

AUTO BODY (AUB)

AUB 100 Introduction to Collision Repair

2 Class Hours, 2 Quarter Credit Hours

This course is designed to familiarize incoming students with the operation of the Automotive Collision Repair labs and provide an overview of the program. Students will be introduced to the potential job opportunities and the working environment in the automotive collision repair industry and will become familiar with the tools used in collision repair. Students will study state and federal environmental safety laws and regulations as well as personal and shop safety. Students will also be asked to demonstrate proficiency using shop equipment, measuring tools/charts, crash manuals and computerized information.

AUB 103 Fundamentals of Auto Body Metal Repair Lab

4 Lab Hours, 1 Quarter Credit Hours

Prerequisites: AUB 104 (may be taken concurrently)

Corequisites: AUB 104

In the lab, students will practice the concepts they learned in AUB 101. Students will be assigned an auto body component and will demonstrate their ability to correctly apply refinishing materials using specialized equipment. Students will also practice using hand and power tools specific to the automotive collision repair industry.

AUB 104 Fundamentals of Auto Body Metal Repair

4 Class Hours, 4 Quarter Credit Hours

Corequisites: AUB 103, WEL 110

Students will learn the proper and safe use of hand and power tools specific to the auto body trade. Students will learn the concepts of straightening sheet metal components and practice the proper use of various auto body refinishing materials and equipment.

AUB 117 Welding for Collision Repair

1 Class Hours, 3 Lab Hours, 2 Quarter Credit Hours

This course is intended to teach students the fundamentals of using both oxy/acetylene and electric welding equipment. Students will learn the three different classes of welding, safety precautions associated with each class and will practice basic welding, brazing and cutting techniques.

AUB 122 Brakes and Suspension Systems for Collision Students

4 Class Hours, 4 Quarter Credit Hours

Corequisites: AUB 123

This course covers the principles of operation of drum and disc braking systems including the study of hydraulic principles, brake inspection, brake bleeding, brake system flushing and machining practices. In addition, this course introduces students to automotive frame systems, tires, wheels, suspension components and suspension inspection and alignment. Students will study steering system inspection and service and suspension system component identification, removal and repair.

AUB 123 Brakes and Suspension Systems for Collision Students Lab

4 Lab Hours, 1 Quarter Credit Hours

Corequisites: AUB 122

Students will practice drum and disc machining, caliper service and brake inspections in the lab. They will also be introduced to anti-lock braking systems and servicing. Students will practice rebuilding wheel cylinders, calipers and master cylinders to manufacturers' specifications. They will also learn tire dismounting and mounting, balancing and service of run-flat design tires. Students will practice removal and installation of steering components and will also study suspension system component removal and replacement in the lab; and practice wheel replacement and alignment using a variety of state-of-the-art equipment.

AUB 127 Introduction to Airbrushing

1 Class Hours, 3 Lab Hours, 2 Quarter Credit Hours

Prerequisites: AUB 243 and AUB 245 and AUB 253 and AUB 254

This course is designed for the person who has no airbrush experience and for those who have used an airbrush before but want to learn new techniques. Instruction will cover how to handle the airbrush, the hook-up and maintenance procedure for double action brushes, how to render in black, white and color and more. Through a series of pre-printed exercises, students will learn glazing techniques, mixing of products and media and to work with stencils and templates.

AUB 128 Custom Modifications I

2 Class Hours, 4 Lab Hours, 3 Quarter Credit Hours

Custom car design and building allows students to express themselves in a creative way. Students will gain minor fabrication skills using sheet metal. Students will be exposed to body kits and their installation. Also, students will learn the art of removing door hardware and installing electric door openers. The installation of Lambo doors and suicide doors will be demonstrated and explained. The course will discuss the art of chopping a roof of an automobile. There is no end to the possibilities of custom car design.

AUB 129 Advanced Airbrushing Techniques

1 Class Hours, 3 Lab Hours, 2 Quarter Credit Hours

Prerequisites: AUB 127 or AUB 227

This course expands on the techniques mastered in AUB 127. Instruction will cover how to render in color and more. Through a series of pre-printed exercises, students will practice glazing techniques, mixing of products and media and to work with stencils and templates. Emphasis will be on illustrations and custom ornate work on large surface areas as well as multi-level illustrations.

AUB 130 Custom Modifications II

2 Class Hours, 4 Lab Hours, 3 Quarter Credit Hours

Prerequisites: AUB 128

After the completion of sheet metal work and design comes the painting techniques students will use in finishing a custom project. Steps in preparing the panel for custom finishes will be demonstrated and practiced. Students will develop a unique illustration and geometric designs for their project. Specific topics addressed include application of candy finish, how to create traditional and realistic flames. The use of templates and a wide variety of masking techniques to create a custom paint finish will be practiced.

AUB 131 Basic Electricity for Collision Repair

3 Class Hours, 3 Quarter Credit Hours

Corequisites: AUB 132

This course covers electrical fundamentals from "What is Electricity?" to basic troubleshooting techniques. Topics covered will be how electricity is produced, types of electricity, Ohm's Law, basic circuit construction, conductors, insulators, induction, battery construction and testing, alternators, starters, lighting systems, electrical testing tools and diagnosis of circuit problems.

AUB 132 Basic Electricity for Collision Repair Lab

3 Lab Hours, 1 Quarter Credit Hours

Corequisites: AUB 131

In the lab, students will learn the use of multimeters and other test equipment to diagnose and repair electrical circuits and components including lights, gauges, solenoids, relays, voltage regulators, motors and generators. Students will be instructed in the correct methods of constructing circuits, testing batteries, charging systems and starting systems.

AUB 136 Fundamentals of Paints and Refinishing Equipment Lab

4 Lab Hours, 1 Quarter Credit Hours

Corequisites: AUB 137

Students will practice surface preparation such as masking techniques, surface preparation, preparing sprayable materials, spraying different consistencies of paints and primers and cleaning and storing painting equipment and supplies.

AUB 137 Fundamentals of Paints and Refinishing Equipment

2 Class Hours, 2 Quarter Credit Hours

Corequisites: AUB 136

Students will learn spray equipment handling, operation and care. Students will practice spraying various consistencies of paints from undercoats to topcoats. Students will learn personal health safety and spray booth operation.

AUB 145 Glass and Non-Structural Panel Replacement

3 Class Hours, 3 Quarter Credit Hours

Prerequisites: (AUB 103 and AUB 104) or (AUB 203 and AUB 204)

Corequisites: AUB 146

Students will be instructed in the proper methods used in the removal and replacement of auto glass, interior moldings, interior hardware and exterior trim. Demonstrations will include proper installation of exterior panels as well as adjustments on hoods, fenders, doors and deck lids.

AUB 146 Glass and Non-Structural Panel Replacement Lab

3 Lab Hours, 1 Quarter Credit Hours

Prerequisites: AUB 103 and AUB 104 or (AUB 203 and AUB 204) and WEL 110 or WEL 151

Corequisites: AUB 145

In the lab, students will practice the concepts they learned in AUB 145. Students will demonstrate the ability to properly install a non-structural panel to manufacturer's specifications. Students will also perform adjustments on hoods, fenders, doors and deck lids to achieve proper fit.

AUB 152 Introduction to Structural Repairs and Component Replacement

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: AUB 103 and AUB 104 or (AUB 203 and AUB 204) and WEL 110 or WEL 151

Corequisites: AUB 153

In this course, students will learn vehicle frame and body design from full frames to unibody construction and the proper methods used in the removal and replacement of such structural components as quarter panels and door skins. Demonstrations will include the operation of hydraulic straightening equipment, straightening techniques, straightening structural components and replacement of door skins and/or quarter panels on live vehicles or replacement doors. Students will be instructed in sectioning of stationary mild and H.S.S. steel panels.

AUB 153 Introduction to Structural Repairs and Component Replacement Lab

8 Lab Hours, 2 Quarter Credit Hours

Prerequisites: AUB 103 and AUB 104 or (AUB 203 and AUB 204) and WEL 110 or WEL 151

Corequisites: AUB 152

Students will demonstrate the ability to properly operate hydraulic straightening equipment and will practice straightening techniques and straightening structural components in the collision repair lab. Students will be instructed in, and practice sectioning of, stationary mild and H.S.S. steel panels. They will also demonstrate their ability to replace door skins and/or quarter panels on live vehicles or replacement doors.

AUB 154 Major and Minor Frame and Structural Straightening

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: AUB 136 and AUB 137 and AUB 145 and AUB 146 and AUB 152 and AUB 153

Corequisites: AUB 155

Students will be instructed in full-frame and unibody straightening on vehicles using the portable and stationary frame straightening equipment. Instruction will also cover the procedures used in the repair of major collision damage, the use and operation of a body and frame bench, and the methods used to verify specifications and measurement. Those skills will be used to repair vehicles with major collision damage using universal measuring systems in the automotive collision repair lab.

AUB 155 Major and Minor Frame and Structural Straightening Lab

8 Lab Hours, 2 Quarter Credit Hours

Prerequisites: AUB 136 and AUB 137 and AUB 145 and AUB 146 and AUB 152 and AUB 153

Corequisites: AUB 154

Students will be asked to demonstrate the knowledge gained in AUB 154 and to perform frame straightening on either unibody or full-frame vehicles. They will also demonstrate their ability to use the universal measuring system to correctly verify specifications and measurement of a vehicle with major collision damage and return a damaged vehicle to factory specification. Vehicle type and design will depend on vehicle availability.

AUB 156 Plastic Panel and SMC Repair

3 Class Hours, 3 Quarter Credit Hours

Prerequisites: AUB 103 and AUB 104 and AUB 136 and AUB 137 and AUB 145 and AUB 146

Corequisites: AUB 157

In this course, students will learn the process for repairing various plastic components used on modern automobiles. Students will be instructed in the use of plastic welders and plastic adhesives to perform repairs on both rigid and flexible components to industry standards. Students will also be instructed in the repair and replacement of Sheet Molded Composite (SMC) panels.

AUB 157 Plastic Panel and SMC Repair Lab

3 Lab Hours, 1 Quarter Credit Hours

Prerequisites: AUB 103 and AUB 104 and AUB 136 and AUB 137 and AUB 145 and AUB 146

Corequisites: AUB 156

Students will practice repairing plastic components using plastic welders and special adhesives particular to the automotive industry. Students will also practice replacing SMC components and panels and refinishing them to manufacturer's specifications and industry standards.

AUB 203 Introduction to Fabrication, Repair and Refinishing

2 Class Hours, 2 Quarter Credit Hours

Corequisites: AUB 204

Students will learn the proper and safe use of hand and power tools specific to the auto body trade. Students will learn the concepts of straightening sheet metal components and practice the proper use of various auto body fabrication and refinishing materials and equipment

AUB 204 Introduction to Fabrication, Repair and Refinishing Lab

6 Lab Hours, 3 Quarter Credit Hours

Prerequisites: AUB 203 (may be taken concurrently)

Corequisites: AUB 203

In the lab, students will be assigned an auto body component and will demonstrate their ability to correctly apply refinishing materials using specialized equipment. Students will also practice using hand and power tools specific to the automotive repair and refinishing industry.

AUB 217 Basic Welding

1 Class Hours, 3 Lab Hours, 2 Quarter Credit Hours

This course is intended to teach students the fundamentals of using both oxy/acetylene and electric welding equipment. Students will learn the three different classes of welding, safety precautions associated with each class and will practice basic welding, brazing and cutting techniques.

AUB 227 Introduction to Airbrushing

1 Class Hours, 4 Lab Hours, 3 Quarter Credit Hours

Corequisites: AUB 268, AUB 269

This course is designed for the person who has no airbrush experience and for those who have used an airbrush before but want to learn new techniques. Instruction will cover how to handle the airbrush, the hook-up and maintenance procedure for double action brushes, how to render in black, white and color and more. Through a series of pre-printed exercises, students will learn glazing techniques, mixing of products and media and to work with stencils and templates.

AUB 236 Paints and Refinishing Equipment

2 Class Hours, 2 Quarter Credit Hours

Corequisites: AUB 237

Students will learn spray equipment handling, operation and care. Students will practice spraying various consistencies of paints from undercoats to topcoats. Students will learn personal health safety and spray booth operation.

AUB 237 Paints and Refinishing Equipment Lab

6 Lab Hours, 3 Quarter Credit Hours

Corequisites: AUB 236

Students will practice surface preparation such as masking techniques, surface preparation, preparing sprayable materials, spraying different consistencies of paints and primers and cleaning and storing painting equipment and supplies.

AUB 243 Multi-Stage Paint Applications

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: AUB 104 and AUB 103 and AUB 137 and AUB 136

Corequisites: AUB 245

Students will practice mixing two- and three-stage paints using computerized mixing equipment. Students will demonstrate their ability to identify colors using vehicle color codes and determine the type of paint presently on the vehicle.

AUB 245 Multi-Stage Paint Applications Lab

4 Lab Hours, 1 Quarter Credit Hours

Prerequisites: AUB 104 and AUB 103 and AUB 137 and AUB 136

Corequisites: AUB 243

Students will demonstrate their ability to mix primers and paints with related additives and apply them to properly prepared vehicle surfaces. To do this, students will be asked to demonstrate their ability to identify colors from vehicle paint codes and mix paints using the computerized mixing equipment and blend newly applied paint into previously painted panels.

AUB 249 Auto/Collision Repair Internship

4 Quarter Credit Hours, 20

This course is designed for students who have completed the majority of their autobody or collision repair studies and wish to hone their skills in the work environment. Employers will be matched with students based on interest/ability levels to assist students to improve their autobody or collision repair skills in the work environment.

AUB 253 Paint and Refinishing Applications

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: AUB 104 and AUB 103 and AUB 137 and AUB 136

Corequisites: AUB 254

Students will practice preparing various types of surfaces to accept the application of paint finishes. Students will inspect, clean, and determine the condition and adequacy of spray guns and related material and equipment. Demonstrations will include instruction in the mixing of primers and paints and the use of computerized mixing equipment.

AUB 254 Paint and Refinishing Applications Lab

4 Lab Hours, 1 Quarter Credit Hours

Prerequisites: AUB 104 and AUB 103 and AUB 137 and AUB 136

Corequisites: AUB 253

Students will practice mixing primers and single-stage paints for consistency and application. Students will use computerized mixing equipment to obtain proper chemical compounds. Students will also practice the application of primers and paints to vehicle surfaces to achieve a finish consistent with industry standards.

AUB 261 Assessing Damage and Estimating Repairs

3 Class Hours, 3 Quarter Credit Hours

This course is designed for students who have completed all aspects of the repair and refinishing portion of their Automotive Collision Repair curriculum. This course prepares students to write estimates of repair using collision crash guides, parts sources, and other available types of literature for various makes of vehicles. Students will also be instructed in the latest software available for the estimation of vehicle repairs.

AUB 268 Advanced Paint Applications

2 Class Hours, 2 Quarter Credit Hours

Prerequisites: AUB 236 and AUB 237

Corequisites: AUB 269

Students will practice mixing two- and three-stage paints using computerized mixing equipment. Students will demonstrate their ability to identify colors using vehicle color codes and determine the type of paint presently on the vehicle.

AUB 269 Advanced Paint Applications Lab

6 Lab Hours, 3 Quarter Credit Hours

Corequisites: AUB 268

Students will demonstrate their ability to mix primers and paints with related additives and apply them to properly prepared vehicle surfaces. To do this, students will be asked to demonstrate their ability to identify colors from vehicle paint codes and mix paints using the computerized mixing equipment and blend newly applied paint into previously painted panels.

AUB 270 Custom Fabrication

2 Class Hours, 4 Lab Hours, 3 Quarter Credit Hours

Custom car design and building allows students to express themselves in a creative way. Students will gain introductory fabrication skills using sheet metal. Students will be exposed to body kits and their installation. Also, students will learn the art of removing door hardware and installing electric door openers. The installation of Lambo doors and suicide doors will be demonstrated and explained. The course will explore the art of chopping a roof of an automobile. There is no end to the possibilities of custom car design.