

Auto Collision Repair and Refinish Technology Program Code 104051

Associate Degree - Two Years

Offered at the Green Bay campus. For information: (920) 498-5444.

Toll-free: (800) 422-NWTC, ext. 5444. Visit the Auto Collision Repair and Refinish website at: www.nwtc.edu/Programs/AutoColl

Program Description

This two-year program provides all the required technical training that the technical diploma offers. It also provides the student with the opportunity to pursue a supervisory or management career, to pursue an automotive industry related career, and to transfer credit to a four-year college.

Students will gain the experience of observing the various management positions that are available to them. The added experience of the management positions will allow the graduate to increase their value to the Auto Collision Repair and Refinishing Industry. The Auto Collision Repair and Refinishing Technology Associate Degree will also provide the student with the opportunity to transfer credit to a four-year college, and pursue an automotive industry related career.

Program Outcomes

- Straighten damaged autobody sheetmetal.
- Repair plastic and composite body parts.
- Refinish automobile body parts.
- Repair and replace stationary glass.
- Repair damaged automobile and light truck frames.
- Repair unibody structural damage.
- Estimate collision damage repair costs.
- Demonstrate auto collision welding procedures.
- Repair manual and passive restraint systems.
- Diagnose problems in automotive electrical, electronic, and mechanical systems.
- Repair steering and suspension systems.
- Qualify for Automotive Service Excellence Autobody and Paint Certification Exam.

Requirements for Program Entry

- Completed application.
- High school transcript or equivalent (such as an HSED or GED® Transcript).
- NWTC Academic Skills Assessment or equivalent (See Academic Skills Assessment section for details and equivalents).
- High school background in mathematics, science, and technology education.
- Students should have mastered basic math skills. For a description of basic math, see the Basic Education section of this catalog.

Accreditations

- NATEF (National Automotive Technicians Education Foundation) Certified Program
- I-CAR Automotive Steel GMA (MIG) Welding Qualification test site
- STAR - Spray Technique Analysis and Research training site
- Auto Glass Technical Institute (AGTI) affiliated provider
- I-CAR Industry Training Alliance Member

Employment Potential

A graduate of the program will have the potential for employment in the following areas:

Insurance Adjuster/Appraiser: Works closely with collision repair facilities to negotiate repair procedures and repair costs.

Collision Center Owner: Owns and operates their own collision repair facility. May have several employees working for them.

Collision Center Manager: Oversees all aspects of the collision center operation; including writing estimates, working with insurance companies, and managing employees.

Manufacturers Representative: Represents various manufacturers of paint and body supplies in either sales or as a technical representative.

With additional education and/or work experience, graduates may find other opportunities for employment.

- Tech-Ed Teacher
- Collision Repair and Refinishing Instructor
- Automotive Engineer
- Insurance Adjuster or Appraiser

Associations

- National Institute for Automotive Service Excellence
- Wisconsin Auto Collision Technicians Association
- Bay Auto Body Association
- National Auto Body Congress
- Collision Repair Instructors Network

Note

All NWTC Auto Collision programs are ASE Certified to NATEF (National Automotive Technicians Education Foundation) Standards. Additionally, all instructional staff in the NWTC Auto Collision Programs are, at a minimum, Master, ASE Certified Technicians.

NWTC Auto Collision Program National Award

The Northeast Wisconsin Technical College Auto Collision Repair & Refinishing Program received a National Award of Excellence from the Auto Industry Planning Council (AIPC) in 2006.

Curriculum

The Auto Collision Repair and Refinish Technology Associate Degree is a two-year program. Upon graduation, a student will have completed 64 credits. The two NWTC Auto Collision, Repair and Refinishing programs are organized in "series" of courses. The two series are: Repair and Refinishing. Both series of courses must be completed in which ever program (associate degree or technical diploma) the student elects to pursue. A student can start in either program (associate degree or technical diploma) at the beginning of either series of classes or when prerequisites are fulfilled.

Auto Collision <i>Refinishing</i> —First Series		
Catalog No.	Description	Credits
* 10-405-101	Auto Collision Ref-Intro	1
	OR	
**10-405-100	Auto Body Repair-Intro	1
10-405-103	Auto Collision Repair	1
	OR	
10-405-102	Auto Body/Restoration-Basic	1
10-405-105	Auto Collision-Plas/Comp	2
10-405-109	Auto Refinish Surface Prep	2
10-405-113	Auto Collision Refinish App	3
10-405-117	Auto Collision Detailing	1
10-801-195	Written Communication	3
10-804-106	Intro to College Math	3
	Semester Total	16
Auto Collision <i>Refinishing</i> —Second Series		
10-405-120	Auto Collision Finish Def	2
10-405-124	Auto Refinishing-Advanced	3
10-405-128	Auto Color Adjustment/Tint	3
10-801-196	Oral/Interpersonal Comm	3
10-809-197	Contemporary Amer Society	3
	Semester Total	14
Auto Collision <i>Repair</i> —First Series		
10-405-107	Auto Collision Trim/Hdware	1
10-405-111	Auto Glass/Hardware	2
10-405-115	Auto Collision Non-Struct	3
10-405-144	Auto Collision Welding	2
10-602-110	Auto Collision Mechanical Serv	3
10-801-197	Technical Reporting	3
10-809-199	Psychology Of Human Relations	3
	Semester Total	17
Auto Collision <i>Repair</i> —Second Series		
10-405-122	Auto Collision Damage Analy	2
10-405-126	Auto Collision Structural	3
10-405-130	Auto Collision Sectioning	3
10-405-135	Auto Collision Damage Rprts	1
10-405-146	Auto Collision Welding-Adv	2
10-602-117	Wiring/Schematics Tech	1
10-602-118	DC Electricity Technology	1
10-602-119	Auto Collision Electronics	1
10-809-172	Race Ethnic & Diversity	3
	Semester Total	17
	Total Credits	64

* 10-405-101 and 10-405-103 are prerequisites for all courses and must be completed to graduate.

**10-405-100 may be taken in lieu of 10-405-101. 10-405-102 may be taken in lieu of 10-405-103.

This program is fully eligible for financial aid.

Please Note

- Some courses have prerequisites (listed at the end of each course description, if applicable) that need to be taken prior to enrolling in those courses.
- Many courses are offered via our Flexible Learning Options (online, accelerated, ITV, video, weekend, and self-paced) and may be taken in any order as long as prerequisites are met. To find out which program courses are offered through Flexible Learning Options, go to www.nwtc.edu or consult a counselor, (920) 498-5444.
- Descriptions of courses not found on this page can be found in the back of this catalog.

Course Descriptions

These courses provide an opportunity for students to develop the knowledge, skills, and understanding required for employment in this field.

10-405-100 AUTO BODY REPAIR ...safety, minor dent repair, abrasives, fillers, undercoats, topcoats, uses classroom and shop presentation. Information applied by students on projects provided, metal finishing, and straightening.

10-405-101 AUTO COLLISION REFINISH-INTRODUCTION ...industry career opportunities and certifications, refinishing safety and environmental regulations, automotive paints, and paint application equipment.

10-405-102 AUTO BODY/RESTORATION-BASIC ...body shop safety, shop materials, basic metal straightening, rust repair, rustout panel replacement and refinishing. Information presented will be applied by students on projects provided by students. (Prerequisite: 10-405-100, Auto Body Repair; or 47-405-461, Auto Body Introduction, OR instructor approval)

10-405-103 AUTO COLLISION REPAIR ...industry career opportunities, expectations, and certifications, personal and shop safety, sheet metal characteristics and analysis, safe equipment use during basic repair procedures on dents and rust, sheet metal patch fabrication and installation, corrosion protection.

10-405-105 AUTO COLLISION-PLASTICS/COMPOSITES ...identification of automotive plastics, making repair or replace decisions, repair of plastics by plastic welding and the use of adhesives, and retexturing and refinishing of plastics and composites. (Corequisite: 10-405-101, Auto Collision Refinishing Intro)

10-405-107 AUTO COLLISION TRIM/HARDWARE ...safe removal and replacement procedures of: exterior and interior trim, restraint systems, vinyl tops and convertible tops, utilizing the correct tools, and industry accepted procedures.

10-405-109 AUTO REFINISHING SURFACE PREP ...planning the refinishing process, paint removal, cleaning and metal conditioning, sanding, masking, preparing adjacent panels for blending, and application of stone resistant materials. (Corequisite: 10-405-101, Auto Collision Refinishing Intro)

10-405-111 AUTOMOBILE GLASS/HARDWARE ...glass types, functions, performance, tools, air and water leak diagnosis and repair, safe repair, and replacement procedures for auto glass, and their related components; utilizing industry accepted procedures.

10-405-113 AUTO COLLISION REFINISH APPLICATION ...the painting environment, using air supply equipment, mixing paint, and the application of undercoats and topcoats. (Corequisite: 10-405-101, Auto Collision Refinishing Intro)

10-405-115 AUTO COLLISION NON-STRUCTURAL ...vehicle construction, part identification, non-structural damage analysis, repair sequence planning, non-structural panel replacement procedures and tool use, non-structural panel repair procedures, corrosion protection, and time management skills for repair procedures. (Prerequisite: 10-405-103, Auto Collision Repair; Corequisite: 10-405-107, Auto Collision Trim/Hardware)

10-405-117 AUTO COLLISION DETAILING ...proper vehicle detailing, including interior cleaning, engine compartment cleaning, exterior cleaning, repairing minor surface defects and buffing, and application of decals, stripes and graphics.

10-405-120 AUTO COLLISION FINISH DEFECTS ...diagnosis and repair of finish defects, including contamination defects, spray technique defects, drying and curing problems, defects from improper preparation, environmental damage, and paint film failures. (Prerequisites: 10-405-101, Auto Collision Refinishing Intro; 10-405-109, Auto Surface Prep for Collision Refinishing; 10-405-113, Auto Collision Refinish Application Systems)

10-405-122 AUTO COLLISION DAMAGE ANALYSIS ...vehicle construction, collision forces, structural damage analysis, measuring equipment, damage diagnosis, and repair planning.

10-405-124 AUTO REFINISHING-ADVANCED ...advanced vehicle refinishing techniques including blending, tri-coat finishes, and custom painting. (Prerequisites: 10-405-101, Auto Collision Refinishing Intro; 10-405-109, Auto Surface Prep for Collision Refinishing; 10-405-113, Auto Collision Refinish Application Systems)

10-405-126 AUTO COLLISION STRUCTURAL ...hydraulic pulling systems, pulling procedures, stress relieving, steel types, straightening procedures for front, rear, side and roof damage, and frame and suspension alignment. (Prerequisites: 10-405-103, Auto Collision Rep; 10-405-107, Collision Trim/Hrdware; 10-405-111, Auto Glass/Hrdware; 10-405-115, Collision Non-Structural; 10-405-122, Collision Damage Analysis; 10-442-144, Collision Welding; 10-602-110 Collision Mech Serv)

10-405-128 AUTO COLOR ADJUSTMENT/TINT ...color theory, color movement, color adjustment and testing color match. (Prerequisites: 10-405-101, Auto Collision Refinishing Intro; 10-405-113, Auto Collision Refinish Appl Systems)

10-405-130 AUTO COLLISION SECTIONING ...full structural panel replacement guidelines and procedures, partial structural panel guidelines and procedures, sectioning joints required in replacement of: quarter panels, front rails, rear rails, rocker panels, A-pillars, B-pillars, floor panels, and full body sectioning. (Prerequisites: 10-405-103, Auto Collision Rep; 10-405-107, Collision Trim/Hrdware; 10-405-111, Auto Glass/Hrdware; 10-405-115, Collision Non-Structural; 10-405-122, Collision Damage Analysis; 10-442-144, Collision Welding; 10-602-110 Collision Mech Serv)

10-405-135 AUTO COLLISION DAMAGE REPORTS ...vehicle body construction, damage analysis, vehicle identification, reference manuals, and writing damage reports both manually and with the aid of a computer.

10-405-144 AUTO COLLISION WELDING ...welding processes, machines and accessories, gas metal arc welding (wire), oxyacetylene cutting, welding and brazing, and gas tungsten arc welding.

10-405-146 AUTO COLLISION WELDING-ADVANCED ...advanced welding procedures necessary for an Auto Collision Repair Technician, including GTAW on aluminum along with GMAW on 1/8 inch thick or thicker steel.

10-602-110 AUTO COLLISION MECHANICAL SERVICE ...automotive systems diagnostic, repair and adjustment procedures covering commonly affected areas of the automobile regularly repaired by an Auto Collision Technician.

10-602-117 WIRING/SCHEMATICS TECHNOLOGY ...electrical symbols, wiring diagrams, tracing wiring circuits, and diagnosing electrical problems with wiring diagrams, **design an automotive electrical circuit. (Corequisite: 10-602-118, DC Electricity Tech)

10-602-118 DC ELECTRICITY TECHNOLOGY ...ohms, amps, voltage, wire repair, series and parallel circuits, meter use, magnetism, **research paper comparing and contrasting A/C and D/C electrical applications.

10-602-119 AUTO COLLISION ELECTRONICS ...electrical circuit diagnosis, troubleshooting and repair of commonly effected circuits that an Auto Collision Technician will encounter.