

Automotive Collision Repair and Refinishing

The Career

When a vehicle is involved in a collision, damage to multiple systems on the vehicle can occur. Technicians must have current training in order to diagnose and repair modern vehicles. That means highly trained collision repair professionals are in greater demand than ever. And because Dunwoody teaches the highest industry standards, those skills are transferable to anywhere in the country.

	Entry-level	Experienced
Paint Technician salary:	\$27,350 - \$28,197	\$47,367 - \$62,206
Body Repair Technician salary:	\$29,971 - \$35,625	\$44,050 - \$55,229

Source: AASP-MN 2007 Salary Survey

The Program

Dunwoody's Repair and Refinishing program is a full-time day program requiring students to attend Dunwoody technical classes 18 hours per week (six hours a day, three days a week). In addition, students complete one 7-credit production unit (210 hours) at Dunwoody during the first summer quarter and a 7-credit internship at an approved industry service facility or another 7-credit production unit at Dunwoody during the second summer quarter. A supervisor from the service facility and an outside advisor will be assigned to oversee the internship options. Dunwoody's programs utilize I-CAR (Inter-Industry Conference on Auto Collision Repair) training materials, and all Dunwoody instructors are certified by the National Institute for Automotive Service Excellence (ASE) and I-CAR Gold professionals. The National Automotive Technicians Education Foundation (NATEF), the branch of ASE which certifies and accredits automotive education programs has certified Dunwoody in all areas of service and repair. Students use specialized tools, materials and techniques to straighten or replace damaged body panels and structural components as well as perform related mechanical and electrical repairs.

Program Length

This is an eight-quarter program, each lasting 12 weeks with the summer quarters lasting 7 weeks. With 106 credits, students graduate with an Associate of Applied Science (A.A.S.) degree. Students may also receive a Dunwoody Diploma for a shorter version of the program.

Applying to Dunwoody is easy

To apply online, visit dunwoody.edu. Or, to speak with a Dunwoody Admissions representative, call 612-374-5800 or 800-292-4652.

Dunwoody's Admissions team is committed to working with you to ease and simplify the admissions process and provide all the necessary information regarding our academic programs, degree opportunities, financial aid, expectations and everything else that enters into such an important decision.

Other exciting Dunwoody Automotive Technology programs and degree options are available. Visit dunwoody.edu for complete details.

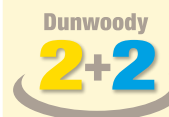


A.A.S. Degree Requirements

ABDY111	Introduction to Collision Industry
ABDY112	Detailing
ABDY113	Bolt-on Panels
ABDY121A	Panel Straightening/Paint Prep I
ABDY121B	Panel Straightening/Paint PrepII
ABDY122	Introduction to Welding
ABDY123	Advanced Welding
ABDY124	Plastic Repair
ABDY131	Aluminum Welding
ABDY132	Complex Panel Repair
ABDY133A	Panel Replacement/Core Supports I
ABDY133B	Panel Replacement/Core Supports II
ABDY134	Collision Electrical & Air Conditioning
ABDY135A	Suspension & Brakes
ABDY135B	Suspension & Brakes II
ABDY141	Structural Damage Analysis & Measuring
ABDY142	Structural Damage Repair
ABDY143	Restraint Systems
ABDY145	Stationary Glass Replacement & Upholst
ABDY211	Introduction to Refinishing
ABDY212	Paint Formulation
ABDY213	Preparation & Paint Application
ABDY221	Finish Matching & Plastic Refinishing
ABDY222	Custom Painting Products & Techniques
ABDY301	Practical Lab & Production I
ABDY302	Practical Lab & Production II
COMM100	Communication Theory & Practice
COMM101	Electronic Communications
ENGL101	Composition
MATH103	Applications for Automotive
QUAL110	Fundamentals of Quality for Service
RSCH100	Research Strategies
	Diversity Electives
	Science Electives
	Social/Behavior Science Electives
	Arts/Humanities Electives
	General Electives



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Dunwoody's 2+2 concept means every graduate of a Dunwoody two-year associate's degree program is qualified to be admitted into one of our breakthrough bachelor's degree programs if they would like to continue their education.

Automotive Collision – Repair and Refinishing

Course Descriptions

ABDY111 - Introduction to Collision Industry

Participants in Intro to Collision Industry will be given an overview of past, present and future collision industry trends. A special emphasis will be safety and safety equipment, vehicle identification nomenclature, industry materials used in the repair process, special industry tools and body shop operations. Career opportunities that arise from collision repair technicians, such as shop ownership, will be discussed and evaluated.

ABDY112 - Detailing

Participants will be required to learn all aspects of detailing techniques and procedures. Included are interior cleaning and stain removal procedures. Exterior cleaning, color sanding and buffing on both new and cured paint, pinstripe, decal and logo applications, and the safe removal of paint overspray from all surfaces. Various compounds and chemicals will be used and evaluated.

ABDY113 - Bolt-on Panels

Participants will be able to identify, remove and replace all bolts on panels that do not require welding or structural adhesive. Panel alignment techniques will be practiced and discussed on Hood, Deck lids, Fenders, Doors and Bumpers. An understanding of vehicle construction, acceptable alignment techniques, procedures and fasteners will also be discussed and practiced.

ABDY121A - Panel Straightening and Paint Prep I

Participants will learn to identify and describe various metals used in the collision industry, straighten metal using several approved methods, learn surface preparation techniques for the use of body fillers. Identify and describe existing paint finishes on both metal and plastic surfaces. Proper application and sanding techniques for primer surfaces, paint gun operation, and masking surfaces for paint.

ABDY121B - Panel Straightening and Paint Prep II

Continued hands-on application and education of the body materials used in the panel straightening process, with more emphasis on metal straightening techniques. This course refines the preparatory process on panel surfaces using the most current industry standards.

ABDY122 - Introduction to Welding

Introduction to welding and its safety issues. Participants will learn and practice the proper welding equipment setup, adjustment and techniques to welding as it applies to the automobile collision industry. Course includes MIG welding and proper use of gas cutting and heating equipment.

ABDY123 - Advanced Welding

Continued discussion and practice of Gas Metal Arc Welding (MIG) and safety issues, with special consideration to 1-car welding procedures and tests. Also includes set up and usage of plasma arch cutting equipment.

ABDY124 - Plastic Repair

Classroom discussion on proper identification and repair techniques. Lab practice using airless welding, and adhesive repair techniques on rigid and flexible interior and exterior plastics used by the auto industry. Special emphasis on retexturing and the additional surface preparation required to the refinishing of plastics.

ABDY131 - Aluminum Welding

Classroom discussion of the properties of aluminum, aluminum alloys and welding processes for aluminum. Shielding gas and wire electrode selection. Lab demonstrations of the setup and adjustment of the MIG welder for aluminum, weld joint preparation, aluminum welding procedures and precautions. Lab assignments include set-up and welding on aluminum using the MIG welding process. ICAR Aluminum welding standards and testing methods are utilized during this course.

ABDY132 - Complex Panel Repair

Qualified participants will discuss and practice the art of accessing damage to and repairing panels with complex shapes and damage to style lines and attached inner panels. Also includes repair of minor damage to pillars,

rocker panel assemblies, quarter panels and radiator supports. Repair of aluminum and plastic panels is also discussed. Vital to the success of panel repairs is restoring corrosion protection, which also will be discussed and practiced at length.

ABDY133A - Panel Replacement and Core Supports I

Qualified participants will study and practice replacement of welded on panels such as radiator core supports, outer door panels (skins), quarter panels and inner splash guards associated with the radiator core support. Participants will study and practice restoration of corrosion protection, chemical adhesion of panels, and the proper use and application of industry seam sealers.

ABDY133B - Panel Replacement and Core Supports II

Qualified participants will have complete lab practice and exposure to the processes involved in radiator core support replacement, outer door panel replacement, and quarter panel replacement. Welding and chemical adhesion methods approved by the collision industry will be utilized in this course.

ABDY134 - Collision Electrical & Air Conditioning

Electrical training objectives include fundamentals of electricity and related automotive circuits, tracing of wiring diagrams and repair of collision-related malfunctions of electrical components and wiring of the automobile. Includes identification and usage of electrical test tools and headlamp aiming. Electrical Lab assignments include headlamp aiming, diagnosing electrical problems and performing repairs. Air conditioning training objectives include Air conditioning theory of operation, properties of refrigerants, and safety.

ABDY135A - Suspension and Brakes

Classroom discussion on the principles, identification and repair of automotive suspensions and brakes. Wheel alignment terms such as camber, castor and toe are discussed. Steering and brake component functions are identified and discussed. Lab practice will include using proper nomenclature, removal and reinstallation of steering, brake and suspension components.

ABDY135B - Suspension and Brakes II

Practical Lab application and continued experience with identification, removal and repair of steering, suspension and brake components. Emphasis placed on alignment and suspension problem solving.

ABDY141 - Structural Damage Analysis & Measuring

When a vehicle is involved in a collision, it can receive damage to its structural, mechanical, suspension, electrical, restraint and other related systems. This course is designed to train the participants to find all types of collision damage. ABDY141 includes classroom discussion and lab demonstration of vehicle collision damage analysis, inspection techniques, damage classification and types of vehicle construction. Also includes measuring concepts, setup and use of measuring systems, and vehicle anchoring systems. Lab assignments: Participants disassemble vehicles, analyze vehicle damage and set up anchoring & measuring.

ABDY142 - Structural Damage Repair

Classroom discussion and lab demonstration of the set up and use of measuring systems, vehicle anchoring, straightening equipment, Industry (I-CAR) guidelines for structural repairs including frame and unibody straightening, structural component replacement and sectioning. Also includes procedures for restoring corrosion protection. Participants disassemble vehicles for repair, order parts, set up measuring systems and straightening equipment and perform structural repairs on unitized and full-frame vehicles, including repairs to mechanical and electrical systems.

ABDY143 - Restraint Systems

This course begins with a classroom discussion of the history of restraint systems. The course focus is on air bag theory of operation, function of components and wiring, deployment conditions, safety precautions, and inspection procedures. Also includes demonstrations of diagnostic and component replacement procedures for air bag and seat belt systems.

Automotive Collision – Repair and Refinishing

ABDY145 - Glass replacement & Upholstery R&I

Collision repair technicians need to be able to remove and replace stationary glass as well as remove and re-install interior trim and upholstery as necessary during vehicle repairs. This course includes classroom discussion and lab demonstration of stationary glass replacement, correction of wind noises and water leaks, and removal and re-installation of interior trim. Lab assignments include removal and replacement of stationary glass, seat covers, seat frames and interior trim.

ABDY211 - Introduction to Refinishing

Participants discuss and practice safety issues, paint handling and proper disposal, as well as a continued discussion of paint preparation, paint application and potential paint problems. Participants will study and practice the use of the industry's most up to date products, the possible future of the paint industry and its effect on the collision repair industry.

ABDY212 - Paint Formulation

Qualified participants will discuss paint mixing formulas, tinting paints with the use of various toners, and the use of metallic and mica in the paint formulation process. Practical application of paint mixing formulas will be practiced using both factory and paint industry recommendations.

ABDY213 - Preparation & Paint Application

Qualified participants will spend the majority of this course in the Paint Spray Booth. Using techniques learned in ABDY 121, 211, and 213, participants will prepare vehicle surfaces, mask vehicle surfaces and spray paint vehicles in a state of the art downdraft spray booth. Participants will be able to properly apply primers, sealers, base coats and clear coats. Blending, color sanding, and final surface finishing techniques are all discussed and practiced.

ABDY221 - Finish Matching & Plastic Refinishing

Explanation and demonstration of industry procedures used in color matching, tinting and blending. Proper use of urethane products, color mixing systems, panel preparation and base coat/clear coat technology. Procedures, techniques and materials used in Tri-coat finish repairs. Also includes special products and procedures used to refinish automotive plastics. Lab assignments include color evaluation, color adjustment (tinting), and blending using urethane products and color mixing system.

ABDY222 - Custom Painting Products & Techniques

ABDY 222 includes surface preparation procedures, specialized refinish materials, spray equipment and techniques used for custom painting on vehicles or small projects. Includes discussion and hands on use of ground coats, midcoats and clearcoats. Materials include standard urethane basecoats, candies, pearls and metalflakes. Also includes masking techniques for custom painting. Lab assignments include creating a custom painted panel or project.

ABDY301 - Practical Lab and Production I

Participants are allowed to get hands-on experience and practice in the collision repair industry by working on "customers" vehicles. Using all the information and experience learned during their first year at Dunwoody, participants write basic estimates, make necessary repairs, refinish, and detail vehicles.

ABDY302 - Practical Lab and Production II

Participants perform major and minor collision repairs on unibody and conventional vehicles; replace structural members and exterior panels; repair dents and damage to body panels, remove and replace glass and upholstery; suspension and mechanical components; prepare panels for paint, refinish, partial, complete panels, and whole vehicles. Participants also discuss repairs with customers, order parts and complete repair orders for customer billing.