

# ANNUAL REPORT 2021

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Montachusett Regional  
Vocational Technical  
School District

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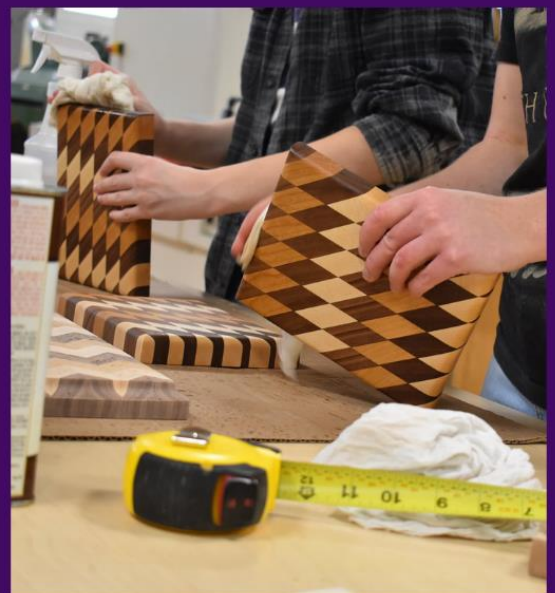
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**MONTY TECH**

When schools across the country shuttered in March of 2020, no one could imagine the long-term effects the pandemic would have on our school systems. The summer of 2020 was spent purchasing and installing air filtration systems and plexiglass barriers, sourcing mass quantities of PPE and working with local departments of public health to determine how to safely bring students and staff into the building. When guidance from the state's Department of Elementary and Secondary Education was released, school leaders were faced with rolling out a learning and instruction model that had never been attempted before. We would offer a Hybrid Learning Model, and a rotating daily schedule that would allow half of the student body to come into the building, while the other half would learn from home.

Still, the beginning of the 2020-2021 school year was fraught with concern for student, faculty and staff safety and a deep-rooted knowledge of how students learn best – in-person. School leaders worked tirelessly to develop a schedule that would bring as many students back into the building as possible, safely, while attempting to balance academic and vocational in-person learning time. Instructors were provided with additional technology supports and added professional development days, to write and create curriculum that could be delivered remotely. This, in itself, would be a challenge. How do you teach a student how to prepare and present a meal, or demonstrate fine-motor skills required to give a haircut, in a virtual learning environment? How do you assess a student's understanding of residential electrical wiring, without having the ability to observe and manipulate his/her work? How can you teach students to safely restrain an animal, with no pet interaction? I am proud to say that the Monty Tech instructors rose to this incredible challenge, and for much of the 2020-2021 school year, delivered an effective educational program, using the resources that were available to them.

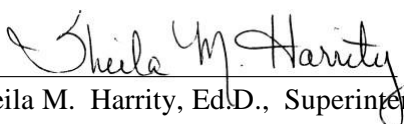
While face-to-face instruction was provided, that, too, looked and felt different to students and staff. On those days when students were scheduled to attend in-person lessons, they found things had changed. Traffic patterns were rerouted, and signage on floors, hallways and doors reminded them to wear a mask and maintain distance. Seating on busses and in the cafeteria was assigned and closely monitored. A place that had always encouraged connection with fellow classmates was now insisting on distance. Though it may have been uncomfortable for both students and staff, the school wide adherence to these new rules seemed to be a quiet demonstration of their understanding. And on May 3, 2021, their compliance was rewarded - Monty Tech was allowed to return to full, in-person learning. With just over a month remaining in the 2020-2021 school year, students and staff welcomed the change, anxious for the halls and classrooms to return to a more normal capacity. While masks, social distancing and numerous hand sanitizing stations were still present, the return of students into the building was a welcome sight for all.

In 2020-2021, it was disappointing that so many traditional annual events had to be cancelled, including VIP, Tour Day, College Fair, and Career Awareness Night; however, where possible, the district continued to operate at a high level. Examples include:

- To help our faculty and staff return to work, daycare issues had to be addressed, and, as a result, an important relationship with the Boys and Girls Club of Fitchburg and Leominster developed. The club provided daycare and homework help, Monday through Friday, to school age children of Monty Tech faculty and staff.
- Thanks to more than \$670,000 in competitive grant awards, Monty Tech was able to renovate and expand the welding/metal fabrication shop and retrofit one science lab. The school launched an all new evening training program that provided no-cost training and job placement to qualified participants. With grant funds, we also established a Safe and Supportive Schools Team to review school policies and procedures and target those in need of improvement, with an overarching goal of providing all students with safe and appropriate learning environments.
- In an effort to build connections with our school supporters and to “show off” the talents of our students, we held our first Holiday Sale, which quickly sold out! More than 400 charcuterie trays, designed and handcrafted by our Cabinetmaking students were sold, and all proceeds went to the Class of 2021 Scholarship Fund.

The 2020-2021 school year was unexpected, challenging, and at times, disappointing, yet there were so many moments to be proud of. I remain humbled and honored to lead such an outstanding organization, and thank you for your continued support.

Respectfully submitted,

  
Sheila M. Harrity, Ed.D., Superintendent-Director

## **Our Mission**

Every student will graduate from Montachusett Regional Vocational Technical School with the skills, knowledge, and abilities to be a productive and effective member of an ever-changing society.

## **Our District**

Montachusett Regional Vocational Technical School is a four-year career and technical high school serving the member towns of:

Ashburnham  
Ashby  
Athol  
Barre  
Fitchburg  
Gardner

Harvard  
Holden  
Hubbardston  
Lunenburg  
Petersham  
Phillipston

Princeton  
Royalston  
Sterling  
Templeton  
Westminster  
Winchendon

## **Leadership**

The leadership team at Montachusett Regional Vocational Technical School is comprised of ten talented administrators whose varied educational backgrounds, professional experiences, and areas of expertise contribute to the success of the school. Working collaboratively, and under the direction of the Superintendent and Principal, the team has transformed the school into one of the most sought-after high schools in North Central Massachusetts.

*Sheila M. Harrity, Superintendent-Director*

*Tom Browne, Principal*

*Dayana Carlson, Assistant Principal*

*Tammy Crockett, Business Manager*

*Christina Favreau, Director of Academic Programs*

*Jim Hachey, Director of Vocational Programs*

*Michael Gormley, Director of Facilities*

*Donald Kitzmiller, Director of Technology*

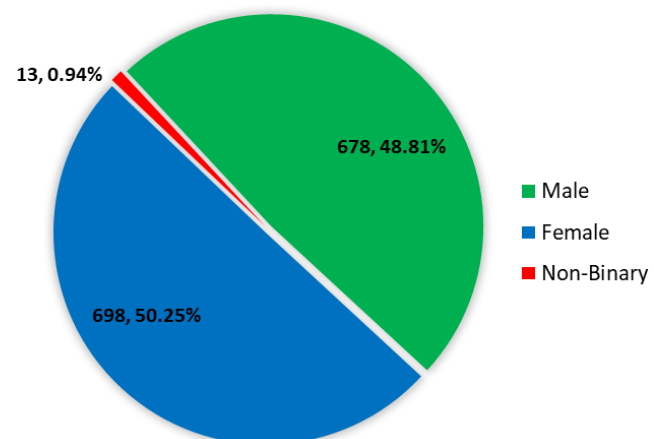
*Katy Whitaker, Development Coordinator*

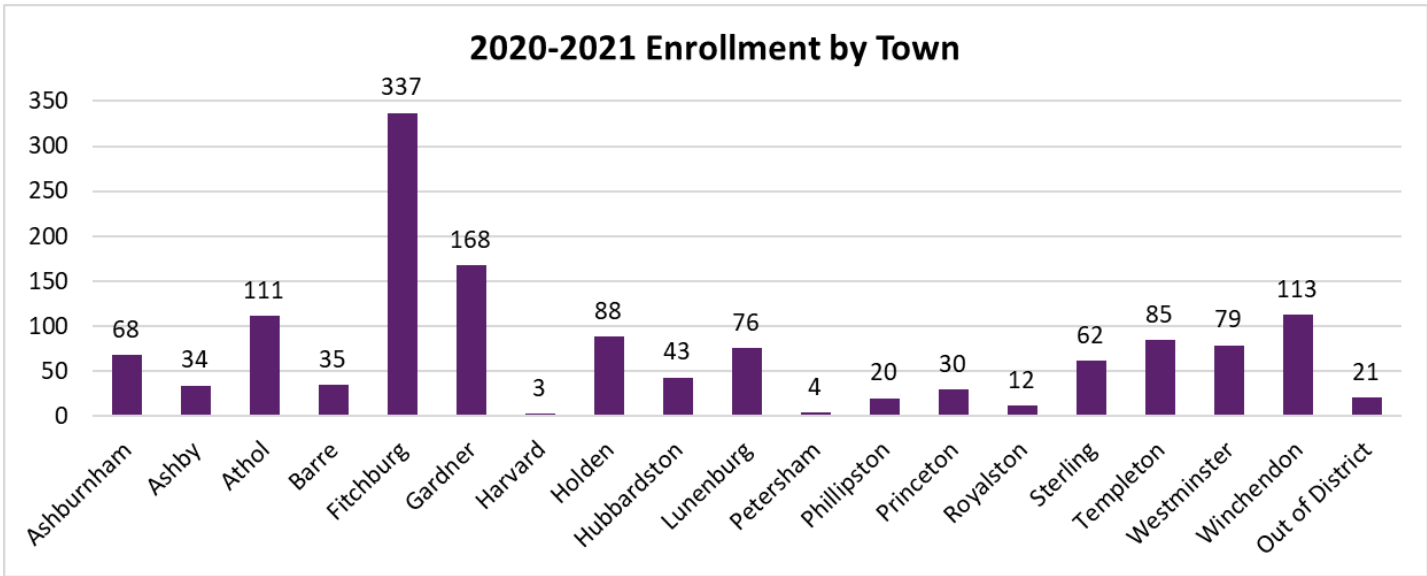
*Victoria Zarozinski, Director of Student Support Services*

## **Enrollment**

On June 1, 2021, student enrollment at Monty Tech included 1,389 students in grades nine through twelve, representing each of the district's eighteen sending communities. Each class of students is comprised of a relatively equal balance of male vs. female students, and each student attending Monty Tech has elected to do so, prepared to explore an interest in one of the school's twenty-one rigorous vocational-technical programs. While the school currently offers only five programs non-traditional for male students, and twelve programs non-traditional for female students, we are proud to have a student population that is well-balanced by gender and a variety of academic interests and achievements.

### **2020-2021 STUDENT ENROLLMENT**





**Class of 2021 Awards**

Members of the Class of 2021 were awarded approximately \$200,000 in scholarships, tools, and equipment. The Monty Tech Foundation generously provided \$35,500 in scholarships to graduating seniors, ranging in amounts of \$250 to \$2,000. The Foundation also awarded \$3,250 to the Practical Nursing graduates. Once again, local and state organizations, as well as generous individuals, continue to recognize the ability and potential of Monty Tech graduates in the form of financial donations. The School Committee, administration, faculty, and graduates are grateful for this support.

Articulation Agreements with local colleges also play an important role in helping reduce the cost of higher education. Qualified Monty Tech students are eligible to receive college credits through a number of articulation agreements with public and private colleges across the country. Approximately 36% of the graduating class of 2021 reported plans to enroll at a 4-year college/university upon graduation. By earning college credits while still in high school, these students will save both time and money as they pursue advanced educational programs.

**Financial Report**

In an effort to develop a cost-effective budget for the fiscal year 2020-2021, a great deal of effort was put forth by the School Committee, administration, and staff. The final fiscal year 2020-2021 Educational Plan totaled \$28,814,865 which represents a 0.19% increase over the 2019-2020 Educational Plan. The District’s FY21 budget only exceeds the minimum spending required by Massachusetts General Law Chapter 70 by \$899,640 or 3.5%.

The District was audited in December 2021 as part of the yearly financial audit by the accounting firm of Melanson, Heath and Co. from Greenfield, MA and expects to receive a good report.

**Grants and Contracts**

Monty Tech continues to pursue grant funding on an annual basis. These funds help provide many educational and social services to the student population. For fiscal year 2021, state and federal grant sources provided the school with \$2,037,076. Programs funded by these grants include: Coronavirus Prevention and Relief, Improving Teacher Quality, Special Education Services and Program Improvement, Title I Support, Perkins Occupational Education, Vocational Capital Equipment initiatives, Student Support and Academic Enrichment and Marine Corp Junior Reserve Officer Training.

## Academic Achievement

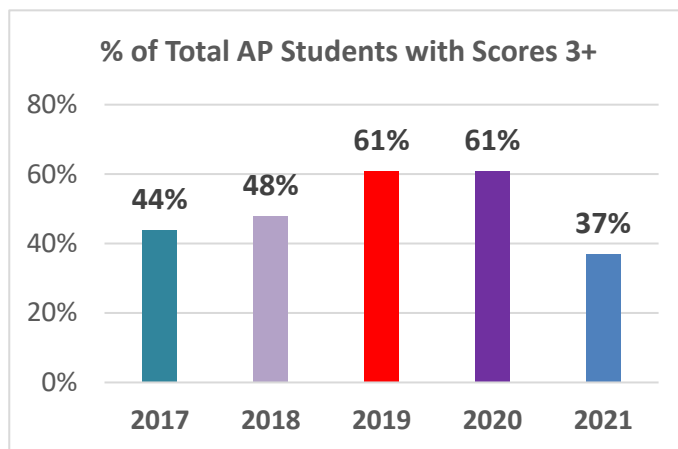
During the spring of 2021, administration of MCAS examinations was disrupted due to the pandemic and changes to educational delivery across the Commonwealth. Here at Monty Tech, 284 Freshman students qualified to take the Biology MCAS exam, having successfully completed the Grade 9 Biology course - 3 of whom were classified as Remote Learning Only. 349 students in Grade 10 took only the ELA and Math MCAS exam - 39 of those students were classified as Remote Learning Only. Finally, 32 Juniors opted to complete both the English and Math MCAS exams, in order to qualify them for scholarship opportunities such as the John and Abigail Adams Award.

Monty Tech remains committed to providing students with rigorous STEM learning opportunities, and so when an opportunity to apply for a Massachusetts Life Science Center grant presented itself, instructors were eager to apply. Working closely with the school's Development Coordinator, science instructors proposed the addition of an all-new science course that would introduce students to Microbiology and career pathways that are emerging in this recent health crisis. After developing a comprehensive proposal, and soliciting (and acquiring) support from business partner Bristol Meyers Squibb, the school's MLSC application was approved for funding, infusing the Monty Tech science department with approximately \$110,000. These funds will be used to renovate a science lab (replicating a biomedical facility), purchase all new course materials, equipment and technology, and provide opportunities for instructors to attend the National Science Teachers Association's national conference in 2022.

During the spring of 2021, students at Montachusett Regional Vocational Technical School continued to demonstrate high academic achievement, earning commendable scores on AP exams, though we did see our first decline in students who scored a 3 or better on the exam. It is important to remember that these exams took place during a difficult year of Hybrid Learning and Instruction. We anticipate a return to improved performance in the coming years, as students return to full-time, in-person learning.

The school is in its 9th year of administering Advanced Placement exams, and students enrolled in AP courses continue to improve their performance.

- In the spring of 2021, 70 out of 188 (37%) exams earned qualifying credit - the highest number of test takers the school has ever seen.
- This year, more than half of the students who tested in the following subjects received qualifying scores: Computer Science Principles, AP Language and Composition, and AP US History. Qualifying scores by these students exceeded the "state" averages in Massachusetts. In addition, students who completed the AP US History exam exceeded "global" averages.
- The AP subject with the highest number of students with qualifying scores was AP Language & Composition with 26 out of 44 students (59%).



	Spring 2017 (SY16-17)	Spring 2018 (SY17-18)	Spring 2019 (SY18-19)	Spring 2020 (SY19-20)	Spring 2021 (SY20-21)
<b>MT AP Courses</b>	6	7	7	7	7
<b>MT AP Student Enrollment</b>	151	135	157	179	187
<b>Students with Qualifying Scores</b>	53 (44%)	46 (48%)	68 (61%)	89 (61%)	70 (37%)
<b>AP Test Takers</b>	120	95	111	146	188
<b>Total # of Qualifying Exams</b>	65 (44%)	58 (43%)	79 (54%)	75 (71%)	60 (43%)
<b>Total # of AP Exams</b>	148	134	146	106	140

## **Vocational Projects in the District Communities**

2020-2021 challenged vocational instructors to rewrite curriculum, so that any lesson may be delivered effectively remotely. For so many years, the value of a Monty Tech vocational education has been our commitment to hands-on learning, which, due to the pandemic and an inability to safely have all students in the building, was limited. However, instructors across the school worked with local municipalities, community service agencies, and within the building to find meaningful opportunities for students to demonstrate their technical skills and proficiency. While projects may have been smaller and even taken a bit longer to complete in 2020-2021, their educational value was immense, and we are forever grateful to our vocational instructors for their diligence in reimaging vocational education under these challenging and unforeseen circumstances.

**Advanced Manufacturing:** Beginning 2020-2021, what was formerly known as Machine Technology would now be called Advanced Manufacturing, a name that better aligns with local workforce needs, job titles and qualifications, and may aide in job placement for qualified students and program graduates. In FY21, program instructors also adopted the newly revised frameworks, and reviewed and developed curriculum to address any changes noted. 124 NC3 Certifications were earned by students, now skilled in Advanced & Precision Measuring Instrument (PMI). Advanced fusion CAD/CAM software training was completed, and Makerbot Method Carbon was also added to the training program. All Freshman students successfully completed safety training, earning an OSHA 10-hour general industry certification. Eight Seniors earned co-op placements, working and learning in area machine shops. (Total student enrollment: 46)

**Auto Body Collision Repair Technology:** Monty Tech Auto Body students and instructors prioritized earning valuable credentials in 2020-2021. Students earned the OSHA 10 hour general industry card, EPA 6H Rule spray certification, I-Car Pro Level One in Refinishing and I-Car Pro Level One in Non-Structural Repair. Five Seniors also earned co-op placements, and were reported to be valuable contributors in local repairs shops in the area. Due to the pandemic, the program restricted shop work to that of Monty Tech staff, but remained surprisingly busy throughout the year. Students performed quite well at the SkillsUSA District competition, earning a gold medal and a bronze in Collision Repair; which several students for the State competition. (Total student enrollment: 62)

**Automotive Technology:** Automotive Technology students benefited from the addition of two new certification opportunities (digital multimeters and scan tool applications) that were made available to students, using the newly purchased Snap-On NC3 certified training equipment. These industry-recognized credentials and the new equipment will enhance the students' level of competency within the automotive industry for years to come. Due to the pandemic, hands-on learning opportunities and in-house repairs were limited to faculty, staff, school, and student vehicles only; yet, surprisingly, the shop remained very busy. Students performed repairs that included transmission replacements, intake manifolds, brake work, and various other technical repairs, demonstrating technical skills that are required for any service technician in our area. Three Seniors and two Juniors earned co-op placements, while instructors continued to utilize e-learning program options to keep the remaining students on track and engaged during the hybrid schedule. (Total student enrollment: 66)

**Business Technology:** Monty Tech's Business Technology program continues to benefit from a unique partnership with Workers Credit Union. The opportunity to participate in teller training and financial literacy workshops has been met with great enthusiasm from students, who completed nine modules and earned a financial literacy certificate. Instructors, in collaboration with their post-secondary colleagues, continue to refine and develop new articulation agreements. The agreement with Mount Wachusett Community College will provide qualified students with college credits at no cost to the student. Students are eligible to receive 24 credits from Mount Wachusett Community College. Unfortunately, due to the pandemic, the Gear House School Store and the Monty Tech Greenhouse were not operational. Program instructors hope to reopen these important training facilities in the coming year, allowing all freshmen, sophomores, and juniors to be successfully trained in the day-to-day operations of retail sales. Four Seniors and three Juniors were out on co-op placements during the 2020-2021 school year. (Total student enrollment: 64)

**Cabinetmaking:** Monty Tech Cabinetmaking students are called upon for a number of projects small and large, across the campus and beyond. During the 2020-2021 school year, students completed projects that included: designing and constructing Barre Cemetery arches, manufacturing button chairs for the town of Royalston's Phineas S. Newton Library, and designing and installing cabinetry for the Fitchburg Fire Department kitchen. Student work was featured during the

school's first-ever Holiday Sale, where 400 charcuterie trays that were designed and handcrafted by our students were sold to community members. The items were so well received that they sold out quickly, and community members have requested similar sales in the future, so that they may benefit from the creative and beautiful work done by these students. Eight Seniors and seven Juniors earned co-op placements, representing the program so well. A sophomore student also won gold in the SkillsUSA District Competition. (Total student enrollment: 62)

CAD/Drafting & Design: In 2020-2021, Monty Tech CAD/Drafting & Design students adjusted quite well to the Hybrid Learning Model, and were able to complete the curriculum easily through the online platform. Students were also able to achieve a number of valuable industry-recognized certifications, including AutoCAD, Inventor, Revit, and Solidworks. While the school's COVID protocol curtailed the number of community service jobs that these students could complete, the senior class was able to work on an important community design project for the Town of Lunenburg. One student competed in the SkillsUSA States competition, representing the program well, while two Senior students were proud to earn coveted co-op placements. (Total student enrollment: 62)

Cosmetology: The Monty Tech Cosmetology program is one of the only programs that students may leave and directly enter the industry, fully-licensed and ready for a career. The state-approved program is rigorous and provides students with countless opportunities to refine their cosmetology skills on clientele who understand and appreciate the learning environment. During the 2020-2021, instructors collaborated with college partners to develop and sign articulation agreements with Mount Wachusett Community College & Quinsigamond Community College that will grant qualified students with college credits, should they choose to pursue advanced training and education. 17 out of 22 Seniors earned their cosmetology licenses, as the Juniors look forward to scheduling their own exams. Seniors also earned certifications in COVID Barbicide, and Pravana. Two Seniors were out on co-op, which was beneficial to their training, as COVID prohibited the opening of our own on-site Salon until May 2021. (Total student enrollment: 82)

Culinary Arts: In a typical year, Monty Tech Culinary Arts students and instructors operate a full-service restaurant and bakery, serving 90-120 patrons daily. They might also showcase their talents at regional events and fundraisers, working side-by-side with some of the area's finest chefs. But 2020-2021 was a different year. Due to COVID, and the hybrid schedule, the school's Mountain Room Restaurant opened to offer take-out meals only to faculty and staff, three days per week. This also included bakery items and desserts. In April, the restaurant was approved to open to the public, though on a very limited basis. Students and instructors found creative ways to keep busy, applying their talents. In February 2021, Culinary Arts students baked more than thousand cookies and chocolates for the Monty Tech Foundation Valentine fundraiser. These "cookie boxes" were extremely popular, providing community members with an opportunity to support the school and students, while also enjoying a sweet treat. All proceeds benefitted student scholarships. The program also continued to donate leftover baked goods to Our Father's House in Fitchburg. Curriculum was reimaged, from a traditional in-person format to the required virtual platform, which proved to be challenging for the culinary trade. Instructors were dedicated to their craft and their students and performed well with the resources that were available to them, seeking meaningful opportunities for students to continue to develop in their chosen trade. Junior Students had an opportunity to earn ServSafe Certifications, Sophomores earned the Massachusetts Allergen Training, and Freshmen earned their OSHA 10 hour Culinary certification. (Total student enrollment: 93)

Dental Assisting: Monty Tech Dental Assisting instructors have emphasized the need for students to earn valuable industry-recognized credentials, as a means to demonstrate technical skill and proficiency. As a result, all students work and prepare for Dental Assisting National Board (DANB) certification exams. In 2020-2021, 93% of Sophomores passed the DANB Infection Control exam, and 100% of the class passed the DANB Radiology exam. This excellent pass rate is a true testament to the high quality instruction in the Monty Tech Dental Assisting program, and something the school continues to be so proud of. A total of 14 students (nine Seniors and five Juniors) earned co-op placements, while the remaining Juniors and Seniors remained in-house, due to COVID restrictions; affiliation/externship experiences in area dental clinics and offices were postponed due to the pandemic. All Seniors & Sophomores received the American Red Cross CPR/AED certification. One Senior won the gold medal at SkillsUSA districts and went on to compete at the state competition. (Total student enrollment: 61)

Early Childhood Education: Students and instructors in the Monty Tech Early Childhood Education program are committed to community service activities, but due to the pandemic, were only able to work on in-house on student-centered projects. Three students earned co-op placements, gaining valuable experience working with young children in area daycare and educational centers. Six Seniors earned the National Child Development Associate credential, while

all 13 seniors qualified and applied for the Massachusetts Department of Early Education and Care Teacher certification. One student was awarded a Gold medal in the SkillsUSA district competition. In 2020-2021, the Monty Tech Child Care Center continued to operate on a much smaller scale (due to enrollment protocols), providing meaningful hands-on learning opportunities for all students in the Early Childhood Education program. (Total student enrollment: 55)

Electrical: Throughout 2020-2021, students and instructors in the Monty Tech Electrical program wired numerous machines, equipment, computers, and lights throughout the school. Students and instructors successfully transitioned lighting in the Auto Body welding stations and the Welding/Metal Fabrication shop to all LED lights. Students also successfully wired a new sand blaster and car lift in Automotive Technology, helping complete a much-needed update in that shop. Students worked in Lunenburg, installing, servicing and adding lighting and electrical plugs to the garage associated with the town's cemetery. With guidance from program instructors, students also began wiring the Habitat for Humanity house being built in Athol. Sixteen Seniors and seven Juniors earned co-op placements, which allowed them to gain important on-the-job skills and additional training in the industry. The Freshman class was filled with 24 first choice students, and all successfully completed the 10-hour OSHA training and certification. (Total student enrollment: 93)

Engineering Technology: The Engineering Technology program at Monty Tech is a rigorous program, infused with a nationally certified curriculum provided by Project Lead the Way, and countless hands-on learning opportunities that provide students with opportunities to demonstrate creativity, make connections with prior learning, and earn college credits. Engineering Technology students continue to benefit from the new technology available in the A.R.M. Lab, including three Amatrol tabletop mechatronics learning systems with Pegasus robots, one Fanuc LR Mate 200ID/4S robot, one Festo MPS 203 mechatronics system, and one Stratasys F270 3D printer. New lessons and training available because of the added technology will only open additional career pathways for students interested in pursuing engineering as an occupation. All Freshmen student completed the OSHA 10-hour General Industry training and certification program, while five Seniors participated in meaningful co-op placements. (Total student enrollment: 54)

Graphic Communications: Throughout the 2020-2021 school year, students in the Graphic Communications program produced numerous projects for our district cities and towns, and a variety of non-profit organizations within the district. As the COVID-19 pandemic continued, hands-on learning opportunities and time spent in the school were limited by the change to a Hybrid Learning Program, so students were unable to complete all community service projects that were requested of them. One Senior and one Junior pursued and earned co-op placements, which allowed them to continue their on-the-job training in a real world work setting. Of the twenty-one talented Seniors who graduated from the Graphic Communication program in 2021, 17 were accepted to college, and four entered the workforce in related careers. Graphics students consistently perform well at SkillsUSA competitions, and 2020-2021 was no exception, with students taking gold, silver & bronze medals at the state competition in in screen printing; a gold medal was also earned in photography, a bronze was awarded in Advertising Design, and silver and bronze medals were achieved in Graphic Imaging Sublimation, making program instructors quite proud. (Total student enrollment: 85)

Health Occupations: The Health Occupations program continues to be one of the more competitive programs here at Monty Tech, providing a rigorous education grounded in current medical knowledge and practice, balanced by hands-on learning opportunities in the on-site Sim Lab and through the use of state-of-the-art Anatomage technology. As our shop continues to utilize the Skills Capital Grant of \$180,246 that was awarded in the summer of 2019, we continued to improve the instructional spaces, technology and equipment for student training purposes. 14 Seniors were partnered with area clinics, through the co-op program, where they continued to learn and flourish in their chosen field, while back on campus, students focused on achieving important industry-recognized credentials. All Juniors and Sophomores obtained their CPR and First Aid certifications. 29 Sophomores and 26 Juniors received Centers for Medicare & Medicaid Services, CMS targeted Covid-19 training for Frontline Nursing Home Staff certifications. Eight Seniors obtained their Home Health Aide Certification, and 19 seniors took the NHA Clinical Medical Assistant Certification (CCMA) exam and passed. (Total student enrollment: 108)

House Carpentry: Though the school has shifted to a Hybrid Learning Model, opportunities to support communities in the district were ever-present. The Monty Tech House Carpentry program completed a number of projects, large and small during this challenging time, that included: constructing and installing the little free library for Ruggles Lane School, and building an 8'x12' cooling shed for the Harvest Community Project – both projects were completed by Sophomores. These Sophomore students also handcrafted a number of beautiful Adirondack chairs, which will be used



for charitable donations in the months to come. Juniors and Seniors, meanwhile, completed the Habitat for Humanity building project in Ashburnham, and also framed, installed a roof, and sided the equipment garage for the Town of Lunenburg Cemetery Department. Students and instructors assisted with framing of the Habitat for Humanity house in Athol, installed a complete truss roof system, all exterior trim details, and roofing and siding materials. 13 Juniors received their HotWorks certifications, while four Senior students earned co-op placements, and enjoyed working with area businesses representing the carpentry and construction trades. (Total student enrollment: 56)

HVAC & Property Maintenance: To complement the programs theory and technical skill lessons, Monty Tech HVAC and Property Maintenance students and instructors participate in the home building project each year, installing the HVAC system and a number of other tasks associated with residential construction efforts. In 2020-2021, Monty Tech HVAC students and instructors works with other trades at the school to complete the Ashburnham Habitat for Humanity community service project. In addition, the venting was completed in the Habitat for Humanity house in Athol. On campus, students removed and installed the mini split system in the school's Bakery. Four Seniors and three Juniors were placed in area businesses through the school's popular co-op program. All Juniors earned EPA 608 Certification, and two Sophomores and one Junior performed well, earning honors at the SkillsUSA State competition. (Total student enrollment: 55)

Information Technology: The Information Technology program continues to offer students opportunities to earn a wide range of industry-recognized certifications that affirm the technical skill proficiency needed for entry-level careers in networking and information technology. In 2020-2021, all Freshmen completed the OSHA 10-hour General Industry training. Sophomore students passed the Test-out PC Pro Certificate exam, the Cisco IT Essential course for computer repair and maintenance, and the Introduction to Networking course. All Juniors completed the CIW Web Curriculum, and Seniors completed the Cisco Python Programming curriculum. Seven seniors completed the AP-CSP curriculum, and five took the finishing exam. Juniors in the program participated and did quite well in the Cyberpatriot and CyberStart America cybersecurity competitions. Two Seniors were on co-op placements applying their technical skills in area businesses. In total, approximately 100 hours of technical support were completed at the program's Help Desk, where students worked on hardware and software troubleshooting on desktops, laptops, printers, and mobile devices. (Total student enrollment: 31)

Masonry: The talents of Monty Tech Masonry students are on display throughout district communities, as projects that were completed during the 2020-2021 school year include: constructing scaffolding at the Habitat for Humanity house in Athol, replacing a concrete walk at Hubbardston Council on Aging, and repairing a granite wall at the Fay Club in Fitchburg. A creative solution to restrictive in-person guidelines, Monty Tech Masonry students and instructors designed, placed and finished a 24 'x 24' concrete slab outside, creating an outdoor classroom so that students could continue to work on important projects, yet remain socially distant and safe. Students continued to maintain the OSHA silica standard, in a program that operates in compliance with all trade regulations. Three Seniors earned co-op placements, and continued to refine their skills working with business partners through the school's co-op program. One Senior won a silver medal at the SkillsUSA State competition, and all juniors completed the industry-standard HotWorks Certification. (Total student enrollment: 45)

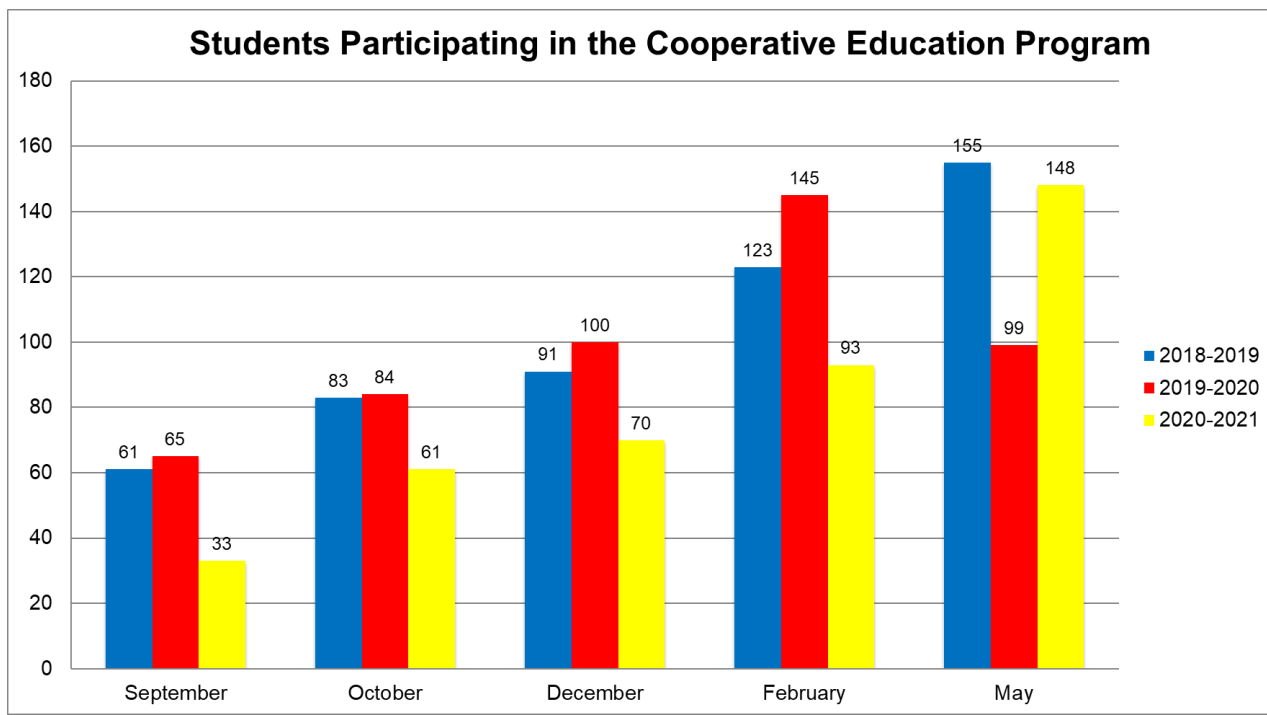
Plumbing: Like programs across the school, the Monty Tech Plumbing program struggled with delivering hands-on lessons that would rival their in-person instruction. However, talented instructors in the school's popular shop worked diligently to rewrite curriculum and design lessons that could be adapted. With a focus on theory and technical knowledge, instructors aimed to embed certification opportunities where possible. To that end, students in grades 10, 11 and 12 successfully completed their HotWorks safety training and earned that important credential. Freshmen also completed the 10-hour OSHA general industry safety training, while Sophomore students completed the 10-hour OSHA Construction safety training and certification. Students and instructors collaborated with other trades to complete two single family house building projects, both located in Ashburnham. Students and instructors also began rough plumbing for the Habitat for Humanity single family home in Athol. Back on campus, students replaced three water coolers with combination filtered bubbler/bottle filler units. Seven students (four Seniors and three Juniors) earned co-op placements, which allowed them to continue to grow in the trade, working with plumbing professionals in the area. All graduates received either a Tier 1 or Tier 2 completion toward MA plumbing licensure. (Total student enrollment: 67)

Veterinary Science: 2020-2021 was the 4<sup>th</sup> year for the school's newest vocational training program - Veterinary Science. Unfortunately, due to COVID restrictions, traffic in the community clinic was somewhat limited. The clinic

did, though, provide low cost veterinary care to 421 families with 635 pets within our district. 14 Seniors earned the CVA (Certified Veterinary Assistant) certification; 20 Seniors achieved their Recover CPR Certification; 21 Juniors achieved their Fear Free Certification; and 22 Freshman successfully completed OSHA 10-hour Healthcare training and certification. Freshmen and Sophomores learned about the use of animals, anatomy, disease, laboratory skills and client service. Junior and Senior lessons in pharmacology, surgical and nursing care, and anesthesiology proved to be invaluable to the students working in the clinic, applying their knowledge with purpose alongside veterinarians and veterinary technicians. (Total student enrollment: 85)

Welding/Metal Fabrication: The 2020-2021 school year brought some exciting news to the Welding/metal Fabrication program. Thanks to a partnership developed while working on a Skills Capital Grant, the Monty Tech Welding/Metal Fabrication program became the first pre-apprenticeship program in the school’s history. This 5-year agreement with the Plumbers & Pipefitters Union #4 will help create a meaningful pathway for students to enter into a registered apprenticeship program leading them into high-wage, high-skill career opportunities. Numerous projects were completed by talented students, including more than fifty requests for individual projects from community members residing in the school’s sending district. Students also fabricated and installed copper inlay on two archways for the Barre cemetery, fabricated an aluminum cupola for the Town of Royalston gazebo, fabricated two art display racks for Fitchburg Riverfront Park, and fabricated and welded three clothing racks for the Town of Hubbardston Senior Center. Five Seniors and four Juniors participated in the popular co-op program, and eight Seniors earned the AWS D1.1 Structural Welding Code Qualification Test. All grade 9 students completed 10 Hour OSHA training. (Total student enrollment: 57)

**Co-operative Education and Student Placement**



The Cooperative Education Program is an extension of the student’s technical education that combines classroom instruction with on-the-job-training. The Co-op Program provides students with an opportunity to further develop academic, technical and employability skills in an industry work environment. All students are eligible to participate in the Co-op Program, provided they satisfy state and school grade, attendance and performance requirements. All Co-op students have completed the OSHA recognized Career Safe online health and safety course.

The Cooperative Education Program is beneficial for both student and employer. For the student, it is a chance to gain on-the-job training that improves both their technical and employability skills. Additionally, making industry connections enhances post-graduate employment opportunities. The Co-op Program allows students to earn while they learn.

Employer benefits include addressing workforce needs in an efficient manner. Co-op students provide a pool of temporary and potential full-time employees who are already trained, thus reducing employer training costs. Co-op work hours may be tailored to suit the needs of partnering employers. While overall co-op placements experienced a slight decline, due primarily to business closures in response to the recent pandemic, qualified students (Juniors and Seniors) continue to work, learn and apply their technical skills in businesses across North Central Massachusetts.

### **Student Support Services**

The 2020-2021 school year forced the world to respond to a pandemic with ripple effects to be felt for years to come. It goes without saying that we needed to pull together, respond, and unite as partners in order to ensure our special populations, and all students regardless of identified disability, remained at the center of decisions. Individuals needed to be met where they were at and all services provided needed to allow for individual needs to be met in new and innovative ways. The health and safety of our school community and their families dictated our decisions and actions. As the district responded to the unforeseen COVID-19 related closure, the hybrid model, and reopening events that occurred throughout the 2020-2021 school year, it did not go unnoticed that our Student Support Service staff, students, and families displayed great resilience as they worked together to address individual needs and tackle these challenging times. While we hope to never experience these events again, we did share a number of experiences that have proven to increase communication and collaboration. Some of our greatest lessons learned came from this experience and we want to extend our sincere gratitude for the efforts put forth during such unprecedented times.

During the 2020-2021 school year, Montachusett Regional Vocational Technical School District provided special services to approximately three hundred students – measuring progress of over two hundred students on Individual Education Plans (IEPs) and just under one hundred students adhering to individualized Section 504 plans. While the Student Support Services (SSS) Department encompasses special education, the department provides support and is available to all Monty Tech students.

The department includes a full-time nursing staff that responded to, and continues to respond to, COVID-19 data, administers medications, performs state-mandated health screening exams, and provides, when necessary, health information to the special education team for a student's IEP meeting. The department benefits from a full-time school social worker that participates in departmental meetings and assists students who have needs concerning finances, family issues, homelessness, maternity, health issues, and proper food and clothing. During the 2020-2021 school year, the department in conjunction with our School Social Worker, doubled down on our efforts to address food insecurity and ensure community agency supports were extended to families in need. The school is also fortunate to have on staff a full-time psychologist, whose role it is to evaluate all students referred for an initial evaluation or who require a three-year re-evaluation. In addition, we have a full-time speech language pathologist, who is available to assist students with disabilities, assess these students and consult with teachers. Our students also have access to the services of a full-time adjustment counselor and part-time school psychologist. All of these individuals are available for scheduled counseling sessions, mental health emergency treatment, medical/mental health re-entry and transition support services, as well as crisis intervention.

The school's Director of Student Support Services oversees the District's Special Education Program, which is reviewed annually in May, in accordance with regulatory requirements. The comprehensive review and evaluation are done in collaboration with the Parent Advisory Council, and the results of the evaluation are used to improve the special education procedures and programs in place at Montachusett Regional Vocational Technical School.

During the 2020-2021 Montachusett Regional Technical School District's Department of Student Support Services made a concerted effort to increase social, emotional, and community based supports. In addition to our current re-entry and school based counseling services, Monty Tech and LUK, Inc. joined forces with the help of the Department of Public Health to provide services to at-risk students and their families. Further, the district partnered with LUK to create a direct pipeline for Telehealth referrals and access to counseling supports. Couple this with the further expansion of our partnership with the SHINE Initiative, it has allowed the district to build upon our mission to provide opportunities for all students to be engaged, lead, and access the supports necessary to improve their social and emotional wellbeing. The Department of Student Support Services has taken the necessary measures to ensure Social Emotional Learning (SEL)

is in the forefront of conversations when supporting students as they acclimate to returning to school full time after lengthy periods of time experiencing various educational models throughout the pandemic. As we establish a full time school routine, we recognize the experiences all students have had over the past few years has varied. Courses and activities designed to promote mindfulness, understanding, and social emotional wellness are part of the many course offerings. Yoga and Meditative Art, Visual Arts, Directed Studies with Social Emotional Learning lessons are all part of the efforts being implemented to ensure we address the needs of all students and support their individual growth and development in a post pandemic world. More about tiered interventions can be found on our website. However, it is worth noting that we continue to build and refine our services for all students as we recognize the importance of developing the whole student and ensuring they are equipped with the necessary to become productive citizens that can compete and adapt in a rapidly changing economy.

### **Technology**

The 2020-2021 school year proved to be a test in many ways for the Monty Tech educational community, requiring flexibility as students and instructors balanced both in-person and remote learning expectations. The shift in instructional delivery, however, was no match for the school's Technology Department. Because of forward thinking on the part of the department's Director and the school's leadership team, 2020-2021 was the school's 5<sup>th</sup> year for the 1:1 Chromebook initiative, so students and instructors had previous experience with the tools and technology needed to learn in a remote or hybrid setting. To support the additional and now required use of this technology, the Technology Department spent countless hours during the school year upgrading the network and increasing the bandwidth coming into the school to sustain video and audio conferencing.

Department personnel upgraded the learning experience for students, by purchasing laptops for students and teachers, building new iMacs for the Graphic Communications program, and rebuilding surplus computers for full remote students in CAD Drafting & Design, Graphic Communications, Business Technology, and Engineering, so that they may work from home on their vocational assignments. A ZOOM license was purchased, and the Instructional Technologist worked diligently to purchase and deploy software for all teachers. Camcorders, wireless headsets, interactive displays and a variety of apps were purchased, installed, and put into the hands of our educators to engage learners at all levels.

Finally, to ensure "business as usual," we invested in Splashtop, VPN client and configured the firewall, so that faculty and staff laptops could be fixed remotely if a software issue presented itself, and so that the Business Office would have remote access into the school to maintain a secure working environment, even when the building was closed.

### **Marine Corps JROTC**

The Monty Tech Marine Corps Junior Reserve Officer Training Corps (MCJROTC) remains one of the school's most worthwhile and engaging programs available to our students. This outstanding leadership program, based on the foundations of instilling a value of citizenship, service to the United States, personal responsibility, and a sense of accomplishment, provides students with countless opportunities to serve as ambassadors in their communities, through the routine demonstration of student leadership development, volunteerism, perseverance, and dedication.

Due to outstanding performance throughout the year, Monty Tech's Marine Corps Junior Reserve Officers' Training Corps program was, once again, designated as a Marine Corps Honor School. Selection for the Marine Corps Honor School means that the school's Marine Corps JROTC program was in the top 15% of the 68 other programs in Region 1, which includes schools from the mid-Atlantic and Northeast U.S. The selection is based on several criteria including:

- *Inspector General's inspection results*
- *Number of cadets in the program*
- *Number of community service hours conducted*
- *Number of public affairs events attended by cadets*
- *Number of academic awards presented to cadets*
- *Participation in drill team competitions, marksmanship competitions, physical fitness competitions, and field trips that support the growth and development of the cadet*

During the 2020 - 2021 school year, MCJROTC Cadets participated in more than 5,000 hours of community service and volunteerism. Cadets assisted the Salvation Army by collecting more than \$25,000 in donations, which were used to countless families in need during the holiday season. These donations will go on to support community members that are in need of assistance, especially during the holiday season.

The Monty Tech MCJROTC has assisted with color guards and participation in community parades, which provides the cadets and community members the opportunity to be involved with civic and veteran ceremonies.

Finally, the Monty Tech Cadet Corps provided 11 Color Guards for local civic and veteran ceremonies, a highlight for students and instructors alike.

### **Monty Tech School of Continuing Education**

The Monty Tech School of Continuing Education had an exciting FY21, receiving the program's first-ever training grants. School leaders applied for and received Career Technical Initiative Grants (Rounds 1 & 3), totaling \$290,000, as well as a \$30,000 Rapid Reemployment Grant. These grants allowed the School of Continuing Education to rollout new training programs, offered to qualified participants (must be unemployed or underemployed) at no charge. In addition, each participant who successfully completed the training would be offered job placement with a business partner. Comprehensive 200-300 hour programs that culminated in industry-recognized credentials in Welding, HVAC and Allied Health were developed and advertised. While the Allied Health (CNA) program did not see enough interested participants to field a cohort, HVAC and Welding were successful in their initial endeavor. Program leaders continue to track student progress and placements, and expect to pursue additional funding for future offerings.

As we continue to monitor workforce needs and skills gaps, the School of Continuing Education works closely with the MassHire North Central Career Center to determine specific training programs that are most in-demand. Our overarching goal to support the North Central Massachusetts workforce readiness pipeline with an increase in career and licensure courses is evident in new programs that are developed, existing programs that are refined and in traditional journeyman/apprenticeship programs that remain a hallmark of our institution.

The pivot to a hybrid learning model seemed to be beneficial to both our career/licensure students as well as our personal enrichment students. During the Fall 2020 and Spring 2021 sessions, we realized the resiliency of our students and their willingness to persevere with their training despite the challenges. Our instructors worked tirelessly to maintain training programs timelines.

Our medical students' skill set was and continues to be in high demand due to the pandemic. We were able to support our local medical facilities with newly licensed healthcare workers, to include Pharmacy Technicians, Medical Billing and Coding Specialists, EKG Technicians, Phlebotomists, and Patient Care Technicians. We hope to offer another CNA training program in the future, as the need for trained Assistants remains great.

### **Practical Nursing Program**

The Monty Tech Practical Nursing Program is designed to prepare graduates to practice safely and ethically in a caring manner for patients who are experiencing common variations in health status in diverse health care settings.

On June 24, 2021 a graduating class of 28 students completed the Practical Nursing Program and entered the nursing profession. The class has thus far achieved a pass rate of 75% graduates passing the NCLEX-PN exam (National Council Licensure Examination for Practical Nurses). Program graduates are currently employed in the health care profession throughout Massachusetts, working in various health care settings, such as long-term care, sub-acute care, mental health/substance abuse facilities, physician's offices and correctional medicine.

The Monty Tech Practical Nursing Program continues to strengthen the "LPN to BSN (Bachelor of Science in Nursing) Bridge" relationship with Fitchburg State University (FSU). Former graduates have successfully transferred into seats in the LPN to BSN Bridge program at FSU and will continue their education to a Bachelor's of Science in Nursing

(BSN). Many class applicants cited their attraction to Monty Tech as the opportunity to complete a ten-month accelerated program and then bridge to Fitchburg State University. In the seven -year history of the Bridge Program, all of Monty Tech's Practical Nursing graduates reaching graduation at FSU have passed their NCLEX-RN exam. These former graduates have gone on to work in hospital settings including Lahey, Beth Israel, and Baystate Medical Center, while others have pursued advanced degrees as Critical Care Nurse Practitioners, Nurse Educators, and Family Practice Nurse Practitioners.

In 2020-2021, Monty Tech Practical Nursing students were asked to complete patient scenarios in the Sim Lab on a weekly basis in Terms 2 and 3. The Faculty Sim team has implemented National League of Nursing (NLN) patient scenarios and authored several others consistent with the National Council of State Board of Nursing Detailed Test Plan. Instructors have also utilized the Sim lab setting to instruct students in developing nursing skills that they may not be experiencing in the clinical setting.

By successfully developing and implementing a vast library of scenarios reflecting INASCAL Standards (International Association for Clinical Simulation and Learning), we hope to prepare our students for any experience they may encounter as a newly licensed Practice Nurse. In Maternity Sim Lab Boot Camp, for example, students utilize the simulation models to imitate the birthing process, from obstetric office visits through labor and common postpartum complications. Well newborn care is also taught. Student feedback has been positive regarding these maternity scenarios, stating it better prepares them for an unexpected outcome during a delivery. This expanded content also better prepares students for NACE (Nursing Acceleration Challenge Exam) success at FSU.

Substance abuse and the mental health setting job opportunities have increased with more funding being provided to combat the opiate crisis. In addition to having specialty clinical rotations, students participate in simulation scenarios involving substance abuse and mental health clients, to help to prepare our graduates to work in a substance abuse clinical setting.

The Monty Tech practical Nursing Program recently completed an accreditation visit from the Massachusetts Board of Registration in Nursing, highlighting goals that include stabilization of faculty positions and pursuance of ACEN (Accreditation Commission for Education in Nursing) accreditation to more accurately reflect the changing environment in nursing education.

### **Looking Ahead**

Undoubtedly, the 2020-2021 school year was challenging and difficult for students and staff, yet the school community demonstrated a remarkable resilience and commitment to education and service that proves, yet again, that Monty Tech is truly a special place to work and learn. While adapting curriculum to the needs of all students both at home and in-person, adhering to state and federal safety and health guidelines, and finding opportunities for students to demonstrate their creativity and technical skills, certainly kept staff busy, there was always an element of improvement, vision, and forward-thinking that kept moving the school forward. Successful grant applications, new coursework, and increased school-to-business partnerships that came about during this difficult year are a few of the more notable initiatives that we expect to have a positive impact on our school and students in the coming years:

**Grant funding to improve and expand training programs:** Monty Tech has applied for and received six Skills Capital Grants, totaling \$2,029,686. School officials anticipate a FY22 application may be forthcoming, and as a result, have met to determine which program is in need of a shop renovation, updated equipment, and/or new technology that reflects current industry standards. The school's Dental Assisting program, which effectively prepares students to enter the dental field may be the next vocational program to benefit from grant funding, should an application be approved. Instructors have advocated for a renovated instructional space, as well as new chairs, tools, and equipment, so that students are trained using the exact instruments and technology found in area clinics. This improved facility would certainly benefit our high school students, and would also allow Monty Tech's School of Continuing Education to develop an all-new evening training program, which would help address the critical shortage for trained Dental Assistants in North Central Massachusetts. We look forward to an opportunity to apply for grant funding that would allow us to extend this training opportunity to young adults in our area, who may not have had the benefit of a vocational high school experience.

New coursework that aligns to STEM career pathways: With the successful application of the FY21 Massachusetts Life Science Center Grant, school officials have been working to renovate an outdated science lab to create a more state-of-the-art instructional space that replicates a microbiology laboratory. As the school looks to update classrooms and vocational areas, it is critical that we do so in a manner that will allow our instructors to deliver information and train students in careers that present high-skill, high-wage job opportunities. The proposed Microbiology course, which was developed by Monty Tech science instructors as a means to engage students in the sciences, may be more critical now than ever before. Seeking partnerships with biomedical companies in our area, so that our instructors may work and learn from skilled scientists will not only benefit our students and strengthen the Monty Tech academic educational program, it may also help feed a struggling STEM workforce pipeline. Whether learning from our industry-immersed colleagues, or gaining new instructional resources and techniques from colleagues attending the National Science Teachers Association's national conference, Monty Tech science instructors are prepared to deliver new course materials that engage students in important and timely science concepts.

Building partnerships for improved job placement: 2020-2021 brought the school's first-ever approval for a Pre-Apprenticeship program – a designation that we expect may improve our graduates' chances of retaining employment with a framework for upward mobility. While Welding/Metal Fabrication students already enjoy this new appellation, school officials may consider seeking approval for other programs in the coming years. To do so, we must first seek and acquire an approved Apprentice Sponsor. This sponsorship and collaboration will serve as a testimony to the strength of Monty Tech's vocational programming, and will increase student opportunities for employment and continued education and training. Business partners that serve on Program Advisory Boards, as Co-Op employers, or who even graduates who now own and operate their own businesses may be interested in such a unique collaboration. In an effort to prepare students for careers, it is incumbent on us to ensure that training does not stop when a student leave Monty Tech, and an approved apprenticeship would ensure students will have continued support and training as they enter a competitive and demanding workforce.

### **The Monty Tech School Committee**

The Montachusett Regional Vocational Technical School District Committee is comprised of twenty-two dedicated individuals, whose expertise proves invaluable in advising the district's operations, policies, and procedures. Our students continue to benefit from the broad scope of their experiences and varying perspectives, and we are thankful to the following members of the 2020-2021 School Committee for their outstanding service.

Eric Olson, Phillipston  
*Chair*

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Ross Barber, Westminster  
Dr. Maureen Ward, Winchendon

Respectfully Submitted By:

Sheila M. Harrity, Ed.D., Superintendent-Director     January 21, 2022

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