



Career & Technical Education

.....
2023-2024
Course Guide





START HERE. > GO ANYWHERE.

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Contact Us:



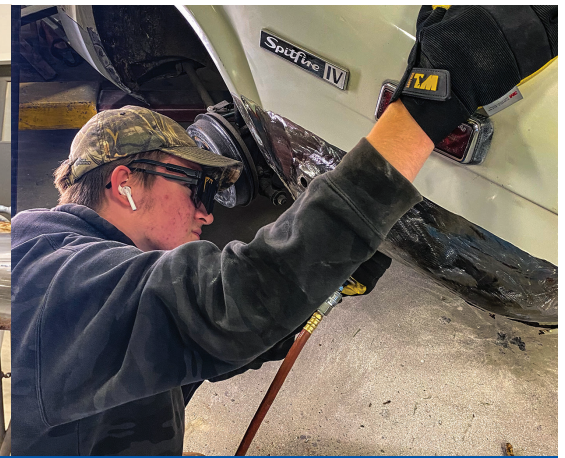
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AUTO BODY REPAIR



In HFM CTE Auto Body, students learn to repair and refinish damaged vehicles. Students also learn safety, high-tech welding methods, flexible and rigid plastic repair, as well as how to make damage appraisals, calculate repair costs, and establish estimates.

Students use hand tools, portable lifting equipment, adhesives and filler, welding equipment, paint mixing and spray equipment, along with new technology, to repair automotive bodies. It is primarily a hands-on technical program where students will become knowledgeable about the auto repair industry.

97%

Of students say CTE has helped them develop the skills necessary to succeed in college, the workplace or the military.*

Career Opportunities:

- Auto Body Repair Technician
- Shop Manager
- Damage Appraiser
- Frame Technician
- Equipment Sales
- Auto Parts Manager
- Glass Technician

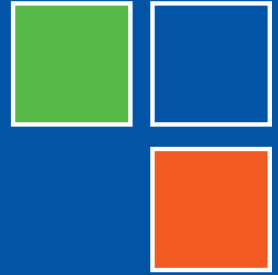
College Partnership/ Articulated Credits:

- Lincoln Technical Institute
- Morrisville State College
- Ohio Technical College



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AUTO TECHNOLOGY



The HFM CTE Automotive Technology program involves a combination of instruction of theory and operation of various automotive systems. The program includes practical shop activities to diagnose, fix, and maintain a wide variety of vehicles.

Students who complete the program will have the skills necessary to begin careers as entry-level technicians or to enter a post-secondary program. It is primarily a hands-on technical program where students will become knowledgeable about the auto technology industry.

Students can graduate with the following certifications:

- ASE Student Certification
- Valvoline Oil Certification
- Hunter Engineering Alignment Certification
- Hunter Engineering Tire Change and Balance Certification
- Snap-On Scan Tool Certification

Career Opportunities:

- Automotive Technician
- Service Manager
- Auto Parts Specialist
- Automotive Engineer
- Estimator
- Tire/Lube Technician

College Partnership/ Articulated Credits:

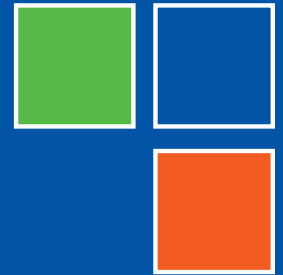
- Lincoln Technical Institute
- Morrisville State College
- Ohio Technical College
- Univ. of Northwestern Ohio
- Universal Technical Institute
- SUNY Canton

Integrated Core Academic Credits:

- 1 English 12



COSMETOLOGY



The HFM CTE Cosmetology program provides students with the professional skills and knowledge necessary to be a successful cosmetologist. This course offers instruction and practical experience in the skills and theory necessary to be employed as a cosmetologist. This includes care of hair, skin, nails and all related services offered in a beauty salon. Equipment used in the cosmetology laboratory is equivalent to that found in a modern salon.

This program is necessary to pass the practical and written components of the New York State Licensing Board Examinations. To qualify for the licensing exam, students must complete a minimum of 1,000 hours of approved instruction.

Our salon clinic is open to members of the local community and provides students with the opportunity to practice their technical skills, essential communication and people skills while gaining real life experience in the cosmetology profession.

Upon successful completion, students are eligible to receive their temporary Cosmetology license and apply to New York State to take the written and practical licensing examinations.

Career Opportunities:

- Salon Stylist
- Hair Color Specialist
- Texture Specialist
- Motion Picture Stylist
- Salon Manager/Owner
- Makeup Artist
- Platform Artist
- Nail Technician
- Manufacturer Educator
- Wig and Extension Specialist
- Facial Technician
- Day Spa Technician
- Cosmetic Chemist
- Sales Representative

College Partnership/ Articulated Credits:

- Bryant and Stratton College
- SUNY Fulton Montgomery
- SUNY Schenectady County Community College
- SUNY Cobleskill

Integrated Core Academic Credits:

- 1 English 12



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CONSTRUCTION TECHNOLOGY



The HFM CTE Construction Technology program focuses on safety skills and basic knowledge of building techniques, tools, and equipment. Students learn the nuances of construction work through our crew set-ups and Project Based Learning approach. We strive to mimic the real world work environment as much as possible.

This program pays particular attention to modern framing techniques and other “green” building strategies.

The program includes training in:

- Residential Construction
- Blueprint Reading and Estimating
- Building Materials and Tools
- Surveying
- Foundation, Floor, Wall and Roof Systems
- Insulation and Energy Efficiency
- Window and Door Installation
- Electrical Wiring
- Energy Use Analysis

Career Opportunities:

- Brick Layer
- Concrete Form Carpenter
- Block Mason
- Framing Carpenter
- Foreman
- Construction Management

College Partnership/ Articulated Credits:

- Alfred State College
- SUNY Fulton Montgomery
- SUNY Delhi

Integrated Core Academic Credits:

- 1 Math (Applied)



CRIMINAL JUSTICE



Events in our nation have changed the focus of security and safety. Our Criminal Justice Program at CTE prepares students to address the issues facing our community.

In addition to local, state and federal government, career opportunities in the Criminal Justice field are available in private firms and public agencies; small businesses, and large corporations.

The HFM CTE Criminal Justice program provides students with an overview of the criminal justice system and its components - law enforcement, courts, and corrections. Daily experiences include guest speakers, field trips, and hands-on projects such as fingerprinting, forensics, crime scene investigation, mock trials, photography, plaster casts and use of radar equipment.

98%

Of students who attended CTE felt they were encouraged to reach their highest potential.*

Career Opportunities:

- Law Enforcement (Local, State and Federal Levels)
- Corrections Officer
- Park Ranger
- Fingerprint Technician
- Forensic Scientist
- Paralegal
- Courts, Lawyer, Judge

College Partnership/ Articulated Credits:

- Bryant and Stratton College
- SUNY Fulton Montgomery
- Herkimer College
- Mohawk Valley Community College

Integrated Core Academic Credits:

- 0.5 Participation in Gov't.
- 0.5 Economics



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CULINARY ARTS



HFM CTE offers a two year industry driven Culinary Arts program that provides real world educational opportunities while building practical skills and a solid foundation in the field. Students gain hands-on experience in a state-of-the-art kitchen learning the proper ways to use, sanitize and maintain equipment. They explore recipes and create menus based on topics of study.

Students engage in work-based learning and leadership exercises by catering special events, luncheons, dinners, and by completing an internship at a local restaurant, bakery, or food service facility at the end of their senior year.

The CTE Culinary Arts program is aligned with the National Restaurant Association's Pro Start curriculum which promotes all facets of the restaurant and food service industry while setting high standards of excellence for students and the field.

Topics covered include:

- Baking and Pastry
- Commercial Food Preparation
- Dining Room Service
- Fine Dining
- Restaurant Operations
- Catering

Career Opportunities:

- Executive Chef
- Pastry Chef
- Caterer
- Food and Beverage Director
- Baker
- Restaurant Manager/Owner

College Partnership/ Articulated Credits:

- Culinary Institute of America
- Pro Start Passport
- SUNY Schenectady County Community College
- SUNY Cobleskill
- SUNY Delhi

Integrated Core Academic Credits:

- 1 English 12



CYBERSECURITY & COMPUTER TECHNOLOGY



As people become increasingly dependent on networks to store their personal, financial, and business data, there is an increasing incentive for criminals to steal, manipulate and monetize that data. Organizations, businesses and governments need trained specialists to proactively defend and address these threats.

Through this program, students have the opportunity to gain foundational knowledge in all aspects of security in the cyberworld and complete training and certification leading to a career as an IT/network professional.

The HFM CTE Cybersecurity and Computer Technology program includes coursework in the following areas:

- Cybersecurity
- Information Technology (IT) Essentials
- PCPro Testout (Junior)
- NetworkPro Testout (Senior)

Career Opportunities:

- Computer Forensics
- Field Service Technician
- Help Desk Technician
- IT Administrator
- Network Installer
- Network Engineer

College Partnership/ Articulated Credits:

- Bryant and Stratton College
- SUNY Fulton Montgomery
- SUNY Cobleskill
- Mohawk Valley Community College

Integrated Core Academic Credits:

- 1 Math (Applied)



DIGITAL MULTIMEDIA



The HFM CTE Digital Multimedia course introduces the tools, techniques, and concepts behind the production of digital media through the practice of good design.

We provide our students with an innovative and engaging style of learning that addresses vital skills required in the ever-growing, constantly evolving industry of digital design while investigating continuing education opportunities and career options.

Divided into two classrooms, students rotate between two professional instructors in a collaborative instructional setting. This affords students the opportunity to explore and experience a variety of digital media tools while enhancing and broadening their skills.

Using state-of-the-art, industry-standard hardware and software gives students direct insight into present-day application possibilities. Macintosh computers, partnered with Adobe Creative Suite, offer students the possibility of acquiring Adobe ACA Certification. Students are presented with opportunities to collaborate on projects for businesses. They gain knowledge and experience participating in a professional, two-week senior internship that has proven to be an invaluable experience.

Career Opportunities:

- Photographer/Videographer
- Graphic Designer
- Animator
- Website Designer
- Music Production
- Special Effects Artist

College Partnership/ Articulated Credits:

- SUNY Fulton Montgomery
- Mohawk Valley Community College
- SUNY Canton
- SUNY Cobleskill

Integrated Core Academic Credits:

- 1 English 12



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ENVIRONMENTAL CONSERVATION



The HFM CTE Environmental Conservation program prepares students for achieving future career goals. Within this program, students can specialize in Forestry & Lumber Production or Heavy Equipment Operation.

Students can receive NYS Game of Logging credentialing, First Aid/CPR, and OSHA certifications. Students learn how to operate HFM's fleet of bulldozers, excavators, loaders and other forestry equipment.

Additional Training:

- Hand Tools and Power Tools
- Welding and Cutting Tools
- Surveying Equipment
- Saw Mill Operation and Management
- Heavy Equipment Maintenance and Operation

HFM CTE's extensive facilities include nature trails, ponds, an indoor aquaculture facility, lumber production area and more.

Students are expected to develop employability skills necessary for success in each career path. Students must have exceptional attendance and dress appropriately for working with power tools as well as working outdoors in all weather conditions. Professionalism with their peers, instructors, and during internships is imperative for student success.

Career Opportunities:

- Heavy Equipment Operator
- Landscaper
- Forestry Technician
- Logger
- Parks Employee
- Forestry Technician

College Partnership/ Articulated Credits:

- SUNY Fulton Montgomery
- North Country Community College
- Paul Smith's College
- SUNY Cobleskill

Integrated Core Academic Credits:

- 1 Math (Applied)



FOUNDATIONS OF FOOD SERVICES



This HFM CTE Foundations of Food Services course is a service level Culinary Arts program. Students learn baking and food preparation techniques along with exploring career opportunities and the necessary work habits that are essential for success on the job. Throughout the program, recipe reading and creating, food preparation, safety, and final food/garnishing presentation are stressed.

FOF students have an opportunity to earn 54 hours of work-based learning experience by preparing and serving food at school sponsored special events and by participating with local restaurants and food services in a senior year internship.

The daily hands-on experiences help students build practical skills and a foundation for cooking that will last a lifetime.

99%

Of students rated their educational experience at CTE above average.*

Career Opportunities:

- Prep Cook
- Waitress/Waiter
- Baker Assistant
- Deli Worker
- Busser
- Store Room Clerk

Program includes training in:

- Safety practices for all equipment used in the kitchen environment
- Good work habits
- Professional sanitation techniques
- Basic knife skills
- Standard culinary practices/fundamentals
- Introduction to ServSafe practices



MEDICAL ASSISTING



The HFM CTE Medical Assisting program prepares students to become nationally Certified Clinical Medical Assistants. Medical Assistants are Allied Health Professionals who perform administrative, clinical and laboratory duties under the direct supervision of a physician.

Medical Assistants work in a variety of settings including clinics, physician offices, outpatient centers and hospitals. The HFM CTE Medical Assisting program prepares students for achieving future career goals in the medical field. Students participate in a minimum of 165 hours of “clinical” or work-based learning as part of this program.

HFM CTE Medical Assisting students have the opportunity to participate in a PAID student internship with St. Mary’s Healthcare.

Duties of Medical Assistants are Administrative or Clinical.

Administrative duties may include: Clinical duties may include:

- | | |
|--|--|
| <ul style="list-style-type: none">• Computer Applications• Telephone Communications• Scheduling• Welcoming Patients• Medical Records | <ul style="list-style-type: none">• Medical Histories• Patient Examinations• Phlebotomy• Medication Administration• Electrocardiogram• Collecting and Performing Basic Lab Tests• Wound Care |
|--|--|

Career Opportunities:

- Certified Clinical Medical Assistant
- Phlebotomist
- Pharmacy Technician
- Electrocardiogram Technician
- Surgery Technician

College Partnership/ Articulated Credits:

- Bryant and Stratton College
- SUNY Fulton Montgomery

Integrated Core Academic Credits:

- 1 Science
(Anatomy & Physiology)



NEW VISIONS EDUCATION



New Visions Education is a comprehensive one year course which offers seniors the opportunity to investigate career paths in education. A major component of this course is the time students spend observing in classrooms and working with students in settings from kindergarten through high school. By shadowing professionals, students see the wide variety of occupations available in the area of education.

In our own classroom, we learn about the history and purpose of education, the alternate structures and services that are provided to students, and the process of planning for and executing a formal lesson plan. Students have the opportunity to create, teach, and evaluate lessons with their peers weekly in preparation for their internships. Professionalism with peers, instructors and students in all classroom settings is imperative for success in this program.

Topics covered include:

- Foundations of Public Education
- Learning Styles/Multiple Intelligences
- Professional Certification Requirements
- Classroom Environment
- Lesson Planning and Instruction
- Classroom Management
- Instructional Strategies
- Educator Responsibilities

Career Opportunities:

- Teacher
- School Counselor
- School Administrator
- School Psychologist
- Social Worker

College Partnership/ Articulated Credits:

- SUNY Fulton Montgomery
Students may earn up to 9 college credits through the "College in the High School" program.

Integrated Core Academic Credits:

- English 12 (1 credit)
- Participation in Government (1/2 credit)
- Economics (1/2 credit)



NEW VISIONS HEALTH CAREERS



The HFM CTE New Visions Health course is an academically rigorous one year program for high school seniors. The classroom is located on-site at Nathan Littauer Hospital where students participate daily in structured clinical observations of varied medical professionals and procedures, while integrating learning through traditional methods such as lecture, discussion, reading, research, and writing.

These experiences provide students with an opportunity to directly learn and observe the various health professions and appropriate patient care, along with the latest in medical treatments, testing and technologies. Admissions criteria for this program includes a completed application, interview, and a minimum GPA of 85.

96%

Of students
would recommend
CTE to others.*

Career Opportunities:

- Medical Doctor/Doctor of Osteopathy
- Physician's Assistant
- Nurse Practitioner/Registered Nurse
- Respiratory Therapist
- Radiology Technician
- Pharmacist
- Physical Therapist

College Partnership/ Articulated Credits:

- SUNY Fulton Montgomery
Students may earn up to 3 English credits through the "College in the High School" program.

Integrated Core Academic Credits:

- English 12 (1 credit)
- Participation in Government (1/2 credit)
- Economics (1/2 credit)



ROBOTICS & ENGINEERING TECHNOLOGY



The HFM CTE Robotics & Engineering Technology course is a STEM (Science, Technology, Engineering, and Math) based program that allows students to use state of the art equipment to learn about the different pathways of robotics and engineering careers.

Students apply college-level Algebra and Engineering to develop system approaches to problem-solving and critical-thinking skills. Students study Automation, Electricity and Electronics, Micro and Nanotechnology, as well as mechanical systems including hydraulics and pneumatic power transmissions.

The program utilizes FMCC's Center for Engineering and Technology laboratories, including the chip fab clean room, robotics lab, and electronics facility.

During this program, students can accumulate 25 college credits, making it possible to complete an associate's degree in Electrical Technology at FMCC in one additional year. They can also complete a paid internship at local industries such as Automated Dynamics, Taylor Made, Tetra Tech, Mohawk Lift, Power & Composite Technologies and more!

Career Opportunities:

- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Silicon Wafer Fabrication
- Analytical Lab Technician
- Environmental Engineering

College Partnership/ Articulated Credits:

- SUNY Fulton Montgomery

Integrated Core Academic Credits:

- 1 Math
(Intermediate Algebra)



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SKILLED TRADES: ELECTRICAL, HVAC & PLUMBING



Currently, industry experts estimate there is a shortage of approximately 2.5 million skilled trades professionals worldwide. In this HFM CTE one year senior program, students will get hands-on experience by taking what they learn in the classroom and applying it in the workshop. Students will explore all three career pathways; Electrical, HVAC (heating, ventilation, and air conditioning), and Plumbing and choose which is best for them.

In the Electrical path students learn about home wiring circuits, switches and outlets, electrical test equipment and safety. In the Plumbing path, students learn about plaster, copper, cast iron and steel pipes, drains, and plumbing safety. In the HVAC path, students learn about the use of various technologies to control temperature, humidity, and purity of the air.

These fields offer many high-paying job opportunities for high school graduates with contractors and labor unions in all three of these skilled trades. Students will also get the opportunity to complete an internship and put their learning into practice in the real world.

Career Opportunities:

- Industrial Electrician
- Journeyman Electrician
- HVAC Installer
- Master Plumber
- Plumbing and Heating Mechanic
- Residential Wireman
- Mechanical Trades Specialist
- HVAC Service Technician
- Air Conditioning Technician



VETERINARY & ANIMAL SCIENCE



Veterinary & Animal Science is a two-year program intended to prepare students for a future in the expanding animal industry that offers a variety of career opportunities. This science-based program teaches skills in areas such as animal handling, livestock production, Anatomy and Physiology, grooming, first aid, health and disease, clinical practices, veterinary terminology, and safety and sanitation.

Students will use the tools of the trade, including diagnostic and grooming equipment. Internships with local veterinary clinics, animal shelters, agribusinesses, grooming and training facilities are also part of the experience. Students have the opportunity to earn one high school English credit and one high school Science credit (Comparative Animal Anatomy & Physiology) and may also have the opportunity to earn college credits over the course of the program.

98%

Of students feel that CTE was above average at preparing them with thinking skills such as creativity, decision making, and problem solving.*

Career Opportunities:

- Animal Caretaker
- Animal Facilities Management
- Animal Laboratory Technician
- Animal Nutritionist
- Animal Shelter Employee
- Artificial Insemination Technician
- Biologist
- Equine Dentist
- Farmer
- Farrier
- Groomer
- Herdsman
- Kennel Assistant
- Pet Daycare Provider
- Pet Shops & Retail Associates
- Pharmaceutical Sales Representative
- Professional Breed/Show Handler
- Sheep Shearer
- Therapeutic Animal Handler
- Trainer
- Veterinarian
- Veterinary Assistant/Technician
- Zoologist
- Pet First Aid, CPR, and Disaster Response
- Veterinary Assistant Certificate
- FAMACHA Certification
- Beef Quality Assurance Cert.

College Partnership/Articulated Credits:

- Alfred State College
- SUNY Canton
- SUNY Delhi
- SUNY Fulton Montgomery
- SUNY Cobleskill

Integrated Core Academic Credits:

- 1 Science (Comparative Animal Anatomy & Physiology)
- 1 English

Notes:

[illegible]

**START
HERE.** 



GO ANYWHERE.

HFM BOCES is committed to equal opportunity in educational programs, admissions and employment. Hamilton-Fulton-Montgomery BOCES does not discriminate on the basis of an individual's actual or perceived race, color, religion, religious practice, national origin, ethnic group, sex, gender identity, sexual orientation, political affiliation, age, marital status, military status, veteran status, disability, weight or any other basis prohibited by New York state and/or federal non-discrimination laws in its programs and activities, including admissions and employment, and provides equal access to the Boy Scouts and other designated youth groups. Inquiries regarding the BOCES non-discrimination policies should be directed to Dr. Aaron Bochniak (abochniak@hfmbores.org), Assistant Superintendent for BOCES Operations and Component District Services, (518) 736-4305, HFM BOCES, 2755 State Highway 67, Johnstown, NY 12095. Inquiries may also be addressed to the Office for Civil Rights at the US Department of Education, 32 Old Slip, 26th Floor, New York, NY 10005, 646-428-3800, OCR.NewYork@ed.gov. (Revised 11/2022)

*Senior Exit Survey, Class of 2023. Surveys scored, data compilation, and report prepared by LifeTrack Services, Inc.

