> <li>• Automotive Servicing I (Non-Certified) 8710</li> <li>• Automotive Servicing II (Non-Certified) 8711</li> <li>• Automotive Servicing III (Non-Certified) 8712</li> <li>• Automotive Technology I (Certified) 8506</li> <li>• Automotive Technology II (Certified) 8507</li> <li>• Automotive Technology III (Certified) 8508</li> </ul>
<p><b>Automotive Youth Educational Systems (AYES) Exit Examinations</b>            Certification of skill in automotive service and repair. Examinations are considered “pathway” examinations potentially leading to ASE industry certification.</p>	<p>Verified credit will be awarded for passing any <b>two</b> AYES exit examinations: A4—Steering and Suspension, A5—Brakes, A6—Electrical/Electronics, A8—Engine Performance.</p>	<p>Automotive Youth Educational Systems (AYES)</p>	<ul style="list-style-type: none"> <li>• Automotive Servicing I (Non-Certified) 8710</li> <li>• Automotive Servicing II (Non-Certified) 8711</li> <li>• Automotive Servicing III (Non-Certified) 8712</li> <li>• Automotive Technology I (Certified) 8506</li> <li>• Automotive Technology II (Certified) 8507</li> <li>• Automotive Technology III (Certified) 8508</li> </ul>
<p><b>Barbers</b>            Virginia state license to practice the cutting, styling, and care of human hair</p>	<ul style="list-style-type: none"> <li>• Complete the training required by the licensing board as defined in the Code of Virginia.</li> <li>• Pass the written and performance elements of Virginia licensing examination.</li> </ul>	<p>Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations</p>	<ul style="list-style-type: none"> <li>• Barbering I 8740</li> <li>• Barbering II 8741</li> </ul>
<p><b>Basic Installer Exam, Mobile Electronics Certified Professional</b>            Examination of mobile electronics skills in four distinct categories: mobile entertainment, navigation, wireless communications, and vehicle security.</p>	<p>Pass an assessment that evaluates knowledge on a wide range of apprentice-level topics such as basic automotive electronics, installation technique, safety, and critical basics of mobile products in four distinct categories: mobile entertainment, navigation, wireless communications, and vehicle security.</p>	<p>Consumer Electronics Association</p>	<ul style="list-style-type: none"> <li>• Electronics Systems I 8416</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Basic Principles of Construction: Residential Construction Academy Examination</b></p> <p>Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: Basic Principles for Construction," Thomson Delmar Learning in Partnership with the Home Builders Institute</p>	<p>Pass an online assessment that measures the skills and information necessary for success in a construction career. The examination covers: working in the construction industry; safety on the jobsite; scaffolds, ladders, and auxiliary power; whole numbers, decimals, fractions, and construction math; linear measure, perimeter area, volume, and right angles; combined operations; fasteners; selection, use and care of common tools; print reading; views, scales, lines, symbols, and plan views; elevations, sections, and details.</p>	<p>Thomson Delmar Learning/Home Builders Institute</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Cabinetmaking I 8604</li> <li>• Cabinetmaking II 8605</li> <li>• Carpentry I 8601</li> <li>• Carpentry II 8602</li> <li>• Carpentry III 8603</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> <li>• Masonry I 8512</li> <li>• Masonry II 8513</li> <li>• Masonry III 8514</li> <li>• Plumbing I 8551</li> <li>• Plumbing II 8552</li> </ul>
<p><b>Brainbench Desktop Publishing Certifications</b></p> <p>Certification of knowledge and skills required for one or more skill set areas relating to knowledge of industry-leading graphics, page layout, and publishing software</p>	<p>Pass any <b>one</b> assessment in the Desktop Publishing Software skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge of industry-leading graphics, page layout, and publishing software. Examples: Adobe Illustrator 8.0, Adobe PageMaker 6.5, Adobe Photoshop 7.0, Macromedia Director 8, Quark Xpress.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Communication Systems 8415</li> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Graphic Communications Systems 8458</li> <li>• Graphic Imaging Technology I 8660</li> <li>• Graphic Imaging Technology II 8661</li> <li>• Imaging Technology 8455</li> </ul>
<p><b>Brainbench Network Administration Certifications</b></p> <p>Certification of knowledge and skills required for one or more skill set areas relating to network administration</p>	<p>Pass any <b>one</b> assessment in the Brainbench Network Administration skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge in various areas relating to the architectures and protocols used in local and wide area networks. Examples: Network Monitoring, Network Technical Support, Network Concepts.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> </ul>
<p><b>Brainbench Software Development Certifications</b></p> <p>Certification of knowledge and skills required for one or more skill set areas relating to knowledge of programming languages and practices</p>	<p>Pass any <b>one</b> assessment in the Software Development skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge of various programming languages and practices. Examples: C++ Fundamentals, Java 2 Fundamentals, JavaScript, Visual Basic 6.0 Fundamentals, Visual Basic.NET, Visual C++.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Database Design and Management, Advanced 6661</li> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Programming 6640</li> <li>• Programming, Advanced 6641</li> </ul>
<p><b>Brainbench Systems Administration Certifications</b></p> <p>Certification of knowledge and skills required for one or more skill set areas relating to computer systems administration</p>	<p>Pass any <b>one</b> assessment in the Brainbench Systems Administration skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge in various areas relating to the architectures and protocols used in computer systems and their operational software. Examples: MS Windows XP Desktop Administration, Unix Administration (General), Windows 2000 Desktop Administration, Linux Administration (Red Hat).</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8622</li> <li>• Computer Systems Technology II 8623</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Brainbench Technical Support Certifications</b>            Certification of knowledge and skills required for one or more skill set areas relating to technical support for the personal computer end user</p>	<p>Pass any <b>one</b> assessment in the Brainbench Technical Support skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge in various areas relating to the support of end users of personal computers. Examples: Technical Help Desk (Microsoft), MS Windows 2000 Desktop Administration, Computer Technical Support, MS Windows Server 2003 Administration.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8622</li> <li>• Computer Systems Technology II 8623</li> </ul>
<p><b>Brainbench Web Administration Certifications</b>            Certification of knowledge and skills required for one or more skill set areas relating to knowledge of Internet architecture and the administration of web servers</p>	<p>Pass any <b>one</b> assessment in the Web Administration skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge of Internet architecture and the administration of web servers. Examples: WWW Concepts, Web Server Administration, Internet Industry Knowledge, E-Commerce Concepts, MS Internet Explorer 4.0.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Database Design and Management, Advanced 6661</li> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Imaging Technology 8455</li> </ul>
<p><b>Brainbench Web Design and Development Certifications</b>            Certification of knowledge and skills required for one or more skill set areas relating to knowledge of all aspects of web development, web page design, programming and scripting languages as well as basic web architecture</p>	<p>Pass any <b>one</b> assessment in the Web Design and Development skill cluster (see *note at top of this section). These assessments provide certification of specific skill set knowledge of various web design and development tools to include programming and scripting languages. Examples: Dreamweaver MX, Flash MX, Internet Concepts, Internet Technology Fundamentals, HTML 4.0, XML Concepts, Web Design Concepts, Web Development Concepts, MS Front Page 2000, JavaScript 1.5 Fundamentals.</p>	<p>Brainbench</p>	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Digital Visualization 8459</li> <li>• Engineering Drawing and Design 8436/8493</li> </ul>
<p><b>Cabinetmaking Assessment</b>            Occupational competency assessment of skills and knowledge covered in an instructional program in cabinetmaking</p>	<p>Pass the NOCTI knowledge-based exam (2014) consisting of 153 test items. Test includes safety, power sawing, drill and drill press, jointer and planer, router and shaper, constructing joints, basic fastening, sanding and finishing, casework design and layout, cutting and shaping casework components, assembling and installing casework, finishing surfaces, transporting and installing casework, and wood lathe.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Cabinetmaking I 8604</li> <li>• Cabinetmaking II 8605</li> </ul>
<p><b>CAD Assessment</b>            Occupational competency assessment of skills and knowledge covered in a secondary design/drafting program focusing on computer assisted design methods</p>	<p>Pass the NOCTI knowledge-based exam (2973) consisting of 98 test items. Test includes identify hardware and operating systems; use hardware and operating systems; interpret and read blueprints; create and manipulate mechanical drawing information; draw and design assemblies; and use 3D modeling.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Introduction to Engineering Design 8439</li> </ul>
<p><b>Carpentry Assessment</b>            Occupational competency assessment of skills and knowledge covered for an instructional program in carpentry</p>	<p>Pass the NOCTI knowledge-based exam (3015) consisting of 151 test items. Test includes hand tools, power tools, blueprints and specifications, building materials and fasteners, measuring and layout operations, foundation, forms and concrete, rough framing, exterior finish, interior finish, basic mathematics, and interior system installation.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Carpentry I 8601</li> <li>• Carpentry II 8602</li> <li>• Carpentry III 8603</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b><i>Carpentry Level One, National Construction Career Test</i></b>            Certification of knowledge and skills defined as Level 1 competency in the carpentry trade area. The certification exam is based on the NCCER Contren Learning Series standardized curriculum (Level 1, Carpentry).</p>	<p>Pass an exam that covers the following areas: basic safety; introduction to construction math; introduction to hand and power tools; introduction to blueprints; basic communication and employability skills; wood building materials, fasteners, and adhesives; floor systems; wall and ceiling framing; roof framing; windows and exterior doors.</p>	<p>National Center for Construction Education and Research (NCCER)</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Carpentry I 8601</li> <li>• Carpentry II 8602</li> <li>• Carpentry III 8603</li> </ul>
<p><b><i>Carpentry: Residential Construction Academy Examination</i></b>            Examination of skills and knowledge covered in the course materials, "Residential Construction Academy: Carpentry," Thomson Delmar Learning in Partnership with the Home Builders Institute</p>	<p>Pass an online assessment that measures the skills and knowledge required to work professionally in the residential carpentry area. The examination covers the following areas: tools and materials; hand and power tools; wood and wood products; fasteners; rough carpentry; blueprints and codes; building layout; concrete form construction; floor, wall and ceiling framing; scaffolds, ladders, and horses; roof framing; exterior finish, windows, and doors; roofing; siding and decks; interior, insulation, and wall finish; stair framing and finish; cabinets and countertops.</p>	<p>Thomson Delmar Learning/Home Builders Institute</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Cabinetmaking I 8604</li> <li>• Cabinetmaking II 8605</li> <li>• Carpentry I 8601</li> <li>• Carpentry II 8602</li> <li>• Carpentry III 8603</li> </ul>
<p><b><i>Certified Computer Service Technician (CST)</i></b>            Certification of skill in and knowledge of basic computer electronics as applied to computer operation, maintenance, and repair</p>	<p>Pass the written CST certification examination, demonstrating knowledge of basic electronics concepts and principles that form the foundation of all other industry specialty knowledge, skills, and abilities; basic computer hardware operations and problems; and general human/customer relations skills.</p>	<p>Electronics Technicians Association, International (ETA)</p>	<ul style="list-style-type: none"> <li>• Computer Systems Technology I 8622</li> <li>• Computer Systems Technology II 8623</li> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> </ul>
<p><b><i>Certified Dental Assistant: Infection Control Examination (ICE)</i></b>            One of three assessments leading to completion of the Certified Dental Assistant credential (CDA)</p>	<p>Pass a knowledge-based exam consisting of 100 multiple-choice questions. The exam includes collection and recording of data, patient and dental health care work education, prevention of cross-contamination and transmission, maintaining aseptic conditions, selecting disinfection or sterilization, performing sterilization procedures, performing disinfection procedures, occupational safety.</p>	<p>Dental Assisting National Board, Inc.</p>	<ul style="list-style-type: none"> <li>• Dental Assistant II 8329</li> </ul>
<p><b><i>Certified Dental Assistant: Radiation Health and Safety (RHS) Examination</i></b>            One of three assessments leading to the complete Certified Dental Assistant credential (CDA)</p>	<p>Pass a knowledge-based exam consisting of 100 multiple-choice questions. The exam includes the intraoral and extraoral processes, mount/label, radiation safety-patient, radiation safety-operator, storage and disposal, quality assurance.</p>	<p>Dental Assisting National Board, Inc.</p>	<ul style="list-style-type: none"> <li>• Dental Assistant II 8329</li> </ul>
<p><b><i>Certified Electronics Technician (CET) Associate</i></b>            Designed for entry-level electronics students, apprentices, or technicians with two years or fewer combined electronics training and/or work experience. The CETA program certifies knowledge of basic electronics concepts and principles that form the foundation of all other industry specialty knowledge, skills, and abilities.</p>	<p>This exam is the basic portion of the full-credit journey-level certification exam. This multiple-choice exam covers basic electricity, electronics, math, AC and DC circuits, transistors, and basic troubleshooting skills. The Associate level exam is a two-hour exam, and the applicant must receive a score of 75% to pass.</p>	<p>Electronics Technicians Association, International (ETA)</p>	<ul style="list-style-type: none"> <li>• Electronics Systems I 8416</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> </ul>

<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Certified Internet Webmaster Associate</i></b>            Certification of basic skills and knowledge that an Internet professional is expected to understand and use. This is the first step in the Certified Internet Webmaster (CIW) program.</p>	<p>Pass any one of three CIW Foundations exams for student-selected verified credit (Virginia graduation credit). The exams cover Internet fundamentals, Web page authoring fundamentals, or networking fundamentals. ProSoft Learning requires candidates to pass all three CIW Foundations exams to achieve the full CIW Associate Certification.</p>	ProSoft Learning	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Programming 6640</li> <li>• Programming, Advanced 6641</li> </ul>
<p><b><i>Certified Novell Administrator (CNA)</i></b>            Certification of skills and knowledge for individuals who handle the day-to-day administration of an installed Novell networking product. The CNA is the first step in the Novell certification program.</p>	<p>Pass the Novell exam 050-677, Foundations of Novell Networking. This exam covers topics such as directory services, security, Web services, LAN/WAN technologies, and client/server management.</p>	Novell	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> </ul>
<p><b><i>Certified Satellite Dish Installer</i></b>            Certification of skills and knowledge necessary to install earth station, TV receive-only satellite dishes for consumer, business, and government use</p>	<p>Pass a test that includes antenna theory, amplifiers, satellite components, reflectors, feeds, wiring and switching, cabling, installation, interfacing, MATV and SMATV systems, fiber optics, and troubleshooting.</p>	Electronics Technicians Association, International (ETA)	<ul style="list-style-type: none"> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> </ul>
<p><b><i>Certified SolidWorks Professional</i></b>            Examination for evaluating and measuring professional competence and establishing industry standards of excellence in mainstream 3D modeling.</p>	<p>Pass an assessment that has both a multiple choice and performance component—both are taken online. The knowledge-based test consists of 50 multiple choice questions. The performance portion tests general proficiency in SolidWorks as well as a high degree of skill in an advanced topic of the test taker's choice. Advanced topics include sheet metal design, mold design, and advanced assemblies, etc. A test taker must earn a grade of 80% to pass.</p>	SolidWorks Corporation	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Digital Visualization 8459</li> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Engineering Drawing and Design 8436/8493</li> <li>• Technical Drawing and Design 8435/8434</li> </ul>
<p><b><i>Cisco CCNA Academy Certificate (CCNA: 1)</i></b>            Certification of successful completion of the CCNA 1: Networking Basics course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)</p>	<p>Pass an online assessment of competency in the following areas: introduction to networking, networking fundamentals, networking media, cable testing, cabling LANs and WANs, Ethernet fundamentals, Ethernet technologies, Ethernet switching, TCP/IP Protocol Suite, IP addressing, routing fundamentals and subnets, and TCP/IP transport and application layer.</p>	Cisco Systems	<ul style="list-style-type: none"> <li>• Computer Networking Hardware Operations I 8542</li> </ul>
<p><b><i>Cisco CCNA Academy Certificate (CCNA: 2)</i></b>            Certification of successful completion of the CCNA 2: Router and Routing Basics course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)</p>	<p>Pass an online assessment of competency in the following areas: WANs and routers, introduction to routers, configuring a router, learning about other devices, managing Cisco IOS software, routing and routing protocols, TCP/IP Suite error and control messages, basic router troubleshooting, intermediate TCP/IP, and access control lists (ACLs).</p>	Cisco Systems	<ul style="list-style-type: none"> <li>• Computer Networking Hardware Operations II 8543</li> </ul>
<p><b><i>Cisco CCNA Academy Certificate (CCNA: 3)</i></b>            Certification of successful completion of the CCNA 3: Switching Basics and Intermediate Routing course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)</p>	<p>Pass an online assessment that indicates competency in the following areas: introduction to classless routing, single-area OSPF, EIGRP, switching concepts, switches, switch configuration, spanning tree protocol, virtual LANs, and virtual trunking protocol.</p>	Cisco Systems	<ul style="list-style-type: none"> <li>• Computer Networking Hardware Operations III 8544</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Cisco CCNA Academy Certificate (CCNA: 4)</b>            Certification of successful completion of the CCNA 4: WAN Technologies course of the CISCO Network Academy Program leading to full certification, Cisco Certified Network Associate (CCNA)</p>	Pass an online assessment that indicates competency in the following areas: scaling IP addresses, WAN technologies, PPP, ISDN and DDR, frame relay, introduction to network administration, optical networking fundamentals.	Cisco Systems	<ul style="list-style-type: none"> <li>• Computer Networking Hardware Operations IV 8545</li> </ul>
<p><b>Cisco Certified Networking Associate (CCNA)</b>            Entry-level certification for workers who install, configure, and operate simple-routed LAN, routed WAN, and switched LAN, and ATM networks that use Cisco routers and switches</p>	Complete the following courses as a part of the CISCO Network Academy Program: CCNA 1: Networking Basics, CCNA 2: Router, CCNA 3: Switching, CCNA 4: WAN Technologies. Pass one comprehensive CISCO certification exam, CCNA Exam 640-507, or two component exams of the CCNA certification.	Cisco Systems	<ul style="list-style-type: none"> <li>• Computer Networking Hardware Operations I 8542</li> <li>• Computer Networking Hardware Operations II 8543</li> <li>• Computer Networking Hardware Operations III 8544</li> <li>• Computer Networking Hardware Operations IV 8545</li> </ul>
<p><b>Collision Repair Assessment</b>            Occupational competency assessment of skills and knowledge covered in a secondary level program in automotive collision repair</p>	Pass the NOCTI knowledge-based exam, Collision Repair (3006), consisting of 123 test items. Test includes welding, sheet metal/panel alignment, plastic repairs, structural, glass, trim and hardware, estimating, safety/environmental, airbags/restraints, air conditioning systems and corrosion protection.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Auto Body Repair I—Collision and Repair (Non-Certified) 8679</li> <li>• Auto Body Repair II—Painting and Refinishing (Non-Certified) 8680</li> <li>• Auto Body Repair III—Collision and Repair and Painting and Refinishing (Non-Certified) 8681</li> <li>• Auto Body Technology I—Collision and Repair (Certified) 8676</li> <li>• Auto Body Technology II—Painting and Refinishing (Certified) 8677</li> <li>• Auto Body Technology III—Collision and Repair and Painting and Refinishing (Certified) 8678</li> </ul>
<p><b>Collision Repair and Refinishing Technician (ASE)</b>            Certification of skill in automobile repair and refinishing. Examinations are considered “pathway” examinations to full ASE certification in a specialty area upon completion of required work experience.</p>	Pass any <b>one</b> of four tests covering the following specialty areas in the ASE Collision Repair and Refinish Test Series: <ul style="list-style-type: none"> <li>• Painting and Refinishing exam</li> <li>• Nonstructural Analysis and Damage Repair exam</li> <li>• Structural Analysis and Damage Repair exam</li> <li>• Electrical/Mechanical Components exam</li> </ul>	National Institute for Automotive Service Excellence	<ul style="list-style-type: none"> <li>• Auto Body Repair I—Collision and Repair (Non-Certified) 8679</li> <li>• Auto Body Repair II—Painting and Refinishing (Non-Certified) 8680</li> <li>• Auto Body Repair III—Collision and Repair and Painting and Refinishing (Non-Certified) 8681</li> <li>• Auto Body Technology I—Collision and Repair (Certified) 8676</li> <li>• Auto Body Technology II—Painting and Refinishing (Certified) 8677</li> <li>• Auto Body Technology III—Collision and Repair and Painting and Refinishing (Certified) 8678</li> </ul>
<p><b>Collision Repair and Refinishing Technology Assessment</b>            Occupational competency assessment of skills and knowledge covered in a secondary level program in collision repair and refinishing technology</p>	Pass the NOCTI knowledge-based exam, Collision Repair and Refinishing Technology (2083), which includes 150 test items. Test includes welding, sheet metal repair/panel alignment, plastic repairs, structural, glass, trim and hardware, and detailing, estimating, electronic, safety/environmental, air conditioning, corrosion and corrosion protection, and refinishing.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Auto Body Repair I—Collision and Repair (Non-Certified) 8679</li> <li>• Auto Body Repair II—Painting and Refinishing (Non-Certified) 8680</li> <li>• Auto Body Repair III—Collision and Repair and Painting and Refinishing (Non-Certified) 8681</li> <li>• Auto Body Technology I—Collision and Repair (Certified) 8676</li> <li>• Auto Body Technology II—Painting and Refinishing (Certified) 8677</li> <li>• Auto Body Technology III—Collision and Repair and Painting and Refinishing (Certified) 8678</li> </ul>



Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Commercial Foods Assessment</b> Occupational competency assessment of skills and knowledge related to commercial foods operations</p>	<p>Pass the NOCTI knowledge-based exam (3020) consisting of 138 test items. Test includes food service overview, sanitation, safety, equipment, production techniques, recipes, purchasing and management skills, menu planning, and service.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Culinary Arts I 8275</li> <li>• Culinary Arts II 8276</li> <li>• Culinary Arts III 8279</li> </ul>
<p><b>Commercial Pesticide Applicator Certification</b> Certification examinations required for applying commercial pesticide in any one of 20 application categories. Assessments are considered to be “pathway” examinations leading toward full certification upon reaching 18 years of age.</p>	<p>Pass a Core Examination as well as <b>one</b> examination in any one of 20 specialty areas in the Commercial Applicator Examination Category. Examples: Agricultural Pest Control—Plant, Agricultural Pest Control—Animal, General Pest Control, Forest Pest Control, Seed Treatment.</p>	<p>Virginia Department of Agriculture and Consumer Services</p>	<ul style="list-style-type: none"> <li>• Agricultural Production Management IV 8012</li> <li>• Agricultural Production Technology III 8010</li> <li>• Floral Design I 8055</li> <li>• Floral Design II 8056</li> <li>• Floriculture 8038</li> <li>• Forestry, Wildlife, and Soil Management 8042</li> <li>• Greenhouse Plant Production and Management 8035</li> <li>• Horticulture Sciences 8034</li> <li>• Introduction to Natural Resources 8040</li> <li>• Landscaping 8036</li> <li>• Natural Resources Business Management 8044</li> <li>• Turf Grass Establishment and Maintenance 8051</li> <li>• Turf Grass Applications, Advanced 8054</li> </ul>
<p><b>Computer Networking Fundamentals Assessment</b> Certification of skills and knowledge for individuals who handle the day-to-day administration of an installed computer network</p>	<p>Pass the NOCTI knowledge-based exam, Computer Networking Fundamentals Assessment (2414), which includes 135 test items. Test includes the following areas: PC principles, network connections, physical connection types, network standards and devices, network terminology, network architecture, network addressing, network security, and network design.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8623</li> <li>• Computer Systems Technology II 8623</li> <li>• Electronics Systems I 8416</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> <li>• Information Technology in Production Systems 8496</li> </ul>
<p><b>Computer Repair Technology Assessment</b> Examination that certifies competency in basic hardware and operating systems technologies for entry-level computer service technicians</p>	<p>Pass the NOCTI knowledge-based exam Computer Repair Technology Assessment (2415), which includes 117 test items. Test includes the following computer-related areas: installing, configuring, upgrading; diagnosing, troubleshooting; preventive maintenance; system boards, processors, and memory; I/O devices; printing; basic networking; security; and customer support and ethics.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8623</li> <li>• Computer Systems Technology II 8623</li> <li>• Electronics Systems I 84167</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> <li>• Information Technology in Production Systems 8496</li> </ul>
<p><b>Construction Masonry—Blocklaying Assessment</b> Occupational competency assessment of skills and knowledge covered in an instructional program in masonry-blocklaying</p>	<p>Pass the NOCTI knowledge-based exam (3025) consisting of 176 test items. Test includes hand and power tools, safety, materials and methods, blueprints and specifications, masonry layout and applications, fireplaces and chimneys, masonry structure maintenance, scaffolding, trade appreciation and human relations, arches, steps, patios and pattern bonds and specialty area of blocklaying.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Masonry I 8512</li> <li>• Masonry II 8513</li> <li>• Masonry III 8514</li> </ul>
<p><b>Construction Masonry—Bricklaying Assessment</b> Occupational competency assessment of skills and knowledge covered in an instructional program in masonry-bricklaying</p>	<p>Pass the NOCTI knowledge-based exam (3125) consisting of 166 test items. Test includes hand and power tools, safety, materials and methods, blueprints and specifications, masonry layout and applications, fireplaces and chimneys, masonry structure maintenance, scaffolding, trade appreciation and human relations, arches, steps, patios and pattern bonds and specialty area of bricklaying.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Masonry I 8512</li> <li>• Masonry II 8513</li> <li>• Masonry III 8514</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Construction Technology Test Assessment</b>            Certification of knowledge and skills defined as entry-level competency in the general building trades area. The certification exam is based on the NCCER Contren Learning Series standardized curriculum (“Construction Technology,” 2nd edition, 2006).</p>	Pass an assessment, Construction Technology (NCCT68), that tests knowledge of safe construction practices, proper use and care of hand and power tools, interpretation of blueprints and site layout, understanding of common construction methods, materials, and practices as well as the basics of four general trade areas (electrical, plumbing, masonry, and carpentry).	National Center for Construction Education and Research (NCCER)	<ul style="list-style-type: none"> <li>• Building Trades I 8516</li> <li>• Building Trades II 8516</li> </ul>
<p><b>Copper-Based Cabling Certification</b>            Certification for technicians who are capable of fabricating, installing, troubleshooting, and maintaining copper cable infrastructure for high-speed data services, voice, video, and security information systems. Instructor must be RBT-System-certified before students can receive certification.</p>	<ul style="list-style-type: none"> <li>• Complete an instructional unit consisting of an RBT Copper-Based Network Cabling Certification module.</li> <li>• Pass an examination covering the following areas: safety, hardware, twisted pair cabling and coaxial cabling, cable testing, cabling standards, network cabling installation, and residential and voice cabling.</li> </ul>	RBT Systems, Inc.	<ul style="list-style-type: none"> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>
<p><b>Core: Introductory Craft Skills, National Construction Career Test</b>            Certification of knowledge and skills defined as <i>construction fundamentals</i> for all building and construction trade areas. The certification exam will be based upon the NCCER Contren Learning Series, “Core Curriculum, Introductory Craft Skills.”</p>	Pass an exam that covers the following areas: basic safety, employability and communication skills, introduction to construction math, introduction to hand tools, introduction to power tools, introduction to blueprints, and basic rigging.	National Center for Construction Education and Research (NCCER)	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Cabinetmaking I 8604</li> <li>• Cabinetmaking II 8605</li> <li>• Carpentry I 8601</li> <li>• Carpentry II 8602</li> <li>• Carpentry III 8603</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> <li>• Masonry I 8512</li> <li>• Masonry II 8513</li> <li>• Masonry III 8514</li> <li>• Plumbing I 8551</li> <li>• Plumbing II 8552</li> <li>• Welding I 8672</li> <li>• Welding II 8673</li> </ul>
<p><b>Cosmetology</b>            Virginia state license to practice the care and styling of human hair, wigs, and hairpieces</p>	<ul style="list-style-type: none"> <li>• Complete the training required by the licensing board as defined in the Code of Virginia.</li> <li>• Pass the written and performance elements of Virginia licensing examination.</li> </ul>	Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations	<ul style="list-style-type: none"> <li>• Cosmetology I 8527</li> <li>• Cosmetology II 8528</li> </ul>
<p><b>Cosmetology Assessment</b>            Occupational competency assessment of skills and knowledge covered in a secondary level program in cosmetology</p>	Pass the NOCTI knowledge-based exam, Cosmetology (2082), consisting of 134 test items. Test includes salon management/accounting; shampooing, conditioning, cutting, styling, coloring, permanent waving, and relaxing hair; skin care; wig services; cleaning and sterilizing equipment; and composition of hair, skin, and nails.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Cosmetology I 8527</li> <li>• Cosmetology II 8528</li> </ul>

<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Criminal Justice Assessment</i></b> (Can use either “Law Enforcement” or “General” versions of this assessment.)</p> <p>Occupational competency assessment of skills and knowledge covered in a secondary level program in introductory criminal justice/law enforcement</p>	<p>Pass the NOCTI knowledge-based exam, Criminal Justice (either 2081 or 2981), consisting of 175 test items (same written test for either assessment). Test includes crime scene handling, use of force continuum, criminal law and procedures, health issues, police concepts and skills, corrections concepts and skills, court system, communication, security, and understanding and working with special populations.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Criminal Justice I 8702</li> <li>• Criminal Justice II 8703</li> </ul>
<p><b><i>Culinary Arts Prep Cook Level 1</i></b></p> <p>Occupational competency assessment of foundational skills and knowledge covered in a secondary level program in culinary arts</p>	<p>Pass the NOCTI knowledge-based exam, Culinary Arts Prep Cook Level 1 (4036), consisting of 155 test items. Test includes recipes; knife skills; large and small equipment; sanitation and safety; cold food preparation; fruits, vegetables, and starches; bakery products; stocks, sauces and hot soups; meats, poultry, and seafood; breakfast foods; receiving and storage; nutritional values; management; and employment skills.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Culinary Arts I 8275</li> <li>• Culinary Arts II 8276</li> <li>• Culinary Arts III 8279</li> </ul>
<p><b><i>Culinary Arts Cook Level 2</i></b></p> <p>Occupational competency assessment of skills and knowledge covered in a secondary level program in culinary arts</p>	<p>Pass the NOCTI knowledge-based exam, Culinary Arts Cook Level 2 (4136), consisting of 203 test items. Test includes recipes; knife skills; large and small equipment; sanitation and safety; cold food preparation; fruits, vegetables, and starches; bakery products; stocks, sauces, and hot soups; meats, poultry, and seafood; breakfast foods; receiving and storage; nutritional values; customer service; management; and employment skills.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Culinary Arts I 8275</li> <li>• Culinary Arts II 8276</li> <li>• Culinary Arts III 8279</li> </ul>
<p><b><i>Data Cabling Installer Certification (DCIC)</i></b></p> <p>Certification of skills and knowledge required of a data cabling installer</p>	<p>Pass an examination that measures knowledge in the following technical areas: basic electricity; data communications basics; definitions, symbols, and abbreviations; cable construction; cable performance characteristics; cabling standards; basic network topologies; basic network architectures; NEC and UL requirements; cabling system components; DCIC installation tools; connectors and outlets; cabling system design; cabling installation; connector installation; cabling testing and certification; cabling troubleshooting; and documentation.</p>	<p>Electronics Technicians Association, International (ETA)</p>	<ul style="list-style-type: none"> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>
<p><b><i>Dental Assisting Assessment</i></b></p> <p>Occupational competency assessment of skills and knowledge covered in a dental assisting instructional program</p>	<p>Pass the NOCTI knowledge-based exam (3026) consisting of 190 test items. Test includes communication, infection control and hazards management, assisting with clinical procedures, performing diagnostic measures, and performing clerical functions.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Dental Assistant 8329</li> </ul>
<p><b><i>Diesel Engine Mechanics Assessment</i></b></p> <p>Occupational competency assessment of skills and knowledge covered in a diesel engine technology program</p>	<p>Pass the NOCTI knowledge-based exam (3027) consisting of 126 test items. Test includes safety, shop equipment, cooling system, lubricating system, intake and exhaust systems, diesel fuel system, cylinder heads, electrical systems, flywheel, clutch and transmission, general shop practices, air conditioning, and engine troubleshooting, disassembly, rebuilding, testing, and operation.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Diesel Equipment Technology I 8613</li> <li>• Diesel Equipment Technology II 8614</li> </ul>

<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Drafter Certification</i></b>  Certification that allows drafters to demonstrate drafting concepts and nationally recognized standards and practices. The certification exam does not require specific knowledge of design and does not cover software specific computer aided drafting (CAD).</p>	<p>Pass an exam that covers drafting concepts as well as nationally recognized standards and practices.</p>	<p>American Design Drafting Association</p>	<ul style="list-style-type: none"> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> </ul>
<p><b><i>Early Childhood Care and Education Assessment</i></b>  Occupational competency assessment of skills and knowledge related to instruction in the early childhood care and education area</p>	<p>Pass the NOCTI knowledge-based exam (3016) consisting of 190 test items. Test includes program management, health and safety, intellectual (cognitive) development, physical development, social and emotional development, positive adult/child relationships and guidance, positive relationships with families, professionalism, language development and communication, creativity, culturally relevant care and education, observation and documentation of learning, inclusion of children with special needs, and curriculum planning.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Early Childhood, Education, and Services I 8285</li> <li>• Early Childhood, Education, and Services II 8286</li> </ul>
<p><b><i>Electrical Certification</i></b>  Certification for the HVAC technician who installs, services, troubleshoots, and repairs a variety of electrical circuits and components in today's HVAC systems. Because the vast majority of service calls involve electrical repairs, HVAC Excellence designates Electrical Certification the prerequisite for all other certifications in its program.</p>	<p>Pass a written exam focusing on circuit fundamentals, electrical materials, magnetism, circuit protection, automatic controls components and applications, troubleshooting basic controls, types of electric motors, application of motors, motor controls, and troubleshooting electric motors.</p>	<p>HVAC Excellence</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b><i>Electrical Construction Assessment</i></b>  Occupational competency assessment of skills and knowledge related to an electrical construction program</p>	<p>Pass the NOCTI knowledge-based exam (3030) consisting of 185 test items. Test includes general information; safety; meters, measures, and testing; identification of tools, materials, and components; National Electric Code; blueprints, drawings, diagrams, and symbols; planning; layout and estimating; AC theory; conductors and magnetic theory; electronics; DC; basic electric and electron theories; low-voltage systems; wiring; circuits and installation; raceway and conduit bending; transformers; motors; motor control circuits and PLCs; lighting; and basic computer skills.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>
<p><b><i>Electrical Occupations Assessment</i></b>  Occupational competency assessment of skills and knowledge related to a secondary level electricity program</p>	<p>Pass the NOCTI knowledge-based exam (2031) consisting of 190 test items. Test covers the following areas: safety, wiring methods, tools, motors and motor control, national electric code, blueprint reading and estimating, applied mathematics, alternating current (AC), and direct current (DC).</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>
<p><b><i>Electrical, National Construction Career Test</i></b>  Certification of knowledge and skills defined as Level 1 competency in the residential and commercial/industrial electrical trade area. The certification exam will be based on the NCCER Contren Learning Series standardized curriculum.</p>	<p>Pass an exam that covers the following areas: electrical safety; hand bending; fasteners and anchors; electrical theory one; electrical theory two; electrical test equipment; introduction to the national electrical code; raceways, boxes, and fittings; conductors; introduction to electrical blueprints; wiring: commercial and industrial; wiring: residential.</p>	<p>National Center for Construction Education and Research (NCCER)</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Electrical Principles: Residential Construction Academy Examination</b> Examination of skills and knowledge covered in the course materials, “Residential Construction Academy: Electrical Principles,” Thomson Delmar Learning in Partnership with the Home Builders Institute</p>	<p>Pass an online assessment that measures important topics that residential electricians need. The examination covers the following areas: basic electricity and electrical theory; safety; electrical quantities and Ohm’s Law; resistors; series, parallel, and combination circuits; measuring instruments; using wire tables and determining conductor sizes; alternating current; magnetic induction; inductance in alternating current schedules; resistance-inductive series circuits; resistive-inductive parallel circuits; capacitors; single-phase transformers; and single-phase motors.</p>	<p>Thomson Delmar Learning/Home Builders Institute</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>
<p><b>Electronics Assessment</b> Occupational competency assessment of skills and knowledge related to a secondary level program in electronics</p>	<p>Pass the NOCTI knowledge-based exam Electronics (1034) consisting of 151 test items. Test includes DC circuits, AC circuits, solid-state circuits, digital circuits, and use of equipment.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> </ul>
<p><b>Electronic Technology Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program in electronic technology systems</p>	<p>Pass the NOCTI knowledge-based exam, Electronics Technology (3035), consisting of 117 items. Test includes safety practices, hand tools, alternate current (AC) circuit analysis, communications, direct current (DC) circuit analysis, solid-state device analysis, basic logic function analysis, electronic device applications, analog circuit analysis, digital electronic circuit analysis, fabrication, inspection, and soldering.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Electronics Systems I 8416</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> </ul>
<p><b>Emergency Medical Technician</b> Certification for emergency medical technician (EMT) or first responder</p>	<p>Pass the written and practical elements of a test focusing on emergency treatment of victims of accident, injury, or illness.</p>	<p>Virginia Department of Health, Office of Emergency Medical Services</p>	<ul style="list-style-type: none"> <li>• Emergency Medical Technician II 8334</li> </ul>
<p><b>EMS First Responder Certification</b> Certification issued by Virginia Emergency Medical Services as a “first responder.” It is the first step in becoming an EMT (emergency medical technician).</p>	<p>Pass the written and practical elements of a “first responder” test focusing on the provision of emergency care expertise needed by first responders to the scene of accident, fire, or medical emergency. The emphasis of the exam is on preparing personnel to address immediate life threats and injuries until more highly trained personnel are available.</p>	<p>Virginia Department of Health, Office of Emergency Medical Services</p>	<ul style="list-style-type: none"> <li>• Emergency Medical Technician II 8334</li> </ul>
<p><b>EPA Technician Certification (Exams: Core I, II, or III)</b> Certification required by Section 608 of the Clean Air Act for anyone who maintains, services, repairs, or disposes of appliances that contain refrigerants with CFCs or HCFCs. The certification must be administered by an EPA-approved testing organization (e.g., Air Conditioning and Refrigeration Institute—ARI).</p>	<p>Pass testing required for the mandatory EPA Technician Certification. Includes a complete review of the final EPA regulations implementing Section 608 of Clean Air Act. Recovery, recycling, reclamation, and proper handling of refrigerants, and other information needed.</p>	<p>Environmental Protection Agency (Authorized Testing Entity)</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> <li>• Industrial Maintenance Technology I 8575</li> <li>• Industrial Maintenance Technology II 8576</li> </ul>
<p><b>Fiber Optic Network Cabling Certification</b> Certification for technicians who are capable of fabricating, installing, troubleshooting, and maintaining fiber optic cable infrastructure for high-speed data services (broadband, LAN, gigabit Ethernet, VoIP, xDSL, and ATM), voice, video, and security information systems. Instructor must be RBT System-certified before students can receive certification.</p>	<ul style="list-style-type: none"> <li>• Complete an instructional unit consisting of an RBT Fiber Optic Network Cabling Certification module.</li> <li>• Pass an examination covering the following areas: fiber optic fundamentals, history of fiber optics, safety, fiber optic tools, fiber optic concepts, cable assemblies, cabling system design, cabling system installation, connecting methods and devices, connecting hardware and outlets, testing, troubleshooting, and standards.</li> </ul>	<p>RBT Systems, Inc.</p>	<ul style="list-style-type: none"> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>

<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Fiber Optics Installer Certification</i></b> Entry-level certification for fiber optics installers. Program establishes and benchmarks the basic knowledge and skills needed to install fiber optics communications cabling safely and competently.</p>	<ul style="list-style-type: none"> <li>Attend an ETA-approved Fiber Optics Installer School (or program).</li> <li>Successfully complete a hands-on demonstration of splicing and connectivity ability as it applies to fiber optics cable.</li> <li>Pass written FOIC certification examination.</li> </ul>	Electronics Technicians Association, International (ETA)	<ul style="list-style-type: none"> <li>Electricity I 8533</li> <li>Electricity II 8534</li> <li>Electricity III 8535</li> </ul>
<p><b><i>Firefighter I Certification</i></b> Certification of skills and knowledge obtained in an entry-level course for new firefighters</p>	Pass an end-of-course examination certifying skills and knowledge learned in an entry-level course for new firefighters. Course is based on National Fire Protection Agency S1001 standard and consists of a combination of classroom study, fire-ground scenarios, and modular practical experiences that will prepare the firefighter to carry out most fire-ground functions under the direct supervision of an experienced firefighter.	Virginia Department of Fire Programs	<ul style="list-style-type: none"> <li>Firefighting I 8705</li> <li>Firefighting II 8706</li> </ul>
<p><b><i>Floriculture Assessment</i></b> Occupational competency assessment of skills and knowledge related to instruction in floriculture</p>	Pass the NOCTI knowledge-based exam (3049) consisting of 119 test items. Test includes basic floral design, intermediate floral design, advanced floral design, small business, plant sciences, and soil sciences.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>Floriculture 8038</li> <li>Horticulture Sciences 8034</li> </ul>
<p><b><i>Floriculture–Greenhouse Assessment</i></b> Occupational competency assessment of skills and knowledge related to instruction in floriculture-greenhouse operation</p>	Pass the NOCTI knowledge-based exam (3949) consisting of 183 test items. Test includes basic floral design, intermediate floral design, advanced floral design, small business, greenhouse operations, plant sciences, and soil sciences.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>Floriculture 8038</li> <li>Horticulture Sciences 8034</li> </ul>
<p><b><i>Forestry Products and Processing Assessment</i></b> Occupational competency assessment of skills and knowledge covered in courses such as Introduction to Natural Resources and Forestry, Wildlife, and Soil Management</p>	Pass the NOCTI knowledge-based exam (2037) consisting of 157 test items. Test includes general safety, logging/harvesting, tree identification, forest protection, silviculture, forest management, business management, wildlife, surveying, chain saw, sawmilling, diesel—hydraulics, employability skills, forest ecology, and timber cruising.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>Forestry, Wildlife, and Soil Management 8042</li> <li>Introduction to Natural Resources 8040</li> <li>Natural Resources Business Management V 8044</li> </ul>
<p><b><i>Fundamental Business Concepts</i></b> Certification awarded for competency in business concepts and skills as related to the Business Management and Administration career cluster</p>	Pass a knowledge-based exam consisting of 100 multiple-choice test items. Test includes questions relating to the following areas business law, communications, economics, emotional intelligence, financial analysis, human resource management, information management, marketing, operations, professional development, and strategic management.	ASK Institute (DECA/MarkED)	<ul style="list-style-type: none"> <li>Business Management 6135</li> <li>Finance 6120</li> <li>Legal Systems Administration 6735</li> <li>Medical Systems Administration 6730</li> <li>Office Administration 6621</li> <li>Office Specialist I 6740</li> <li>Office Specialist II 6741</li> <li>Office Specialist III 6742</li> <li>Principles of Business and Marketing 6115</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Fundamental Marketing Concepts</b>            Certification awarded for competency in marketing concepts and skills as related to the Marketing Sales and Service career cluster</p>	<p>Pass a knowledge-based exam consisting of 100 multiple-choice test items. Test includes questions relating to the following areas: marketing, distribution, marketing-information management, product/service management, promotion, selling.</p>	<p>ASK Institute (DECA/MarkED)</p>	<ul style="list-style-type: none"> <li>• Fashion Marketing 8140</li> <li>• Fashion Marketing, Advanced 8145</li> <li>• Financial Services Marketing 8180</li> <li>• Global Marketing and Commerce 8135</li> <li>• Global Marketing and Commerce, Advanced 8136</li> <li>• Hotel Marketing 8160</li> <li>• Hotel Marketing, Advanced 8162</li> <li>• Internet Marketing 8125</li> <li>• Marketing 8120</li> <li>• Marketing, Advanced 8130</li> <li>• Marketing Management 8132</li> <li>• Sports, Entertainment, and Recreation Marketing 8175</li> <li>• Sports, Entertainment and Recreation Marketing, Advanced 8177</li> <li>• Travel and Tourism Marketing 8165</li> <li>• Travel and Tourism Marketing, Advanced 8167</li> </ul>
<p><b>Fundamentals of Wireless LANs Examination</b>            Certification of introductory skills and knowledge of wireless local area networks</p>	<p>Pass an online end-of-course exam for Cisco's sponsored course, Fundamentals of Wireless LANs. The exam focuses on the design, planning, implementation, operation, and troubleshooting of wireless networks.</p>	<p>Cisco Systems</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8622</li> <li>• Computer Systems Technology II 8623</li> </ul>
<p><b>General Drafting and Design Assessment</b>            Occupational competency assessment of skills and knowledge covered in a secondary level program in general drafting and design</p>	<p>Pass the NOCTI knowledge-based exam, General Drafting and Design (3038), consisting of 118 test items. Test includes basic drawing and dimensioning skills, job entry skills, geometric construction, applied mathematics, drawing techniques and supplementary view, dimensioning skills—computer-aided drafting (CAD), dimensioning skills—mechanical drafting, mechanical drafting and shop manufacturing processes, planning and performing architectural activities/terms/symbols, architectural floor plans, architectural elevations and sections, and supplemental drafting activities.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> </ul>
<p><b>Graphic Communication Technology Assessment</b>            Occupational competency assessment of skills and knowledge covered in an instructional program for graphics arts, printing, and related digital media</p>	<p>Pass the NOCTI knowledge-based exam (4042) consisting of 190 test items. Test includes introduction to printing, electronic imaging and copy presentation, image assembly and platemaking, duplicator/press operations, finishing processes, and electronic publishing.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Graphic Imaging Technology I 8660</li> <li>• Graphic Imaging Technology II 8661</li> </ul>
<p><b>Graymark Cable Installation Certification</b>            Certification provided to students who have successfully trained on the Graymark Cabling Tech program as taught by a certified instructor. The Cabling Tech program covers all topics required by the industry standard BICSI Level 1 certification plus cable installation such as phone, cable television, and inside and outside installation of cable.</p>	<ul style="list-style-type: none"> <li>• Complete the Graymark Cabling Tech program taught by a teacher certified to teach that curriculum.</li> <li>• Pass an exit exam related to the Graymark Cabling Tech program competencies.</li> </ul>	<p>Graymark International</p>	<ul style="list-style-type: none"> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>

<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Greenhouse Operators Certification Program</i></b>            Certification of skills and knowledge relating to greenhouse production and marketing</p>	<p>Pass a knowledge-based exam based on curriculum provided by the Virginia Flower Growers Association for greenhouse operations.</p>	<p>Southeast Greenhouse Growers Association/Virginia Flower Growers Association</p>	<ul style="list-style-type: none"> <li>• Floral Design I 8055</li> <li>• Floral Design II 8056</li> <li>• Floriculture 8038</li> <li>• Greenhouse Plant Production and Management 8035</li> <li>• Horticulture Sciences 8034</li> <li>• Specialty Horticulture Arts 8037</li> </ul>
<p><b><i>Health Assisting Assessment</i></b>            Occupational competency assessment of skills and knowledge covered in basic health assisting instruction</p>	<p>Pass the NOCTI knowledge-based exam (2044) consisting of 123 test items. Test includes medical terminology, observation and communication, employment skills, and health assisting skills.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Health Assistant II (Psychiatric Aide) 8332</li> <li>• Nurse Aide II 8362</li> <li>• Practical Nursing II 8358</li> </ul>
<p><b><i>Heating, Electrical, Air Conditioning Technology (HEAT) Examination</i></b>            Combined assessment covering heating, electrical, and air conditioning technology. This examination is designed specifically for secondary HVAC programs.</p>	<p>Pass a “student outcome assessment” (HEAT) examination designed for secondary HVAC programs. This 100-question examination includes equipment installation and service; knowledge of electric heat systems and components; knowledge of heating system and components; safety, theory and application; troubleshooting and problem solving. There are two versions of the HEAT assessment, one with questions covering gas heat, and the other with questions on oil heat.</p>	<p>HVAC Excellence</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b><i>Heating, Ventilation, Air Conditioning (HVAC) Assessment</i></b>            Occupational competency assessment of skills and knowledge related to a secondary program in Heating, Ventilation, and Air Conditioning.</p>	<p>Pass the NOCTI knowledge-based exam (3045) consisting of 200 test items. Test includes electricity, soldering, brazing, and welding, pipefitting, controls, installation and service, related math and science, refrigeration, refrigerant recovery, general safety, computer literacy, employability skills, air conditioning, heat pumps and electric heat, hydronic systems, forced air, gas, and oil units, humidity and air movement, and sheet metal and ductwork.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b><i>Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) Assessment</i></b>            Occupational competency assessment of skills and knowledge related to a secondary program in Heating, Ventilation, and Air Conditioning and Refrigeration.</p>	<p>Pass the NOCTI knowledge-based exam (3064) consisting of 118 test items. Test includes electricity, soldering, brazing, and welding, pipefitting, controls, installation and service, related math and science, refrigeration, refrigerant recovery, general safety, computer literacy, and employability skills.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b><i>Heavy Equipment Operations, National Construction Career Test</i></b>            Certification of knowledge and skills in the secondary level Utility/Heavy Construction Technology program. The certification exam is based on the NCCER Contren Learning Series standardized curriculum for this specialty area.</p>	<p>Pass an exam that covers heavy equipment safety, introduction topics to the trade, identification of heavy equipment, basic operational techniques, tractors, and grades (Part One).</p>	<p>National Center for Construction Education and Research (NCCER)</p>	<ul style="list-style-type: none"> <li>• Utility/Heavy Construction Technology I 8616</li> <li>• Utility/Heavy Construction Technology II 8617</li> </ul>
<p><b><i>Home Health Aide Assessment</i></b>            Occupational competency assessment of skills and knowledge covered in home health aide instruction</p>	<p>Pass the NOCTI knowledge-based exam (2048) consisting of 131 test items. Test includes first aid; abbreviations, vocabulary, and communication; employability skills; client care/medications; safety; nutrition and elimination; positioning; client transfer; personal care; home maintenance management; and client rights.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Health Assistant II (Psychiatric Aide) 8332</li> <li>• Nurse Aide II 8362</li> <li>• Practical Nursing II 8358</li> </ul>



<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Horticulture–Landscaping Assessment</i></b> Occupational competency assessment of skills and knowledge covered in basic landscaping instruction</p>	<p>Pass the NOCTI knowledge-based exam (3149) consisting of 138 test items. Test includes general knowledge, pest management, fundamentals of irrigation, basic nursery/greenhouse skills, horticulture retail, landscape construction, landscape maintenance, golf course maintenance, and arboriculture.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Horticulture Sciences 8034</li> <li>• Landscaping 8036</li> </ul>
<p><b><i>Horticulture–Olericulture and Pomology Assessment</i></b> Occupational competency assessment of skills and knowledge covered in basic greenhouse plant production and management as related to fruits and vegetables</p>	<p>Pass the NOCTI knowledge-based exam (3249) consisting of 124 test items. Test includes general knowledge, pest management, fundamentals of irrigation, basic greenhouse skills, horticulture business and retailing, vegetable and fruit production, soils and seeds, and propagation.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Greenhouse Plant Production and Management 8035</li> <li>• Horticulture Sciences 8034</li> <li>• Specialty Horticulture Arts 8037</li> </ul>
<p><b><i>Hospitality Management–Food and Beverage Option Assessment</i></b> Occupational competency assessment of skills and knowledge related to hospitality industry management with emphasis on food and beverage operations</p>	<p>Pass the NOCTI knowledge-based exam (1079) consisting of 159 test items. Test includes introduction to hospitality management; guest relations/concierge; understanding hospitality marketing; the marketing department; marketing to organizations; safety on the job; cashier; travel and tourism; restaurant management; food and beverage service; and legal and ethical responsibilities.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Hospitality, Tourism, and Recreation I 8202</li> <li>• Hospitality, Tourism, and Recreation II 8203</li> <li>• Hotel Marketing, Advanced 8162</li> </ul>
<p><b><i>Hospitality Management–Lodging Option Assessment</i></b> Occupational competency assessment of skills and knowledge related to hospitality industry management with emphasis on lodging operations</p>	<p>Pass the NOCTI knowledge-based exam (1080) consisting of 163 test items. Test includes introduction to hospitality management; front office organization; rooms; bedding and rates; the reservation function; guest relations/concierge; understanding hospitality marketing; the marketing department; marketing to organizations; safety on the job; cashier; travel and tourism; and legal and ethical responsibilities.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Hospitality, Tourism, and Recreation I 8202</li> <li>• Hospitality, Tourism, and Recreation II 8203</li> <li>• Hotel Marketing, Advanced 8162</li> </ul>
<p><b><i>House Wiring: Residential Construction Academy Examination</i></b> Examination of skills and knowledge covered in the course materials, “Residential Construction Academy: House Wiring.” Thomson Delmar Learning in Partnership with the Home Builders Institute</p>	<p>Pass an online assessment that measures all areas of residential wiring that are required of an entry-level electrician. The examination covers the following areas: preparing and planning a residential wiring job; safety; hardware, materials, measurement instruments used; residential service entrances; electrical system rough-in; electrical box and enclosure installation; cable and raceway installation; switching and branch circuit installation; video, voice, and data wiring installation; residential system trim-out; lighting fixture and device installation; service panel trim-out; maintaining, troubleshooting, and repairing residential electrical wiring systems.</p>	<p>Thomson Delmar Learning/ Home Builders Institute</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Electricity I 8533</li> <li>• Electricity II 8534</li> <li>• Electricity III 8535</li> </ul>
<p><b><i>HVAC, National Construction Career Test</i></b> Certification of knowledge and skills defined as Level 1 competency in the heating, ventilation, and air conditioning area. The certification exam will be based upon the NCCER Contren Learning Series standardized curriculum.</p>	<p>Pass an exam that covers basic principles and skills related to the residential and light commercial heating and air conditioning systems.</p>	<p>National Center for Construction Education and Research (NCCER)</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>HVAC, Residential Construction Academy Examination</b> Examination of skills and knowledge covered in the course materials, “Residential Construction Academy: HVAC,” Thomson Delmar Learning in Partnership with the Home Builders Institute</p>	<p>Pass an online assessment that measures the skills and knowledge necessary for the aspiring technician who will be involved in the installation, startup, and service of residential air conditioning and heating systems. The examination covers the following areas: introduction to matter, energy and heat basics; refrigeration process; installation safety; unit location and the air distribution system; system connections; system evacuation, startup, and service; mechanical and electrical troubleshooting; refrigerant management; basic electricity motors and automatic controls; indoor air quality; electric, gas, oil, hydronic, and geothermal heating.</p>	<p>Thomson Delmar Learning/ Home Builders Institute</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b>IC<sup>3</sup> Certification</b> A global, validated, standards-based training and certification program for basic computing and Internet literacy. It validates the knowledge and skills required for basic use of computer hardware, software, networks, and the Internet.</p>	<p>Pass <b>three</b> individual examinations in the following areas:</p> <ul style="list-style-type: none"> <li>• Computing Fundamentals</li> <li>• Key Applications</li> <li>• Living Online</li> </ul>	<p>Certiport</p>	<p>Choose any 36-week Business and Information Technology course <i>except</i> the following:</p> <ul style="list-style-type: none"> <li>• Business Individualized Program 6745</li> <li>• Digital Input Technologies 6161</li> <li>• International Baccalaureate Information Technology in a Global Society IB6613</li> <li>• International Baccalaureate for Business and Management IB6135</li> <li>• Keyboarding Applications 6152</li> <li>• Notetaking 6241</li> </ul>
<p><b>Industrial Maintenance Mechanic Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program in industrial maintenance technology</p>	<p>Pass the NOCTI knowledge-based exam, Industrial Maintenance Mechanic Assessment (1074), consisting of 146 test items. Test includes digital fundamentals, hydraulics/pneumatics, motor controls/mechanism drives, programmable controls, and industrial robotics systems.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Industrial Maintenance Technology I 8575</li> <li>• Industrial Maintenance Technology II 8576</li> </ul>
<p><b>Installer (or Service) Core Certification (HVAC)</b> The Core NATE Installer exam is the first certification required before a technician chooses a more advanced specialty installation exam for full certification (passing of core exam and specialty area exam).</p>	<p>Pass a 50-question core exam that covers safety, tools, soft skills, principles of heat transfer and total comfort, and electrical questions.</p>	<p>North American Technician Excellence, Inc. (NATE)</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b>IT Essentials 1 Examination (PC Hardware and Software)</b> End-of-course certification awarded upon successful completion of the curriculum unit, IT Essentials Level 1: PC Hardware and Software, from Cisco Systems. It provides stepping-stone preparation to the A+ certification from CompTIA.</p>	<p>Pass <b>one</b> examination covering the following topics: information technology basics, how computers work, assembling a computer, operating systems fundamentals, Windows 9x operating systems, multimedia capabilities, Windows NT/2000/XP operating systems, advanced hardware fundamentals for servers, networking fundamentals, printers and printing, preventive maintenance, troubleshooting PC hardware, and troubleshooting software.</p>	<p>Cisco Systems</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Systems Technology I 8622</li> <li>• Computer Systems Technology II 8623</li> <li>• Information Technology in Production Systems 8496</li> </ul>
<p><b>IT Essentials 2 Examination (Network Operating Systems)</b> End-of-course certification awarded upon successful completion of the curriculum unit, IT Essentials Level 2: Network Operating Systems, from Cisco Systems. It provides a stepping stone to the certifications such as Network+, Server+, and Linux+ from CompTIA.</p>	<p>Pass <b>one</b> examination covering the following topics: operating system fundamentals, introduction to networking, physical components of a network, TCP/IP networking, overview of network services, introduction to network operating systems, installation and boot process overview, Windows 2000 Professional, Linux installation procedures, Linux, advanced NOS administration, installing and maintaining hardware in a Linux environment, troubleshooting the operating system, and network security.</p>	<p>Cisco Systems</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Computer Network Engineering IV: Designing and Supporting Computer Networks 8545</li> </ul>

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<p><b>Java Programming Examination</b> End-of-course certification awarded upon successful completion of the course, Fundamentals of Java Programming, from Cisco Systems. It provides a stepping stone to the Sun Certified Programmer for Java certification.</p>	<p>Pass an end-of-course online exam that tests the following areas: conceptual understanding of object-oriented programming; Java languages; object-oriented technologies to solve business problems; language fundamentals and Java language API; and creating classes, objects, and applications.</p>	<p>Cisco Systems</p>	<ul style="list-style-type: none"> <li>• Database Design and Management, Advanced 6661</li> <li>• Programming, Advanced 6641</li> </ul>
<p><b>Linux+ Certification</b> Benchmark of basic knowledge and skills pertaining to the Linux computer operating system</p>	<p>Pass an examination consisting of approximately 95 multiple-choice questions, which tests basic knowledge of the work environment and typical job tasks and problems encountered by an entry-level Linux professional.</p>	<p>CompTIA</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> </ul>
<p><b>Lodging Management Program Certification, Level 1</b> Certification indicating that student has studied and experienced career opportunities in the lodging and food service industry, has developed skills needed in the operation of a lodging property, and has passed the Level 1 exam</p>	<p>Pass an exam after completing Level 1 of the AH &amp; LA Lodging Management Program. Exam items include overview of lodging management, the front office, and housekeeping.</p>	<p>American Hotel and Lodging Association (AH &amp; LA)</p>	<ul style="list-style-type: none"> <li>• Hospitality, Tourism, and Recreation I 8202</li> <li>• Hospitality, Tourism, and Recreation II 8203</li> <li>• Hotel Marketing, Advanced 8162</li> </ul>
<p><b>Lodging Management Program Certification, Level 2</b> Certification indicating that student has studied and experienced career opportunities in the lodging and food service industry, has developed skills needed in the operation of a lodging property, and has passed the Level 2 exam</p>	<p>Pass an exam after completing Level 2 of the AH &amp; LA Lodging Management Program. Exam items include leadership and management, marketing and sales, food and beverage service.</p>	<p>American Hotel and Lodging Association (AH &amp; LA)</p>	<ul style="list-style-type: none"> <li>• Hospitality, Tourism, and Recreation I 8202</li> <li>• Hospitality, Tourism, and Recreation II 8203</li> <li>• Hotel Marketing, Advanced 8162</li> </ul>
<p><b>Machining Skills–Level 1</b> Certification of essential knowledge and skills for entry-level machinists in any one of seven distinct Machining Level 1 skill areas</p>	<p>Each of seven credentials that can be earned requires successful completion of a performance requirement and a related theory exam. Each credential involves a different written exam with the exception of Turning; the Turning exam needs to be taken only once for both Turning credentials. In summary, there are seven performance requirements and six written exams at Machining Level I.</p>	<p>National Institute for Metalworking Skills, Inc. (NIMS)</p>	<ul style="list-style-type: none"> <li>• Precision Machining Technology I 8539</li> <li>• Precision Machining Technology II 8540</li> </ul>
<p><b>Manufacturing Technology Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program in manufacturing technology</p>	<p>Pass the NOCTI knowledge-based exam, Manufacturing Technology (1084), consisting of 175 items. Test includes math, science, measurement, communication skills, workplace safety, health and job skills, quality assurance (maintenance), blueprint reading, manufacturing fundamentals, processes and materials, planning and scheduling, production processing, material utilization, computer use, process control and improvement, time motion and costs, purchasing and resource identification activities, computer control functions, PLCs and automated manufacturing, communication processes, electrical/electromechanical fluid components, and design processes.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Manufacturing Systems 8425</li> <li>• Manufacturing Systems, Advanced 8427</li> </ul>
<p><b>Medical Assisting Assessment</b> Occupational competency assessment of skills and knowledge covered in a medical assisting instructional program.</p>	<p>Pass the NOCTI knowledge-based exam (3055) consisting of 198 test items. Test includes general office procedures, general laboratory procedures and diagnostics, clinical procedures, patient instruction, and foundations of healthcare.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Medical Assistant II 8346</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Microsoft Certified Professional (any Microsoft Professional Certification exam)</b> A measure of technical proficiency and expertise indicated by passing one of Microsoft’s information technology industry certification exams, leading toward a more advanced Microsoft certification specialty program</p>	<p>Pass <b>one</b> current Microsoft information technology certification exam that provides a valid and reliable measure of technical proficiency and expertise (a current exam is any exam that has not been retired).</p>	<p>Microsoft</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Programming 6640</li> <li>• Programming, Advanced 6641</li> </ul>
<p><b>Microsoft Office Specialist (MOS)</b> Globally recognized standard for demonstrating desktop skills with the Microsoft Office Specialist suite of business productivity applications. Office Suite versions include Office 2000, XP, and 2003. Certifications are available in specific MOS versions at several levels: specialist (core) or expert.</p>	<p>Pass any <b>one</b> unique Microsoft Office Specialist exam at the specialist <b>or</b> expert levels (a minimum of <b>one</b> unique exam is required for student-selected verified credit eligibility).</p>	<p>Microsoft</p>	<ul style="list-style-type: none"> <li>• Computer Applications 6611</li> <li>• Computer Information Systems 6612</li> <li>• Computer Information Systems, Advanced 6613</li> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> <li>• Database Design and Management (Oracle) 6660</li> <li>• Database Design and Management (Oracle), Advanced 6661</li> <li>• Database Design and Management with PL/SQL (Oracle) 6662</li> <li>• Design, Multimedia, and Web Technologies 6630</li> <li>• Design, Multimedia, and Web Technologies, Advanced 6631</li> <li>• Digital Input Technologies 6161</li> <li>• Information Technology Fundamentals 6670</li> <li>• International Baccalaureate Information Technology in a Global Society IB6613</li> <li>• Keyboarding Applications 6152</li> <li>• Legal Systems Administration 6735</li> <li>• Medical Systems Administration 6730</li> <li>• Office Administration 6621</li> <li>• Office Specialist I 6740</li> <li>• Office Specialist II 6741</li> <li>• Office Specialist III 6742</li> <li>• Word Processing 6625</li> </ul>
<p><b>Nail Technician</b> Virginia state license to practice nail care</p>	<ul style="list-style-type: none"> <li>• Complete the training required by the licensing board as defined in the Code of Virginia.</li> <li>• Pass the written and performance elements of a Virginia licensing examination.</li> </ul>	<p>Virginia Board of Barbers and Cosmetology, Department of Professional and Occupational Regulations</p>	<ul style="list-style-type: none"> <li>• Nail Technician 8692/8693</li> </ul>
<p><b>National Automotive Technicians Education Foundation End of Program Test Series Examinations</b> Assessment of specialty skill areas in automobile service and repair. Individual examinations are considered to be “pathway” examinations potentially leading to ASE industry certification in a specialty area.</p>	<p>Pass at least <b>two</b> of eight specialty exams in the following areas: engine repair, automatic transmission and transaxle, manual drive train and axles, suspension and steering, brakes, electrical and electronic systems, heating and air conditioning, or engine performance. Verified credit will be awarded for the passing of two specialty examinations.</p>	<p>National Automotive Technician Education Foundation (NATEF)</p>	<ul style="list-style-type: none"> <li>• Automotive Servicing I (Non-Certified) 8710</li> <li>• Automotive Servicing II (Non-Certified) 8711</li> <li>• Automotive Servicing III (Non-Certified) 8712</li> <li>• Automotive Technology I (Certified) 8506</li> <li>• Automotive Technology II (Certified) 8507</li> <li>• Automotive Technology III (Certified) 8508</li> </ul>
<p><b>National Health Care Foundation Skill Standards Assessment</b> Assessment based on recognized foundational industry standards for the national Health Science career cluster</p>	<p>Individuals must be considered eligible to take the assessment after successful completion of certain specified portfolio criteria as determined by the local instructor. The following National Health Care Foundation Skill Standards will be included on the assessment: communications, systems, employability skills, legal responsibilities, ethics, safety practices, teamwork, and health maintenance practices.</p>	<p>National Consortium on Health Science and Technology Education</p>	<ul style="list-style-type: none"> <li>• Health Assistant II (Psychiatric Aide) 8332</li> <li>• Nurse Aide II 8362</li> <li>• Practical Nursing II 8358</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>National Professional Certification in Customer Service</b>            Certification documenting knowledge and skills in the industry-identified area of Customer Service Skill Standards.</p>	<p>Pass an Internet-delivered, knowledge-based exam made up of real-life customer service situations, some presented through video and audio, with questions presenting possible courses of action.</p>	<p>National Retail Federation Foundation</p>	<ul style="list-style-type: none"> <li>• EFE Cooperative Education I 9020/9030</li> <li>• EFE Cooperative Education II 9021/9031</li> <li>• Fashion Marketing 8140</li> <li>• Fashion Marketing, Advanced 8145</li> <li>• Finance 6120/6121</li> <li>• Financial Services Marketing 8180</li> <li>• Global Marketing and Commerce 8135</li> <li>• Global Marketing and Commerce, Advanced 8136</li> <li>• Hotel Marketing 8160</li> <li>• Hotel Marketing, Advanced 8162</li> <li>• Internet Marketing 8125</li> <li>• Marketing 8120</li> <li>• Marketing, Advanced 8130</li> <li>• Marketing Management 8132</li> <li>• Sports, Entertainment, and Recreation Marketing 8175</li> <li>• Sports, Entertainment, and Recreation Marketing, Advanced 8177</li> <li>• Travel and Tourism Marketing 8165</li> <li>• Travel and Tourism Marketing, Advanced 8167</li> </ul>
<p><b>Network+ Certification</b>            Certification that candidates have knowledge of the layers of the OSI model, can describe the features and functions of network components and have skills needed to install, configure, and troubleshoot basic networking hardware peripherals and protocols.</p>	<p>Pass a written exam requiring knowledge of networking technology and networking application practices.</p>	<p>CompTIA</p>	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> </ul>
<p><b>NRDA Certification (Dental Assisting)</b>            One of several certifications in the health sciences field offered by the National Association for Health Professionals.</p>	<ul style="list-style-type: none"> <li>• Complete a state-approved dental assisting program.</li> <li>• Pass a knowledge-based examination pertaining to common requirements and job functions of a dental assistant.</li> </ul>	<p>National Allied Health Registry/            National Association for Health Professionals</p>	<ul style="list-style-type: none"> <li>• Dental Assistant II 8329</li> </ul>
<p><b>NRCMA Certification (Medical Assisting)</b>            One of several certifications in the health sciences field offered by the National Association for Health Professionals</p>	<ul style="list-style-type: none"> <li>• Complete a state-approved medical assisting program.</li> <li>• Pass a knowledge-based examination pertaining to common requirements and job functions of a medical assistant.</li> </ul>	<p>National Allied Health Registry/            National Association for Health Professionals</p>	<ul style="list-style-type: none"> <li>• Medical Assistant II 8346</li> </ul>
<p><b>Nurse Aide</b>            Certification for individuals who perform patient care in support of registered professional nurses and other health care personnel</p>	<ul style="list-style-type: none"> <li>• Complete an approved nurse aide program.</li> <li>• Pass a practical and written test focusing on basic emergency procedures, vital signs, intake and output, bathing and oral hygiene, care of the skin, communication and interpersonal skills, infection control, patients' rights, restorative therapy, and the unique needs and behaviors of the cognitively impaired patient.</li> </ul>	<p>Virginia Board of Nursing</p>	<ul style="list-style-type: none"> <li>• Health Assistant II (Psychiatric Aide) 8332</li> <li>• Nurse Aide II 8362</li> <li>• Practical Nursing II 8358</li> </ul>
<p><b>Nursing Assisting Assessment</b>            Occupational competency assessment of skills and knowledge covered in nursing assisting instruction</p>	<p>Pass the NOCTI knowledge-based exam (3058) consisting of 116 test items. Test includes basic nursing skills, personal care services, mental health and social service needs, client rights, employability skills, and basic restorative devices.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Health Assistant II (Psychiatric Aide) 8332</li> <li>• Nurse Aide II 8362</li> <li>• Practical Nursing II 8358</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Oracle Certification Program Examinations</b> A measure of technical proficiency and expertise indicated by passing one of the Oracle industry certification exams, leading toward a more advanced Oracle certification specialty program</p>	<p>Pass <b>one</b> current Oracle professional certification exam that provides a valid and reliable measure of technical proficiency and expertise in Oracle database design, development, operation, and maintenance. (A current exam is any that has not been retired.)</p>	<p>Oracle Corporation</p>	<ul style="list-style-type: none"> <li>• Database Design and Management (Oracle) 6660</li> <li>• Database Design and Management (Oracle), Advanced 6661</li> <li>• Database Design and Management with PL/SQL (Oracle) 6662</li> </ul>
<p><b>Outdoor Power Equipment Certifications</b> A certification program that includes six tests (each one a certification), ranging from small outdoor power engines to compact diesel engines and generators</p>	<p>Pass any <b>one</b> of the following tests: two-stroke engine, four-stroke engine, electrical, drivelines, compact diesel, or generator to receive one of six Outdoor Power Equipment certifications.</p>	<p>Equipment and Engine Training Council (EETC)</p>	<ul style="list-style-type: none"> <li>• Introduction to Power, Structural, and Technical Systems 8016</li> <li>• Small Engine Repair 8082</li> <li>• Small Engine Technology I 8725</li> <li>• Small Engine Technology II 8726</li> </ul>
<p><b>Parts Specialist (ASE)</b> Certification of knowledge, skills, and professionalism of parts specialists</p>	<p>ASE tests and issues a certification for each of the following three areas: medium/heavy truck parts specialist, automobile parts specialist, and medium/heavy truck aftermarket parts specialist.</p>	<p>National Institute for Automotive Service Excellence</p>	<ul style="list-style-type: none"> <li>• Automotive Servicing I (Non-Certified) 8710</li> <li>• Automotive Servicing II (Non-Certified) 8711</li> <li>• Automotive Servicing III (Non-Certified) 8712</li> <li>• Automotive Technology I (Certified) 8506</li> <li>• Automotive Technology II (Certified) 8507</li> <li>• Automotive Technology III (Certified) 8508</li> </ul>
<p><b>Plumbing Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program in the plumbing trade</p>	<p>Pass an exam that covers the following areas: introduction to the plumbing trade; plumbing tools; introduction to plumbing math; introduction to plumbing drawings; plastic pipe and fittings; copper pipe and fittings; cast-iron pipe and fittings; carbon steel pipe and fittings; fixtures and faucets; introduction to drain, waste, and vent (DWV) systems; and introduction to water-distribution systems.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Plumbing I 8551</li> <li>• Plumbing II 8552</li> </ul>
<p><b>Plumbing: Residential Construction Academy Examination</b> Examination of skills and knowledge covered in the course materials, “Residential Construction Academy: Plumbing,” Thomson Delmar Learning in Partnership with the Home Builders Institute</p>	<p>Pass an online assessment that measures all areas of residential plumbing installations. The examination covers the following areas: materials; hand and power tools; pipe, fittings, valves, and devices; fixtures and equipment; faucets and drain assemblies; equipment layout and installation; water distribution and installation; installation of waste drainage and vent systems; fixture and equipment installation; troubleshooting and plumbing repairs; and troubleshooting hydronic heating systems.</p>	<p>Thomson Delmar Learning/Home Builders Institute</p>	<ul style="list-style-type: none"> <li>• Building Trades I 8515</li> <li>• Building Trades II 8516</li> <li>• Plumbing I 8551</li> <li>• Plumbing II 8552</li> </ul>
<p><b>Precision Machining Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program in precision machining</p>	<p>Pass the NOCTI knowledge-based exam, Precision Machining (3052), with 154 test items. Test includes organization and shop practices, measurement and inspection, shop math, interpretation of blueprints, design activities, benchwork, precision grinding machines, lathes, power saws, milling, cutting tool technology, drill presses, electro-discharge machines (EDM), computer numerical control (CNC), machine maintenance, metallurgical processes and heat treating, and application of technical information.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Precision Machining Technology I 8539</li> <li>• Precision Machining Technology II 8540</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Pre-Engineering Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level pre-engineering program</p>	<p>Pass the NOCTI knowledge-based exam, Pre-Engineering/Engineering Technology (1475), with 179 test items. Test includes an overview of engineering, design process/problem solving, manufacturing, materials, communication and teamwork, safety, and engineering systems.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Advanced Engineering 8491</li> <li>• Computer Integrated Manufacturing 8442</li> <li>• Digital Electronics 8440</li> <li>• Engineering Design and Development 8443</li> <li>• Engineering Practicum 8453</li> <li>• Introduction to Engineering 8490</li> <li>• Principles of Engineering 8441</li> </ul>
<p><b>Pre-Skills Assessment for Mastercam Certification</b> The Pre-skills Assessment for Mastercam is an examination of skills needed to utilize the Mastercam software product. Mastercam is a Windows®-based CAD/CAM software product for 2- through 5-axis milling and turning; 2- and 4-axis wire EDM; 2D and 3D design, surface, and solid modeling; artistic relief cutting, and 2D and 3D routing.</p>	<p>Pass an online assessment administered by the National Occupational Competency Testing Institute (NOCTI). This test is required before candidates can achieve the Mastercam Certified Programmer (Level 1) certification. The Mastercam software product was developed by CNC Software, Inc.</p>	<p>Administered by the National Occupational Competency Testing Institute (NOCTI) for CNC Software, Inc.</p>	<ul style="list-style-type: none"> <li>• Advanced Drawing and Design 8438</li> <li>• Architectural Drawing and Design 8437/8492</li> <li>• Digital Visualization 8459</li> <li>• Drafting I 8530</li> <li>• Drafting II 8531</li> <li>• Engineering Drawing and Design 8436/8493</li> <li>• Technical Drawing and Design 8435/8434</li> </ul>
<p><b>PrintED Certification (all exams)</b> Certification program that validates competencies related to PrintED, the industry's national accreditation program for secondary and postsecondary graphic communications programs. The program currently includes three exams, with a certificate being awarded for each area.</p>	<ul style="list-style-type: none"> <li>• Complete an instructional program that has achieved the national PrintED accreditation.</li> <li>• Pass one exam (either Introduction to Graphic Communications, Press Operations, or Digital File Preparation) that validates competencies related to the PrintED industry-based curriculum for the graphics communications industry.</li> </ul>	<p>Graphic Arts Education and Research Foundation</p>	<ul style="list-style-type: none"> <li>• Graphic Imaging Technology I 8660</li> <li>• Graphic Imaging Technology II 8661</li> </ul>
<p><b>Production Agriculture Assessment</b> Occupational competency assessment of skills and knowledge covered in typical Agricultural Production Technology and/or Management courses</p>	<p>Pass the NOCTI knowledge-based exam, Production Agriculture Assessment (2063), consisting of 161 test items. Test includes animal science, plant science, agriculture mechanics, farm management, record keeping, leadership, and employability.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Agricultural Production Management IV 8012</li> <li>• Agricultural Production Technology III 8010</li> </ul>
<p><b>ProStart Program Certification (Levels 1 and/or 2)</b> End-of-course examination for individuals who prepare for careers in the restaurant and food service industry. Indicated successful completion of either year 1 or 2 of the ProStart-sponsored curriculum.</p>	<ul style="list-style-type: none"> <li>• Complete Year 1 or 2 of the industry-based ProStart sponsored culinary curriculum.</li> <li>• Pass the end-of-year ProStart program examination.</li> </ul>	<p>National Restaurant Association Educational Foundation</p>	<ul style="list-style-type: none"> <li>• Culinary Arts I 8275</li> <li>• Culinary Arts II 8276</li> <li>• Culinary Arts III 8279</li> </ul>
<p><b>Protective Services Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program of instruction in protective services.</p>	<p>Pass the NOCTI knowledge-based exam, Protective Services (1480), consisting of 148 test items. Test includes the following areas: public safety, law enforcement, fire fighting, emergency medical services, legal issues, career development, and homeland security.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Public Safety I 8700</li> <li>• Public Safety II 8701</li> </ul>
<p><b>Real Estate Salesperson</b> Virginia state license to handle purchases and sales of real estate</p>	<ul style="list-style-type: none"> <li>• Complete the training required by the licensing board as defined in the Code of Virginia.</li> <li>• Pass the written and performance elements of a Virginia licensing examination.</li> </ul>	<p>Virginia Real Estate Board (Department of Professional and Occupational Regulations)</p>	<ul style="list-style-type: none"> <li>• Real Estate Marketing 8191</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Residential Air Conditioning and Heating Certification</b>            Certification offered by ARI and referred to as one of its Industry Competency Exams (ICE). It measures industry-agreed standards of basic competency for entry-level (one-year experience or less) technicians in the area of Residential Air Conditioning and Heating (equipment consists of 5-ton systems or smaller).</p>	<p>Pass an exam that contains 100 multiple-choice questions covering the ARI curriculum guide for Residential Air Conditioning and Heating.</p>	<p>Air Conditioning and Refrigeration Institute (ARI)</p>	<ul style="list-style-type: none"> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration I, 8503</li> <li>• Heating, Ventilation, Air Conditioning, and Refrigeration II 8504</li> </ul>
<p><b>Retail Commercial Baking Assessment</b>            Occupational competency assessment of skills and knowledge related to retail commercial baking normally included in a secondary level culinary arts program</p>	<p>Pass the NOCTI knowledge-based exam, Retail Commercial Baking (2010), consisting of 200 test items. Test includes general baking knowledge; weights, measures, general baking math; classifications and properties of ingredients; handling and storage of ingredients; safety and sanitation; production, scheduling, planning; yeast-raised dough products; doughnuts (cake and yeast-raised); cake decorating; cakes; laminated dough; cookies, pies, and pastries; customer service; and merchandising of products.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Culinary Arts I 8275</li> <li>• Culinary Arts II 8276</li> <li>• Culinary Arts III 8279</li> </ul>
<p><b>Retail Trades Assessment</b>            Occupational competency assessment of skills, functions, and knowledge foundations related to marketing and merchandising occupations</p>	<p>Pass the NOCTI knowledge-based exam (3053) consisting of 199 test items. Test includes advertising, electronic marketing, visual merchandising, entrepreneurship, economics, communication, selling, employability skills, related mathematics, marketing/merchandising and human relations/customer service.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Fashion Marketing, Advanced 8145</li> <li>• Global Marketing and Commerce, Advanced 8136</li> <li>• Marketing, Advanced 8130</li> </ul>
<p><b>Sales Certification</b>            Certification exam designed to capture the core sales duties for a broad range of entry-level through first-line supervisory positions across the sales and service industries. It is appropriate for anyone interested in obtaining a job or pursuing a career in retail and other customer-service/sales-focused industries.</p>	<p>Pass an Internet-delivered, knowledge-based exam. The assessment relates to three critical work functions identified in the NRFF Sales Skill Standards:</p> <ul style="list-style-type: none"> <li>• Prepares for selling</li> <li>• Gains customer commitment and closes the sale</li> <li>• Develops and implements sales and follow-up plan</li> </ul> <p>See NRFF Web site for Sales Skills Standards:  <a href="http://www.nrf.com/content/foundation/salescert.htm">http://www.nrf.com/content/foundation/salescert.htm</a></p> <p><i>Must pass the National Professional Certification in Customer Service before attempting the Sales Certification exam.</i></p>	<p>National Retail Federation Foundation</p>	<ul style="list-style-type: none"> <li>• Fashion Marketing 8140</li> <li>• Fashion Marketing, Advanced 8145</li> <li>• Financial Services Marketing 8180</li> <li>• Global Marketing and Commerce 8135</li> <li>• Global Marketing and Commerce, Advanced 8136</li> <li>• Hotel Marketing 8160</li> <li>• Hotel Marketing, Advanced 8162</li> <li>• Internet Marketing 8125</li> <li>• Marketing 8120</li> <li>• Marketing, Advanced 8130</li> <li>• Marketing Management 8132</li> <li>• Sports, Entertainment, and Recreation Marketing 8175</li> <li>• Sports, Entertainment and Recreation Marketing, Advanced 8177</li> <li>• Travel and Tourism Marketing 8165</li> <li>• Travel and Tourism Marketing, Advanced 8167</li> </ul>
<p><b>SENSE Training Program Certification (Level I, Entry-level Welder)</b>            Certification of knowledge and skills in welding for Level 1, Entry-Level Welder</p>	<p>To earn an AWS SENSE Level I (entry-level welder):</p> <ul style="list-style-type: none"> <li>• Complete the prescribed SENSE training program offered through an AWS-approved participating organization (program).</li> <li>• Pass the required written and performance-based certification examinations.</li> </ul>	<p>American Welding Society</p>	<ul style="list-style-type: none"> <li>• Welding I 8672</li> <li>• Welding II 8673</li> </ul>



<b>Credential Title/Description</b>	<b>How to Earn It</b>	<b>Provider</b>	<b>Possible Preparatory Courses</b>
<p><b><i>Small Animal Science Assessment</i></b> Occupational competency assessment of skills and knowledge covered in a small animal care and/or veterinary science program.</p>	Pass the NOCTI knowledge-based exam (7413) consisting of 152 test items. The test includes the following areas: Safety and Personal Hygiene, Animal Care, Management and Restraint, Grooming, Genetics/Reproduction, Business Management, Animal First Aid, Clinical/Nursing Skills, Dog and Cat Care and Management, Health and Disease, Nutrition, Leadership, and Job Skills.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Biological Applications in Agriculture 8086</li> <li>• Biotechnology Applications in Agriculture 8087</li> <li>• Biotechnology Foundations 8085</li> <li>• Equine Management and Production 8015/8080</li> <li>• Small Animal Care I 8083</li> <li>• Small Animal Care II 8084</li> <li>• Veterinary Science 8088</li> </ul>
<p><b><i>Small Engine Technology Assessment</i></b> Occupational competency assessment of skills and knowledge covered in a typical Small Engine Repair course</p>	Pass the NOCTI knowledge-based exam (3068) consisting of 194 test items. Test includes safety, general shop practices, maintenance, lubrication systems, fuel system, carburetor fundamentals, governor, ignition, starters and alternators, cylinder head service and maintenance, engine assembly, and troubleshooting.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Agricultural Power Systems 8018</li> <li>• Agricultural Power Systems, Advanced 8020</li> <li>• Introduction to Power, Structural, and Technical Systems 8016</li> <li>• Small Engine Repair 8082</li> <li>• Small Engine Technology I 8725</li> <li>• Small Engine Technology II 8726</li> </ul>
<p><b><i>START Certification (Hospitality Skills)</i></b> End-of-course exam that certifies satisfactory completion of the START curriculum related to line level occupations (Guest Service, Rooms Division, Food and Beverage Division) in the hospitality industry</p>	Pass an end-of-course exam that covers specific areas of the hospitality industry. These areas include hospitality orientation, guest services, rooms division, front desk, reservationist, PBX operator, guest room attendant, maintenance worker, laundry attendant, public service cleaner, bell services attendant, and food and beverage division (restaurant server, banquet services, and bus person).	American Hotel and Lodging Association (AH & LA)	<ul style="list-style-type: none"> <li>• Hospitality, Tourism, and Recreation I 8202</li> <li>• Hospitality, Tourism, and Recreation II 8203</li> <li>• Hotel Marketing 8160</li> <li>• Hotel Marketing, Advanced 8162</li> </ul>
<p><b><i>Student Electronics Technician (SET) Certification</i></b> The SET certification program is designed for electronics students who have completed an electronics instructional program, but have not entered the work force. It certifies knowledge of basic electronics concepts and principles.</p>	This exam is the student version of the journey-level certification exam (Certified Electronics Technician Associate—CTE). This multiple-choice exam covers basic electricity, electronics, math, AC and DC circuits, transistors, and basic troubleshooting skills.	Electronics Technicians Association, International (ETA)	<ul style="list-style-type: none"> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> <li>• Electronics Systems I 8416</li> <li>• Electronics Systems II 8412</li> <li>• Electronics Systems III 8413</li> </ul>
<p><b><i>Telecommunications Electronics Technician Certification</i></b> Certification of skills and knowledge related to telecommunications and electronics technicians</p>	Pass an examination that measures knowledge of cables and cabling, analog telephony, equipment, telecom safety, transmission service, distribution methods, computer, digital telephony, interfacing, Internet, network infrastructures and topologies, office wiring, test equipment, troubleshooting, transmission protocols, mathematics, optical wiring, and wireless telephony.	Electronics Technicians Association, International (ETA)	<ul style="list-style-type: none"> <li>• Electronics Technology I 8536</li> <li>• Electronics Technology II 8537</li> <li>• Electronics Technology III 8538</li> <li>• Telecommunications I 8650</li> <li>• Telecommunications II 8651</li> </ul>
<p><b><i>Television Broadcasting Assessment</i></b> Occupational competency assessment of skills and knowledge covered in a secondary level program in television broadcasting</p>	Pass the NOCTI knowledge-based exam, Television Broadcasting (1427), consisting of 136 test items. Test includes pre-production, production, and post-production.	National Occupational Competency Testing Institute (NOCTI)	<ul style="list-style-type: none"> <li>• Television Production I 8688</li> <li>• Television Production II 8689</li> </ul>
<p><b><i>UNIX Examination</i></b> End-of-course certification awarded upon successful completion of the course Fundamentals of UNIX. It provides a stepping stone to various Sun Systems Administrator certifications and the Linux+ certification from CompTIA.</p>	Pass an end-of-course online exam that includes the following areas: how to use UNIX operating system commands, basic Sun Microsystems' Solaris operating environment commands, introduction to the Common Desktop Environment (CDE), and fundamental command-line features of the Solaris environment (file system navigation, file permissions, the vi text editor, command shells, and basic network use).	Cisco Systems	<ul style="list-style-type: none"> <li>• Computer Network Software Operations 6650</li> <li>• Computer Network Software Operations, Advanced 6651</li> </ul>

Credential Title/Description	How to Earn It	Provider	Possible Preparatory Courses
<p><b>Virginia Pharmacy Technician Examination</b> Certification of basic skills and knowledge to begin work as a Pharmacy Technician</p>	<p>Complete the training as defined in the Code of Virginia. Pass the Virginia Pharmacy Technician Examination.</p>	<p>Virginia Board of Pharmacy</p>	<ul style="list-style-type: none"> <li>• Pharmacy Technician I 8305</li> <li>• Pharmacy Technician II 8306</li> </ul>
<p><b>Virginia Workplace Readiness Assessment and IC<sup>3</sup> Certification</b> A customized certification based on 156 Workplace Readiness Skills lessons developed for high school Career and Technical Education students who learn Virginia’s essential 13 Workplace Readiness Skills embedded in all CTE high school course frameworks. This credential is eligible for the student-selected verified credit option in any secondary program area when combined with at least one IC<sup>3</sup> certification test. IC<sup>3</sup> is a global, validated, standards-based training and certification program for basic computing and Internet literacy.</p>	<p>Pass a knowledge-based exam, Virginia Workplace Readiness Assessment, consisting of 100 test items. Test covers items related to basic employment reading and math skills; writing and speaking skills required for employment; computer literacy; skills in reasoning, problem-solving, and decision making; understanding of “big picture”; work ethic and satisfactory attendance; work attitude and initiative; self-presentation skills; and working as a team member to accomplish goals.</p> <p>Pass an individual examination in one of three areas: Computing Fundamentals, Key Applications, or Living Online</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p> <p>Certiport</p>	<p>The Virginia Workplace Readiness Assessment and IC<sup>3</sup> Certification is a generic credential that can be used as a program-enhancement tool for any occupational level and designated foundational Career and Technical Education secondary course. The essential tasks and competencies covered by the Workplace Readiness Assessment are an integral part of all Virginia CTE course frameworks. The IC<sup>3</sup> Certification can be used as a measure of digital literacy.</p>
<p><b>Visual Communications Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program that includes instruction in visual communications</p>	<p>Pass the NOCTI knowledge-based exam, Visual Communications Assessment (1425), consisting of 163 test items. Test includes visual literacy, conceptual design, color theory, typography, materials and tools, processes and procedures, and occupational overview.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Television Production I 8688</li> <li>• Television Production II 8689</li> </ul>
<p><b>Welding Assessment</b> Occupational competency assessment of skills and knowledge covered in a secondary level program in welding</p>	<p>Pass the NOCTI knowledge-based exam, Welding (3072), consisting of 127 test items. Test includes thermal cutting processes, basic heat treat/metallurgy/distortion control, welding terms/symbols/blueprint reading, weld inspection, knowledge of welding consumables, safety, power source principles, oxyfuel welding and brazing, shielded metal arc welding, gas metal arc welding/flux cored arc welding, basic knowledge of measuring instruments, welding qualifications and procedures, and welding costs.</p>	<p>National Occupational Competency Testing Institute (NOCTI)</p>	<ul style="list-style-type: none"> <li>• Welding I 8672</li> <li>• Welding II 8673</li> </ul>
<p><b>Welding, National Construction Career Test</b> Certification of knowledge and skills defined as Level 1 competency in basic welding. The certification exam will be based upon the NCCER Contren Learning Series standardized curriculum.</p>	<p>Pass an exam that focuses on welding principles as contained in the Contren Learning Series curriculum, Welding Level One/AWS Entry Level Welder. The curriculum complies with the American Welding Society’s Schools Excelling through National Skills Standards Education (SENSE) program.</p>	<p>National Center for Construction Education and Research (NCCER)</p>	<ul style="list-style-type: none"> <li>• Welding I 8672</li> <li>• Welding II 8673</li> </ul>