



Issues and Solutions for Career and Technical Education in Virginia 2021–2022

Virginia educators, business representatives, and organizations representing career and technical education (CTE) professionals developed Virginia ACTE’s positions. Virginia ACTE welcomes comments from citizens, 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.

Virginia Association for Career and Technical Education (www.virginiaacte.org)

IN BRIEF

1. Virginia ACTE supports funding that would expand hiring work-based learning (WBL) coordinators to increase 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 21st century students for our future technical workforce.
3. Virginia ACTE supports continued priority funding for CTE classroom lab equipment and program expansion to prepare students for a competitive workforce and postsecondary education.
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 funding for the integrated CTE curricula and specialized equipment in Governor’s STEM Academies and Governor’s Health Sciences Academies, which prepare students for in-demand, high-wage, and high-skill careers essential to Virginia.
6. Virginia ACTE supports the expansion of elementary school CTE career awareness initiatives that create opportunities for student exposure to 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 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.

Rationale

- Work-based learning refers to a sequence 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, WBL 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 life within 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, externship, school-based enterprise, internship, entrepreneurship, clinical experience, cooperative education, youth-registered apprenticeship, registered apprenticeship, and supervised agriculture experience.
- Schools must increase opportunities for student WBL. Coordinators in each school division would 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.
- The coordinator will serve as the 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 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 funding for industry-recognized standards, assessments, and credentials to strengthen CTE programs, develop staff, and prepare our future technical 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.
- Prior to the pandemic, Virginia's high school students earned 158,452 credentials. 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 132 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 2021 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.

2.2 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.

- 2.3 Continue funding for CTE teachers to attain Virginia Board of Education-approved, industry-recognized certifications.
- 2.4 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 continued priority funding for CTE classroom lab equipment and program expansion to prepare students for a competitive workforce and postsecondary education.

Rationale

- School divisions have multiple CTE programs requiring equipment and labs that must be updated regularly to meet industry standards.
- General Assembly funding has kept Virginia’s CTE classrooms equipped with the technology and materials that students will use in the workplace. General Assembly funds are distributed among 132 school divisions and 1152 secondary schools and local and regional centers. These funds are used to provide project-based and industry-relevant educational experiences.
- The 2021 General Assembly level-funded CTE equipment at \$1.8 million, with a base allocation of \$2,000 and the remainder distributed based on CTE student enrollment.
- 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.
- There were over 679,000 enrollments (duplicate count; some students took more than one course) in CTE courses before the pandemic, indicating daily use of CTE equipment and labs.
- For a CTE program, the average cost for equipment and software updates ranges from \$60,000 (e.g., Teachers for Tomorrow) to more than \$250,000 (e.g., Automotive Technology).
- Virginia’s critical, skilled workforce is experiencing shortages of qualified, skilled workers. Virginia’s public schools can help close the skills gap through adequately funded CTE programs.

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 priority 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.

POLICY ISSUE 4

Virginia ACTE supports efforts to implement and, where they already exist, strengthen innovative undergraduate and graduate teacher-preparation programs in CTE in Virginia.

Rationale

Virginia continues to experience a critical shortage of qualified teachers, especially in its most challenged schools.

- 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.
- Demand for CTE teachers and programs is increasing:
 - Enrollment during 2019-2020 totaled more than 679,000 (duplicate count; some students took more than one 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.

Virginia needs highly qualified CTE teachers to meet increasing demand. Teacher preparation programs at the state's colleges and universities (sometimes in cooperation with Virginia's community colleges), along with selected 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 funding for the integrated Career and Technical Education curricula and specialized equipment in the Governor’s STEM Academies and Governor’s Health Sciences Academies, which prepare students for in-demand, high-wage, and high-skill careers essential to Virginia.

Rationale

- Students perform better when they learn academic skills applied to real-world settings, as they do in CTE programs.
- Secondary CTE programs build on elementary STEM experiences and integrate STEM, using performance- and team-based instruction and encouraging critical thinking and problem solving.
- The 2021 General Assembly provided \$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.
- 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 proposes to expand the integration of Virginia’s CTE curriculum with the Standards of Learning and STEM initiatives:

- 5.1 Increase funding for Governor’s STEM Academies and Governor’s Health Sciences Academies using sustainable, reliable funding streams.*
- 5.2 Support CTE in all public schools as a performance-based educational system that incorporates the standards for career and technological literacy, authentic assessment, and the infrastructure for college and career readiness.*
- 5.3 Recognize CTE as an integral component of K–12 STEM initiatives and acknowledge CTE’s unique ability to provide STEM instruction in secondary schools.*
- 5.4 Increase funding for competitive innovation program grants to support current and future Governor’s STEM Academies and Governor’s Health Sciences Academies.*

POLICY ISSUE 6

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

Rationale

- Today's students will reinvent career pathways multiple times and they need a modern toolkit beginning in elementary school K-5.
- Integrating college and career awareness in elementary school instruction helps students imagine and explore careers.

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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