

Career Technical (CTE) Education in Vermont: Overview and Agency Priorities

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1/13/17





Priorities for Governor Scott

- Affordability
- Growing the economy
- Protecting our vulnerable students

Career and Technical Education

Affordability: CTE provides access to industry-recognized credentials, postsecondary credentials and high-wage jobs.

Growing the Economy: CTE links students to employers in high-growth, high-priority VT economic sectors (e.g. Health Sciences, Advanced Manufacturing)

Protecting the vulnerable: Applied, “hands on” nature of CTE coursework has proven effective in developing high levels of skill in populations that do not always thrive in regular classrooms, and has proven successful in moving first generation students and students living in poverty towards postsecondary credentials.

What is CTE?

- Programs of study that help students develop college and career readiness through gaining skills, technical knowledge, strong academic foundation and real-world experience for high-skill, high-demand, ideally high-wage careers
- [CTE: Making the Difference](#)

https://www.youtube.com/watch?v=GT_CXBEIgeAo





CTE at the AOE

Career & Technical Ed

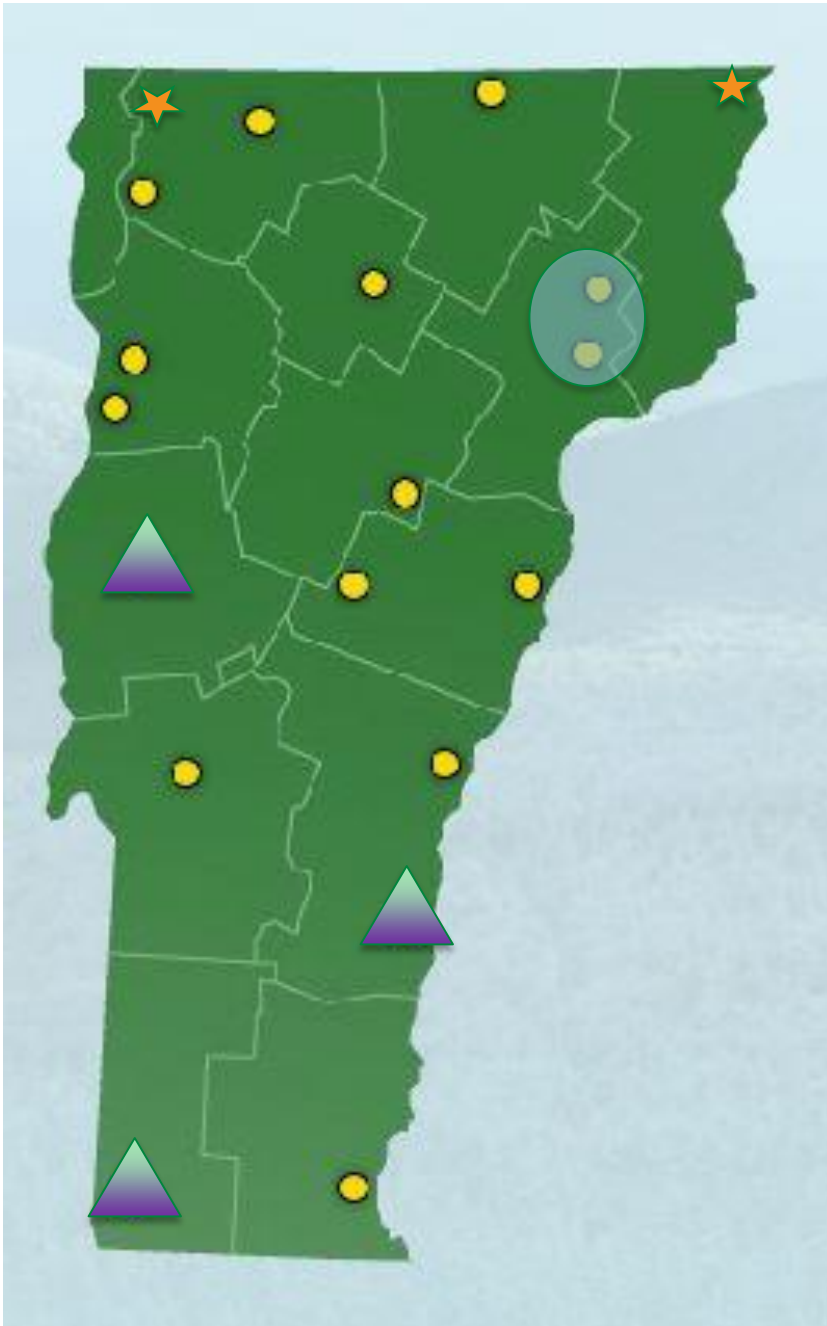
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- 100% funded by the Federal government, tasked with implementing and monitoring Perkins Act
- This year, likely to be involved in reauthorization of Perkins and associated rulemaking

Diverse Governance Statewide



-  Independent Technical Center Districts
-  Satellite location/comprehensive high school
-  Independent Schools hosting technical education programs
-  Full or part-time regional career centers



PAST

Vocational Education

For a Few Students

For a Few "Jobs"

6 to 7 "Program Areas"

In-lieu of Academics

High School Focused

100 years of progress



PRESENT

Career and Technical Education

For All Students

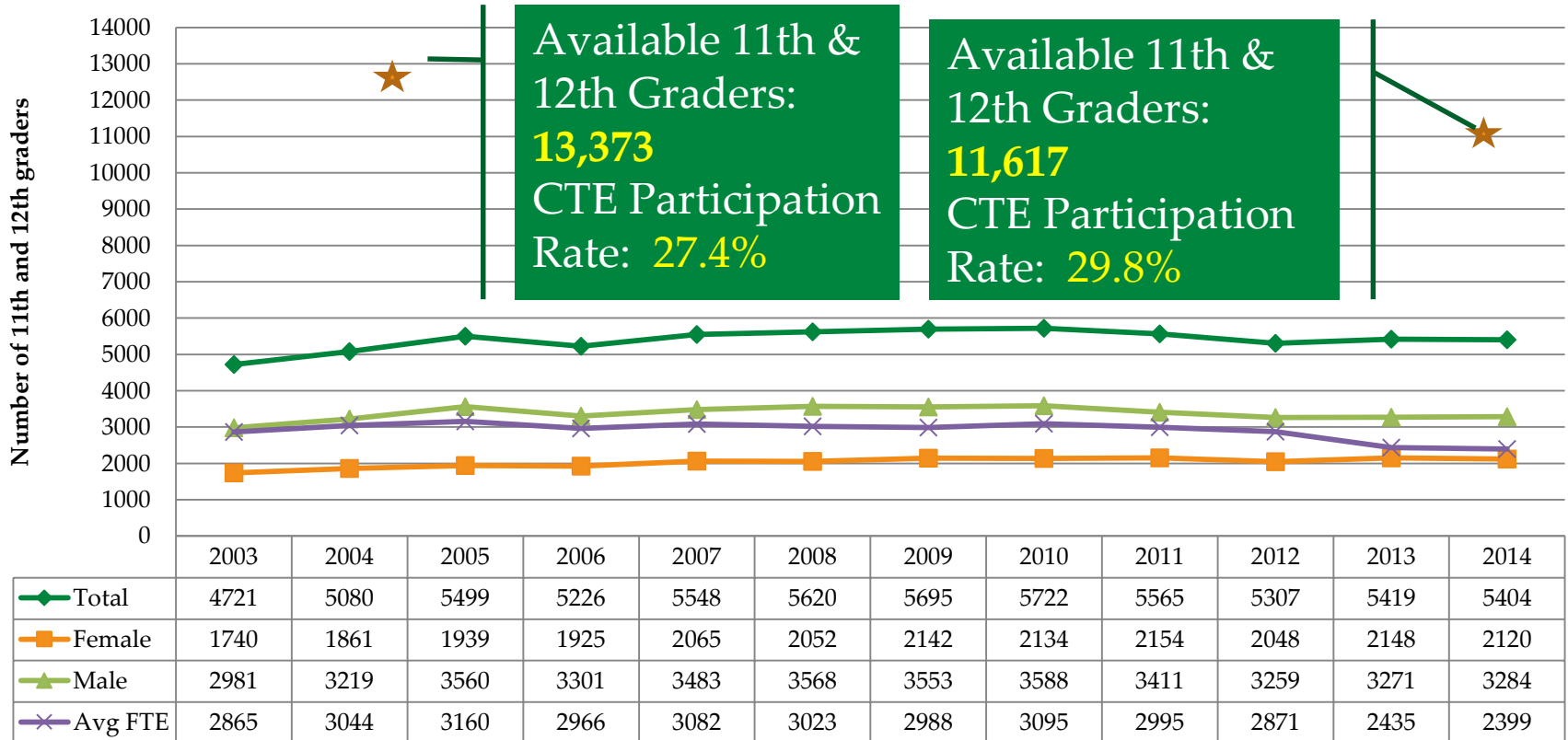
For All "Careers"

16 Career Clusters with 79 Pathways

Integrated with Academics

High School and College Partnerships

State of Vermont 10 Year Secondary CTE Participation Rate Trend



The proportion of our total student population that is participating in CTE is GROWING statewide.

Who Participates in CTE?

Category	CTE	ALL VT HIGH SCHOOL STUDENTS
Males	61%	50%
Special Ed	21%	15%
FRL	31%	33%

Outcomes

Graduation Rate: 98-99% of CTE students who “concentrated” [completed at least half of the required sequence of instruction] their studies in technical education graduate from high school.

Placement: 93-97% of concentrators are employed or enrolled in postsecondary

Industry Recognized Credentials: 58.5% of concentrators left with an industry recognized credential, such as an LNA (Licensed Nurse Assistant), Game of Logging, or Cisco Networking Certification.

Dual Enrollment: 13.5% of CTE students received at least one transcribed course through dual enrollment (2014-15).

College Enrollment: 40% of Vermont students who participated in CTE were enrolled in postsecondary education within 12 months, 48% within 18 months. 59% enrolled in VT.



Statement of the Problem

- Population decline and increasing poverty are leaving Vermont business and industry (and state government) without the skilled workers they need to drive business growth and economic prosperity.
- High school graduates most likely to stay in Vermont are also the graduates with lower level of skill, less connection to postsecondary institutions, and less connection to high-wage career opportunities in the state.

AOE CTE Theory of Action

By investing in:

- a robust, high-quality **career advising and guidance system** that is aligned with high-wage, high-growth sectors;
- the development of employer-led **rigorous programs of study** that include **both secondary and postsecondary elements** and are embedded within transparent **career pathways** for high-skill, high-demand occupations;
- expanding student participation in **postsecondary programs** that lead to industry-recognized credentials or degrees that signal higher levels of skill

Vermont will improve the economic conditions of both the state and its individuals, including the conditions of historically marginalized and underserved groups.

How will we accomplish this?

- (1) Work with business and industry partners, and fellow Vermont Agencies, to identify high-wage, high-growth economic development sectors, and specific employer skill needs within those sectors. Use this needs assessment to inform selection of priority CTE sectors and the development of career pathways that introduce students to good career opportunities in VT.
- Priority: Growing the economy



How do we facilitate better pathways from secondary school to trade certificates of value?



- A robust system for co-crafting Vermont programs of study (POS)
 - educators and employers working in tandem to identify and develop what is needed and what works for Vermont.
- Consensus around goals: do students and industry want the same things?
- A robust system for tracking credentials of value after high school other than the National Student Clearinghouse, which collects primarily two- and four-year college attendance (coordination with DOL).
- Resources: a person whose job it is to coordinate and support career pathways and rigorous programs of study.

How do we better connect schools with businesses?

- Set realistic and achievable expectations.
 - ~ 25% of Vermont's employers have 1-19 employees and the next 20% have 20-99 employees. Can Vermont's employer base support all of the educational needs for Work-Based Learning, Advisory Committee work, etc... at the secondary and post-secondary level?
- On a systems level, business and industry should inform our development of pathways and the credentials/certificates.
- Business and industry should participate in developing real-world problems for which students develop real solutions as part of authentic performance assessments.



How will we accomplish this?

(2) Use personalized learning plans, work-based learning, dual enrollment and high quality CTE instruction to move young Vermonters toward careers in these sectors.

- Priority: Affordability

How will we accomplish this?

(3) Improve the academic rigor of CTE programs, by raising standards, infusing rigorous academics into career pathways, and increasing the porosity between traditional regular high school and CTE programming.



Priority: Affordability

CTE Modules

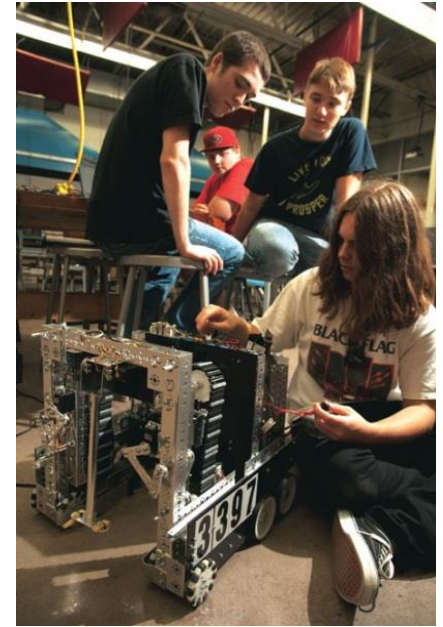


- Shorter programs
- Treated more like explicit courses
- Allows students to participate who might have opted not to attend
- Fewer students complete “programs”

How will we accomplish this?

(4) Improve postsecondary participation by students who are growing up in adversity or are the first in their families to go to college by leveraging dual enrollment, partnerships with colleges and CTE pathways to ensure that:

- beginning in middle school, students are exposed to the career opportunities in high-wage, high-growth sectors that are associated with post-secondary degrees or advanced IRCs, and
- while still in high school, students successfully earn college credits that move them towards these post-secondary goals.



Priorities:

Vulnerable populations, Grow the economy

How will we accomplish this?

(5) In partnership with high schools, regional CTE centers, business and industry, the Department of Labor and postsecondary institutions, develop robust model career pathways in three high-priority sectors: **health careers, advanced manufacturing, and construction and green building design.**

- Pathways will integrate information about the education and training required at each step, relevant registered apprenticeships, work-based learning opportunities and employer-led training initiatives.
- **Priority: Grow the economy**

Therapeutic Services

Other pathways with related occupations:

- Diagnostic Services
- Support Services

Bachelor's Degree (4 Years)

- Acupuncturists
- Athletic Trainers
- Dietitians and Nutritionists
- See Other Careers

Advanced Degree (4+ Years)

- Chiropractors
- Dentists
- Pediatricians
- See Other Careers

1-3 Years

- Dental Hygienists
- Orderlies
- Registered Nurses
- See Other Careers

Less Than 1 Year

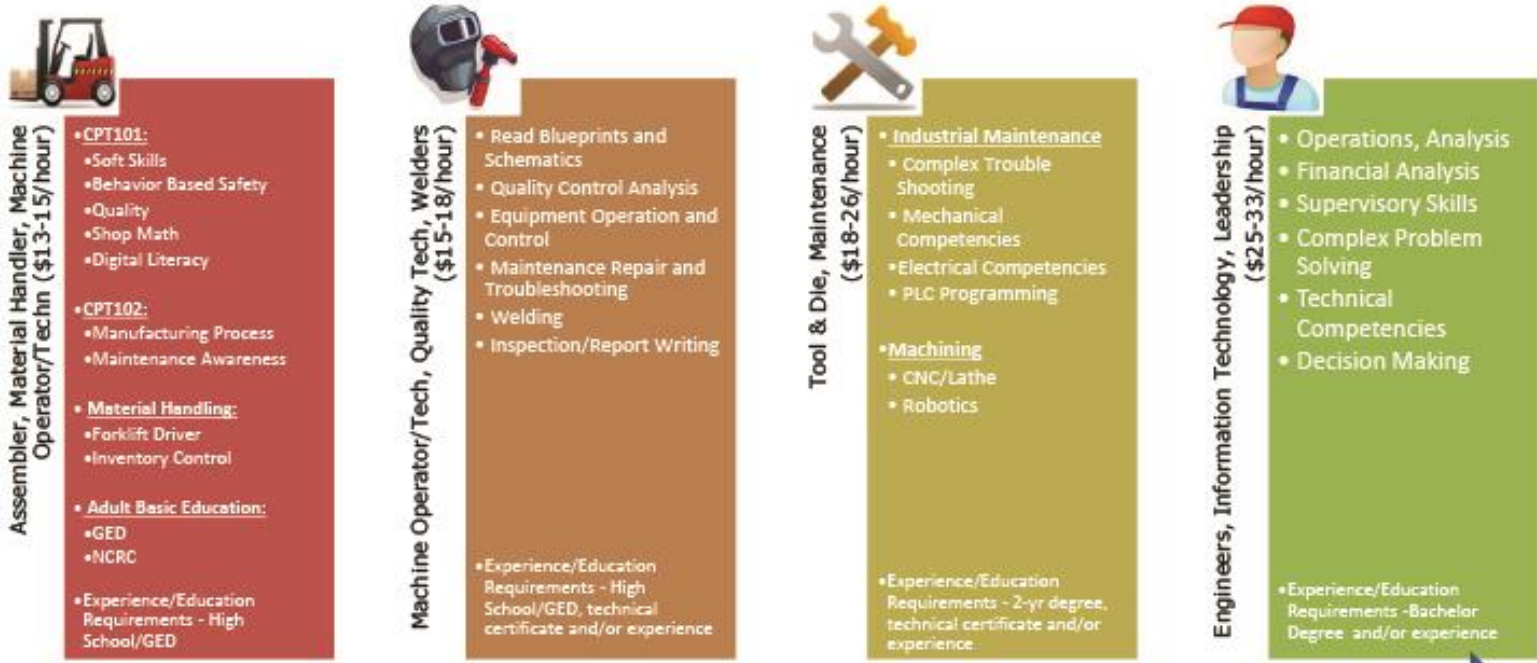
- Dental Assistants
- Medical Assistants
- Pharmacy Technicians
- See Other Careers

High School Diploma or GED

- Home Health Aides
- Physical Therapist Aides
- Surgical Technologists
- See Other Careers



Advanced Manufacturing – Career Pathways Map



Core Objectives:





Name: Brody Pigeon

Grade: Senior

Sending High School: Bellows Free Academy, St. Albans, Vermont

Career Technical Education Center: Northwest Technical Center, St. Albans, Vermont

Program: Building Trades

Bio: Brody is a third year student in the Building Trades program at Northwest Technical Center. He joined the program as a sophomore where he learned basic building skills.

The City of St. Albans purchased a foreclosed home in a nearby neighborhood, and as a junior, Brody and his classmates started re-building and re-finishing the home as part of the tech program. Because of his skill set, Brody was able to make upwards of \$15 per hour building a house over the summer. After graduation, Brody is interested in attending a college program for construction management or a career as an auto body technician.





Name: Eliza Kissam

Grade: Senior

Sending High School: Burlington
High School

Career Technical Education Center:
Burlington Technical Center,
Burlington, Vermont

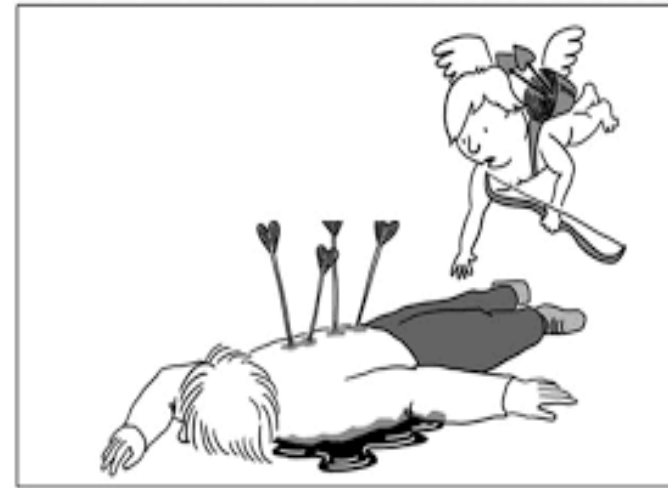
Program: Sports and Medical Sciences
Program

Eliza is a second year student in the Sports and Medical Sciences Program at the Burlington Technical Center. The two-year program is accredited by Vermont Technical College and the Community College of Vermont and teaches students anatomy, physiology, human growth and development, nutrition and medical terminology.

Eliza, who is in the top of her class at Burlington High School, was recently accepted into Brown University early acceptance, where she plans to join the five-year program for a Bachelor's and Master's in Public Health, followed by medical school.

What are the challenges in rural communities?

- Transportation time to get to centers
- Lack of employer resources to provide work-based learning
- Lack of exposure to career opportunities that are not present in the local economy
- Lack of access to post-secondary education/training opportunities
- Unintended consequences, including on non-CTE students

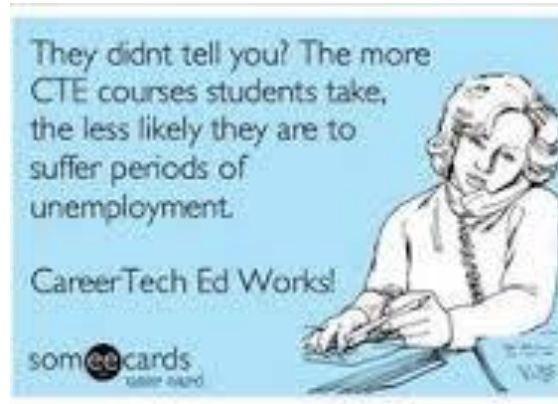


...Hello? Gary?

How will we accomplish this?

(6) Work with fellow state Agencies to identify the source of labor market information to be used as key performance indicators and a process for jointly reviewing and prioritizing findings based on this data.

- **Priorities: Grow the economy,
Affordability**



Building capacity to advance the work

- Currently there are no state funded CTE positions—we are dual-purposing federal dollars to the best of our ability, but these staff will be diverted in the coming year by the likely reauthorization of the Perkins Act, which governs federal funding of CTE, and associated rulemaking.
- AOE will seek grant monies and leverage partnerships with business and industry to advance Career Pathways work in the short term.

Risks to be Managed

- Lack of state funding for AOE CTE staff means limited capacity to shape and coordinate the statewide agenda of CTE.
- The federal government will be reauthorizing Perkins, probably this year. This means AOE staff will be diverted to focus on reauthorization and rulemaking for Perkins.
- Increased participation in CTE means increased education spending (CTE is more costly).
- Large disparities in offerings and spending across CTEs statewide.
- Autonomy of CTEs means weaker coordination with proficiency goals and curriculum planning of SUs and SDs.
 - Who holds accountability for student outcomes? High schools? CTE centers?

Thank you.