



# 2019 ANNUAL REPORT



**MONTACHUSETT REGIONAL VOCATIONAL TECHNICAL SCHOOL**

*1050 Westminster Street, Fitchburg, MA 01420*

**[WWW.MONTYTECH.NET](http://WWW.MONTYTECH.NET)**

Each year I look forward to the development of the Annual Report, as a means to reflect on the achievements and accomplishments celebrated by students and staff at Monty Tech. The 2018-2019 school year was a remarkable one, as our school saw the opening of an all-new training facility, renovated instructional space and state-of-the-art equipment added to three vocational areas, students earning more industry-recognized credentials than ever before, and new partnerships with area colleges and universities. It was a year to remember.

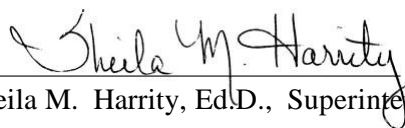
Students who attend Monty Tech have chosen a high school experience unlike any other. While completing all of the same high school requirements of students enrolled in a traditional, comprehensive high school, our students are also learning a valuable trade – skills they will carry with them for a lifetime. These vocational skills may provide opportunities for our graduates to work their way through college; they may open the door to new, related career pathways, or they may be the foundation for a lifelong career. The education and training they receive at Monty Tech will open doors and allow them to choose a college and/or career pathway that will define their future.

Monty Tech academic programs continue to serve students at all levels well. This year, students completed the Next Generation MCAS, and earned commendable passing rates: English Language Arts 99%, Mathematics 97%, and Biology 99%. Monty Tech students exceeded the state averages in all 3 subjects. In addition, great strides were made in our relatively new Advanced Placement programs, with more than 60% of test takers earning a score of 3 or better. Finally, an all-new science program was fully integrated in FY19 – Biomedical Sciences. This rigorous sequence of courses was met with enthusiasm from students and staff, so plans to expand this Project Lead the Way programming are underway. Our talented academic faculty continue to refine curriculum, incorporate new instructional strategies, and challenge every student to reach new levels, and we couldn't be prouder of the results.

And while we are certainly proud of our academic and vocational training programs, a Monty Tech experience would not be complete without participating in meaningful community service. Last year we were honored to once again host the Wreaths Across America Convoy with a remembrance ceremony as it made its way down to Arlington National Cemetery. As the convoy left the school parking lot and hundreds of American flags waved, I was reminded once again of the value of a Monty Tech education. For a moment, our students were taken out of the classrooms and shops and asked to think about what this convoy meant, where it was heading and how they were a small part of the ceremony. They were asked to consider service, and through the waves and cheers it was clear that Monty Tech students knew and understood the meaning behind that experience. It's not often that high school students are asked to stop and think about others and how they might contribute to another person's well-being. But at Monty Tech, our students are not only familiar with the concept, they are committed to community service. Whether it is building a carriage house for the NEADS program, designing and building dugouts for area Little League programs, or ensuring handicap accessibility in dated town offices, our staff and students are proud to serve.

While students and instructors across the school continue to demonstrate creativity, innovation, and leadership, school leaders continue to keep an eye on emerging trends in vocational education. As we prepare these talented students to make important life choices, we are reminded that in the end, the choice is theirs to make: college or career or both. It is our job to support their aspirations and to educate and train them to achieve at the highest possible level. On behalf of our talented educators and administrators, who remain focused on delivering the highest quality academic and vocational-technical education possible, I am delighted to present the District's 2018-2019 annual report to you, providing a snapshot of the wonderful experiences happening on a day-to-day basis here at MontyTech.

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*

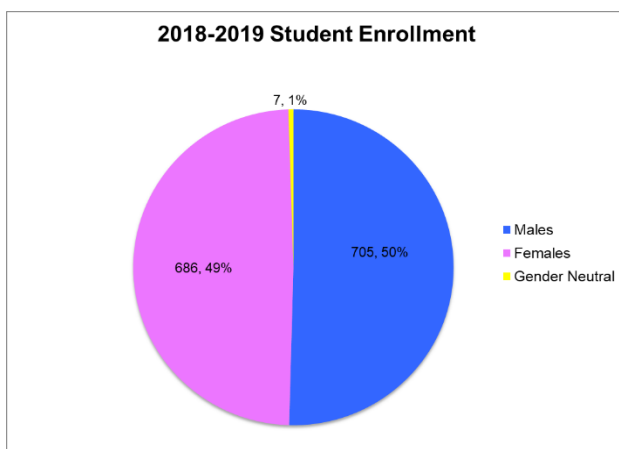
*Michael Gormley, Director of Facilities*

*Donald Kitzmiller, Director of Technology*

*Katy Whitaker, Development Coordinator*

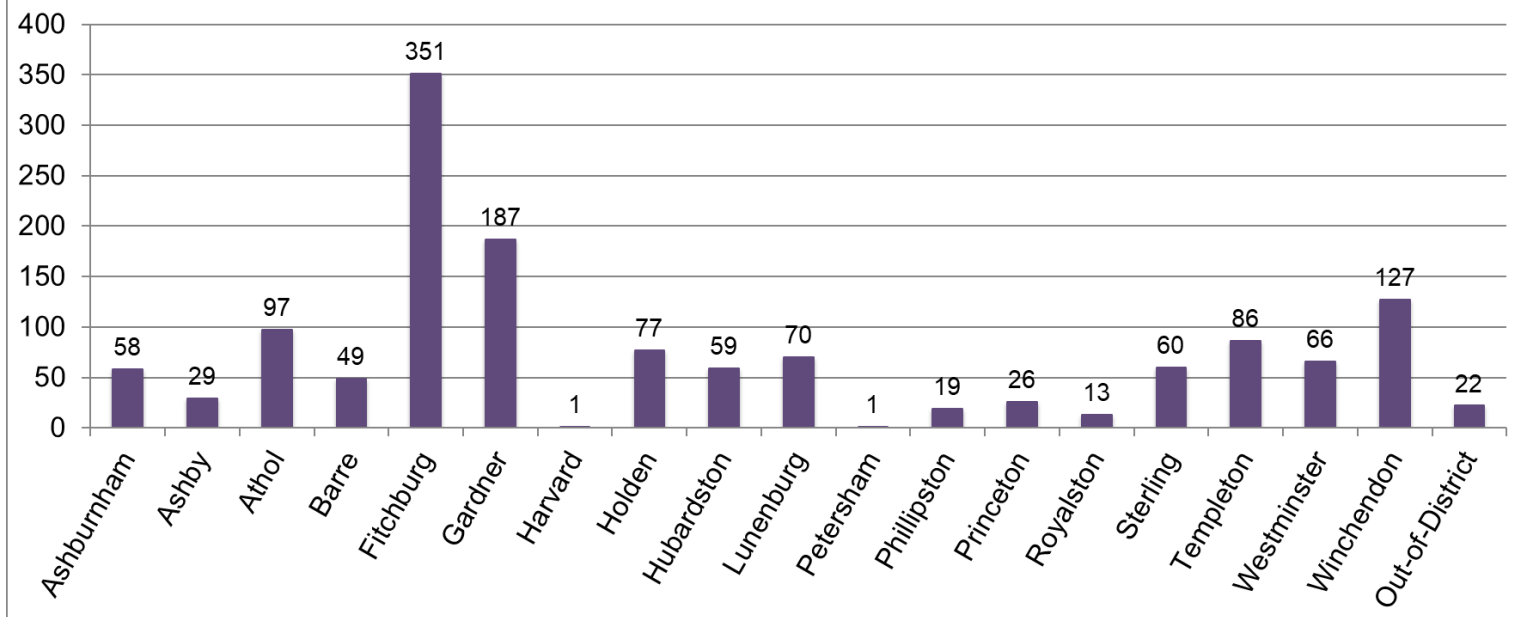
*Victoria Zarozinski, Director of Student Support Services*

## **Enrollment**



On June 1, 2019, student enrollment at Monty Tech included 1,398 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.

### 2018-2019 Total Enrollment By Town



Throughout 2018-2019, Monty Tech offered a variety of opportunities for students, parents, and community members to learn about and visit the school. In October 2018, approximately 450 district eighth graders participated in the annual “Tour Day” event. Students toured our twenty-one vocational-technical areas and learned about the school’s challenging academic offerings and exciting athletic and extracurricular programs. Career Awareness Night offered interested students the opportunity to return in the evening with their family members to further explore the facilities and speak with staff members.

The Vocational Interest Program (V.I.P.) offers area seventh and eighth grade students the chance to visit Monty Tech after school and participate in hands-on learning experiences across a variety of vocational-technical areas. The program continued to attract a large number of students during the 2018-2019 school year, serving approximately 700 area students.

#### **Class of 2019 Awards**

Members of the Class of 2019 were awarded approximately \$200,000 in scholarships, tools, and equipment. The Monty Tech Foundation generously provided \$36,000 in scholarships to graduating seniors, ranging in amounts of \$500 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 38% of the graduating class of 2019 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 2018-2019, a great deal of effort was put forth by the School Committee, administration, and staff. The final fiscal year 2018-2019 Educational Plan totaled \$27,756,374 which represents a 3.2% increase over the 2017-2018 Educational Plan. The District's FY19 budget only exceeds the minimum spending required by Massachusetts General Law Chapter 70 by \$135,947 or .6%.

The District was audited in November 2019 as part of the yearly financial audit by the accounting firm of Melanson, Heath and Co. from Greenfield, MA and has received a very 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 2019, state and federal grant sources provided the school with \$945,083. Programs funded by these grants include: Essential Health Services, Social Intervention and Mediation, Improving Teacher Quality, Special Education Services and Program Improvement, Title I Support, Perkins Occupational Education, and Marine Corp Junior Reserve Officer Training. The District also received more than \$465,000 in competitive grants, including a Skills Capital Grant for \$385,000 to purchase equipment for new hospital beds, EKG machines and an Anatomage Table to benefit the Health Occupations and Practical Nursing programs as well as new diagnostic certification tools to benefit the Automotive Technology program. The District also received \$80,000 in funds to increase school safety. Using these allocation and competitive funds, the school was able to purchase a variety of instructional technology, equipment, and supplies to enhance the learning experience.

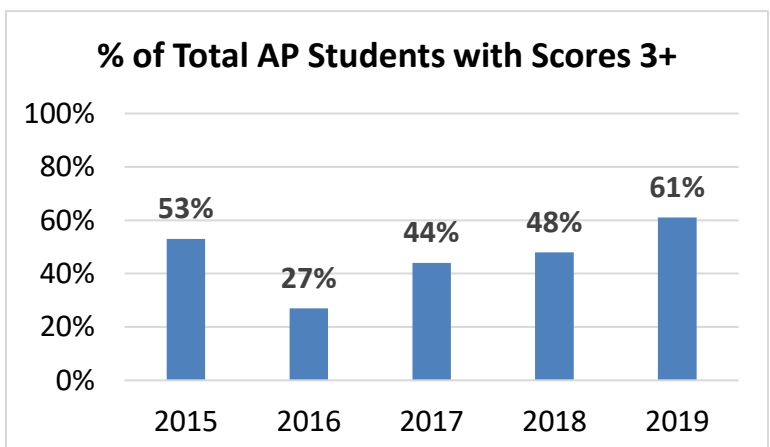
## **Academic Achievement**

During the spring of 2019, students at Montachusett Regional Vocational Technical School continued to demonstrate high academic achievement, earning commendable scores on the MCAS in English Language Arts, Mathematics, and Biology. This year, students completed the Next Generation MCAS - a computer-based test that is designed to give students a clear signal on whether they are on track for college and career readiness. The new standards are more rigorous than the standards for the Legacy MCAS. Monty Tech's passing rate on the English Language Arts was 99%, Mathematics 97%, Biology 99%. Monty Tech students exceeded the state averages in all 3 subjects. With regard to our Accountability status, Monty Tech has made "Substantial Progress Toward Meeting our Targets."

Monty Tech is committed to providing students with rigorous STEM learning opportunities, and so in recent years, the curriculum has been expanded to include Advanced Placement Programs (two English courses, two mathematics courses, two science courses, and one computer science course) and teachers have participated in meaningful, high-quality professional development which has enabled us to successfully implement two Project Lead the Way biomedical courses.

The school is in its 7th year of administering Advanced Placement exams, and students enrolled in AP courses continue to improve their performance. In the spring of 2019, 68 out of 111 students (61%) earned qualifying scores - the highest number of students with qualifying scores we've ever had. Of these students, 79 out of 146 "exams" (54%) earned qualifying scores - the highest number of qualifying exams we've ever had.

This year, more than half of the students who tested in the following subjects received qualifying scores: AP Computer Science Principles, AP Literature & Composition, AP Environmental Science, and AP



Language & Composition. The AP subject with the highest number of students with qualifying scores was AP Literature & Composition. It was also the AP subject with the most test takers with 31 students taking this exam. Students enrolled in AP Language & Composition, AP Environmental Science, and AP Computer Principles earned the highest (mean) average this year, compared to any prior year.

	Spring 2015 (SY14-15)	Spring 2016 (SY15-16)	Spring 2017 (SY16-17)	Spring 2018 (SY17-18)	Spring 2019 (SY18-19)
<b>MT AP Courses</b>	3	5	6	7	7
<b>MT AP Student Enrollment</b>	99	188	151	135	157
<b>Students with Qualifying Scores</b>	47 (53%)	39 (27%)	53 (44%)	46 (48%)	68 (61%)
<b>AP Test Takers</b>	89	145	120	95	111
<b>Total # of Qualifying Exams</b>	53 (46%)	44 (24%)	65 (44%)	58 (43%)	79 (54%)
<b>Total # of AP Exams</b>	116	187	148	134	146

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

Unlike students in traditional, comprehensive high schools, students at Monty Tech are asked to put their education into practice on a daily basis. Students across the twenty-one different vocational-technical education programs are building homes, reconstructing damaged properties, repairing service vehicles, making walkways more accessible, and performing countless community services.

The 2018-2019 school year was a busy one for our vocational educators, as each trade aimed to provide practical, hands-on learning experiences for our students, while helping to improve each of the eighteen member communities.

**Auto Body Collision Repair Technology:** The Monty Tech Auto Body shop benefited from new instructional equipment this year. A new silicon bronze MIG welder was added to the program, so that students continue to be trained in the industry's latest technologies. The shop floor was coated with a new epoxy flooring, and a new lift was installed and relocated to replace the old lift, updating and enhancing the instructional space. Three new Vacuum sanders were installed to keep the dust in the shop down, and four new shop benches were installed. In addition to the 80+ community service projects completed last year, students and instructors painted a sign for Hubbardston Council on Aging, as well as one of Monty Tech's vans. All Seniors received their EPA 6 H Certificate, I-Car Pro Level 1 in Refinishing and Non-Structural Repair Certification, and a SEM Plastic Repair Certificate. Six Seniors and two Juniors earned co-op placements, and one Senior traveled to Louisville, KY, competing in the SkillsUSA national competition in June 2018. A 2017 graduate of the program traveled to Russia to compete in the SkillsUSA World competition, where he placed an impressive 14<sup>th</sup>. (Total student enrollment: 63)

**Automotive Technology:** As in past years, the Monty Tech Automotive Technology program continues to service a variety of vehicles. Over 400 vehicles were serviced and repaired during the 2018-2019 school year, including vehicles brought in by faculty, staff, public, school and students. Students performed repairs that will prepare them for the workplace, such as timing belts, electronic diagnostics, intake manifold gaskets, brake work and various other technical repairs. The program was awarded approximately \$200,000 from the FY20 Massachusetts Capital Skills grant program, and will use those funds to provide a more comprehensive electrical and electronics training curriculum. Two Snap-On NC3 certification programs have been added, including digital multimeters and scan tool application. Nine students earned co-op placements throughout the school year, which is a testament to the strength of the program. The Monty Tech Automotive Technology program continues to be the area's premier workforce pipeline for automotive dealerships and businesses. For those students who plan to pursue advanced training, we have updated articulation agreements with 3 colleges/universities, as well as the 15 community colleges across Massachusetts. Over the last few years, our students

have received more than \$28,000 in scholarships to attend University of Northwestern Ohio, and in 2018-2019, a Junior placed 1st in the UNOH nationwide scholarship testing, earning a \$5,000 scholarship. (Total student enrollment: 60)

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 9 modules and earned a financial literacy certificate. As a member of the Massachusetts Schools Bank Association through the Federal Reserve Bank of Boston, Monty Tech students are able to compete in the Banking Bowl and Marketing Competitions. Workers Credit Union has also purchased a conference table, 6 chairs, and 2 new white boards to support the program. Instructors, in collaboration with their post-secondary colleagues, continue to refine and develop new articulation agreements. These agreements with Mount Wachusett Community College and Keene State 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 and 12 credits from Keene State. Opportunities to demonstrate customer service, cash handling, and accounting skills are ever-present as the Business Technology students successfully operate an in-house retail location, The Gear House School Store, and the Monty Tech Greenhouse. Eleven Seniors and four Juniors were out on co-op placements during the 2018-2019 school year. (Total student enrollment: 80)

Cabinetmaking: Students and instructors in the school's Cabinetmaking program continue to spent time during the 2018-2019 school year manufacturing, assembling and installing maple benches for the Veterinary Science training center. Sophomore students crafted 400 pine beverage caddy's for the 2019 Superintendent's Dinner. Using reclaimed maple trees cut from the site of the new science wing, Cabinetmaking students fabricated furniture for Mount Wachusett Community College. Students and instructors also completed projects throughout the school and surrounding communities, to include: work tables and cabinet storage units for Graphic Communications, a large quilt display cabinet and storage for the Ashby Public Library, and custom built oak cabinets for CAD/Drafting & Design. To support a recent graduate who now attends WPI, students cut out multiple pieces on the CNC, which will be used in a solar decathlon project in Morocco. A total of 18 students (11 seniors and 7 juniors) earned co-op placements; making this the highest number of students out on Co-op in the program's history. (Total student enrollment: 66)

CAD/Drafting & Design: The Monty Tech CAD/Drafting & Design program is increasingly busy each year with outside projects, completing miscellaneous signs and banners for community sports events, craft fairs, and non-profit events. Students also played an instrumental role in 2019 Superintendent's Dinner, designing the layout and décor for this annual fundraising event, and ended the year by designing and installing signage throughout the building for the 2019 graduation exercises. A total of four students (one junior and three seniors) were on Co-op placements, working and learning in area businesses. Four students advanced to the SkillsUSA States competition, representing the program well. With funds awarded from the FY20 Skills Capital Grant, instructors created an all-new instructional space. The new fabrication lab includes equipment to support lessons in 3D printing, 3D scanning, Injection Molding, CNC work and laser cutting. Over the course of the 2018-2019 school year, CAD/Drafting & Design students achieved over 100 industry-recognized certifications in AutoCAD, Inventor, Revit, and Solidworks. 2018-2019 was the most successful year for certifications due to the introduction of SolidProfessor, an online curriculum that was made possible by Perkins grant funding. (Total student enrollment: 58)

Cosmetology: The Monty Tech Cosmetology program students and instructors provided numerous community services, including basic manicures to the residents at Heywood Wakefield Commons. Seniors and Juniors volunteered to be elves for the Wreaths Across America convoy celebration, where they did face painting, braids, and nail polish applications. The Freshman and Sophomore teachers have implemented Schoology this year, which will benefit both staff and students as they transition to Junior and Senior years. The Junior class held four fundraising events, donating \$2,300.00 to the Ava Roy Assistance Fund and raising funds so that they could travel to New York's International Hair show. Finally, for the third consecutive year, every senior successfully passed the Massachusetts Cosmetology State Boards, earning licenses to practice. (Total student enrollment: 87)

Culinary Arts: Monty Tech Culinary Arts students and instructors are always busy with the daily operation of the Mountain Room Restaurant, which is open for lunch from 11:30 am to 1:00 pm Monday through Friday. In addition to operating a full-service restaurant and bakery, serving 90-120 patrons daily, culinary students showcase their talents throughout the year, providing outstanding service at events that include the following: two Program Advisory Committee dinner meetings, four Monty Tech Foundation breakfasts, Monty Tech's Retirees holiday luncheon, a

graduation reception, the Women in Technology event, Principal and Counselors' Day, the Monty Tech homecoming dance, MAVA meetings, all School Committee meetings and sub-committee meetings, the Gardner AARP luncheon and the MHCC volunteer luncheon. Community service opportunities for students are always a highlight, and this year our students prepared meals for Our Father's House (Fitchburg), and NEADS (Princeton) events. Students and instructors also prepared and donated pastry and baked goods to the House of Peace and Education in Gardner. The program's greatest undertaking is always the Annual Superintendent's Dinner scholarship fundraiser, during which students work side-by-side with some of the area's finest chefs, preparing a six-course dinner with extensive hors d'oeuvres for more than three hundred guests. Culinary Arts students value industry-recognized credentials, and were proud to earn Allergen Awareness and ServSafe Certifications. Senior students also competed in the SkillsUSA Meal Ready to eat challenge at the Framingham Armory. (Total student enrollment: 95)

Dental Assisting: A critical component of the Monty Tech Dental Assisting curriculum is the preparation for the Dental Assisting National Board certification exams. In 2018-2019, every sophomore passed the DANB Infection Control exam, and every senior passed the DANB Radiology exam. All Seniors exposed 2 full mouth series on patients at their externship sites to meet the new requirements for the state. Two Seniors earned co-op placements, while the remaining 13 students participated in affiliation/externship experiences in area dental clinics and offices. Students and instructors welcomed Community Health Connections, a school-based dental hygiene program, and provided dental services to more than 60 students in need. Students were given valuable hands-on experience, assisting the staff from CHC during each dental procedure performed. Sophomore students provided dental education to students at Winchendon Memorial Elementary School and Meetinghouse Elementary School in Westminster, while four juniors assisted with the Kid Seal Program at Quinsigamond Community College. A new vacuum pump, which can be used by all four dental chairs, was purchased, as well as all new CPR manikins with feedback devices. (Total student enrollment: 61)

Early Childhood Education: Students and instructors in the Monty Tech Early Childhood Education program are committed to community service activities, and the 2018-2019 school year was no exception. In addition to studying early education and care concepts, students worked collaboratively to raise funds for Lucy's Love Bus, an agency that provides grants for children with cancer that are not covered by health insurance, as well as as SkillsUSA Change for Children. They provided gifts for children at Cleghorn Neighborhood Center, and organized a "Diaper Drive" for the Gardner VNA Diaper Pantry, which resulted in more than 1,200 diapers being collected and delivered to this important community service agency. Twelve outstanding program graduates earned their CDA (Child Development Associate) credential. The Monty Tech Child Care Center continues to operate at full capacity, providing meaningful hands-on learning opportunities for all students in the Early Childhood Education program. (Total student enrollment: 60)

Electrical: Throughout 2018-2019, students and instructors in the Electrical program wired numerous machines, equipment, computers, and lights throughout Monty Tech. Students and instructors successfully completed wiring equipment in the HVAC shop including six new welding stations, four new boilers, numerous outside condenser units, and all associated controls, as well as the school's new Automation, Robotics, and Mechatronics (ARM) Lab. With the completion of this new instructional space, instructors have written new curriculum, and are rolling out lessons in PLC (programmable logic controller) programming and associated wiring. This added element will increase the employability of Electrical students and graduates. The teacher station was also remodeled to improve shop tool use and organization, bringing the most utilized tools together. Nine seniors and four juniors earned Co-op placements. (Total student enrollment: 83)

Engineering Technology: The Engineering Technology program at Monty Tech is a rigorous program, infused with 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. In addition, all freshmen completed the OSHA 10-hour General Industry training. Three Seniors earned Co-op placements. New technology was added to the training program, including a Xerox Versalink C7020 multifunction color printer, three Amatrol table top mechnronics learning systems with pegasus robot, one Fanuc LR Mate 200ID/4S robot, one Festo MPS 203 Mechtronics system, and one StratasysF270 3D printer. (Total student enrollment: 51)

Graphic Communications: Throughout the 2018-2019 school year, the students in Monty Tech's Graphic Communications shop produced numerous projects for our district cities and towns, and a variety of non-profit organizations in the district. In total, students successfully produced approximately 400 orders, saving cities, towns and non-profit organizations more than \$200,000. The program welcomed 22 freshmen students into a shop that was recently



remodeled, and enhanced with new technology to include a printmaster press, a perfect binding machine, dye sublimation and all new Xerox copiers for our copy center. Three motivated students pursued and earned Co-op placements. Of the 21 talented seniors who graduated from the Graphic Communication program, 14 were accepted into colleges/universities and 8 chose to enter the workforce in related careers. (Total student enrollment: 86)

Health Occupations: The Health Occupations program at Monty Tech continues to educate a large number of students, providing a rigorous education grounded in current medical knowledge and practice. A unique collaboration with Mount Wachusett Community College enables Senior students to participate in an Emergency Medical Technician training program, earning eight college credits at no cost; 13 Seniors completed the EMT Course in 2018-2019. In addition, 12 seniors earned co-op placements, and 17 seniors received their National Clinical Medical Assistant certificate. Every junior enrolled in the Health Occupations program earned CPR certification; 24 juniors received their nursing assistant certificate, as well as a certificate in “A Habilitation Training Curriculum” from the Alzheimer's Association. Students and instructors are particularly invested in community service, and as a result, students hand-made veteran's day cards and sent them to the Bedford VA Hospital, bought gifts and clothing for the Fitchburg Community Christmas party, hosted an American Red Cross Blood drive, and held a “Baby Shower” benefiting Battered Women's Resources, Inc. (Total student enrollment: 106)

House Carpentry: Monty Tech’s House Carpentry program supported a number of community organizations during the 2018-2019 school year, by building and installing two walls in Graphic Communications, stripping and re-roofing a section of the roof at Princeton Town Hall, building a carriage house for NEADS in Princeton, building a lean-to roof at Hubbardston DPW to cover sand and salt, rebuilding the ceiling in the weight room in the gym, and expanding the bathroom at the Lunenburg Town Hall. Students also handcrafted countless Adirondack chairs for charitable donations. A total of ten students (nine seniors and one junior) earned co-op placements throughout the school year, while all sophomore students successfully completed the OSHA 10-hour Construction training, which enables the students to work on outside projects and qualifies them for the school’s popular co-op program in their junior year of study. (Total student enrollment: 63)

HVAC & Property Maintenance: Students and instructors in the HVAC & Property Maintenance program were awarded grant money to develop an oil burner technician training program, in partnership with Monty Tech’s Continuing Education Department. Students completed a beneficial shop remodel, installing new oil burner training modules to be used by both day and evening students. New boiler and furnace lab space was completed, providing students with additional “hands-on” learning experiences while remaining in shop. The tool crib was also reconfigured, and a new shop position was created, Service & Parts Manager, to reflect the requirements in the industry. Students working as the shop managers are tasked with keeping accurate records of all material being used in shop and recording them on a shared google document. New welding stations are up and running, an effort made possible by the school’s Electrical, Welding, and the Auto Body Collision shops. Electrical wired everything including the state of the art variable speed exhaust fan. Welding built the benches and installed the exhaust hood, and Auto Body painted the work stations. The outside rack for the air conditioners is now complete and being used, and three new stations for furnaces, air conditioning split systems and the new oil supply tank are securely maintained in that space. Students earned National EPA Certification for refrigerant recovery, and a total of ten students (six seniors and four juniors) were placed in area businesses through the school’s popular co-op program. (Total student enrollment: 60)

Information Technology: The Information Technology program continues to offer students more industry-recognized certificates than any other program at Monty Tech. It is an accomplishment our instructors are so proud of, as these certifications affirm the technical skill proficiency needed for so many entry-level careers in networking and information technology. All Freshmen completed the OSHA 10-hour General Industry training and VEX Robot Certification. All Sophomores passed the IC3 Certificate Exam for basic computer hardware, software, and internet knowledge and skills, as well as the Test-out PC Pro Certificate exam, the Cisco IT Essential course for computer repair and maintenance, and the Introduction to Networking course. One sophomore, one junior, and one Senior passed the COMPTIA A+ exam. All Juniors sat for the CIW Advanced HTML5 & CSS3 Certification exams in June, in addition to the Cyber Security Operations Final Exam. Seniors completed the Python Programming course and participated in the AP Computer Science Principles course, which resulted in nine students earning qualifying scores. Four students earned co-op placements, applying their technical skills in area businesses. In total, more than 400 hours of community tech support were completed, which involved hardware and software troubleshooting on desktops, laptops, printers, and mobile devices. (Total student enrollment: 41)

Machine Technology: Throughout the 2018-2019 school year, instructors were able to train Machine Technology students in precision measurement, and granted more than 300 certifications to students accordingly. All new CNC and new cutter technology was used, and a new print reading curriculum was introduced. All freshmen received their OSHA 10-hour general industry certification, while all Seniors and six juniors earned co-op placements, working and learning in area machine shops. Machine Technology students and instructors also completed a number of outside projects, which included engraving school plaques, and assisting Athol High School with teaching and certifying students in NC3 Precision Measuring Instruments. (Total student enrollment: 45)

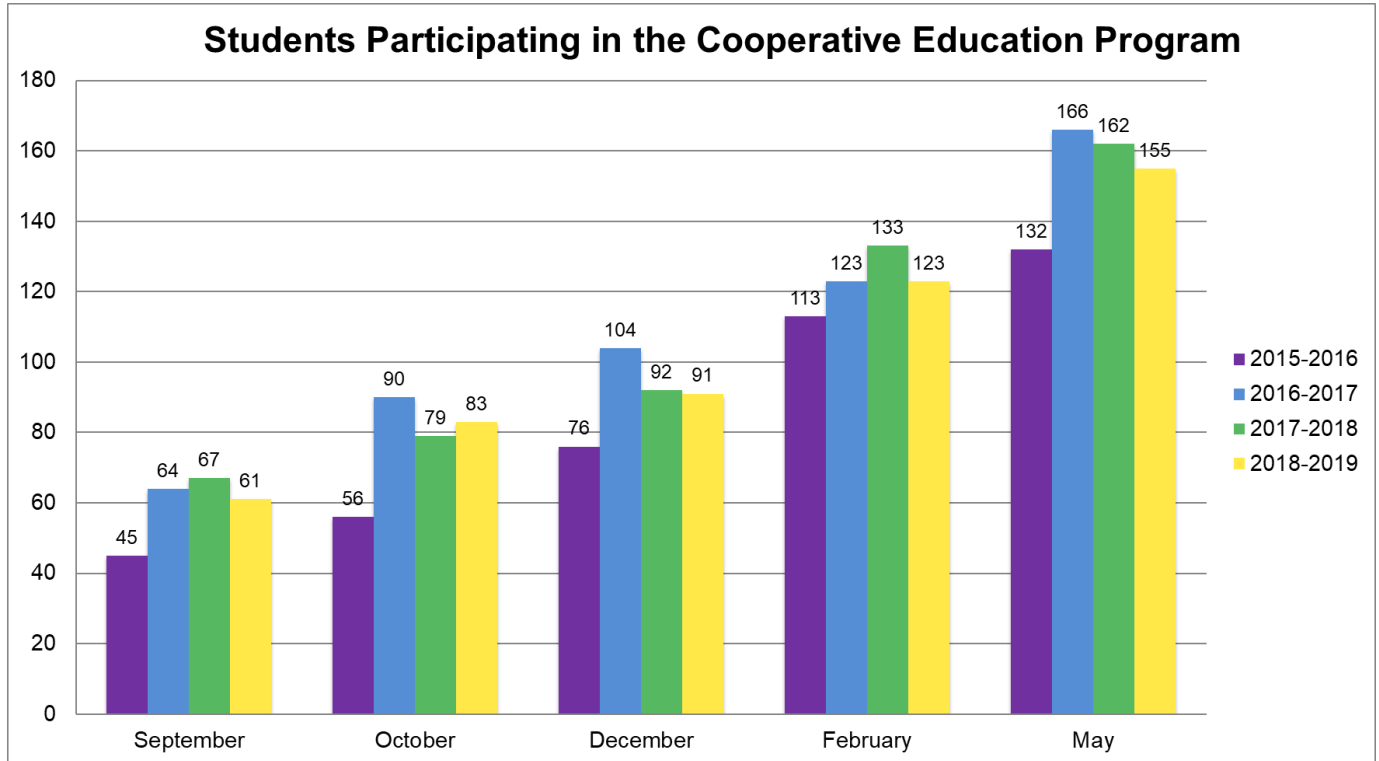
Masonry: The talents of Monty Tech Masonry students are on display throughout the district, as projects that were completed this year to include: installation of a concrete walk for the LUK Organization, stone veneer inside the offices at NEADS, stone veneer and paver sidewalk at the garage at Monty Tech, repairing a marble floor in the mausoleum at Fitchburg's Forest Hill Cemetery, repair of stone steps at the gazebo on Fitchburg's Upper Common, installation of a handicap ramp at Saima Park, as well as several projects around the school. Students continued to maintain the OSHA silica standard, in a program that operates in compliance with trade regulations. The Masonry program also benefitted from new equipment, dust free saws and grinders. Five seniors and two juniors earned co-op placements, and continued to refine their skills working with business partners through the school's co-op program. (Total student enrollment: 61)

Plumbing: The 2018-2019 school year saw 19 freshmen enter the Plumbing trade at Monty Tech., all of whom successfully completed OSHA 10-hour General Industry safety training, while the sophomores completed OSHA 10-hour Construction Training. Seniors earned the Mega-Press certification, while the sophomores attended training in PEX Piping Systems at the Viega training facility in Nashua, NH. Students and instructors worked at the Bresnahan Scout & Community Center in Ashburnham, installing sinks in the kitchen area, and finishing a bathroom. A bathroom was also remodeled for the Town of Lunenburg, making that space ADA compliant for those attended important town meetings. Students and staff spent time in Winchendon, installing water filters at Memorial, and replacing water coolers at Murdock, Memorial and Toy Town Elementary. A bathtub was replaced with a shower stall & grab bars for the Gardner Habitat for Humanities house, to aid a homeowner with disabilities. Compressed air service lines were installed in the school's new ARM lab, and countless maintenance issues were attended to throughout the building. Eight seniors and one junior participated in the co-op program. One Senior received the 2019 Vocational Tech Plumbing All Star Award given by the Plumbing, Heating, and Cooling Contractors Association of Massachusetts, while another was recognized by the Central Mass Plumbing & Gas Inspectors Association – awards that will help these talented graduates as they pursue advanced training in the field. (Total student enrollment: 71)

Veterinary Science: 2018-2019 marked a very special year for the school's newest vocational training program, veterinary Science. Students and instructors were moved in to the new training center, taking every advantage the new 7,500 sq. ft. state-of-the-art facility could provide. After another successful exploratory program, 22 students were accepted into the program and are proud to be Monty Tech's 2nd class of Veterinary Science students. All freshmen completed the OSHA 10-hour healthcare training, and spent the second semester engaged in introductory animal science lessons, as well as a number of valuable field trips to support the new curriculum, with trips to: UMASS Amherst to study Equine Reproduction Medicine, and Lilac Hedge Farm and Jordan's Dairy to observe agricultural production facilities in Massachusetts. Sophomores worked through some very challenging curriculum, covering units in client services, hospital management, anatomy, pathology and laboratory procedures. They visited Flying High Farm in Lunenburg to work with horses and complete the program's large animal requirements, and also toured Idexx laboratories in North Grafton, MA to observe all aspects of clinical pathology. All sophomores gained certification in Fear Free Handling, an industry recognized achievement which will open doors for them throughout the area. (Total student enrollment: 44)

Welding/Metal Fabrication: The 2018-2019 school year brought new equipment - a 4 ft Squaring Shear - to the students in the school's Welding/Metal Fabrication program. 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. All freshmen students successfully completed the OSHA 10-hour General Industry training, and instructors implemented new online curriculum for the Junior related theory class. Seniors competed in the Notch Mechanical pipe welding competition, and eight upperclassmen (four seniors and four juniors) were placed in area shops, working and learning from trade professionals who support the school's co-op program. (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 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. During the 2018-2019 school year, approximately 22.4% of qualified students (Juniors and Seniors) earned Co-op placements, working, learning and applying their technical skills related in area businesses.

## Student Support Services

During the 2018-2019 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 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. 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.

### **Technology**

The 2018-2019 school year marked the end of the first 3-year lease for the school's popular 1:1 Chromebook initiative. Students and instructors have expanded access to instruction through the use of this important technology. To support this effort, the District's Technology Department spent countless hours during the school year upgrading the network to include new switches, wireless access points, fiber lines, and firewall.

Department personnel upgraded the learning experience for students, reconfiguring the Engineering Technology shop with all new HP Z stations and eight Z book laptops, and installing ten new SMART boards throughout the school. To complement the Google classroom experience, the Monty Tech Technology Department added Schoology to the list of its many resources and supports for instructors. The District's Instructional Technologist and four academic instructors attended the annual Schoology Conference, with the goal of identifying new solutions, technologies, and best practices that will enhance the school's technology-driven approach to education.

To support these expanded technology needs, Monty Tech successfully completed a number of necessary infrastructure upgrades, using federal e-rate dollars totaling \$116,511. The school's external bandwidth speeds have been increased to 2.5 GB and internal bandwidth to 10GB to better ensure continued connectivity and speeds appropriate with a high-use learning community.

### **Marine Corps JROTC**

The Monty Tech Marine Corps Junior Reserve Officer Training Corps (MCJROTC) had a productive 2018-2019 school year. The Cadet Corps stood a formal Inspector General inspection and achieved a "Mission Ready" grade, and due to outstanding performance throughout the year, Monty Tech's Marine Corps Junior Reserve Officers' Training Corps program was 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. Region 1 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*

Because of this distinction, Monty Tech MJROTC instructors are allowed to nominate up to six cadets to each of the three service academies — U.S. Naval Academy, U.S. Military Academy and U.S. Air Force Academy. This is the 8<sup>th</sup> time the program has earned this distinction since 2007.



The Monty Tech JROTC Cadet Corps was honored to once again host the Wreaths Across America Convoy with a remembrance ceremony as it made its way down to Arlington National Cemetery.

The Cyber Security Team received national recognition by securing a place to compete in the Air Force Association's National Cyber Security Competition held in Baltimore, MD, for the ninth consecutive year. The competition field began with over 1900 hundred teams battling for just 13 seats, and Monty Tech placed 5<sup>th</sup> in the highly competitive field in the all service division.

The 2018-2019 Corps of Cadets completed over 9,600 hours of community service, conducting a major food drive with United Way, completing a 10 mile March A Thon that raised \$21,000 in support of NEADS, and spending five weekends working with the local Salvation Army helping to raise over \$21,000 for needy families. The Monty Tech Cadet Corps provided 31 Color Guards for local civic and veteran ceremonies, and supported 19 community service projects throughout North Central Massachusetts. Through civic engagement and veteran affiliation, our Cadets received more than \$180,000 dollars in scholarships.

### **Student Athletics**

The Monty Tech athletic program was proud to provide meaningful extracurricular activities to more than 500 students during the 2018 – 2019 school year, participating on our freshmen, junior varsity, or varsity teams. Fourteen teams competed in the fall 2018, thirteen during the winter season and 11 representing the school in the spring of 2019.

The varsity football team showed some improvement on the season, ending with a record of 3-8 and an eye toward the future. The Varsity Boys Soccer team finished the regular season with an 11 – 5 – 2 record, led by Rubelsi Moran who had 22 goals and 8 assists on the season. The young JV Boys team was 4 – 5 – 2, and looks to have a promising future. The Varsity Girls Soccer team finished at 7 – 9 – 2 missing the playoffs by only one win. The JV Girls Soccer team was 9 – 4 – 1 and will help the varsity in the future years. The Varsity Field Hockey team was 8 – 10, while the JV Field Hockey team finished with a 4 – 4 – 1 record, with all freshmen and sophomores on the roster. The Varsity Golf team struggled a bit, but finished with a 4 – 8 - 1 record. The JV golf players continued to work on their game and participated in some JV tournaments and some official matches. The Varsity Girls Volleyball team finished at 4 – 16, while the JV Girls were 8 – 7. The Varsity Boys Cross Country team was 8 – 1, finishing an impressive 2<sup>nd</sup> place in the Colonial Athletic League. Unfortunately, the Girls Cross country program could not recruit enough girls to compete as a team, but the two female seniors competed with the boys throughout the season.

The Boys Varsity Basketball team finished with a 5 – 15 record; the JV team finished with a record of 7 – 11 and looks forward to sending some talented players to the Varsity team next year. The Varsity Girls Basketball team had the best campaign in school history, finishing with an impressive 17 – 3 record and winning the Colonial Athletic League Championship. They continued the season, winning the State Vocational Tournament, beating Bay Path, 65 – 37 and Blackstone Valley Tech 51 – 40 in the Championship game. They won three straight games in the Central Mass Division IV tournament over Quaboag, 64 – 59, Douglas, 62 – 35 and Blackstone Valley Tech 61 – 44, and defeated Maynard in the Finals, winning the first District Championship for girls basketball 56-49. They moved on to the State Tournament where they played Hopkins Academy in the Semi-Finals, losing 55 – 48. Two seniors, Erica Regan and Emily St. Thomas each reached 1000 points for their career in early February. Emily now holds the school record for points. The JV Girls also enjoyed a strong season, finishing 15 – 3, and hope to see some strong players advance to the Varsity level next year. The Wrestling team competed in a number of tournaments, where standout athlete Isiac Paulino won 40 matches; as a freshman he is well on his way to 100 career wins. The Boys Indoor Track and Field team was 3 – 5 and the Girls team 0 -8 as they look to improve for the spring season. The Varsity Boys Ice Hockey team was 6 – 10 – 4, and the Girls Ice Hockey team continues to improve each year, graduating only 2 players and expecting at least five to return.

Due to poor field conditions the baseball teams have been unable to play their home games at Monty Tech, but have continued to represent the District well. The Varsity Baseball team was 9 – 11, qualifying for the post season tournament by winning the CAL Small School division. They lost to Uxbridge 3 -0 in a hard fought game. The JV team finished the season with a record of 5 – 7 and the Freshmen with a record of 2 – 5. The Varsity Softball team continues to excel,

finishing 2<sup>nd</sup> in the Colonial Athletic League with a record of 14 – 6 in the regular season, and winning the first two games in the Districts to advance to the District Semi-Finals. The talented team beat AMSA, 12 – 6 and Narragansett 10 – 6 before losing to Millbury 12 - 2. The JV Girls Softball team was also impressive, finishing 9 – 4 on the season, and should provide some talented players to future teams. Boys Varsity Lacrosse finished with a 5 – 13 record and the JV played hard throughout the season. The Varsity Girls Lacrosse team was 7 – 12, an improvement over last year and finished 3<sup>rd</sup> in the Colonial Athletic league, while the JV team finished with an outstanding record of 14 - 3. The Boys and Girls Track & Field teams both saw an increase in participation, and finished strong with records of 4 – 5 (boys) and 4 – 9 (girls).

Congratulations to the Outstanding Male and Female athletes for 2018-2019, Connor Dandy and Cassie Skinner.

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

The Monty Tech School of Continuing Education continues to update and add courses that emphasize a commitment to excellence by offering affordable, quality, and enjoyable educational experiences. For the Fall of 2018, Monty Tech offered 130 classes with 980 registrations and during the Spring 2019 semester; there were 102 post-graduate and continuing studies courses, with 793 registrations.

The program is on track to support the North Central Massachusetts workforce readiness pipeline with an increase in career and licensure courses. The students earn industry-recognized credentials, and participate in externships to support the hands-on learning component. We continue to increase our small business partnerships, and the number and quality of personal enrichment classes – sewing, knitting, acrylic painting and glass fusing, to name a few. Catalog distribution has more than doubled, from 80,000 to 170,000 copies, and the relatively new online registration feature continues to add value to our students and instructors.

In Spring 2019, we offered an all-new Oil Burner Technician certification prep course. Students in the newly established the 120- hour program trained on new boilers and burners, and upon completion earned the opportunity to sit for the oil burner technician state licensing exam. This course provides our community members with a high quality, affordable entry into a viable career pathway. We have also added an EPA 608 certification course to benefit students in the HVAC industry.

Our medical course offerings now include Pharmacy Technician, Certified Medical Billing and Coding, EKG, Phlebotomy, Certified Nurse Aide, Patient Care Tech, and Medical Terminology.

The continued success and sustainability of an adult education program is based on hiring quality instructors and meeting the needs of the community and supporting workforce development. Our goals in the coming year include identifying additional training opportunities to meet the needs of the regional workforce, provide affordable and meaningful training opportunities to our nontraditional student population, and expanding programming to include off-site, daytime training opportunities across the region.

### **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 27, 2019 a graduating class of 28 students completed the Practical Nursing Program and entered the nursing profession. The class achieved a pass rate of 96%, with 27 of the 28 graduates passing the NCLEX-PN exam (National Council Licensure Examination for Practical Nurses). One graduate will pursue the examination in the coming months.

All of the 2019 graduates are currently employed in the health care profession throughout Massachusetts, and many are working within the eighteen cities and towns of the Monty Tech school district as Licensed Practical Nurses 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. Several 2019 graduates are pursuing seats in the LPN to BSN program at FSU and will be continuing their education to the Bachelors in Nursing. 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 5-year history of the Bridge Program, all of Monty Tech’s Practical Nursing graduates reaching graduation at FSU have passed their RNNCLEX exam.

Monty Tech Practical Nursing students are now completing patient scenarios in the Sim Lab on a weekly basis in Terms 2, 3, and 4. The Faculty Sim team has implemented National League of Nursing (NLN) patient scenarios and authored several others consistent with our curriculum frameworks, and have also utilized the Sim lab setting to instruct students in developing nursing skills that they may not be experiencing in the clinical setting. Instructors have successfully developed and implemented a library of scenarios reflecting INASCAL Standards (International Association for Clinical Simulation and Learning).

In Maternity Sim Lab Boot Camp, students utilize the new simulation models to imitate the birthing process, from obstetric office visits through labor and common post-partum complications. Well newborn care is also taught. Student feedback has been positive regarding these new 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. Having a clinical rotation at AdCare Hospital in Worcester, and performing simulation scenarios involving substance abuse clients, has better prepared our graduates to work in a substance abuse clinical setting, as well.

We are expecting an accreditation visit from the Massachusetts Board of Registration in Nursing this year. Our goals include stabilization of faculty positions, securing a certified Simulation Instructor, and pursuance of ACEN (Accreditation Commission for Education in Nursing) or other accreditation status to more accurately reflect the changing environment of nursing education.

### **Looking Ahead**

While the Montachusett Regional Vocational Technical School District educational community is certainly proud of the achievements of our talented students, faculty, and staff, we continue to have an eye toward the future, always committed to improving our vocational and academic programming, strengthening key partnerships, and maintaining facilities that contribute to student success and achievement. As we look ahead, there are a number of programs and initiatives that we expect will have a positive impact on our school and students for years to come.

Expand Health Occupations program to include vital diagnostics: Monty Tech was awarded a generous \$385,000 Skills Capital Grant, a portion of which will benefit the staff and students of the Health Occupations program. To better prepare our graduates for a variety of careers in the health sector, the school will purchase new diagnostic equipment to train students in the proper procedures for testing for cholesterol, blood sugar, lead, lung volume, and more. In addition, the program will receive state-of-the-art virtual dissection technology, bringing lessons in anatomy and physiology to new heights. This equipment, provided by Anatomage and most often found on college campuses, is expected to engage students and bring a deeper level of knowledge and understanding to students as they explore the human body and its complex systems.

Celebrate the completion of an all-new Automotive Technology simulation lab: The \$385,000 Skills Capital Grant award will also fund an all-new Automotive Technology simulation lab, which will include the latest technology in trainers and simulators aligned with NATEF standards. At Monty Tech, students are presented with countless opportunities to earn industry-recognized credentials. These certifications are not only a testament to the skills they have developed

while enrolled at Monty Tech, but also will ensure our graduates are more employable upon graduation. To that end, the Monty Tech Automotive Technology instructors have proposed adding NC3 Automotive Diagnostic Certifications to the program. In partnership with Snap On Tools, Monty Tech will now present students with a more sophisticated technical training program and opportunities to earn all-new diagnostic credentials, validating their experience and ability to diagnose and service today's computer-controlled vehicles. In addition, the program will also receive new automotive lifts, floor jacks, engine stands, chargers and an air table, to ensure students are trained on equipment that will prepare them for careers in the automotive industry.

Roll out affordable veterinary care services in the school's new veterinary clinic: A project more than 7 years in the making, the Monty Tech Veterinary Clinic is now open, providing affordable veterinary care to pets across the region. The rollout of services continues throughout the 2019-2020 school year, with routine wellness care visits, affordable medications and vaccinations, diagnostic services, primary care surgical services, stable urgent care, compassionate end of life care, and dentistry. Monty Tech is proud to offer veterinary care services to families with valid EBT cards (food stamps) residing in the Monty Tech District. The 7,500 sq. ft. clinic also houses a grooming salon, preparing students for yet another high-demand animal care occupation. There are no eligibility requirements to receive services in the Grooming Salon.

### *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 2018-2019 School Committee for their outstanding service.

Brian J. Walker, Fitchburg  
*Chair*

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*Vice Chair*

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John Columbus, Templeton

Ross Barber, Westminster

Dr. Maureen Ward, Winchendon



Respectfully Submitted By:

Sheila M. Harrity, Ed.D., Superintendent-Director    January 24, 2020

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