



Issues and Solutions for Career and Technical Education in Virginia, 2022–2023

Virginia educators, business representatives, and organizations representing career and technical education (CTE) professionals contribute to the development of the Virginia Association for Career and Technical Education’s positions. Virginia ACTE welcomes comments from citizens, students, parents, and members of the boards that govern Virginia’s public schools. We seek public policy support with the goal of providing opportunity for all Virginia students.

IN BRIEF

1. Virginia ACTE supports funding that would expand the hiring work-based learning (WBL) coordinators, who will ensure high-quality WBL opportunities for students and to align these opportunities with the Commonwealth’s Profile of a Virginia Graduate.
2. Virginia ACTE supports continued funding for industry-recognized standards, assessments, and credentials to strengthen CTE programs, develop staff, and prepare students for our future workforce.
3. Virginia ACTE supports expanded funding for CTE classroom lab equipment and program expansion, as well as funding for the integrated CTE curricula and specialized equipment in Governor’s STEM Academies and Governor’s Health Sciences Academies, to prepare students for a competitive workforce and for postsecondary education and training.
4. Virginia ACTE supports increased efforts by Virginia’s colleges and universities to develop and, where they already exist, strengthen innovative undergraduate and graduate teacher-preparation programs in CTE.
5. Virginia ACTE supports continued and expanded funding to sustain the CTE Resource Center and its work to promote college and career readiness through continued integration of secondary and postsecondary CTE curricula with Virginia’s Standards of Learning and alignment with industry and professional standards and certifications.
6. Virginia ACTE supports the expansion of elementary school CTE career awareness initiatives that create opportunities for student exposure to technical career pathways that encourage awareness, interest, and readiness for secondary CTE programs.

POLICY ISSUE 1

Virginia ACTE supports funding that would expand the hiring of high-quality work-based learning (HQWBL) coordinators, who will ensure high-quality WBL opportunities for students, and to align these opportunities with the Commonwealth's Profile of a Virginia Graduate.

Rationale

- Work-based learning refers to a collection of on-the-job experiences undertaken in partnership with local companies or organizations. Working with the Virginia Department of Education's Office of Career, Technical, and Adult Education, and also our regional workforce councils throughout the Commonwealth, HQWBL opportunities are coordinated at the state, regional, and local school division levels and aligned with the Profile of a Virginia Graduate (8VAC20-131-70).
- Work-based learning experiences enable students to apply classroom instruction; enhance knowledge, skills, and attitudes; develop workplace skills; and experience a given career while experiencing a real-world work environment.
- Employers increasingly seek new hires who have WBL experiences. Students who participate in WBL experiences often work for their placement companies after high school graduation or even after college graduation. Virginia recognizes 12 WBL methods of instruction: job shadowing, mentorship, service learning, externships, school-based enterprise, internships, entrepreneurships, clinical experiences, cooperative education, youth-registered apprenticeships, registered apprenticeships, and supervised agricultural experience.
- Schools must increase opportunities for student WBL. Coordinators in each school division are necessary to build relationships with the local and regional business community, screen and match qualified students to WBL experiences in line with their career goals and interests, and oversee the school division's WBL program.
- These coordinators are a critical link between the classroom and the business community.

Virginia ACTE proposes the following recommendation to assist school divisions and the business community in providing opportunities for students to participate in WBL experiences and prepare all students to be career ready:

- 1.1 *Provide state funding for the implementation of WBL coordinators in all school divisions to support opportunities to strengthen Virginia's future workforce.*
- 1.2 *Expand teacher professional learning options among higher education partners for coursework and certifications in WBL.*

POLICY ISSUE 2

Virginia ACTE supports continued funding for industry-recognized standards, assessments, and credentials to strengthen CTE programs, develop staff, and prepare students for our future workforce.

Rationale

- Virginia employment projections suggest 500,000 new jobs will be created by 2026. As employers seek to fill these jobs, they rely on industry-recognized credentials as evidence of workers' knowledge, skills, and abilities. Virginia's future workforce must be ready for new growth opportunities in high-tech, high-growth industries.
- Virginia's high school students earned 142,202 credentials in the 2021-2022 school year. The Profile of a Virginia Graduate broadens student opportunities to earn a credential beginning with the ninth-grade class of 2018-2019, graduating in 2022.
- Credentialing assessments have been level-funded for the past three years. Funding is divided among 131 school divisions, which serve over 1,250,000 high school students.
- In previous years, these assessments cost over \$5.4 million, while state funding was only \$3.9 million. School divisions had to use over \$1.5 million in local funding to meet the shortfall. Requested funding would allow school divisions to encourage more students to pursue industry-recognized credentials.
- The current Standards of Quality state, "Career and technical education programs shall be aligned with industry and professional standard certifications, where they exist." (Code of Virginia §22.1-253.13:1B) The College, Career, and Civic Readiness section of the School Quality Profile documents these earned industry credentials.
- The 2022 General Assembly funded:
 - more than \$1.8 million for industry certification examinations, licensure tests, and occupational-competency examinations
 - \$308,655 for the Workplace Readiness Skills assessment and other board-approved industry certifications
 - \$500,000 for industry credentialing for students and professional development for instructors in STEM-Health and CTE programs
 - \$1.3 million for information-technology industry credentials.
- Section 22.1-298.1 of the Code of Virginia was amended in 2015 to state: "Every teacher seeking an initial licensure with an endorsement in career and technical education shall have an industry certification credential in the area in which the teacher seeks endorsement. If the teacher has not attained an industry certification credential, the Board may, upon request of the employing school division or educational agency, issue the teacher a provisional license to allow time for the teacher to attain such credential."

Virginia ACTE proposes the following recommendations:

2.1 Increase last year's funding for credentialing assessments by \$1.5 million to \$2.5 million.

a. Increase funding for credentialing assessments to help students complete

industry certifications, occupational competency exams, Workplace Readiness Skills assessments, state licensures, and other valid, high-quality assessments, as approved by the Virginia Board of Education, as a part of their secondary CTE studies, Standard Diploma requirements, and the Profile of a Virginia Graduate requirement.

- b. Continue funding for CTE teachers to attain Virginia Board of Education-approved, industry-recognized certifications.
- c. Support and expand credentialing initiatives at the secondary-education level and recognize the importance of secondary-education credentialing initiatives for success at the postsecondary level and for career readiness.

POLICY ISSUE 3

Virginia ACTE supports funding for CTE classroom lab equipment and program expansion, as well as funding for the integrated CTE curricula and specialized equipment in Governor’s STEM Academies and Governor’s Health Sciences Academies, to prepare students for a competitive workforce and for postsecondary education and training.

Rationale

- School divisions have multiple CTE programs requiring equipment and labs that must be updated regularly to meet industry standards.
- General Assembly funding has Virginia’s CTE classrooms equipped with the technology and materials that students will use in the workplace. General Assembly funds are distributed among 131 school divisions and 1,151 secondary schools and local and regional centers. These funds are used to provide project-based and industry-relevant educational experiences.
- The 2022 General Assembly level-funded CTE equipment at \$1.8 million, with a base allocation of \$2,000 per school division and the remainder distributed based on CTE student enrollment.
- The 2022 General Assembly provided a supplemental \$600,000 in competitive innovation program grants for in-demand, fast-growth industry sectors, with priority given to state-identified challenged schools and the Governor’s STEM Academies and Governor’s Health Sciences Academies.
- Funding of \$1.4 million was allocated for equipment in high-skill, in-demand, and fast-growth industry sectors identified by the Virginia Board of Workforce Development, based on data from the U.S. Bureau of Labor Statistics and the Virginia Employment Commission.
- For each school-based CTE program, the average cost for equipment and software updates ranges from \$60,000 per program (e.g., Teachers for Tomorrow) to more than \$250,000 per program (e.g., Automotive Technology).
- Virginia’s critical, technical workforce is experiencing shortages of qualified, skilled workers. Virginia’s public schools can help close the skills gap through adequately funded CTE programs.
- Students perform better when they learn academic skills applied to real-world settings in CTE programs.

- Secondary CTE programs build on elementary STEM experiences and integrate STEM, using competency- and team-based instruction and encouraging critical thinking and problem solving.
- Governor’s STEM Academies, Governor’s Health Sciences Academies, and other STEM initiatives relevant to all CTE programs are growing.
 - Twenty-two Governor’s STEM Academies expand options for students to acquire STEM literacy and technical skills while earning an industry credential.
 - Nine Governor’s Health Sciences Academies represent partnerships between public school divisions, healthcare institutions, the private sector, and institutions of higher education to deliver rigorous programs that result in effective career preparation, with students earning relevant certifications and credentials.
- There is a need to provide reliable, sustainable, and identifiable funding for the Governor’s STEM Academies to update labs to keep pace with changing curricula and to provide rigorous and relevant programs of study based on rapidly evolving industry needs.

Virginia ACTE recommends the following to strengthen Virginia’s CTE programs:

- 3.1 Increase funding for CTE equipment by \$1 million to \$2.8 million.
- 3.2 Continue funding for CTE expansion to meet the demands of high-skill, in-demand, and fast-growth industry sectors.
- 3.3 Increase funding for equipment and software updates for credentialing assessments required by industry standards.
- 3.4 Increase funding for Governor’s STEM Academies and Governor’s Health Sciences Academies using sustainable, reliable funding streams.
- 3.5 Recognize CTE as an integral component of K–12 STEM initiatives and acknowledge CTE’s unique ability to provide STEM instruction in secondary schools.
- 3.6 Increase funding for competitive innovation program grants to support current and future Governor’s STEM Academies and Governor’s Health Sciences Academies.

POLICY ISSUE 4

Virginia ACTE supports increased efforts by Virginia's colleges and universities to develop and, where they already exist, strengthen innovative undergraduate and graduate teacher-preparation programs in CTE.

Rationale

- Virginia continues to experience a critical shortage of qualified teachers, especially in its most challenged schools and in technical subject areas.
- CTE is ranked fifth in Virginia's top-10 list of critical teacher shortage areas. CTE has been included in this listing since 2003-2004. School divisions increasingly have difficulty finding qualified CTE teachers; the shortage is predicted to worsen over the next five years.
- The National Science Foundation and the Virginia Office of Education Economics identified middle school and high school CTE teacher positions as important STEM professions.
- Demand for CTE teachers and programs is increasing:
 - Enrollment during 2021-2022 totaled more than 698,235 (duplicate count; some students took more than one CTE course).
 - Workplace Readiness Skills (taught in all CTE courses) are a priority for Virginia's employers.
 - Teachers in four CTE program areas (Agricultural Education, Business and Information Technology, Family and Consumer Sciences, and Marketing) comprise the largest number of instructors endorsed to teach Economics and Personal Finance, a graduation requirement for all Virginia students. Students in these courses score highest on average in the end-of-course W!SE Financial Literacy Certification Test.

Virginia needs highly qualified CTE teachers to meet increasing demand. Teacher preparation programs at the Commonwealth's colleges and universities, community colleges, and special initiatives, offer some solutions to these shortages, but more needs to be done.

- The 2016 General Assembly included CTE as a critical-shortage teaching discipline, allowing students enrolled in approved undergraduate or graduate teacher programs to apply for the Virginia Teaching Scholarship Loan Program.

Virginia ACTE proposes the following recommendations to strengthen and expand Virginia's supply of highly qualified CTE teachers:

- 4.1 *The Virginia Board of Education and the State Council of Higher Education for Virginia (SCHEV) should prioritize support for teacher-education programs in CTE in Virginia's colleges and universities to encourage a supply of highly qualified teachers.*
- 4.2 *The career switcher programs should require rigorous pedagogy instruction, realistic endorsement requirements with relevant certifications, and professional experience.*
- 4.3 *Funding for the Virginia Teaching Scholarship Loan Program should be increased, with a portion of these funds set aside to target CTE teacher-shortage areas.*

4.4 *The State Council of Higher Education for Virginia (SCHEV) and the Virginia Community College System (VCCS) should endorse the Virginia Teachers for Tomorrow program as a dual-enrollment community college course eligible for transfer to postsecondary teacher-education programs.*

POLICY ISSUE 5

Virginia ACTE supports continued and expanded funding to sustain the CTE Resource Center and its work to promote college and career readiness through continued integration of secondary and postsecondary CTE curricula with Virginia's Standards of Learning and alignment with industry and professional standards and certifications.

Rationale

The CTE Resource Center provides the following vital activities:

- Revising and bringing in to compliance the website, which has greatly improved access to course information and credentials for teachers, students, parents, and business partners.
- Developing and revising CTE curricula on a three- to five-year cycle with the assistance of business/industry panels and teachers.
- Hosting business/industry representatives and teacher curriculum development teams and other meetings of the state's educational leaders.
- Providing up-to-date, Virginia Board of Education-approved information about certifications and licensure requirements for CTE teachers and students.
- Aligning career and technical education courses with Virginia's Standards of Learning for English, Mathematics, History and Social Science, Science, and Economics and Personal Finance.
- Aligning CTE courses with national and state certification standards, when available, as well as competitive standards for career and technical student organizations.
- Providing up-to-date curricula on Virtual Virginia/Canvas and resources free to Virginia public school teachers.
- Offering in-service meetings to teachers across the state virtually and in person at no cost to Virginia public school teachers or school divisions.
- CTE Resource Center state funding was \$400,000 per year in the 2008-2009 biennial budget.
- CTE Resource Center state funding was cut 35 percent in FY 2009-2010 and 38 percent in FY 2010-2011, leaving state funding at \$248,021.
- The General Assembly restored \$50,000 of the funding in FY 2012, with funding now at \$298,021 in the current biennial budget.
- The CTE Resource Center has an extensive record of support for career and technical education programs and connections to industry standards. A minimal budget restricts the abilities of this valuable resource.

Virginia ACTE proposes the following recommendations to support college and career readiness and sustained funding for the CTE Resource Center:

5.1 The General Assembly should restore full funding to sustain the work of the CTE Resource Center.

5.2 The General Assembly should continue to provide permanent line-item funding to the CTE Resource Center.

POLICY ISSUE 6

Virginia ACTE supports the expansion of elementary school CTE career awareness initiatives that create opportunities for student exposure to technical career pathways that encourage awareness, interest, and readiness for secondary CTE programs.

Rationale

- Younger learners have a limited view of possible careers, often limited to knowing only the professionals they encounter or the careers of parents, parents' friends, and friends' parents.
- Today's students will revise or reorient their career pathways multiple times, and they need a modern toolkit beginning in grades K-5.
- Integrating college and career awareness in elementary school instruction helps students imagine and explore careers in the context of their curricula, and supports the decisions they make in secondary course selections.

Virginia ACTE recommends the expansion of elementary school CTE opportunities:

6.1 Expose students in K-5 to a broad exploration of career pathways.

6.2 Increase the participation of business and industry partners in K-5 career awareness.

Affiliated Organizations

Virginia Association for Teachers of Family and Consumer Sciences

Virginia Association of Agricultural Educators

Virginia Association of Career and Technical Education Administrators Virginia

Association of Marketing Educators

Virginia Association of Trade and Industrial Educators

Virginia Association of Career and Technical Education—Special Needs Division Virginia Business Education Association

Virginia Health and Medical Sciences Educators Association Virginia Technology and Engineering Education Association

Division of Virginia Counseling and Career Development

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