

Collision Auto Repair (CAR)

CAR 1000 Damage Analysis, Estimating, and Customer Service 3 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The course will cover how to define and identify various types of vehicular damage and utilize indicators of structural damage to create computer generated estimates of collision damaged vehicles. Customer satisfaction indicators will be explored to improve customer service in the collision repair industry. BILLABLE CONTACT HOURS: 3

CAR 1100 Automotive Detailing and Prep 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

This course provides the basic knowledge of automotive cleaning and preparation. The student will perform personal and environmental safety practices associated with buffing and polishing, removal of overspray, cleaning interior and exterior surfaces, and preparing a vehicle for delivery. Customer satisfaction will be emphasized during the performance of coursework and actual vehicle preparation activities. BILLABLE CONTACT HOURS: 5

CAR 1200 Auto Body Fundamentals 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The course will cover how to repair damaged panels using: hammer and dolly, metal finishing procedures, resistance weld dent pullers, plastic filler to restore panel contours, and apply primer/fillers in preparation for paint. The course will investigate emerging vehicular structures and materials and explore various Original Equipment Manufacturers (OEM) repair procedures required. BILLABLE CONTACT HOURS: 5

CAR 1250 Plastic Repair and Refinishing 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.) Prerequisite Or

Pre- or Corequisite: CAR 1200

The student will identify characteristics of various types of plastics, such as thermoset, thermoplastic, composites, and perform specific repair and refinish processes on each type. Both hot air nitrogen welding and two-part adhesive bonding procedures will be demonstrated and performed by the students. BILLABLE CONTACT HOURS: 5

CAR 1300 Collision Welding 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

The student will perform specific GMAW (MIG) weld repairs on galvanized mild and high strength steel following the repair guidelines established by I-CAR and the collision repair industry. The student will identify and perform cutting processes for different materials and locations in accordance to manufacturer's specifications. BILLABLE CONTACT HOURS: 5

CAR 1350 Bolted-on Panel Replacement 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1200

The course will cover replacement and alignment of all types of outer body panels including aluminum and plastic composites. The course will explore advanced vehicle materials repair and mechanical attachment methods including: structural adhesives, rivet bonding, new types of mechanical fasteners such as Self-Piercing Rivets (SPR's), and other new Original Equipment Manufacturers (OEM) processes in this course. BILLABLE CONTACT HOURS: 5

CAR 1380 Aluminum Repair and Welding 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1200 and CAR 1300

The course addresses how to identify alloys of aluminum used on modern vehicle components and perform OEM approved repair procedures on common alloys. Aluminum GMAW welding processes will be performed using pulse and synergistic welders to industry certification requirements. BILLABLE CONTACT HOURS: 5

CAR 1400 Welded-on Panel Replacement 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1350

Pre- or Corequisite: CAR 1300

The course explores how to devise and follow a damage repair plan prior to repairing a collision damaged vehicle. The damage repair plan will include straightening and alignment of damaged body components, repair of body panels, and replacement of outer body panels using welding, bonding, self-piercing rivets (SPR), or other OEM approved methods, to ensure corrosion protection and returning the vehicle to the pre-accident condition. BILLABLE CONTACT HOURS: 5

CAR 1450 Non-Structural Analysis and Damage Repair: Co-Operative Internship 2 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Pre- or Corequisite: CAR 1400

The student will spend 90 supervised hours at a co-op approved collision repair facility working with a certified structural repair technician. The student will perform such duties as: remove damaged panels, replace and align new panels, restore corrosion protection, and other collision repair tasks. The student will report to the instructor on a weekly basis and will be evaluated by the instructor at the co-op collision site. BILLABLE CONTACT HOURS: 2

CAR 1600 Paint and Refinish I 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

CAR 1600 provides the foundation skills for the application of automotive paint finishes. The student will mix and apply modern primers, primer/surfaces, sealers, and topcoats. Among the topics covered will be surface preparation for painting, environmental laws, personal safety protection, and modern paint spraying equipment. BILLABLE CONTACT HOURS: 5

CAR 1700 Paint and Refinish II4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1600

The course will cover how to sand, mask, and tape vehicles in preparation for partial vehicle refinishing. The students will use computer-based mixing formulas to mix the paint color to a blendable match and will perform a paint repair on a late-model vehicle documented with a visual and digital portfolio. BILLABLE CONTACT HOURS: 5

CAR 1800 Paint and Refinish III4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1700

The course will focus on color theory as it applies to mixing and tinting paint for proper color matching. Tri-coat and Multi-coat glamor finishes will be explored by spraying let-down panels and investigation special blending processes required. Emphasis will be placed on base coat blending techniques for both solvent and water-based paint. BILLABLE CONTACT HOURS: 5

CAR 1900 Paint and Refinish IV: Preparation for Certification 2 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1800

Students will perform advanced paint application and repair processes while earning I-CAR ProLevel One Platinum Certification upon successfully passing the End Of Program (EOP) exam with 70% or above. Students will also review and prepare for the ASE Paint & Refinish Certification test using pre-testing and directed study techniques to prepare for certification. BILLABLE CONTACT HOURS: 3

CAR 2100 Structural Damage Analysis 4 Credit Hours

English/ESL Placement: Placement into ENG 1055 or higher (or placement into ESL 1011 or higher for students taking the ESL sequence of courses.)

Prerequisite: CAR 1400

Students will use safe procedures in the set up, measurement, analysis and repair of body over frame and unibody vehicular damage utilizing a 3-dimensional laser measuring system and hydraulic frame pulling equipment. Students will develop a repair plan, and document dimensional accuracy upon completion of the repair. BILLABLE CONTACT HOURS: 5