

VERMONT TECH

CONTINUING EDUCATION &
WORKFORCE DEVELOPMENT

Impact Report 2019-2020



VERMONT TECH

CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

Vermont Tech's mission is to provide career-focused technical and professional education in a caring community, which prepares students for immediate workplace success and continued learning.

We value our role in supporting the Vermont economy and meeting the needs of industry and business by preparing highly qualified graduates in high-growth, high wage occupations that are the key economic drivers of our state.

- Our value proposition to students and families is we are an excellent return on investment ranking first in the state by net present value at the 10-, 20-, and 30-year milestones after graduation.
- Vermont Tech's Class of 2019 achieved a 99% placement rate, with 99% of employed graduates working in their field.
- Our graduates have helped shape, create and impact the state in innumerable ways in the most critical sectors- healthcare, manufacturing, engineering, construction, IT, trades, renewable energy, transportation and teacher training.
- Vermont Tech is uniquely positioned, statewide and through our employer partners, to support the needs of these students. Students are investing their precious/limited dollars on a career path that will provide them an opportunity to secure their future with a high growth, high wage opportunity enabling them to support their family and invest in their community.

VERMONT TECH

CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

Mission:

CEWD provides accessible, career-focused education for life-long success.

- Vermont Tech offers a unique learning experience in Vermont: focused, hands-on, applied learning taught by faculty who are experts in their field.
- The Office of Continuing Education & Workforce Development (CEWD) brings this style of education to a wide range of professions and professionals.
- CEWD designs and delivers workforce education and training, including customized workshops, courses that lead to certifications, degree programs, and more. We also partner with respected national vendors to provide online, non-credit trainings with an open enrollment format.

VERMONT TECH

CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

MISSION The Office of Continuing Education & Workforce Development provides accessible, career-focused education for life-long success.

OVER
3,200
PEOPLE SERVED STATEWIDE



CAREER & TECHNICAL TEACHER EDUCATION PROGRAM
51 teachers enrolled

NEW EMPLOYER PARTNERSHIPS



PLUS Over 100 employers attended our career fair!

at a glance



\$4 million grant for Advanced Manufacturing Training. Over 200 Participants Served & New Apprenticeship programs:

- Advanced Manufacturing
- Industrial Maintenance
- LPN

APPRENTICESHIP
700+



Grant Support for solar installer training, Building Efficiency, Vacuum Training, Water Quality, CNC, solidworks, welding and Forestry

STUDENTS
40+

CLASSES STATEWIDE
144



Received over \$25 Million in Funding in last 9 years

VERMONT TECH
CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

vtc.edu/cewd | cewd@vtc.edu

BUILDING CAREERS. GROWING BUSINESSES.

Unique Learning Experience

The Office of Continuing Education & Workforce Development (CEWD) offers a unique learning experience to Vermont: focused, hands-on, applied learning taught by instructors who are experts in their field. This style of education is available to a wide range of professions and professionals.

CEWD designs and delivers workforce education and training, including customized workshops, training that lead to certifications, degree programs, and more. We also partner with respected national vendors to provide online, non-credit trainings with an open enrollment format.

Vermont Tech's CEWD serves healthcare facilities, state agencies, non-profits, small businesses, manufacturing, service industries, educators, municipal government, builders and contractors, as well as those interested in gaining new life skills.



AGRICULTURE & FOOD SYSTEMS	ELECTRICAL & PLUMBING TRAININGS
BUSINESS TRAININGS	ENGINEERING TRAININGS
CAREER & TECHNICAL TEACHER EDUCATION PROGRAM	GREEN TRAININGS
CUSTOMIZED CERTIFICATES	HEALTHCARE TRAININGS
ONLINE TRAININGS	

Proud Partners

The Office of Continuing Education & Workforce Development is proud to partner with these organizations:



OFFERINGS

**Hundreds of
Classes/IRCs**

AGRICULTURE & FOOD SYSTEMS

- ArcGIS/GPS
- Diversified AG
- Meat Cutting
- Natural Resource Management
- Water Quality
- Welding

ENGINEERING TRAININGS

- Advanced Manufacturing Apprenticeship
- CNC Machining
- Customized Training
- Industrial Maintenance
- Programmable Logic Controllers
- Solidworks
- Welding

ONLINE TRAININGS

- Accounting and Finance
- Business / Project Management
- Career Online High School
- Computer Science / Applications
- Construction and Trades
- Design and Composition
- Health and Fitness
- Healthcare and Medical
- Hospitality
- IT – Application and Science
- Language and Arts
- Law and Legal
- Teaching and Education
- Writing and Publishing

BUSINESS TRAININGS

- Collaborative Coaching
- Communication Skills
- Customer Service
- Emerging Leaders
- Emotional Intelligence
- Employee Engagement
- Managing Conflict
- Proficiency-Based Leadership
- SHRM Learning Systems
- Strategic Leadership
- Supervisor & Manager Training

ELECTRICAL & PLUMBING TRAININGS

- Electrical Code Updates
- Exam Preparation
- Vermont Department of Labor Registered Apprentice Program

CAREER & TECHNICAL TEACHER EDUCATION PROGRAM

- For new, secondary Career & Technical Education Teachers

CUSTOMIZED CERTIFICATES

- For companies to support and develop technical needs

GREEN TRAININGS

- Building Performance Certification
- HVAC
- Solar PV - Intro to Advanced
- Wastewater Rules, Systems, Soils
- Weatherization Trainings
- Wetland Delineation

HEALTHCARE TRAININGS

- Clinical Medical Assistant
- Coding/Billing
- Medical Terminology
- Online CNE's
- Pharmacy Tech
- Phlebotomy



VERMONT TECH

CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

RANDOLPH CENTER CAMPUS
124 Admin Drive, PO Box 500
Randolph Center, VT 05061

WILLISTON CAMPUS
72 Helena Drive, Suite 110
Williston, VT 05495

vtc.edu/cewd | cewd@vtc.edu

**Serving
Hundreds of
Employers
Yearly**

EMPLOYER PARTNERS

The Employer Partner Program leverages support from employers to recruit, engage, and support future and current students to help grow and expand Vermont's workforce.

Your Support

Vermont Tech relies on generous contributions from our valued employers to help support the important programs and services we offer to students. Through the Employer Partner Program, employers can make a transformative impact on our career development resources while increasing their visibility on campus. Membership provides companies with additional business services, unique engagement opportunities, and premium visibility options that reach students and alumni.

By partnering with Vermont Tech, companies will automatically gain publicity and brand recognition. Employers will reach a variety of talented students

who recognize and appreciate the help and support the companies provide. Employer involvement will build important connections necessary for the future growth and success of the company.

Participating businesses and organizations play a key role during every step in the process, providing career guidance, meaningful workplace experience, and the opportunity to start working immediately following program completion. Employers benefit by developing a pipeline of local students who are trained in a relevant area and are engaged in both their workplace and their city or town.

Internships & Scholarships

STEP BY STEP

- 1 Employers identify any Vermont Tech two- or four-year degree programs that provides the necessary knowledge and skills they are seeking in an employee.
- 2 Prospective students are recruited with input from the employer.
- 3 Students receive a paid internship or apprenticeship with employers and may be eligible for a scholarship opportunity.
- 4 After graduation, employers provide an interview to student for job openings within the company.



We work with hundreds of employer partners...some examples:

CVMC	FujiFilm Dimatrix	Barry Callebaut
GE	IVEK	Lane Press
GS Precision	Rhino Foods	Hazelett
Benoit Electric	Keurig Dr. Pepper	PC Construction
Vermont Creamery	Ben & Jerry's	Champlain Cable
Shaw's	CTE Centers	CSWD
Global Foundries	Perrigo	FAB Tech
BMH	Chroma	Cad Cut
GW Plastics	Omni Medical	LED Dynamics

Non-Credit enrollment - 2414

Credit enrollment - 797

Meet our SWFI Participants

Orin Knapp has learned a lot in his eight years working in manufacturing. But this father of two knew he needed more than just on-the-job experience to advance his career.

LEARN MORE ABOUT ORIN



He also received National Institute for Metalworking Skills (NIMS) Certification through VTC CEWD

“Being a young parent makes it really hard to find time—and extra money—to further my education,” says the father of four-year-old Avangaline and 18-month-old Amelia.

Orin Knapp has learned a lot in his eight years working in manufacturing. On his journey from entry-level worker to skilled CNC machinist, the Newfane, VT resident has produced everything from eyeglass screws to specialized astronomical parts. “I’ve made things that have gone to outer space,” he says excitedly. “It’s amazing to think of how far I’ve come since I first started.”

But Orin knew he needed more than just on-the-job experience to advance his career even further.

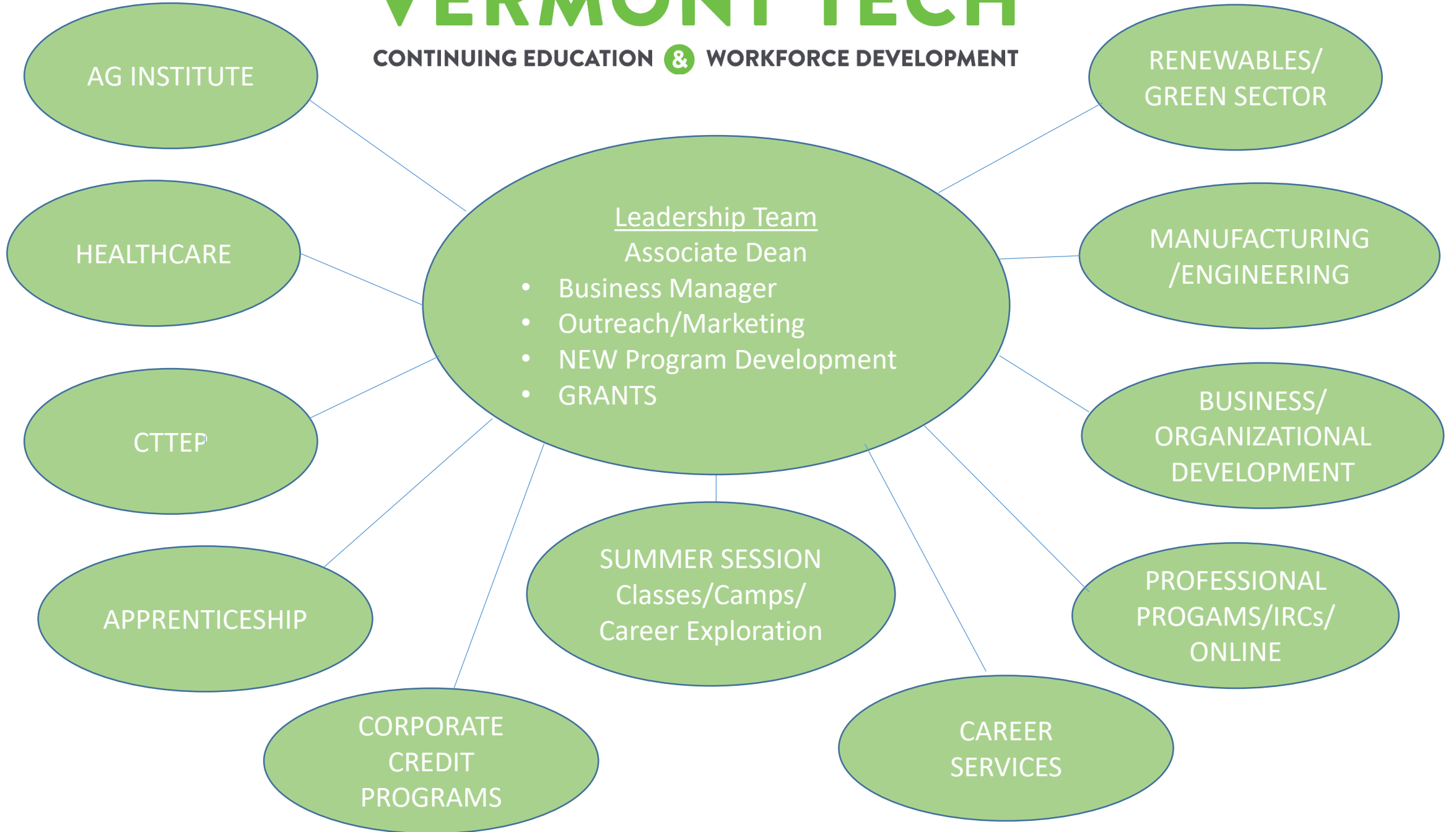
That’s why he participated in Vermont Tech’s [SolidWorks & CNC Machining Certification](#) program, offered at River Valley Tech in Springfield, VT. He enrolled with help from the [Strengthening Working Families Initiative](#) (SWFI), which offers no-cost training and support services to eligible custodial parents.

So when he learned about SWFI through his employer, Chroma Technology, he knew he had to take advantage of the fully grant funded learning opportunity. “I told my wife, Mary, and she 100% supported me. What did I have to lose?” Chroma also supported his decision, allowing him to adjust his work schedule to accommodate classes.

He says earning college credits and industry recognized credentials helped validate his eight years working in manufacturing. “I had the experience, but I didn’t have anything to back it up except my word,” says Orin. “With this program, I earned documentation of my manufacturing knowledge.”

VERMONT TECH

CONTINUING EDUCATION & WORKFORCE DEVELOPMENT



Manufacturing programs:

GE-Aviation

- Toolmaker
- Maintenance Technician
- Master's Robotics

GW Plastics

- Manufacturing Technology Leadership

GS Precision

- Advanced Manufacturing Technician

Global Foundries

- Technician Program

Manufacturing Technician Apprenticeship Programs



- Full-time employment
- \$18-\$24 per hour/plus benefits
- 3000-6000 hours OJT
- 20-40 college credits
- Tuition, books, software paid for by company
- Matriculated Vermont Tech Student
- Bonuses/Salary Increase/Promotion upon Graduation
- Tuition Reimbursement Programs to continue education = degree

**VERMONT
TECH**

CONTINUING EDUCATION &
WORKFORCE DEVELOPMENT

GF Technician Program Summary



GLOBALFOUNDRIES®

VERMONT
TECH

- Enrolling Tech Center/High School Graduates
- Must be 18 years or older to apply
- Must Submit Resume with Application
- Acceptable GPA → 2.7 (B- or higher)
- Dependable
- Demonstrated Technical Aptitude
- Pass interview process to be selected for pre-testing
- Pass Math (Algebra) pre-testing with VTC
- Max Class size of 16 Students

Curriculum and Cadence

- VTC Course to be held at it's Williston Campus
 - 1 Course per Semester → 3 Semesters per Year
- Internal Courses to be held on GlobalFoundries Campus

VTC Curriculum (34 Credits towards ~67 Credits for AS Degree EET)			
Year	Spring	Summer	Fall
Year 1		Pre-Testing	MAT 1311 Pre Calculus 1 (3 Credits)
Year 2	PHY 1041 Physics 1 (4 Credits)	ELT 1110 Digital Circuits (3 Credits)	MAT 1312 Pre Calculus 2 (3 Credits)
Year 3	ELT 1031 Circuits 1 (4 Credits)	ELT 2075 Programming Logic Controllers (3 Credits)	ELT 1032 CIRCUTS 2 (4 Credits)
Year 4	ELT 3070 Semiconductor Technology (3 Credits)	ELT 2130 Industrial Electronics (4 Credits)	Capstone Project (GF Work Project) (2 Credits)

GF Courses / Certifications			
Year	Spring	Summer	Fall
Year 1		Safety Training, Certification, & Operating Equipment Platform they will be assigned to	Lean MFG 1) Lean 101: 8 Hours (Internal) 2) Lean 55: 8 Hours (Internal)
Year 2	Lean MFG 1) JBIs: 2 Days (Internal) 2) 4Ps: 2 Days (Internal)	Lean MFG 1) Structured Problem Solving: 2 Days (Internal) 2) Book Club: 15 Hours (Internal)	Parts Ordering & Fab Level Metrics: 1) Parts Ordering>Returns 2) Spending 3) Availability
Year 3	General Maintenance Practices 1) Soldering: NASA Type, Splicing Wires, Heat Shrinking, etc... 2) Plumbing: Swagelok fittings, Flaretek fittings, Pilar fittings, bending stainless lines, Heat forming Teflon lines, etc...	General Maintenance Practices 1) Schematics: Electrical and Pneumatic etc 2) Test Equipment: Meters, Scopes, Amp Meters etc...	Technical Communications (Google) 1) Google Tools (Drive, Slides, Groups, Sites, etc) 2) Technical Communications/Presentations
Year 4	Vacuum Systems & Leak Checking 1) Vacuum System Principles 2) Components of Systems 3) Troubleshooting / Leak Checking	Preventive Maintenance 1) Documentation (Perfect PM) 2) Performing the work 3) Continuous Improvement	Select One: 1) RF Systems (Introduction) 2) Robotics/Handling Systems 3) TBD

Background

- By 2020, 65-75% of the workforce will be required to have some formal education beyond high school

United States Department of Labor, 2019

- Among Vermont's 50 fastest growing occupations, 44 require significant postsecondary education or training

Vermont Business Roundtable, 2019

- People with associate degrees earn 40 percent more than people with only a high school diploma, and people with bachelor's degrees earn on average 80 percent more over their lifetimes

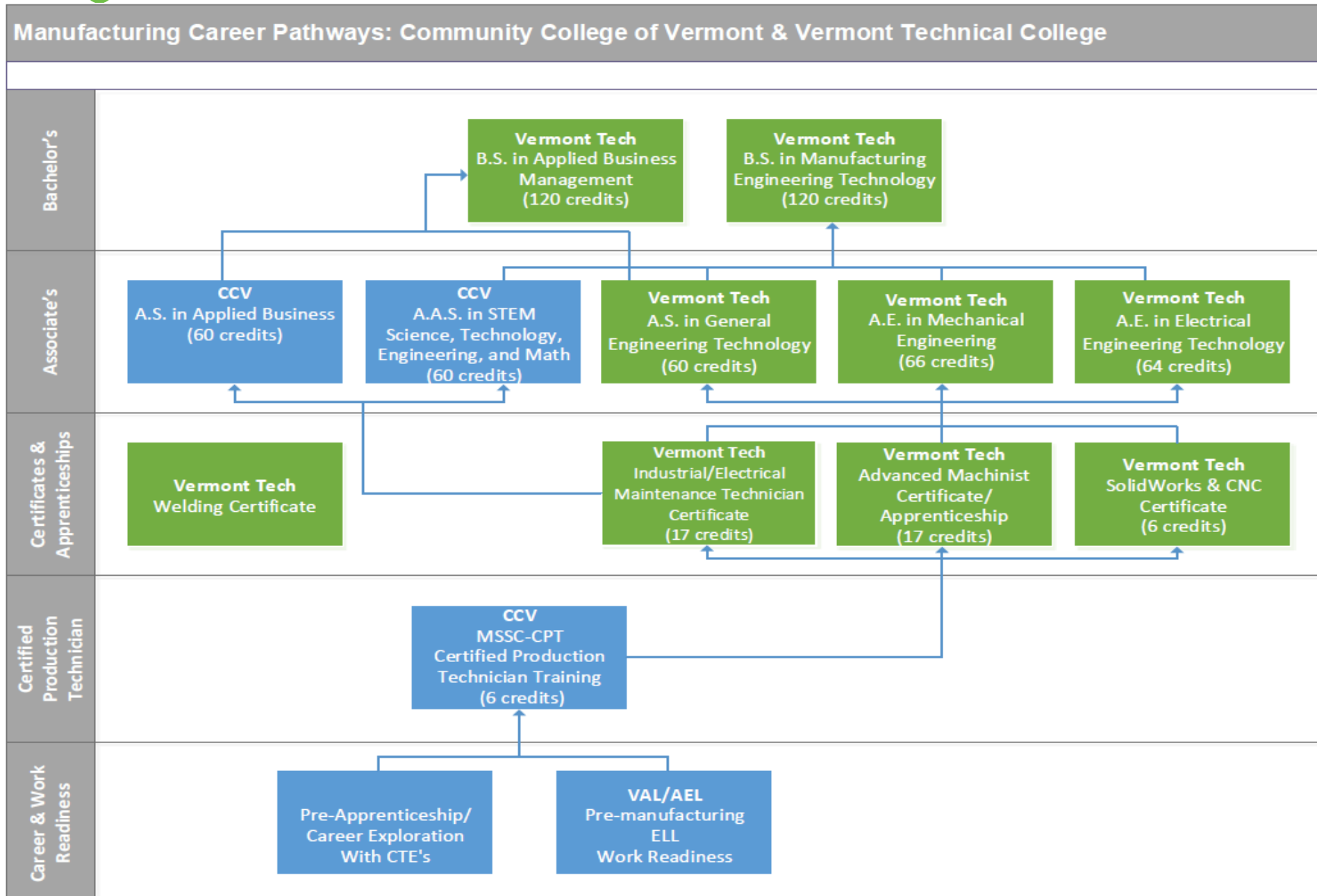
Education Policy Foundation, 2019

Our programs help employers and the Vermont Economy:

These are examples of recent or current students investigating and implementing improvements through work in Vermont Tech Programs:

- Paul took it upon himself to investigate the potential to end the unnecessary printing of CMM reports that were already digitized; this saved over **500,000** sheets of paper annually and reduced printing costs by **\$23,000**.
- Doug and Ryan suspected that rinse line water usage was excessive and implemented an automated in-line flow meter that saved over **400,000** gallons of water annually. If expanded plant wide, it could save over 2.5 million gallons of water or over **\$25,000** annually.
- Kevin built a shim to close the gap between the catch basin and the End of Tool Arm (EOTA) to eliminate scrapped parts saving over **\$31,000** in scrapped parts and press time back runs.
- Dylan created a single block to replaced class B gage blocks reducing inspection time from an average of 6 hours to 15 minutes. Using a standard shop hour rate of \$150, that's a savings of \$862.50 per class B gage block inspections, which happens dozens of times a day. Close to **\$2 million in savings**
- Mike built his own mold flusher to remove excess LSR (liquid silicone rubber) saving **\$131,000** annually in mold cleaning time.
- Sean and Jason tackled the problems with a machine that was “cutting air” too often. Their multi-faceted approach to program optimization reduced spindle time by 93 hours annually with less tool wear and less chance for catastrophic failure. And while that reduction in time has a savings (93 x \$150 = \$13,950), more importantly those 93 hours can be used to increase the output of die sets, providing the tooling to support an increase of **over \$2 million** in business output.
- John and James designed and fabricated a universal CMM fixture to replace the cost of building and maintaining multiple fixtures. They did a 3D design in Unigraphics and even made the prototype using a 3D printer Jon had in his garage at home. Annually savings equals more than **\$610,000**.
- FUJI FILM has realized a cost savings of **\$191,000** due to student project work.

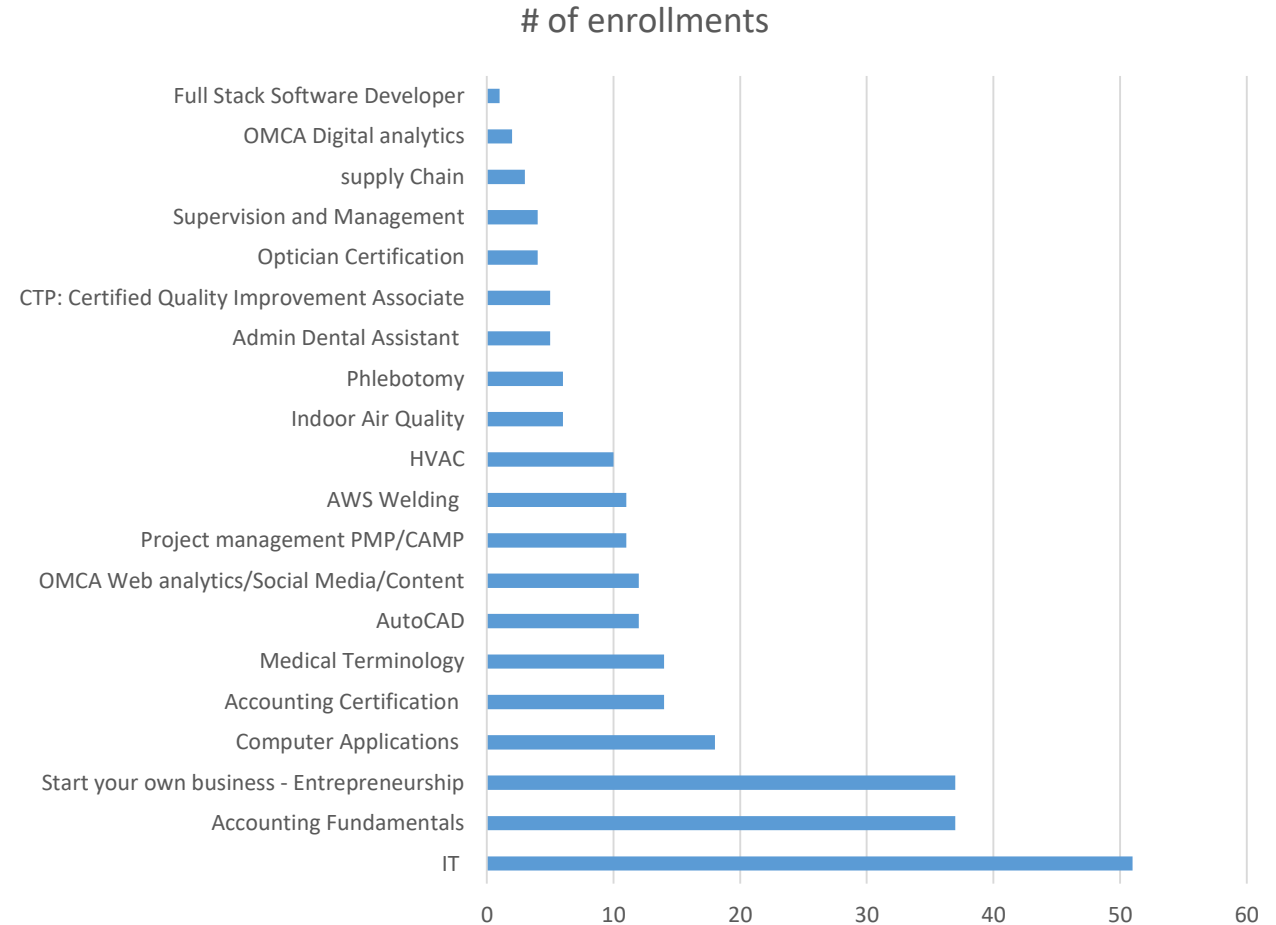
Manufacturing Career Pathways:



CEWD Enrollment	AY17-18	AY18-19	AY19-20	AY20-21*
<u>For Credit (Industry Partners)</u>				
Number of courses offered	43	50	51	26
Headcount Enrollment	358	378	411	205
Credit hours	914	895	950	416
<u>For Credit (All Others)</u>				
Number of courses offered	52	46	39	
Headcount Enrollment	450	438	386	
Credit hours	1003	1133	1062	
<u>Not-for-Credit (All Others)</u>				
Number of courses offered	348	312	315	199
Headcount Enrollment (unduplicated)	2569	2617	2414	1256
Total Student Contact Hours-carnegie units 1=15 hours	7772	8266	8629	7693.9
Courses offered at CTE's (credit and NC)	45	44	48	14
Camps	5	7	4	
*spring and summer 21 not available yet				

CARES Act workforce

Training Title	# of enrollments	Certificate
IT	51	no
Accounting Fundamentals	37	no
Start your own business - Entrepreneurship	37	no
Computer Applications	18	no
Accounting Certification	14	Yes
Medical Terminology	14	no
AutoCAD	12	Yes
OMCA Web analytics/Social Media/Content	12	Yes
Project management PMP/CAMP	11	yes
AWS Welding	11	yes
HVAC	10	Yes
Indoor Air Quality	6	Yes
Phlebotomy	6	Yes
Admin Dental Assistant	5	Yes
CTP: Certified Quality Improvement Associate	5	Yes
Optician Certification	4	Yes
Supervision and Management	4	no
supply Chain	3	Yes
OMCA Digital analytics	2	Yes
Full Stack Software Developer	1	Yes
Admin Assistant	1	no
Nutrition	1	no
	265	



CARES ACT WORKFORCE

We purchased and delivered 47 laptops and welding equipment for 32 students.

Number of students	Number of classes
223	271

ADDISON	12
BENNINGTON	8
CALEDONIA	8
CHITTENDEN	72
FRANKLIN	6
Grand Isle	4
LAMOILLE	12
ORANGE	9
ORLEANS	8
RUTLAND	17
WASHINGTON	35
WINDHAM	16
WINDSOR	16

The most popular courses were:

- Accounting/ Accounts Payable
- Medical Terminology
- Welding (limited class size)
- Excel
- Digital Analytics
- Autocad
- Certified Indoor Air Quality
- HVAC
- Phlebotomy
- Project management (PMP Certification)
- Start your own online business
- Certified Quality Improvement Specialist
- C++
- Python 3