

# Auto Body and Collision Repair Technology

Western Monroe & Orleans Counties  
**WEMOCO**  
Career & Technical Education Center

Science, art and technique: equal partners in auto body and collision repair



Students learn the fundamentals of repairing and refinishing damaged vehicles, including the fundamentals of metal straightening, MIG-welding, plastic fillers, plastic repair, major collision repair, hardware repair and service, detailing, and refinishing. The artistic skills applied in decorative auto painting are also introduced.

## Units of Study

- Identifying Plastic Parts
- Worker Protection
- Tools and Equipment
- Paint Mixing
- Body Fillers
- Metal Straightening
- Repairs to Fiber-Reinforced Plastics
- Adhesively Bonded Panel
- Spray Guns
- Compressed Air
- MIG Welding
- Jacking and Lifting
- Spray Environment
- Vehicle Construction
- Waterborne Refinishing
- Steering and Suspension
- Plastic Welding
- VOC Rules and Regulations
- Customer Relations
- Glass
- Electrical
- Estimating
- Brakes
- Aluminum Welding
- Plastic Welding
- Career Opportunities and Ethics

## Integrated Academics

- English
- Science

## Licensing / Industry- Based Certifications

- I CAR Intro Series
- I CAR Non-Structural
- I CAR Refinishing

## Work-Based Learning

CTE programs bring students into the workplace for real life experiences. Businesses that support our Auto Body and Collision program:

- Gerber Collision
- Qualicoat

## Articulation Agreements

- Alfred State
- Ohio Technical College
- 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 Auto Body Repairers: 9% projected growth in New York State jobs 2016-2026.

New York State salary range:  
\$28,960 entry level- \$54,100 experienced

Education Requirements: Technical training and a high school diploma or equivalent. Some certifications may be required.

## Explore more:

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

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Monroe 2-Orleans Board of Cooperative Educational Services  
Monroe2BOCES.org/cte 585-352-2471  
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Your Educational Partner of Choice  
**Boces2**

# Auto Body and Collision Repair Technology



## Employability Profile

### 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	_____

### Quality Control

Identification and proper use of measuring tools: tape, rule, dial indicators, micrometers, verniers, protractors, and levels	_____
Use optical comparators	_____
Verify Geometric Dimensioning and Tolerancing (GD&T) of a part	_____
Use holding and positioning devices for measurement verification	_____

### Engineering and Blueprint Skills

Use Computer Aided Design (CAD) software	_____
Setup and program in Computer Aided Manufacturing (CAM) software	_____
Interpret blueprints and procedures	_____
Interpret blueprint Geometric Dimensioning and Tolerancing (GD&T)	_____

### Manufacturing Skills

Identification and proper use of bench work tools	_____
Layout of a part based on blueprints	_____
Applies proper speeds and feeds to every process (Cuts? Should processes be defined?)	_____
Metallurgy – identify metals, hardness, and understand the applications for different metals	_____

### Manual Lathe

Setup and use	_____
Facing and turning	_____
Knurling and tapers	_____
Single point threading	_____

### Manual Mill

Setup and use	_____
Indicating a vice	_____
Tramming a head	_____
Squaring a block	_____
Drilling	_____
Edge finding	_____
Edge finding	_____

### CNC Lathe

Setup and use	_____
Manual programming G code	_____
Editing code	_____
Use of Computer Aided Manufacturing (CAM)	_____
Trouble shooting set ups (run-out, mismatch, etc)	_____

### CNC Mill

Setup and use	_____
Manual programming G code	_____
Editing code	_____
Use of Computer Aided Manufacturing (CAM)	_____
Trouble shooting set ups (un-square, mismatch, etc)	_____

### Grinding and Cutting

Surface grinding to a specific tolerance or finish	_____
Use of a pedestal grinder	_____

### Welding and cutting skills

Iron worker	_____
Set up and break down of OFC	_____
Operation of OFC	_____
Set up and bread down of PAC	_____
Operation of PAC	_____
CNC plasma cutting	_____
Set up and break down of SMAW	_____
SMAW 7018 Flat	_____
SMAW 7018 Out of position	_____
SMAW 6010 Flat	_____
SMAW 6010 Out of position	_____
Set up and break down of GMAW	_____
GMAW 70S-2 Flat	_____
GMAW 70S-2 Out of position	_____
GMAW 308-L Stainless	_____
Set up and break down of GTAW	_____
GTAW Stainless	_____
GTAW Steel	_____
GTAW Aluminum	_____
Weld symbols	_____
Blueprint reading	_____