Automotive Technology

Western Monroe & Orleans Counties
WEMOCO
Career & Technical Education Center

Develop advanced diagnostic skills to repair cars with complex, computer-driven operating systems

Students learn to maintain, diagnose and repair passenger vehicles. Students identify mechanical and electronic/computer issues that affect vehicle performance and safety. Students utilize computer-based diagnostic equipment as a source of vehicle analysis.

Units of Study

- Shop Orientation and Safety (OSHA 10)
- Suspension and Steering
- Brakes
- Electrical/Electronic Systems
- Engine Performance
- Engine Repair
- Heating, Ventilation and Air Conditioning
- Automatic Transmissions and Transaxles
- Manual Transmissions and Drivetrains
- Basic Technician Skills, Financial management
- Welding - Oxyacetylene, MIG, and TIG

Integrated Academics

- English
- Math

Licensing / Industry- Based Certifications

Automotive Service of Excellence (ASE)

College Credits

MCC Dual Enrollment -
ATP 100: Auto Services

Work-Based Learning

CTE programs bring students into the workplace for real life experiences. Businesses that support our Automotive Technology program:

- Access Lifts and Ramps
- Admar Positioning Solutions Bob Johnson Auto
- DeCarolis
- Ford Customer Service
- Mercedez Benz of Rochester
- Prolift
- Titan Motorworks
- Websmart Auto
- West Herr

Articulation Agreements

- Alfred State
- MCC
- University of Northwestern Ohio
- SUNY Canton
- SUNY Morrisville

Career Outlook

All CTE programs correlate to many careers paths. Use the links below to explore more. One example:

Job Projections for Automotive Master Mechanics: 5% projected growth in New York State jobs 2016-2026.

New York State salary range:
$24,750 entry level- $51,850 experienced

Education Requirements: Technical training and a high school diploma or equivalent. Industry certification is usually required once the person is employed.

Explore more:

https://www.careerzone.ny.gov/
https://www.onetonline.org/find/

WEMOCO Career & Technical Education Center
Monroe 2-Orleans Board of Cooperative Educational Services
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@WEMOCOCTE

Your Educational Partner of Choice
BOCES 2

Automotive Technology

Employability Profile

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Career Readiness

- Attendance
- Punctuality
- Appropriate Workplace appearance
- Takes Initiative
- High Quality of work
- Knowledge of workplace ethics
- Responsive to supervisor
- Effective Communication skills
- Solves problems
- Makes decisions
- Cooperates with others
- Resolves conflict
- Observes critically
- Takes responsibility for learning
- Reads with understanding
- Solves problems using math
- Complies with health and safety rules
- Uses technology appropriately

Safety/OSHA 10

- Show the use of personal protective equipment
- Locate & show material safety data sheets
- Implement safe operation of vehicles in the shop
- Examine fire hazards, fire extinguishers, and show fire extinguisher use

Brakes

- Inspect and service brake lines, hoses, and fittings
- Flush and bleed the brake hydraulic system
- Remove, inspect, and install brake shoes and hardware
- Inspect and replace wheel cylinders
- Inspect and measure brake drums
- Set up, machine, a rotor and a drum on a brake lathe
- Inspect drum parking brake components and operation
- Remove, inspect, and replace a disc brake caliper, rotor, and pads
- Retract a rear caliper piston with an integrated rear disc parking brake caliper
- Service antilock brake system

Engine Repair

- Inspect engine for leaks
- Perform engine mechanical tests
- Inspect the exhaust system for leaks and damage
- Check and adjust valve lash
- Inspect and replace timing belt

Automatic Transmission/Transaxle

- Check and adjust transmission fluid levels
- Inspect for fluid leaks
- Inspect and adjust transmission linkage
- Inspect powertrain mounts

Manual Drive Train & Axles

- Bleed a hydraulic clutch system
- Inspect and service front wheel drive half shafts
- Inspect the differential and refill with the correct lubricant
- Check locking hub assemblies

Electrical/Electronic Systems

- Perform voltage, amperage, and resistance tests
- Interpret and use wiring diagrams
- Diagnose circuit faults
- Test circuit protection devices
- Perform wiring repairs
- Test relay operation and relay circuits
- Perform a battery inspection
- Perform battery services
- Diagnose starting system concerns
- Test starter current draw and starting system voltage drops
- Remove and replace a starter motor
- Inspect the charging system
- Test generator output
- Perform charging system voltage drops
- Remove and replace a generator
- Inspect and service interior and exterior lighting components
- Remove and reinstall a door panel

Suspension & Steering

- Perform mounting and balancing
- Rotate tires per the manufacturer's specification
- Check and adjust tire air pressure
- Service components of the tire pressure monitoring system
- Service wheel bearings
- Disable and enable the supplemental restraint system
- Remove and replace a driver's side air bag
- Inspect, remove and replace steering linkage components
- Determine proper power steering fluid type; inspect fluid level and condition
- Flush the power steering system
- Perform suspension system component inspections
- Diagnose suspension system concerns
- Service components of the suspension system
- Perform a prealignment inspection

Heating & Air Conditioning

- Replace a cabin air filter
- Service, drain, flush, refill, and bleed cooling system

Engine Performance

- Replace fuel filter
- Remove and replace spark plugs
- Service components of the positive crankcase ventilation (PCV) system
- Retrieve OBD-11 diagnostic trouble codes

Welding

- Adjust the pressures and light a torch in a safe manner
- Demonstrate proper torch manipulation in making a straight line cut
- Demonstrate proper torch manipulation in making a straight line cut using MIG, and TIG