

CTE

INNOVATION
EDUCATION
OPPORTUNITY

AUTOMOTIVE TECHNOLOGY

2020-21

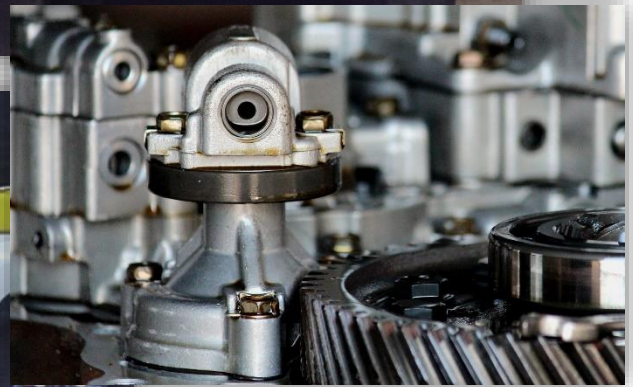
COURSE SYLLABUS

CAREER AND TECHNICAL EDUCATION
FRANKLIN-ESSEX-HAMILTON BOCES • ADIRONDACK EDUCATIONAL CENTER

CTE IS A DIVISION OF THE FEH BOCES
711 NY-3 • SARANAC LAKE, NEW YORK 12983 • 518-891-1330
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AUTOMOTIVE TECHNOLOGY



Automotive Technology

Course description	Automotive Technology is a two-year program based on the National Automotive Technician Education Foundation (NATEF) model for Maintenance and Light Repair. The National Automotive Technician Education Foundation evaluates entry-level technician training programs against standards developed by the automotive industry and accredits qualifying programs.
Prerequisites	Automotive Technology students will work in a variety of different conditions and on their feet for long periods of the time. This course also involves intense physical activity; therefore, students should be in good physical condition. Students should also have a good working knowledge of math, science, and English 10.
Program length	2-year, half-day program
Location	North Franklin Educational Center (NFEC)
Course objective	The Automotive Technology program is designed to graduate entry-level technicians with a broad skill set, a solid foundation in electrical/electronics, and general understanding of all automotive systems.
Course topic outline	<ul style="list-style-type: none">• Intro to auto shop and personal safety• Tools and equipment• Work-based learning• Looking for information• Developing an employment plan• Communicating on the job• Preparing vehicle for service• Preparing vehicle for customer• Basic service opportunities• Engine repair• Automatic transmission• Drivetrain and axles• Suspension and steering• Brakes• Electrical/electronic systems• Engine performance• Heating and air conditioning• Maintaining a safe and healthy environment• Demonstrating work ethics and behavior• NYS motor vehicle and motorcycle inspection• Demonstrating technology literacy• Demonstrating teamwork• Seeking and applying for employment• Demonstrating financial literacy• English language arts• Mathematics• Science• Professional portfolio
Student course requirements	In order for the student to gain national recognition he/she must obtain at least 85% or better for six marking periods. (No more than thirteen absences in six marking periods.)
Textbooks & resources	Duffy, James E. Modern Automotive Technology. Goodheart Wilcox, 2015. Valvoline Oil Certification ALLDATA Repair Manuals Mitchell ProDemand Service Manuals PowerPoint presentations Automotive industry-related videos, articles, and literature
Assessments	The students are assessed daily on laboratory work, exams and quizzes. The technical assessment exam (both written and performance) is based on the NOCTI exam core. Students will also produce a professional portfolio.
Grading system	Skill 67% (attendance, participation, employability skills, work ethic) Theory 33% (tests, quizzes, class projects, portfolio and industry-based literature)

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Automotive Technology

Attendance & class participation The FEH BOCES attendance policy requires students to conform to their component district's policy. For those times when it is necessary to be absent, a written note from the parent/guardian will be expected the next class day.

Activities/labs/projects/clinics Students will complete G-W Online task sheets (based on NATEF standards) in the following areas: introduction to auto shop and personal safety tools and equipment, looking for information, preparing vehicle for service, preparing vehicle for customer, basic service and engine repair, suspension and steering (alignments), brakes, electrical/electronic systems, engine performance, and New York State vehicle inspection.

Students who meet the Work-Based Learning requirements will perform an 8-10 week internship at an automotive-related job site in year two of the program. Students must also complete a portfolio that includes resume, cover letter, letters of reference, letters of application, samples of task sheets, and written assignments, awards, etc.

Students will be allowed to perform clinic work on customer vehicles once they have been properly trained and have completed the corresponding task sheet(s).

Required materials Students are required to wear long work pants and closed-toed shoes or boots during all clinical work. Students must all provide a notebook for classroom use.

Industry certification OSHA 10-Hour Occupational Safety
NOCTI (National Occupational Competency Testing Institute)
National Institute for Automotive Service Excellence (ASE)
NYS Department of Motor Vehicle Inspector

Articulation agreements Each Career and Technical Education (CTE) program prepares students for the world of work and for the rigors of post-secondary coursework. Each program partners with area colleges to obtain articulation agreements that allow for advanced standing or the issuance of credit to those CTE students meeting all program requirements and articulation agreement standards. FEH BOCES has an articulation agreement in Automotive Technology with the following colleges:

- Alfred State College
- Morrisville State College
- SUNY Canton
- UTI (Universal Technical Institute)

Related careers/Post-secondary training Students completing the Automotive Technology program can seek many entry-level employment opportunities in the automotive industry. Career opportunities include automotive technician, service manager, service writer, shop foreman, parts specialist, auto salesman, automotive engineer, and automotive instructor. Some careers may require additional training through two- or four-year degree programs at technical trade schools or community colleges or through the military.

Automotive Technology

ELA/math/science credit integrated academic overview

Each CTE program offered at FEH BOCES includes four major curriculum elements for students to receive credits: CTE, math, science, and English Language Arts (ELA). CTE instructors collaborate with certified science and math instructors. The ELA curriculum element uses a co-teaching model between the CTE subject experts and a certified English instructor. Topics in English, science, and math are tied to specific business and industry course content to show students how academic material relates to real-world business knowledge and skill. English, science, and math elements are taught at the commencement level and meet Next Generation Standards for students to obtain one (1) credit for each over a two-year period.

Curriculum Elements	11th Grade Credits	12th Grade Credits
Career and Technical Education (CTE)	2.5	2.0
Commencement Level Math	0.5	0.5
Commencement Level Science	0.5	0.5
English Language Arts	0.5	0.5

Career & financial management credit overview

Each CTE program offered at FEH BOCES offers a career & financial management credit to all students who successfully complete a CTE program. This curriculum element is composed of two major parts: (A) Introduction to Occupations and (B) Nature of Industry. Part A is delivered through integrated class assignments, while Part B is automatically delivered due to the nature of CTE.

Student-affiliated organizations

There are different student-affiliated organizations that the students have the opportunity to be involved with, including Student Council and National Technical Honor Society.

National Technical Honor Society nomination requirements

- Maintain a cumulative CTE average of 85% or higher based upon the first six quarter grades.
- Maintain a record of excellent attendance in CTE (13 days over the first six quarters).
- Plan to pursue a career in their field of training.
- Maintain an outstanding record of employability skills as judged by the CTE instructor.
- Nomination by the CTE instructor with no reservations.
- Instructor nomination must include a "yes" answer to the following characteristics established by the national office: follows instructions, safety conscious, dependable, trustworthy, responsible, honest, works well with others, takes pride in work, exhibits a good attitude, exhibits leadership, and exhibits good citizenship.

WBL experiences & requirements

Each CTE program has a Work-Based Learning experience. This means that all students prior to the end of the second year are given the opportunity to be exposed to the operation of a business and specific job duties related to careers in their CTE area. This internship is designed to connect the skills and knowledge learned in the CTE classroom with the real world requirements of a business. Students must demonstrate good attendance, attitude, internship records, and work ethics, as well as respect for others and property.

CTE

MISSION:

Provide high-quality educational programs and shared services for our students, schools and communities.

VISION:

Maximize the potential of each individual so today's learners become tomorrow's skilled professionals.

CORE BELIEFS:

- Everyone can learn and grow.
- We place students at the forefront of all decisions.
- We model integrity, positivity, hard work and professionalism.
- We value creativity and innovation.
- We embrace diversity and treat each other with respect, compassion and dignity.
- We offer multiple pathways to success.
- We build effective partnerships through collaboration and shared decision-making
- Safety is everyone's responsibility.



NOTES:



The Franklin Essex Hamilton BOCES does not discriminate on the basis of an individual's actual or perceived race, color, religion, creed, ethnicity, national origin, citizenship status, age, marital status, partnership status, disability, predisposing genetic characteristics, sexual orientation, gender (sex), military status, veteran status, domestic violence victim status or political affiliation, and additionally does not discriminate against students on the basis of weight, gender identity, gender expression, and religious practices or any other basis prohibited by New York State and/or federal non-discrimination laws in employment or its programs and activities.

The District provides equal access to community and youth organizations. Inquiries regarding the District's non-discrimination policies should be directed to:

Civil Rights Compliance Officer, 23 Husky Lane, Malone, NY 12953
(518) 483-6420
civilrightscompliance@fehbm.org

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