



AUTO COLLISION REPAIR & REFINISHING

What is Auto Collision Repair & Refinishing?

Being a student in the Auto Collision Repair & Refinishing (ACR&R) Technology program at City College is Challenging and exciting. You will acquire the skills & knowledge to succeed as a collision repair technician and/or a refinishing technician. The ACR&R program and instructors are ASE (Automotive Service Excellence) Certified.

What you will learn COLLISION REPAIR:

- ◊ Perform repairs with basic tools in body damage situations, according to lectures and repairs shown.
- ◊ Perform welding operations using resistance and metal inert gas equipment.
- ◊ Disassemble multiple panels including hood, fenders, doors & bumpers, reassemble & align according to manufacturers' recommendations.
- ◊ Identify & diagnose door hardware malfunctions, including latches, lock assemblies & window regs.
- ◊ Apply gasket and adhesive methods to remove and replace stationary automobile glass.

• REFINISHING:

- ◊ Select and use proper safety equipment for personal and environmental protection against hazards from the refinish industry.
- ◊ Apply automotive undercoat products per manufacturer's specifications through proper application techniques.
- ◊ Select & apply correct automotive basecoat/clearcoat products per manufacturer's specs using both solvent and water-borne systems
- ◊ Using the proper techniques & products, prepare a substrate by correctly cleaning & abrading the surface before the application of auto undercoats.
- ◊ ASE and I-Car guidelines are also employed.

Program Highlights

The department utilizes three spray booths including a GARMAT Downdraft Paint Booth. A computerized paint – mixing system is used in the Refinishing program. The Collision Repair program utilizes a laser measuring system and frame rack.

Certifications preparing for

Students are also encouraged to study for and take the ASE Certification Tests.

Type of college degree

Certificate of Applied Science; Auto Collision Repair (9 month)
Certificate of Applied Science; Auto Refinishing (9 month)
Associate of Applied Science degree (two-year)

Career information

ACR&R graduates may find career opportunities with auto repair shops, auto parts stores, windshield repair shops and other automotive related businesses.

Job Outlook and Pay

Median Wage (MT)*	\$41,000 yearly \$19.70 per hour
Median Wage (US)*	\$38,300 yearly \$18.43 per hour

*Bureau of Labor Statistics, Office of Employment Projections; MT Dept. of Labor and Industry, Research and Analysis Bureau (projections through MT 2022 U.S. 2024)

**For more information visit <http://www.careerinfonet.org/Occupations>.

City College entry-level wages of graduates: **\$29,500** (2013-2016)

Automobile Collision Repair and Refinishing Technology

(Associate of Applied Science Degree)

Required Courses	Credits
ABDY 101 Introduction to Estimating	2
ABDY 110 Introduction to Collision Repair	4
ABDY 120 Non-Structural Collision Repair	6
ABDY 150 Refinish Safety	2
ABDY 160 Automotive Undercoats	4
ABDY 170 Automotive Topcoats.....	6
ABDY 201 Advanced Estimating.....	1
ABDY 220 Structural Collision Repair	6
ABDY 240 Aluminum Repair	4
ABDY 270 Advanced Refinishing	6
ABDY 275 Waterborne Paint Systems	3
ABDY 280 Custom Painting	
OR ABDY 298 Internship	5
AST 285 ASE Exam Prep: Section One	1
CAPP 120 Introduction to Computers	3
COMX 106 Communicating in a Dynamic Workplace	3
M 114 Extended Technical Mathematics.....	3
TRID 140 Automobile Sheet Metal and Structural MIG Welding	2
TRID 181 Transportation Electrical Systems Lecture	2
TRID 182 Transportation Electrical Systems Lab	2
TRID 152 Vehicle Heating, Ventilation & Air Conditioning.....	3
WRIT 121 Introduction to Technical Writing	
OR WRIT 122 Introduction to Business	
Writing.....	3
Total minimum credits required for degree	71

For more information on this City College gainful employment program, such as cost, financial assistance, and placement rates, please go to:
http://www.msubillings.edu/citycollege/programs/gedt_2016/auto_collision_repair.html

Suggested Plan of Study

Automobile Collision Repair & Refinishing

Associate of Applied Science

<u>Fall Semester-Even Years</u>	<u>Credits</u>
ABDY 101.....	2
ABDY 110.....	4
ABDY 120.....	6
TRID 140.....	2
M 114.....	3
Total	17

<u>Spring Semester – Odd Years</u>	<u>Credits</u>
ABDY 201.....	1
ABDY 220.....	6
ABDY 240.....	4
CAPP 120.....	3
TRID 181	2
TRID 182	2
Total	18

<u>Fall Semester – Odd Years</u>	<u>Credits</u>
ABDY 150.....	2
ABDY 160.....	4
ABDY 170.....	6
TRID 152.....	3
WRIT 121 or 122.....	3
Total	18

<u>Spring Semester – Even Years</u>	<u>Credits</u>
ABDY 270.....	6
ABDY 275.....	3
ABDY 280 or 298.....	5
AST 285.....	1
COMX 106.....	3
Total	18

Automobile Collision Repair Technology (Certificate of Applied Science)

Required Courses	Credits
ABDY 101 Introduction to Estimating	2
ABDY 110 Introduction to Collision Repair	4
ABDY 120 Non-Structural Collision Repair	6
ABDY 201 Advanced Estimating.....	1
ABDY 220 Structural Collision Repair	6
COMX 106 Communicating in a Dynamic Workplace	3
M 111 Technical Mathematics.....	3
TRID 140 Automobile Sheet Metal and Structural MIG Welding	2
TRID 152 Vehicle Heating, Ventilation & Air Conditioning	3
WRIT 104 Workplace Communications	3
Total minimum credits required for certificate.....	33

Students should check the course descriptions for required prerequisites.

Automobile Refinishing Technology (Certificate of Applied Science)

Required Courses	Credits
ABDY 150 Refinish Safety	2
ABDY 160 Automotive Undercoats	4
ABDY 170 Automotive Topcoats.....	6
ABDY 270 Advanced Refinishing.....	6
ABDY 275 Waterborne Paint Systems	3
AST 285 ASE Exam Prep: Section One	1
COMX 106 Communicating in a Dynamic Workplace	3
M 111 Technical Mathematics.....	3
TRID 152 Vehicle Heating, Ventilation & Air Conditioning	3
WRIT 104 Workplace Communications	3
Total minimum credits required for certificate	34

Students should check the course descriptions for required prerequisites.

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Automobile Collision Repair Technology Certificate of Applied Science

<u>Fall Semester – Even Years</u>	<u>Credits</u>
ABDY 101.....	2
ABDY 110.....	4
ABDY 120.....	6
TRID 140.....	2
M 111	3
Total	17

<u>Spring Semester – Odd Years</u>	<u>Credits</u>
ABDY 201.....	1
ABDY 220.....	6
COMX 106.....	3
TRID 152.....	3
WRIT 104.....	3
Total	16

Automobile Refinishing Technology Certificate of Applied Science

<u>Fall Semester - Odd Years</u>	<u>Credits</u>
ABDY 150.....	2
ABDY 160.....	4
ABDY 170.....	6
TRID 152.....	3
WRIT 104.....	3
Total	18

<u>Spring Semester – Even Years</u>	<u>Credits</u>
ABDY 270.....	6
ABDY 275.....	3
M 111.....	3
AST 285.....	1
COMX 106.....	3
Total	16