Auto Collision Repair
Program Guide

Technical Certificate Requirements

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACR 110 Paint and Refinishing 1</td>
<td>3</td>
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<tr>
<td>ACR 115 Paint and Refinishing 2</td>
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<tr>
<td>ACR 130 Non-Structural Analysis &amp; Damage Repair 1</td>
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<tr>
<td>ACR 135 Non-Structural Analysis &amp; Damage Repair 2</td>
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<tr>
<td>ACR 150 Structural Analysis &amp; Damage Repair 1</td>
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</tr>
<tr>
<td>ACR 155 Structural Analysis &amp; Damage Repair 2</td>
<td>2</td>
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<tr>
<td>Semester Total</td>
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<td>ACR 120 Paint and Refinishing 3</td>
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<td>ACR 125 Paint and Refinishing 4</td>
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<td>ACR 140 Non-Structural Analysis &amp; Damage Repair 3</td>
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<td>ACR 145 Non-Structural Analysis &amp; Damage Repair 4</td>
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<td>ACR 160 Structural Analysis &amp; Damage Repair 3</td>
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<td>ACR 165 Structural Analysis &amp; Damage Repair 4</td>
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<td>Semester Total</td>
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Total Technical Education Credits 40

Associate of Applied Science Degree Requirements

Required Technical Courses

- Automotive Collision Repair Technical Certificate: 40 credits
- ACR 170 Mechanical and Electrical (by arrangement with instructor): 3 credits

Related Technical Electives

- Any Automotive, Business Administrative Technology, Commercial, Arts, Diesel, or Welding Technology courses: 2 credits

General Education (course numbers 100 or above)

- Verbal Communications: 3 credits
- Written Communications: 3 credits
- Mathematics, and/or Computer Science: 6 credits
- Social Sciences and/or Humanities and Fine Arts: 3 credits

Technical Certificate: 40 credits
Related Technical Electives: 5 credits
General Education: 15 credits
Total AAS Credits: 60 credits

Admission Criteria

- Successfully complete applicable preadmission testing and/or advising

The Auto Collision Repair program is accredited by the National Automotive Technicians Education Foundation (NATEF), a division of the National Institute of Automotive Service Excellence (ASE). Instructors are Master ASE Certified. Students learn all aspects of the collision repair process from start to finish on state of the art equipment. Students learn frame measuring with laser and sonar computerized equipment and frame straightening with two three-post frame machines. Students gain skills in automotive welding, dent repair, parts replacement and door glass and regulator repair and replacement as well as plastic repair. Students also learn the proper surface preparation, and refinishing skills with the latest HVLP spray guns. Students will be spraying with basecoat clear coat urethane paints, tri stage pearl finishes as well as the newest waterborne paint technology and UV light activated finishes. Students work on actual customer projects in a real collision shop atmosphere.
Career Opportunities: Automotive Body and Paint Shops, Automotive Dealers, Paint and Supply Stores, Metal Shops, Paint Shops, Manufacturing Companies

Course Descriptions

ACR 110 Paint and Refinishing 1, 3 credits.
This course will give the student basic knowledge of the automotive refinishing industry. Students will be introduced to the safety requirements needed for personal protection as well as an overview of the equipment and materials used in the automotive refinishing industry.

ACR 115 Paint and Refinishing 2, 3 credits. (Prerequisite: ACR 110)
In this course the student will be able to identify the safety equipment needed to perform spraying operations. Explain and demonstrate proper spraying operation as well as selecting the proper materials needed for particular projects. Paint mil thickness and paint removal and surface preparation will be emphasized as well.

ACR 120 Paint and Refinishing 3, 3 credits. (Prerequisite: ACR 115)
During this course students will learn final surface preparation, as well as correct masking procedures to properly prepare a project for refinishing. Students will then learn the correct ratios and procedures for properly and safely mixing materials needed for projects. Students will also learn and apply the skills necessary for proper spray gun operation as well as identifying and correcting paint defects.

ACR 125 Paint and Refinishing 4, 4 credits. (Prerequisite: ACR 120)
Students take the knowledge and skills gained from previous courses and apply them to actual customer projects. Students gain skills in color theory and tinting used for color matching, as well as procedures for and spot and blend repairs. Removing paint defects, final assembly and detailing to prepare project for delivery is also emphasized.

ACR 130 Non-Structural Analysis and Damage Repair 1, 4 credits.
Students will be instructed in the various career opportunities in the Collision Repair field, as well as the basic vehicle construction in unibody, space frame, and body over frame vehicles. Students will also be instructed in all safety aspects of collision repair. Students will also receive entry level instruction in Automotive plastics, Welding, cutting, metal straightening techniques, body fillers, outer body panel replacements/adjustments, and finally they will be introduced to interpreting damage reports.

ACR 135 Non-Structural Analysis and Damage Repair 2, 4 credits. (Prerequisite: ACR 130)
Students will take the skills and information from ACR 130 to the next level in ACR 135. This will include welding, cutting, metal finish, body filler, panel replacement and adjustment, and plastid repair. Identifying trim and hardware to be protected will be critical as this is the last course in non-structural before students will begin working on live customer work.

ACR 140 Non-Structural Analysis and Damage Repair 3, 4 credits. (Prerequisite: ACR 135)
Students will expand on all the knowledge and skills developed in ACR 130 and ACR 135 while working on live projects in the shops area including welding, cutting, metal finish, body filler, panel replacement and alignment, and plastic parts repairs. Door skin replacement will also be covered and performed on a practice door in this course.
ACR 145 Non-Structural Analysis and Damage Repair 4, 5 credits. (Prerequisite: ACR 140)
Students will expand on all the knowledge and skills developed in ACR 130, ACR 135, and ACR 140 while working on live projects in the shop area including welding, cutting, metal finish, body filler, panel replacement and alignment, and plastic part repairs. Extensive plastic parts identification and repair procedures will also be covered and performed in this course.

ACR 150 Structural Analysis and Damage Repair 1, 2 credits.
Upon the completion of this course the student will be able to identify structural panels of the vehicle and learn special procedures for their replacement or repair including restoring corrosion protection. The replacement of stationary glass, structural measuring equipment, and applied welding is included in the course.

ACR 155 Structural Analysis and Damage Repair 2, 2 credits. (Prerequisite: ACR 150)
In this course students will perform BOF (body over frame) as well as unibody structural measuring, develop a damage repair plan from this inspection as well as actually performing the repair as needed. Welding and cutting repair procedures will also be performed as needed for a specific application.

ACR 160 Structural Analysis and Damage Repair 3, 3 credits. (Prerequisite: ACR 155)
This is an intermediate course where all the knowledge gained in ACR 150 and ACR 155 is used to perform repairs on BOF (body over frame) and unibody practice vehicles. Structural sectioning installation of fixed structural glass and the importance of restoring the vehicle to pre accident condition will all be covered and performed.

ACR 165 Structural Analysis and Damage Repair 4, 3 credits. (Prerequisite: ACR 160)
This is an advanced course where students use skills gained in the previous three structural repair courses and apply them to live customer work in the shop. Analyzing and repairing full frame vehicles as well as unibody, sectioning, installing structural glass, and welding of structural components are covered.

ACR 170 Mechanical and Electrical Components, 3 credits. (Prerequisites: successful completion of all certificate core courses. Required only for AAS degree completion)
This course involves the basic analysis, repair and replacement of suspension and steering components along with angles and pivot-point alignment involved in proper steering alignment. This class also includes classroom and laboratory instruction on basic electricity, use of test equipment, schematic reading, general automotive electronics and the repair of electrical components commonly damaged during a collision. Minor mechanical analysis will be discussed as well.