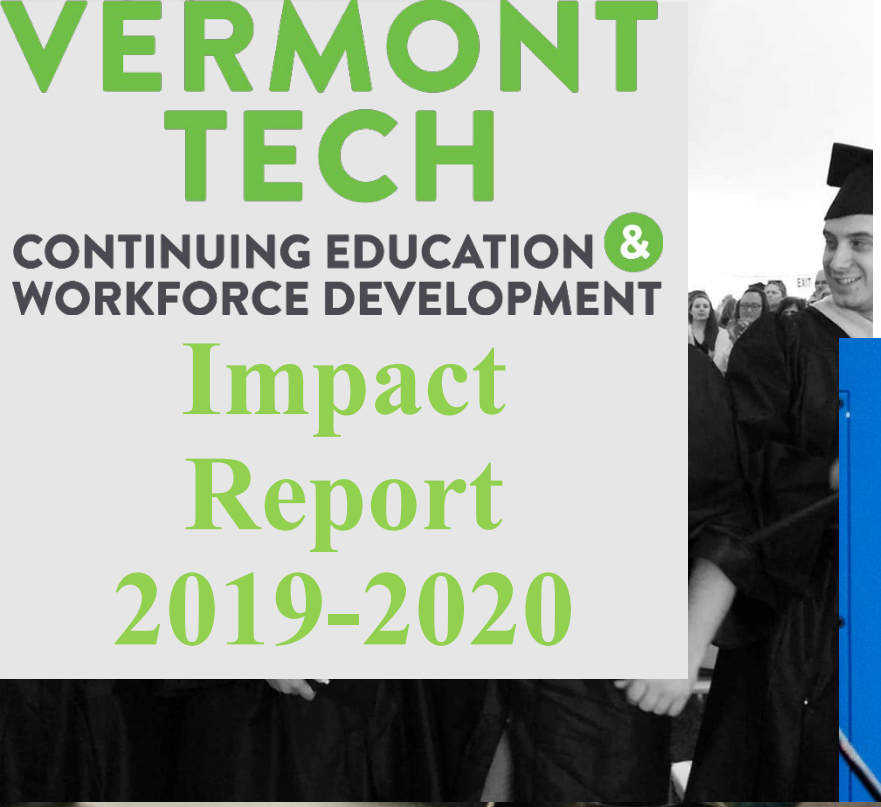
VERMONT TECH

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. They 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

- 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.

Mission:

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

- 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

at a glance

MISSION

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

Received over $25 Million in Funding in last 9 years

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

- Advanced Manufacturing
- Industrial Maintenance
- LPN

OVER
3,200
PEOPLE SERVED STATEWIDE

APPRENTICESHIP
700+
STUDENTS

Over **60** courses offered to employers:

- General Electric
- GW Plastics
- GS Precision
- FAB TECH
- FUJI
- Global Foundries
- BMH

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

40+
CLASSES STATEWIDE

144
GRADUATES

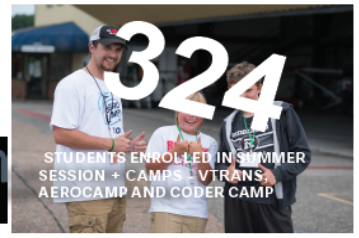
CAREER & TECHNICAL TEACHER EDUCATION PROGRAM

51 teachers enrolled

NEW Interdisciplinary Bachelor's of Science Degree

NEW EMPLOYER PARTNERSHIPS

FUJIFILM Value from Innovation · VERMONT CREAMERY · VTrans Working to Get You There · Generator · allEarth SOLAR



PLUS Over 100 employers attended our career fair!

vtc.edu/cewd | 802 728 1305 | cewd@vtc.edu

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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:

BPI · DDI · North American Board of NABCEP Certified Energy Practitioners · ed2go · SIRM · VERMONT AGENCY OF NATURAL RESOURCES · VERMONT DEPARTMENT OF LABOR A proud partner of the americanjobcenter network

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CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

vtc.edu/cewd | cewd@vtc.edu

Hundreds of Classes/IRCs

OFFERINGS

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

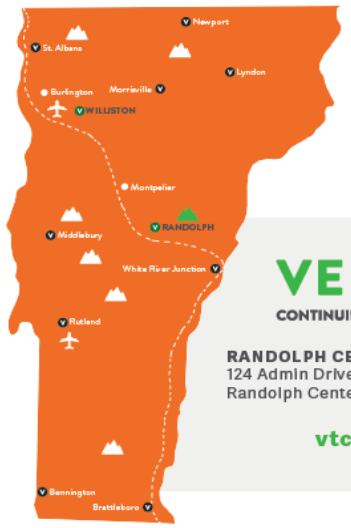
ELECTRICAL & PLUMBING TRAININGS
- Electrical Code Updates
- Exam Preparation
- Vermont Department of Labor Registered Apprentice Program

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

VERMONT TECH

Office of Development
(802) 728-1258 | development@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.

VERMONT TECH
CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

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

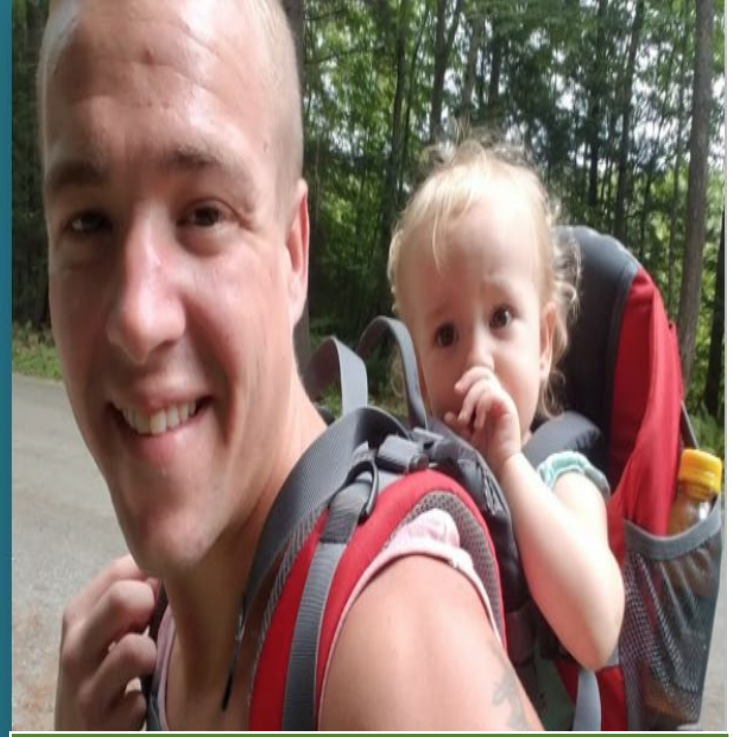
Non-Credit enrollment - 2414

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 Apprentice 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

- Tech Center/High School 2019 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

GLOBALFOUNDRIES VERMONT TECH

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 5S: 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

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CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

VERMONT TECH
CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

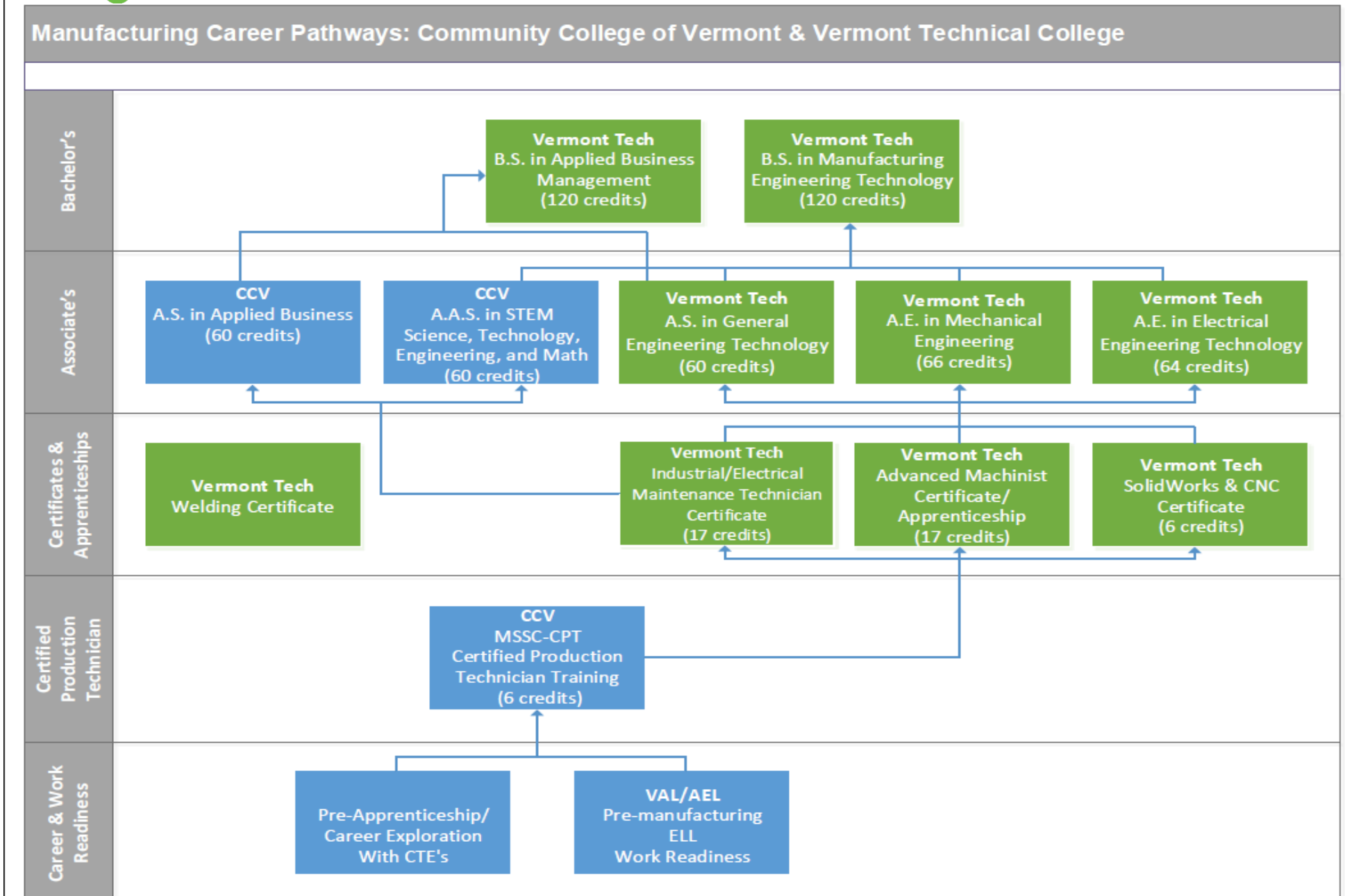
Our programs help employers and the Vermont Economy:

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.**

VERMONT TECH
CONTINUING EDUCATION & WORKFORCE DEVELOPMENT

Manufacturing Career Pathways:



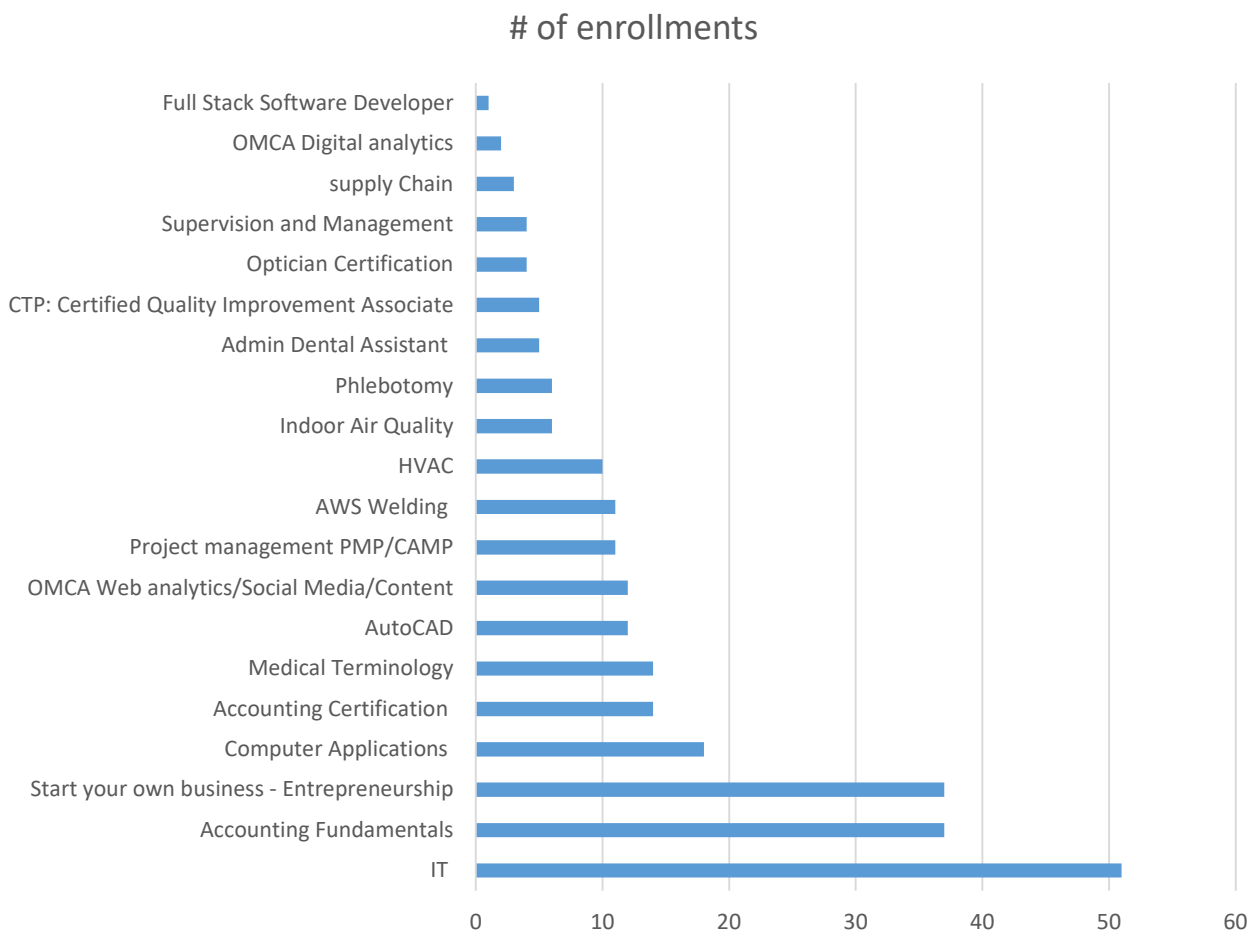
CEWD Enrollment	AY17-18	AY18-19	AY19-20	AY20-21*
For Credit (Industry Partners)				
Number of courses offered	43	50	51	26
Headcount Enrollment	358	378	411	205
Credit hours	914	895	950	416
For Credit (All Others)				
Number of courses offered	52	46	39	
Headcount Enrollment	450	438	386	
Credit hours	1003	1133	1062	
Not-for-Credit (All Others)				
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				

NVRH VTC NVU Partnership

- NVRH provides 4 Scholarship a year for RN-BSN students
- **Vermont Technical College, Northern Vermont University-Lyndon, and Northeastern Vermont Regional Hospital Collaboration**
- This collaboration between Vermont Technical College (VTC), Northern Vermont University – Lyndon (NVU-L), and Northeastern Vermont Regional Hospital (NVRH) will create a traditional college pathway for high school and career/technical education (CTE) graduates to pursue a nursing degree in the Northeast Kingdom (NEK) of Vermont. Ultimately, this pathway will increase enrollment in NVU – L's pre-nursing concentration in general studies and support the addition of a face to face cohort of Vermont Tech's practical nursing and associate degree in nursing programs.
- Vermont Technical College offers a 1 + 1 + 2 career ladder approach to the bachelor's degree in nursing. Year one is the Practical Nursing Program; year two is the Associate's Degree in Nursing Program; and years three and four are the online RN to BSN program. Vermont Tech currently has a practical nursing (PN) program and associate degree in nursing (ADN) program presence in the NEK. VTC nursing offers the PN and ADN programs, at NVU –L, Newport (North Country Career Center), and White River Junction (Upper Valley CCV), that are linked for classroom delivery via telepresence videoconferencing technology. This approach to program delivery allows for one faculty member to teach to three classrooms synchronously. The seats are distributed as follows: NVU-L – 18 PN/18 ADN (8 have clinical in Northern NH; 10 have clinical in the Lyndon/St. Johnsbury area), Newport – 9 PN/9ADN, White River Junction – 8 PN/16 ADN (8 are in the Dartmouth Hitchcock LPN-RN designated cohort). These sites/seats are non-residential and are typically occupied by non-traditional students who are not looking for a traditional, residency-based student experience. The average age of VTC nursing students is 32-35 years old. The pre-nursing concentration at NVU-L in general studies has been in place for several years, however, enrollment is declining and admission to the VTC PN program can be challenging due to the limited number of seats at the NVU-L telepresence site.
- The collaborative vision is to create a pathway for NEK and Northern New Hampshire high school and CTE graduates to complete pre-requisite courses while enrolled in the pre-nursing concentration in general studies through NVU-L and then matriculate into the Vermont Tech PN program face to face cohort located at NVU-L.
- The NVU-L pre-nursing curriculum will include the four pre-requisite courses for VTC nursing: Human Anatomy & Physiology I/II, Introduction to Nutrition, and Human Growth & Development. In addition to these courses, pre-nursing students will also take other general education courses required in the ADN program, including a college level math, English, Introduction to Psychology, and a humanities elective. Vermont Tech nursing also sees value in adding an "Introduction to Nursing" special topics course that will give pre-nursing students an introductory look at the art and science of nursing, nursing as a profession, and the nursing process.
- The NVU-L PN/ADN cohorts will start at 18-20 seats and grow to 27-30, maintaining a maximum classroom faculty to student ratio at 1:30 and a clinical faculty to student ratio at 1:10. All classroom and lab experiences will be at NVU-L. Clinical experiences will be largely at NVRH, but also in other NEK community agencies in the greater St. Johnsbury/Lyndon areas. The existing telepresence cohort at NVU-L will remain as is.
- This pathway will create a 4.5-5 (1 + 1 + 1+ 2) year option for students wanting a traditional college experience at NVU-L. Students will have the option to live on campus, participate in student activities, and have a meal plan, even when they transfer to the Vermont Tech portion of the pathway. Students who are accepted into the pre-nursing concentration will be conditionally accepted to the Vermont Tech PN program. While they will need to go through the VTC admissions process and meet the VTC admissions criteria for nursing, students are not competing with outside applicants for a seat. Any seats in the face to face NVU-L cohort that are not filled with NVU-L pre-nursing student applicants will be offered to waitlisted students from other cohorts/sites and other outside applicants. Below is the suggested curriculum.
- All classroom and lab learning spaces will be located at NVU-L. NVRH will donate hospital beds and other equipment to the skills and simulation lab spaces. NVRH leadership is also seeking funding for skills and simulation lab installation. The current NVRH-VTC skills lab, located at 1091 Hospital Drive, Suite 1, St. Johnsbury, VT 05819, will be relocated to the NVU-L campus and will be used by the Lyndon telepresence students and the new NVU-L cohort students. There is also discussion with Lyndon Institute's (LI) health professions faculty/staff regarding additional collaboration to relocate the LI skills lab to the NVU-L campus. This consolidation of skills lab spaces between NVU-L, NVRH-VTC, and LI would enable creation of a large, student friendly, well equipped skills lab that can be used by each institution.

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
Nutition	1	no
	265	



CARES ACT WORKFORCE

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

We purchased and delivered 47 laptops and welding equipment for 10 students.

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