

Virginia Career and Technical Education: Program Highlights 2011-12

Virginia Department of Education, Office of Career and Technical Education Services



The 16 career clusters help students investigate careers and design their plan of study to advance their career goals. Within each career cluster, there are multiple career pathways that represent a common set of skills and knowledge, including academic, technical, and career readiness skills that lead to credentials necessary to pursue a full range of career opportunities from entry level to management, including technical and professional career specialties. CTE actively partners with business and industry to design and provide high quality, dynamic programs to meet current, emerging, and projected labor market needs. Relevant work-based learning opportunities and leadership development offered through career and technical student organizations, are incorporated into the academic and career plan.

2011-12 Student Enrollment by Career Clusters

| | |
|--|--------|
| Agriculture, Food and Natural Resources | 11,829 |
| Architecture and Construction | 9,515 |
| Arts, Audio-Video Technology and Communications | 10,863 |
| Business Management and Administration | 42,575 |
| Education and Training | 10,579 |
| Finance | 4,259 |
| Government and Public Administration | 11,666 |
| Health Science | 6,961 |
| Hospitality and Tourism | 18,459 |
| Human Services | 36,571 |
| Information Technology | 29,692 |
| Law, Public Safety, Corrections and Security | 3,624 |
| Manufacturing | 4,354 |
| Marketing | 16,813 |
| Science, Technology, Engineering, and Mathematics (STEM) | 38,245 |
| Transportation, Distribution and Logistics | 6,947 |

TOTAL Number of Students Enrolled (unduplicated counts) 262,952

Source: Virginia Department of Education

Implementing “Rigor and Relevancy” in CTE Programs

- During 2011-12, five Governor’s Science, Technology, Engineering, and Mathematics (STEM) Academies were implemented. Two more were approved in fall 2012, bringing the total to 17 across the Commonwealth (Halifax, Hampton, Arlington, Suffolk, Russell, Stafford, Loudoun, Chesterfield, Richmond City, Carroll, Virginia Beach, Chesapeake, Fairfax, Roanoke County, New Kent, Lynchburg, and Newport News). The Governor’s STEM Academy is designed to expand options for students to acquire STEM literacy, and other critical skills, knowledge, and credentials that will prepare them for postsecondary education and high-demand, high-skill, and high-wage careers in a competitive global economy.
- In 2011-12, beginning with students entering the ninth grade, Virginia high school students must earn a credit in economics and personal finance toward graduation requirements.
- Beginning September 2011, Governor Robert McDonnell announced Virginia’s Microsoft Information Technology (IT) Academy Program. The IT Academy provides a solution for bridging education and the world of work. It is designed to drive employability, digital literacy, STEM-focused training and certification, and 21st century work force development for students.

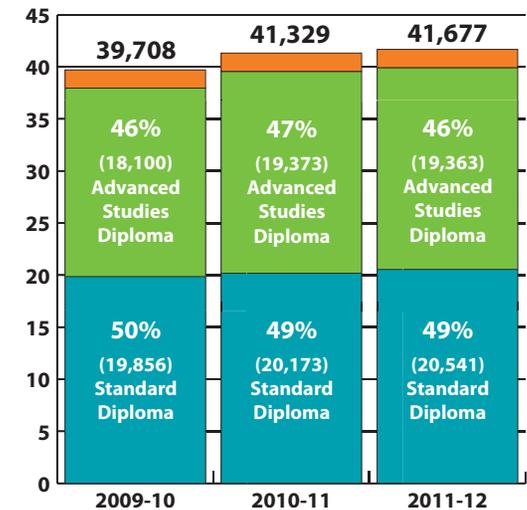
As of December 2012,

- 352 high schools including CTE technical centers are implementing the IT Academy Program.
- 45,460 students have enrolled in 28 CTE priority courses that have been correlated to the Microsoft IT Academy content and resources.
- 2,666 students and educators are active E-Learning users.
- 9,009 Microsoft IT Academy certifications have been earned by students.
- 32 students achieved the Microsoft Office Specialist (MOS) Master Level. To earn this credential a student must pass four individual Microsoft Office Suite examinations that include Word Expert, Excel Expert, PowerPoint, and one of four elective exams such as Access.

Improving Student Performance

- Participation in the Workplace Readiness Skills for the Commonwealth examination increased significantly from 3,693 in 2010-11 to 20,342 in 2011-12. Sixty-seven percent of those who attempted the exam in 2012 earned the credential, 2% more than the previous year.
- Participation in the Virginia Career Readiness Certificate increased from 208 in 2010-11 to 1,219 in 2011-12. Eighty-eight percent of those who attempted the exam in 2012 earned the credential.
- Eighty-one percent of CTE students (3,031 of 3,761) passed the WISE (Working in Support of Education) test and earned the financial literacy credential.
- Approximately 30,500 secondary students (including CTE program completers) earned dual enrollment credits.
- Approximately 680 secondary students (including CTE program completers) earned community college certificates or degrees at or before high school graduation.

Completers Graduated with Standard and Advanced Studies Diplomas



Source: Virginia Department of Education

Virginia Career and Technical Education: Program Highlights 2011-12 *continued*

CTE Students Earned a Variety of Industry Certifications Across the Career Clusters

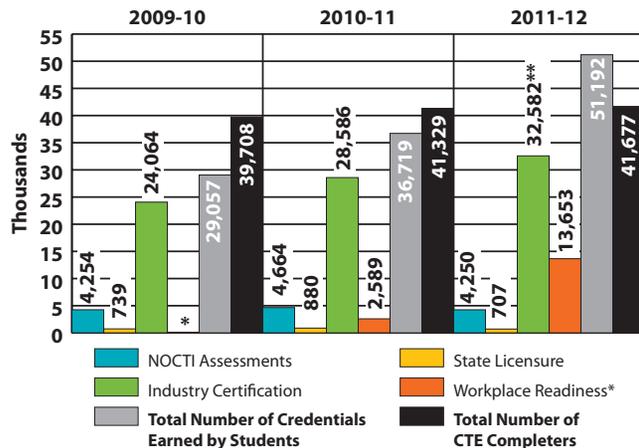
| | | |
|----------|-------------------|-----|
| Region 1 | Central Virginia | 119 |
| Region 2 | Tidewater | 174 |
| Region 3 | Northern Neck | 96 |
| Region 4 | Northern Virginia | 150 |
| Region 5 | Valley | 131 |
| Region 6 | Western Virginia | 95 |
| Region 7 | Southwest | 127 |
| Region 8 | Southside | 45 |

Source: Virginia Department of Education

Credentials Boost Resumes

With credentials in hand, students show their knowledge, technical and job-readiness skills, and stand out in today's competitive job market.

Credentials Earned by CTE Students



*Prior to 2010-11, workplace readiness skills assessments were included in the Industry Certification category, but are now reported separately.

**In 2011-12, nearly 1,100 students earned Virginia Career Readiness Certificate which is included in the Industry Certification category.

Source: Virginia's School Report Card

Top Statewide Occupational Projections

| Occupation | 2011 Median Wage Virginia Statewide | 2020 Projected Employment | Typical Education Needed for Entry |
|---|-------------------------------------|---------------------------|------------------------------------|
| Registered Nurses | \$63,710 | 77,857 | Associate's degree |
| Business Management Analysts | \$90,210 | 72,140 | Bachelor's degree |
| Business General and Operations Managers | \$109,240 | 59,361 | Bachelor's degree |
| Retail Sales Supervisors | \$37,140 | 50,223 | High school diploma |
| Software Developers, Systems Software | \$109,490 | 48,184 | Bachelor's degree |
| Accountants and Auditors | \$68,100 | 47,032 | Bachelor's degree |
| Heavy and Tractor-Trailer Truck Drivers | \$35,090 | 46,334 | Postsecondary certificate |
| Elementary School Teachers | \$55,140 | 44,796 | Bachelor's degree |
| Computer Systems Analysts | \$93,070 | 42,177 | Bachelor's degree |
| Manufacturing Maintenance and Repair Workers | \$35,080 | 35,802 | High school diploma |
| Carpenters | \$37,150 | 34,726 | High school diploma |
| Network & Systems Architects and Administrators | \$81,120 | 27,294 | Bachelor's degree |
| Secondary School Teachers | \$55,200 | 27,293 | Bachelor's degree |
| Executive Secretaries and Assistants | \$45,820 | 26,915 | Some college |
| Automotive Service Technicians | \$40,350 | 26,539 | Postsecondary certificate |
| Licensed Practical Nurses | \$38,560 | 25,741 | Postsecondary certificate |
| Lawyers | \$124,540 | 23,275 | Professional degree |
| Electricians | \$44,880 | 23,186 | Postsecondary certificate |
| Construction Managers | \$85,450 | 18,336 | Associate's degree |
| Plumbers, Pipefitters, and Steamfitters | \$42,210 | 18,231 | High school diploma |
| Police and Sheriff's Patrol Officers | \$47,620 | 17,798 | Some college |
| Market Research Analysts and Specialists | \$61,250 | 16,737 | Bachelor's degree |
| Manufacturing Production Supervisors | \$54,920 | 14,492 | Postsecondary certificate |
| Civil Engineers | \$76,830 | 11,876 | Bachelor's degree |
| Financial Analysts | \$75,050 | 11,569 | Bachelor's degree |
| Mental Health Counselors | \$42,480 | 10,384 | Master's degree |
| Industrial Machinery Mechanics | \$43,470 | 10,282 | High school diploma |
| Pharmacists | \$114,670 | 9,341 | Professional degree |
| Welders, Cutters, Solderers, and Brazers | \$39,850 | 9,163 | High school diploma |
| Graphic Designers | \$49,960 | 8,799 | Bachelor's degree |
| Firefighters | \$46,360 | 8,573 | Postsecondary certificate |
| Interpreters and Translators | \$89,470 | 7,781 | Bachelor's degree |
| Landscaping Supervisors | \$43,500 | 6,996 | High school diploma |
| Dental Hygienists | \$81,450 | 6,740 | Associate's degree |
| Electronics Engineers | \$97,190 | 5,920 | Bachelor's degree |
| Telecommunications Equipment Installers | \$55,710 | 5,706 | Postsecondary certificate |
| Meeting, Convention, and Event Planners | \$53,360 | 5,669 | Bachelor's degree |
| Aerospace Engineers | \$125,110 | 5,170 | Bachelor's degree |
| Food Service Managers | \$52,980 | 5,052 | High school diploma |
| Massage Therapists | \$49,470 | 4,989 | Postsecondary certificate |
| Environmental Scientists and Specialists | \$74,610 | 4,630 | Bachelor's degree |
| Technical Writers | \$72,870 | 4,099 | Bachelor's degree |
| Construction and Building Inspectors | \$52,520 | 3,991 | Some college |
| Veterinarians | \$85,420 | 2,987 | Professional degree |
| Chefs and Head Cooks | \$43,310 | 2,694 | High school diploma |

Source: Virginia Employment Commission, Virginia Occupational Employment Projections 2010-20