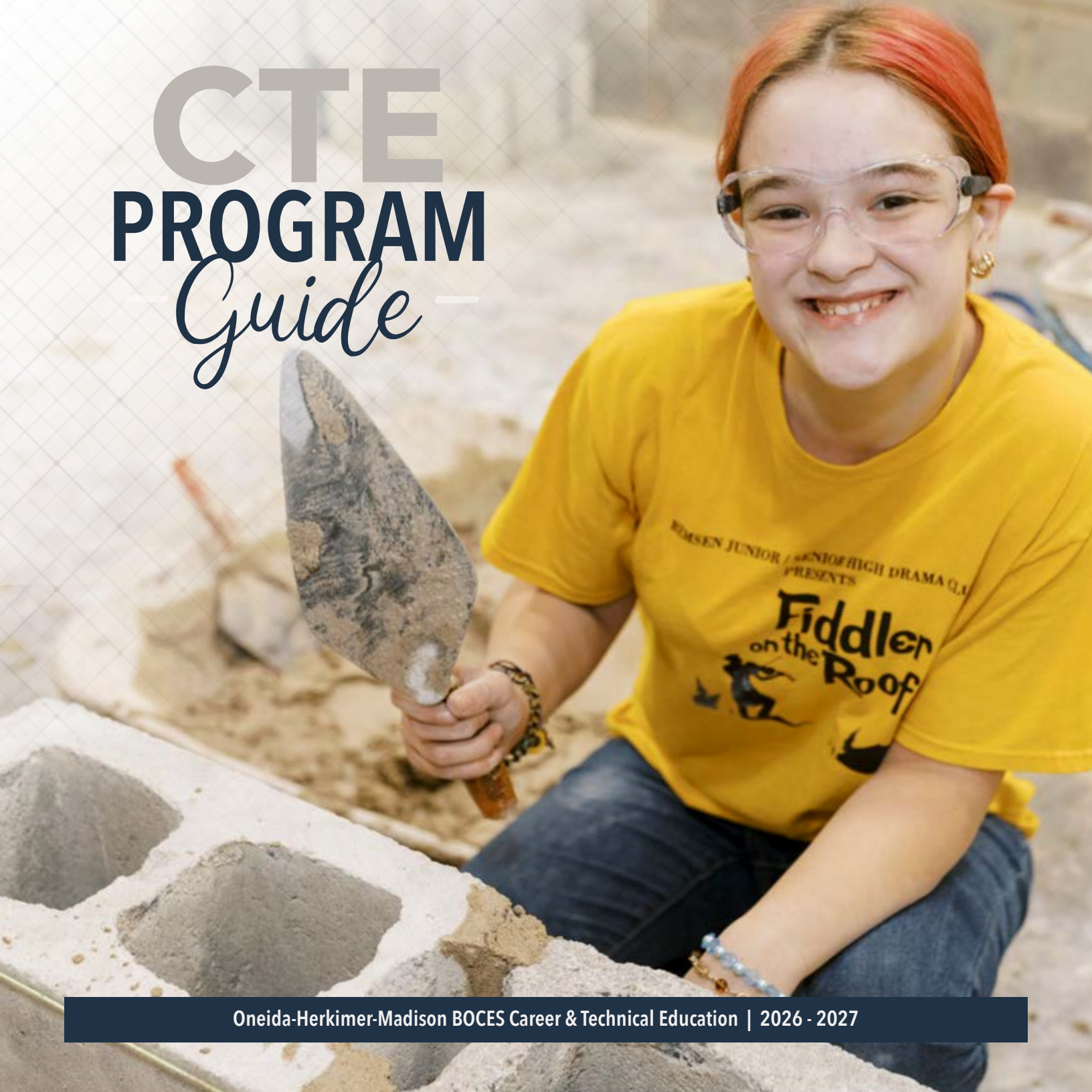
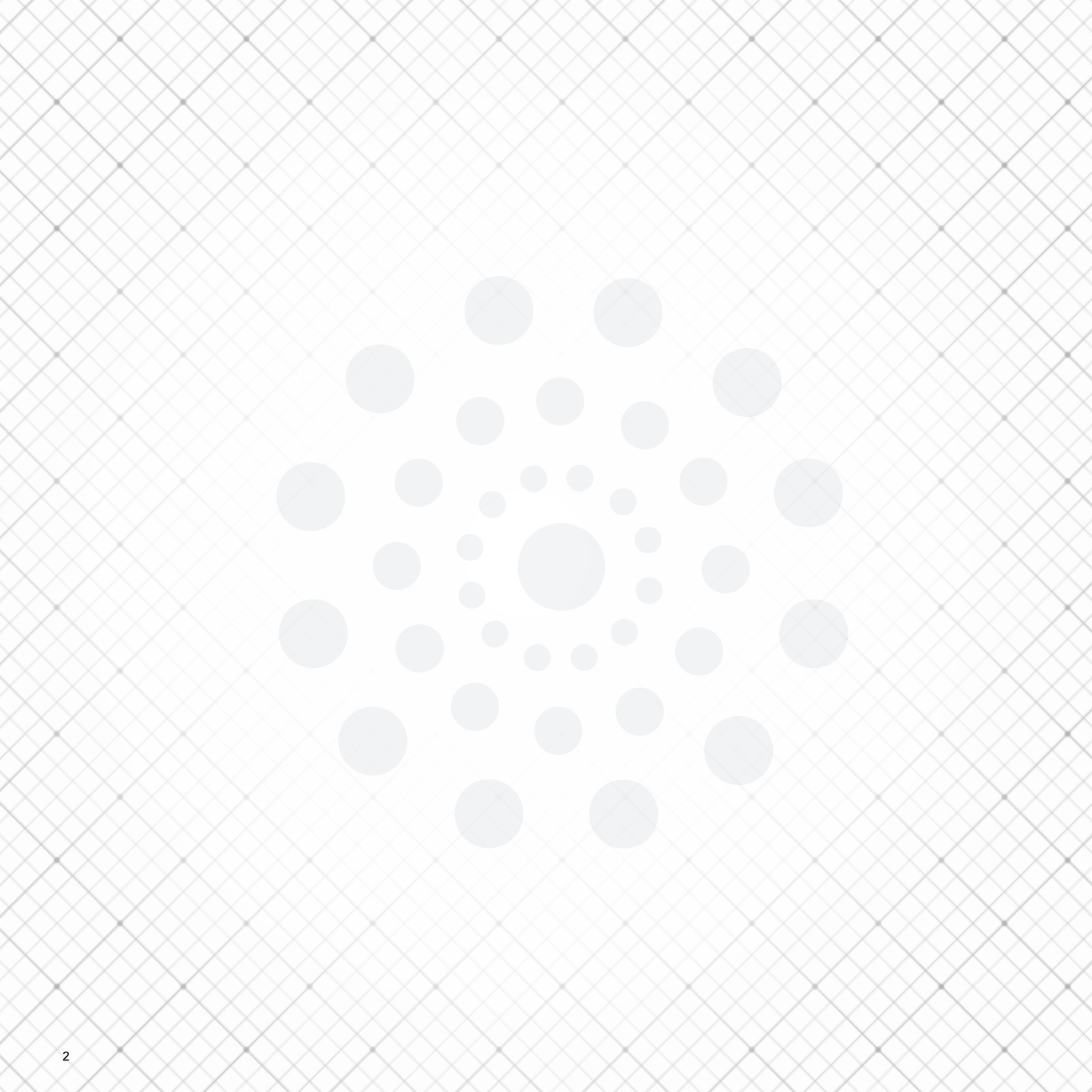


# CTE PROGRAM *Guide*





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# *Career and Technical* EDUCATION CENTER

*Career and Technical Education Center programs prepare students for high wage, high demand careers and postsecondary education through the development of technical and transferable skills. Students enroll for two years in most programs to increase their college and employment potential after high school. However, students do have the option of enrolling in a program for one year.*

*Students attend a half day in their Career and Technical Education Center program and a half day at their home school. Working with state-of-the-art equipment, students apply theory to a wide range of real-life work assignments in the school's shops and laboratories. We emphasize a positive mindset, employability skills and career research to prepare students for college and career readiness.*

*For more information, contact your school counselor, call us at 315.793.8666 or visit our website at [www.oneida-boces.org/ctec](http://www.oneida-boces.org/ctec) to take a virtual tour and hear student testimonials regarding our outstanding programs!*

# What can the Career & Technical Education Center offer you?

The demand for career and technical education students has surged over the last few years. These students will be met with a wealth of new opportunities. In the Mohawk Valley alone, according to the New York State Department of Labor, by 2030, there will be a 20-30% increase in the number of employment opportunities that align with many of the trades in the CTE programs at Oneida-Herkimer-Madison BOCES. These programs, taught by industry expert teachers, proudly serve our region.

For CTE students, the opportunities don't end at OHM BOCES. All of our traditional CTE programming is tied to higher education credit for qualifying students, including various dual credit opportunities through Mohawk Valley Community College (MVCC) which are outlined in this program guide. Our programs of study also provide the foundational skills that can serve any student in both industry and higher education. Many of our students follow career pathways linking high school learning with college degrees, industry-recognized certifications, and connections between what is learned in the classroom and expectations in the employment field.

In 1948, the Oneida-Herkimer-Madison BOCES began its mission to educate students in various pathways for high school graduation. Our active partnerships with the business community through our Advisory Council and program consultant committees advise on state-of-the-art equipment and curricula. Our programs of study are equipped with cutting-edge technology that allows students to sharpen their skills in a program of study. Moreover, they are driven by industry-expert teachers who provide the most meaningful learning experience possible. Our educators, area businesses, students, and parents work together as a team to provide a world-class education that is dynamic and prepares students for post-secondary opportunities.

In addition to the career and technical programs and integrated academic courses that OHM BOCES offers, we also provide New Visions courses that allow seniors to go on-site at participating businesses to learn about the field. Additionally, we offer MiTech, an exploratory program to expose freshmen and sophomores to the variety of CTE courses we offer. More information about these programs can be found in this publication.

Are you interested in a dynamic education with budding opportunities, cutting-edge technology, higher education opportunities, and skills that will translate to any post-high school environment? We invite you to look through these pages to learn how a career and technical education can be the key to your future.

Mike Hoover | CTE Principal



# Arts & HUMANITIES

*Arts and Humanities encompass a wide range of disciplines that explore the human experience, both past and present. They focus on understanding, interpreting and appreciating various aspects of human culture, creativity, expression and thought.*

*The Arts has a more specific focus towards creativity and aesthetics, often involving the production and expression of ideas, emotions and concepts through various mediums. Humanities delve into the exploration of human culture, history, language, literature, philosophy, ethics and other forms of intellectual and artistic expressions.*

# ADVERTISING DESIGN AND MULTIMEDIA PRODUCTIONS

This is a two-year course offering an overview of graphic arts fields including advertising, design, illustration, logo and symbol design, computerized graphic design, basic web page design and typography. First-year students learn design principles, advertising and marketing theories, basic computer operations and introduction to design software packages.

Second-year students create independent design projects in areas of interest including audio production, video production, digital photography and web page design.

*College Credit Available Through:  
Bryant & Stratton College  
Mohawk Valley Community College  
(Dual-Credit Agreement)*



# Engineering Technologies TRADE & TECHNICAL

*With a heavy focus on technical skills, this career cluster allows students exposure to the “ins and outs” of several trades and STEM fields. Program options include Auto Body Repair, Automotive Technology, Construction Trades, Electricity, Emerging Technologies & Cyber Security, Outdoor Power/Recreational Equipment Technology and Welding. Students are taught by experienced professionals in the field while immersed in hands-on experience. Proper use of tools, understanding codes and exposure to emerging technologies are just some of the ways in which students are prepared for success in the fields.*

*Also included in this career cluster is MiTech, which allows ninth and tenth grade students the opportunity to explore the technical trades field, and Pathways in Technology Early College High School (P-TECH), which combines academic rigor and career focus to allow graduates to earn a high school diploma and an accredited associate degree.*

# AUTO BODY REPAIR

The Auto Body program is designed to prepare students to become entry-level technicians. First-year students do plastic repair, small dent repair, re-finishing, and introduction to welding. When students return for their second year, they apply the first-year lessons on customers' vehicles in a state-of-the-art lab, which includes a paint booth and frame machine. These lessons, learned over the scope of the two-year program, will prepare students to enter the auto body field.

*College Credit Available Through:  
Alfred State*



# AUTOMOTIVE TECHNOLOGY



Students in Automotive Technology learn to diagnose, service and repair many different systems in today's vehicles. Students also learn about computerized engine controls, emission controls, wheel alignment and how to perform New York State vehicle inspections. This program provides an excellent foundation to enter an automotive college program, the workforce or the military. Our Automotive Technology program is accredited by the ASE Education Foundation at the Maintenance and Light Repair Level. Our instructor is an ASE certified Master Technician and also holds the Advanced Engine Performance and Maintenance and Light Repair certifications. Our graduates have excellent employment potential due to the need for qualified automotive technicians.

*College Credit Available Through:*

*Alfred State | SUNY Canton | SUNY Morrisville | University of Northwestern Ohio*

# CONSTRUCTION TRADES

The Construction Trades program teaches basic skills in residential construction as students gain experience in foundation work, rough framing, roofing, siding, drywall, solar panel installation and our newly expanded modules of plumbing and masonry. Students learn how to use and maintain trade tools properly and safely. In addition, they receive instruction in building codes, blueprint reading and the application of trade math. Our talented students engage in various projects on and off campus.

*College Credit Available Through:  
Alfred State  
Mohawk Valley Community College*





# ELECTRICITY

Electricians install, maintain and troubleshoot electrical systems and equipment in homes, offices, institutions and industrial plants. Students learn residential, light commercial and industrial wiring through a variety of hands-on activities and projects. During the second year of the program, students will also receive instruction in solar photovoltaics using state-of-the-art equipment.

In partnership with MVCC, students learn mechanics, electronics, motor control systems and automation which drive the design, operation and maintenance of all modern complex machinery. During this learning experience, students will attend MVCC, free of charge, and earn college credit that leads to a direct pathway to entry level positions in advanced manufacturing.

*College Credit Available Through:  
Alfred State | Mohawk Valley Community College (Dual-Credit Agreement)*



BEC

# EMERGING TECHNOLOGIES & CYBER SECURITY

This two-year course teaches computer repair and basic networking fundamentals during the first year. This includes hardware and software installation, PC hardware devices and end user support, problem solving, troubleshooting, telecommunications protocols and network support.

Second-year students will learn advanced networking technologies and gain exposure to the field of information system security including issues faced by homes and businesses, the types of damage they may cause and prudent security measures to counteract them.

Students will learn basic terminology involved in cyber security, describe various threats and identify potential security technologies to combat these threats.

With today's emerging technologies, all types of businesses and industries face information system security issues, making knowledge of computer security a high demand area. With further training and experience, students completing this program have the opportunity to take certification exams in A+, N+ and Security+, thereby greatly increasing their employment potential.

*College Credit Available Through:  
Mohawk Valley Community College*




# MITECH

## (MODULES OF INTEGRATED TECHNOLOGIES)

MiTech (Modules of Integrated Technologies) is a career exploration and skills development program for ninth or tenth grade students with academic needs who are preparing to enter traditional career and technical education programs. Students will engage in real-life tasks allowing them to apply knowledge and information, accrue work-based learning hours, develop skills in craftsmanship, build self-esteem, and develop good work habits and work ethic.

Students may receive English, math, and two career and technical education credits. Program modules may include auto body repair, automotive technology, carpentry, culinary, horticulture, small engine repair and welding. Students will also have the opportunity to visit additional CTE courses to help them identify other areas of potential interest.





# OUTDOOR POWER/ RECREATIONAL EQUIPMENT TECHNOLOGY

In the Outdoor Power/Recreational Equipment Technology program, students learn to repair, rebuild and tune up several basic types of engines. These engines can be found on equipment such as snow blowers, lawn mowers, rototillers, farm tractors, construction equipment, motorcycles, jet skis and snowmobiles. Students also learn metal skills, including electric arc, MIG and oxyacetylene welding.

*College Credit Available Through:  
SUNY Cobleskill | Paul Smith's College*



# P-TECH

## (PATHWAYS IN TECHNOLOGY EARLY COLLEGE HIGH SCHOOL)

Pathways in Technology Early College High School (P-TECH) is a program offering an integrated high school and college curriculum focusing on science, technology, engineering, art and mathematics (STEAM), while also providing workplace skills including leadership, communication and problem solving.

This program will enroll freshmen in a flexible (four, five, or six-year) program combining academic rigor and career focus with graduates earning a high school diploma and an accredited associate degree. Students will experience internships with P-TECH business and industry partners and, upon graduation, will be regarded as viable candidates for employment with these partnering agencies.

Enrollment for this program is conducted through an application process in collaboration with the districts we serve. Students have the opportunity to fulfill Regents diploma requirements (22 high school credits) and earn 64 college credits in one of the ten P-TECH associate degree pathways offered.





# WELDING

Welding students learn to construct and repair equipment, machinery, parts and piping by fusing metal parts together. Students follow layouts, blueprints, work orders and verbal directions using oxyacetylene, MIG, TIG or arc welding apparatus. Eligible students can take a test required for specific welding certifications.

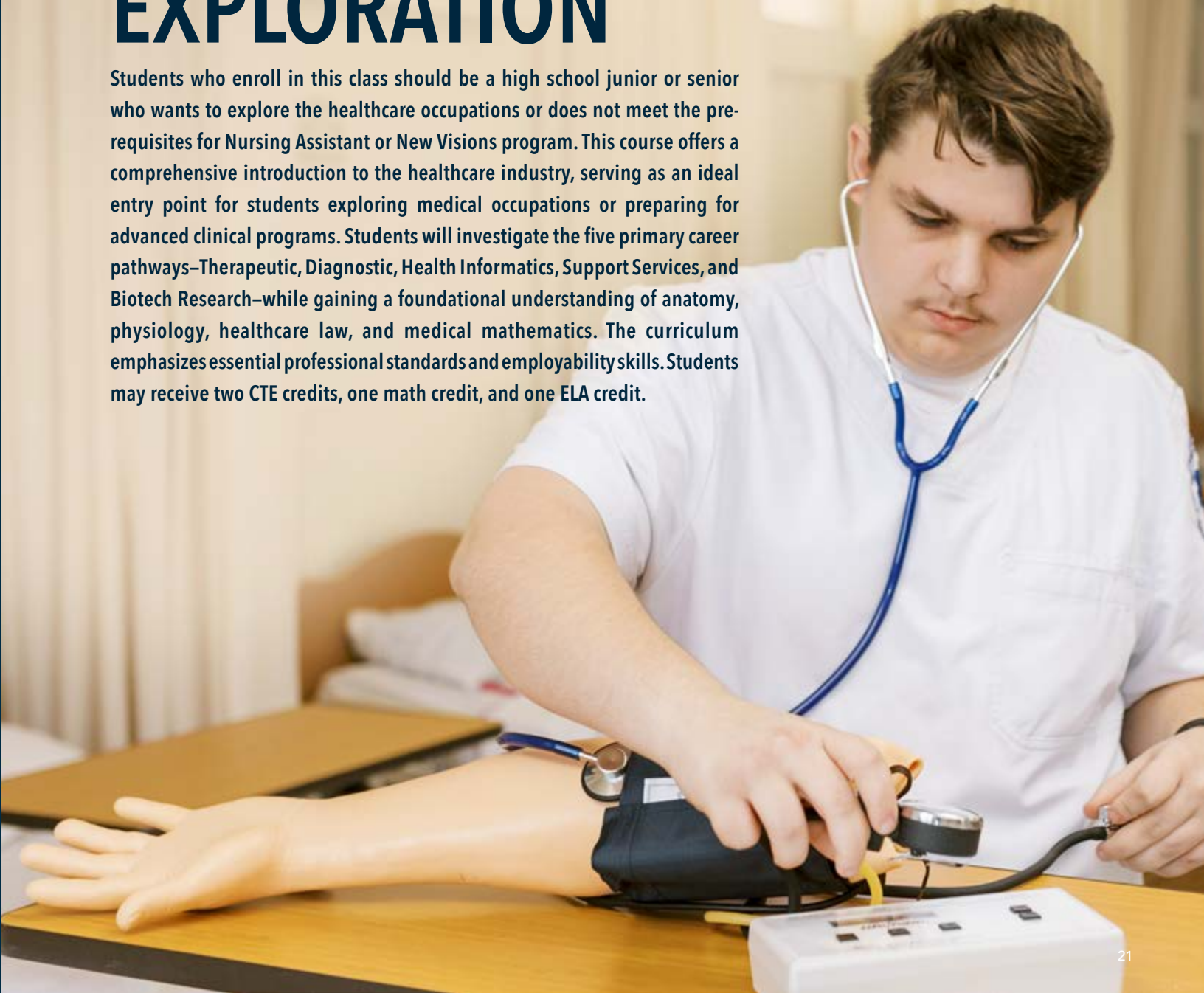
*College Credit Available Through:  
Alfred State  
Mohawk Valley Community College  
Paul Smith's College*

# Health SERVICES

*Health Services are all the services provided to protect and improve health, prevent diseases, treat patients to the extent possible, prevent disabilities, provide medical and social rehabilitation services and ensure patients are able to live a long and fulfilling life. Health services professionals include nurses, emergency medical technicians (EMTs), paramedics, health administrators, managers and physicians, among others.*

# HEALTH CAREERS EXPLORATION

Students who enroll in this class should be a high school junior or senior who wants to explore the healthcare occupations or does not meet the prerequisites for Nursing Assistant or New Visions program. This course offers a comprehensive introduction to the healthcare industry, serving as an ideal entry point for students exploring medical occupations or preparing for advanced clinical programs. Students will investigate the five primary career pathways—Therapeutic, Diagnostic, Health Informatics, Support Services, and Biotech Research—while gaining a foundational understanding of anatomy, physiology, healthcare law, and medical mathematics. The curriculum emphasizes essential professional standards and employability skills. Students may receive two CTE credits, one math credit, and one ELA credit.



# NURSING ASSISTANT

This one-year course teaches students basic skills in the area of personal needs and develops the specialized skills required for patient comfort. After learning applied theory in the classroom, students practice nursing skills in the clinical laboratory in actual role-playing situations. Students then transfer their knowledge to the work environment, where they spend six weeks (100 clinical hours) gaining valuable experience. Once students complete the class, they are eligible to take the written and performance tests offered by the New York State Department of Health to become a Certified Nursing Assistant.

*College Credit Available Through:  
Bryant & Stratton College*





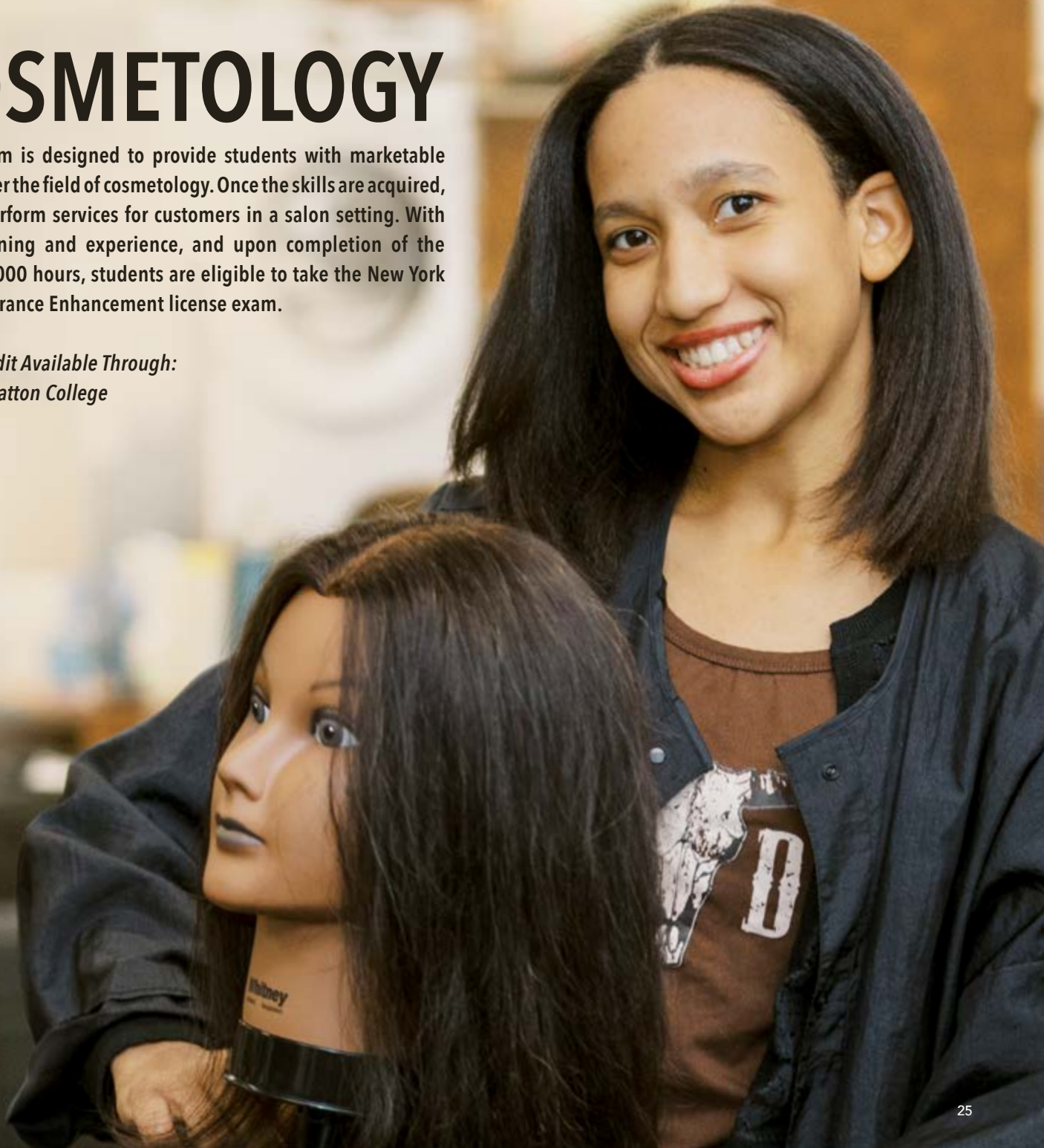
# Human & PUBLIC SERVICES

*Human and Public Services are filled with professions for those with a strong desire to help others by making life safer, easier and more fulfilling. Human and public services include public safety, social support, education, employment, utilities, courts, legislation, law enforcement, community food and housing, and emergency and other services. This diverse field offers many opportunities to make a difference in a variety of settings.*

# COSMETOLOGY

This program is designed to provide students with marketable skills to enter the field of cosmetology. Once the skills are acquired, students perform services for customers in a salon setting. With further training and experience, and upon completion of the required 1,000 hours, students are eligible to take the New York State Appearance Enhancement license exam.

*College Credit Available Through:  
Bryant & Stratton College*





# CRIMINAL JUSTICE

The two-year Criminal Justice program covers nearly all facets of public safety. The first year includes topics such as New York state penal, vehicle and traffic laws; criminal procedure law; accident investigation and reconstruction; incident command; fire fighting; criminal investigation; police patrol tactics; forensics; ballistics; cyber security; terrorism; firearm safety; and more.

The second year introduces seniors to the popular field of forensic science. Topics include crime scene investigation; anthropology; hair, fiber, soil and blood spatter analysis; and practical, hands-on activities. This program is designed to better educate and prepare students to be successful in an increasingly technical and competitive career.

*College Credit Available Through:*

*Bryant & Stratton College | Hilbert College | Mohawk Valley Community College*



# CULINARY ARTS

This program is designed for students interested in becoming commercial cooks for restaurants, hotels, hospitals or catering services. Cooking, menu planning, management skills, sanitation and safety practices and table service are covered in this program. Students receive practical experience preparing lunches, dinners and banquets for non-profit organizations. Each student also participates in an internship at a local restaurant or college dining facility. The program follows the Culinary Professional curriculum.

*College Credit Available Through:*  
*Alfred State*  
*Mohawk Valley Community College*  
*Niagara Community College*  
*SUNY Broome*

# EARLY CHILDHOOD EDUCATION

Early Childhood Education students engage in a variety of learning opportunities, including dual-credit courses through Mohawk Valley Community College that lead to practical experience with daycare, preschool and elementary classrooms. Students will operate a laboratory nursery school under the direction of the program's teacher at the Career and Technical Education Center. Students gain practical experience working in internships at local elementary schools and daycare centers.

*College Credit Available Through:  
SUNY Cobleskill | Mohawk Valley Community College (Dual-Credit Agreement)*





# Natural & AGRICULTURAL SCIENCES

*Natural & Agricultural Sciences is a broad, multidisciplinary field of biology that encompasses the parts of exact, natural, economic and social sciences that are used in the practice and understanding of agribusiness, horticulture and cultivation, chemistry, geography, geology and physics. Studies include plants, animal and food sciences, soil science, agricultural engineering and entomology.*

# ANIMAL SCIENCE

Students in the Animal Science program study animal behavior, safe handling and restraint, anatomy and physiology, small animal care and management, health and disease, nomenclature and veterinary terminology. Students will also visit sites to view first-hand how animal science applies to a variety of jobs and occupations.

*College Credit Available Through:  
SUNY Cobleskill*



# CONSERVATION

The Conservation program emphasizes the skills and knowledge required for success in the many conservation-related careers. The course is a blend of classroom instruction and hands-on outdoor learning, with the importance of a favorable work ethic stressed. Students acquire skills in forestry, fish and wildlife management; heavy equipment operation; timber harvesting; chainsaw operation and maintenance; tree climbing; map and compass; GPS; surveying and more. In our greenhouse, students become skilled in hydroponics, aquaculture and plant propagation.

*College Credit Available Through:  
Paul Smith's College | SUNY Cobleskill*



# NEW VISIONS

*Seniors Only*

*Programs included in the New Visions career cluster offer high school seniors an insider's view of a professional field. With opportunities in Business Management, Communications, Education, Engineering Technology, Health Professions and Veterinary Science; students participate in internships and observations with local business partners, allowing them to explore careers from the inside out.*



# BUSINESS MANAGEMENT


The New Visions: Business Management program offers students the opportunity to explore a variety of business professions at local establishments. Students develop competencies useful in a wide range of careers within the business field.

The program delivers instruction in English 12, Participation in Government and Economics.

# EDUCATION

The New Visions: Education program provides students the opportunity to explore all aspects of the education profession. Through internships, students will get to see first-hand what classroom teachers and other related staff do on a day-to-day basis. The program delivers instruction in English 12, Participation in Government and Economics.





# ENGINEERING TECHNOLOGY

New Visions: Engineering Technology is an innovative program that gives high school seniors an in-depth look at the different areas of engineering before they enter college. Working with professionals in the field allows students to experience the daily work routine. The program delivers instruction in English 12, Participation in Government and Economics.

# HEALTH PROFESSIONS

The New Visions: Health Professions program is open to seniors who plan to enroll in post-secondary two- or four-year colleges to study in a health-related field. Students in the program explore a variety of health occupations on site at the local hospital and other health facilities. Students develop competencies useful in a wide range of careers within the health field.

Through observations within various departments, students learn what is required of a health professional on a daily basis. The program delivers instruction in English 12, Participation in Government and Economics.

Additionally, students in New Visions Health receive instruction through MVCC in College Foundations Seminar and Medical Terminology for Health Professionals.





# VETERINARY SCIENCE

This is a one-year program for seniors that offers the students the opportunity to explore the various aspects of veterinary science and the possible career options in the field. General areas of instruction include animal behavior, animal handling and restraint, species and breed identification, animal anatomy and physiology, basic lab techniques, animal care, animal welfare, animal health and disease. Students will participate in internship programs at various types of animal care facilities.

Students wishing to pursue a college education in animal science will have to be exposed to the basic knowledge and terminology needed for majoring in animal science or veterinary medicine. Prerequisites for the class are Living Environment and Chemistry.

# ALTERNATIVE

## *Credit Bearing Programs*

*With a focus on foundational instruction as well as the opportunity to explore individual abilities and interests, these programs provide students with the skills needed to complete foundational lab components in the Trades Exploration program as well as prepare food in the Food Service Occupations program. Through Multi-Occupations, students are presented with hands-on tasks in several occupational clusters alongside classroom instruction that stresses the importance of basic academic skills.*



# FOOD SERVICE

The Food Service program allows students to receive foundational instruction in the food service industry through select course offerings. Students learn theory and receive practical experience in quantity preparation for large groups and short order cooking.



# MULTI- OCCUPATIONS

Multi-Occupations is a program offering career exploration and skills development to encourage and challenge students to discover their abilities and interests. Hands-on tasks in several occupational clusters provide real work opportunities that may include shadowing and internship experiences. Classroom instruction stresses the importance of foundational academic skills. Clusters focus on employability, independent living, social and safety skills to participate within the home and community.

# TRADES EXPLORATION

The Trades Exploration program was developed for high school students who would benefit from foundational hands-on, experiential learning. The course exposes students to a variety of career skills and content including automotive repair, carpentry, electricity, small engine repair and welding. The program is designed to help students make connections between academic achievement and their potential career.



# School to Career PROGRAMS

*The School and Business Alliance utilizes several career development strategies to assist students in making successful transitions from school to a successful career: career shadowing, business speakers and tours, college tours and summer work opportunities.*

*The Regional Program for Excellence internships offer highly motivated high school juniors and seniors opportunities to explore their career choices in a work setting with respected professionals. Students complete 75 hours by receiving release time from their classes to meet with mentors for a weekly three-hour block or during summer months.*





# Work Experience

## Internships

During school hours, a student may be assigned to observe and participate in a variety of activities related to their curriculum at an off-campus site. Students do not receive wages and may not replace an employee.

## New Visions Internships

Students in the New Visions program typically spend three to four days a week in workplace internships in the business management, communications, education, engineering technology, health and veterinary science fields. One to two days each week is spent in the classroom working on related curriculum projects, listening to guest speakers, or taking virtual field trips.

## Direct Job Placement

The Career and Technical Education Center works closely with area businesses to identify students who are prepared for direct job placement, for either full- or part-time work, or summer employment.

# CTE Program Credits

## Regents Diploma with a Technical Endorsement

Most Career and Technical Education programs at the Oneida-Herkimer-Madison BOCES are approved by the State Education Department. If students successfully complete the CTE program, complete 22 units of high school credits, pass the five required Regents examinations, and pass a technical assessment (which is part of the CTE program), students are eligible to receive the Regents diploma with a technical endorsement.

## High School Credit

For each successfully completed year, you can receive four credits. For a one-year program, you can receive four Career and Technical Education (CTE) credits or two CTE credits and, with home school approval, one credit of English 12 and one credit for science. For a two-year program, you can receive eight credits. These can be eight CTE credits or (with home school approval) five, six or seven CTE credits and up to three academic credits including English 12, math and science. See your high school counselor for more information.

## College Credit Integration

All of the New Visions programs offer three college credits from MVCC for English 101 and Personal Finance. This is at no cost to students. Seniors in Conservation can pay a reduced fee and be eligible to receive three college credits from SUNY Morrisville in their Environmental Science (ENSC 100) course. There are also new dual-credit offerings in several of our programs, including Advertising Design/Multimedia Productions, Construction Trades, Criminal Justice, Culinary Arts, Early Childhood Education, Electricity, Emerging Technologies & Cyber Security and Welding.

## Articulation

Through articulation agreements between a post-secondary institution and the Oneida-Herkimer-Madison BOCES, students may gain advanced standing in certain programs and, for others, actual credit for a college-level course. The terms of the articulation generally include the following: students must have completed the CTE course within the past school year, maintained a B average or better, demonstrated excellent attendance and received recommendation from the CTE instructor. For more specific information, contact the BOCES CTE counseling department at 315.793.8618 or 315.793.8660. All Career and Technical Education programs have established articulation agreements with local colleges and trade schools.





# Clubs & Activities

## SkillsUSA

SkillsUSA offers leadership and citizenship development to complement the CTE student's skill training. Members may also participate in local, state and national SkillsUSA competitions.

## FFA Conservation Club

The National FFA organization is the oldest vocational organization in the United States and is recognized by the federal government as an important part of vocational education. FFA promotes leadership development through activities that benefit students and the community. Students gain valuable leadership experience toward success in the workforce. Membership is open to any BOCES CTE student.

## Advisory Council Representatives

At the Career and Technical Education Center your opinions count. To make sure student perspectives are heard and considered when important decisions are made, two students are selected each year as members of the Career and Technical Education Advisory Council. These students attend all council meetings and actively take part in all discussions.

## Honor Society

Each year, outstanding students are inducted into the Career and Technical Honor Society. They are students who have shown excellent academic achievement in their Career and Technical program, good attendance, active participation in organizations, and a serious interest in a vocational or technical field.

# OTE Program Credits

## Scholarships & Awards

*OHM BOCES Career and Technical Education students are eligible to compete for several scholarships and awards thanks to the generous contributions of the following sponsors:*

**Blue 360**

**Clinton Tractor**

**Colleen Perta**

**Colours Inc.**

**Delta Kappa Gamma New Visions**

**Donna Grippe**

**FFA**

**King Refrigeration and Air Conditioning**

**McQuade & Bannigan, Inc.**

**Michael F. Duniec Memorial**

**Mohawk Valley Builders Exchange**

**Mohawk Valley Counselors' Association**

**MVCC Foundation**

**OHM BOCES Teachers' Association**

**Philip T. Dlugolecki**

**Richard Gerstner Memorial**

**Richard Marchitelli**

**Rome Teachers Federal Credit Union**

**Sam Cavo**

**Seed and Weed Garden Club**

**SkillsUSA**

**Slocum Dickson Foundation**

**Steet Ponte**

**Syracuse Auto Dealers Association**



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