### Program Planning Guide

**Automotive Restoration Technology Diploma, D60140**

**Program Length:** 3

**Career Pathway Options:** Automotive Restoration Technology Diploma

**Program Site/s:**

### Suggested Course Schedule:

<table>
<thead>
<tr>
<th>Suggested Course Schedule:</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class</td>
</tr>
<tr>
<td><strong>1st Semester (Fall)</strong></td>
<td></td>
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<tr>
<td>ARS 112 Auto Restoration Research</td>
<td>3</td>
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<tr>
<td>ARS 117 Automotive Engines</td>
<td>1</td>
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<tr>
<td>ARS 131 Chassis and Drive Trains</td>
<td>2</td>
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<tr>
<td>TRN 110 Intro to Transport Tech</td>
<td>1</td>
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<tr>
<td>TRN 120 Basic Transp Electricity</td>
<td>4</td>
</tr>
<tr>
<td>TRN 180 Basic Welding for Transp.</td>
<td>1</td>
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<tr>
<td></td>
<td>12</td>
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<td><strong>2nd Semester (Spring)</strong></td>
<td></td>
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<tr>
<td>ARS 118 Wood &amp; Metal Restoration</td>
<td>2</td>
</tr>
<tr>
<td>AUB 111 Painting &amp; Refinishing I</td>
<td>2</td>
</tr>
<tr>
<td>AUB 112 Painting &amp; Refinishing II</td>
<td>2</td>
</tr>
<tr>
<td>AUB 121 Non-structural Damage I</td>
<td>1</td>
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<tr>
<td>ENG 102 Applied Communications II</td>
<td>3</td>
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<tr>
<td>MAT 101 Applied Mathematics I</td>
<td>2</td>
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<td>12</td>
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<tr>
<td><strong>3rd Semester (Summer)</strong></td>
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<tr>
<td>ARS 113 Automobile Upholstery</td>
<td>2</td>
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<tr>
<td>ARS 114 Restoration Skills I</td>
<td>2</td>
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Total Semester Hours Required to Graduate: 46
Automotive Restoration Technology Diploma, D60140

Course Descriptions

ARS 112 Auto Restoration Research 3-0-0-3
This course covers identification and collection of information needed to restore classic automobiles. Emphasis is placed on using books, numbers, emblems, titles, bills of sale, and other documents as resources. Upon completion, students should be able to use reference materials in the area of auto restoration to restore classic vehicles.

ARS 113 Automobile Upholstery 2-4-0-4
This course covers automobile upholstery work used in restoration of classic automobiles. Emphasis is placed on removing, repairing, or reconstructing worn/damaged upholstery material in classic automobiles. Upon completion, students should be able to disassemble, repair/reconstruct, or replace the seats, headliners, door panels, and other components in the interior of vehicles.

ARS 114 Restoration Skills I 2-4-0-4
This course covers mechanical, electrical, and upholstery restoration. Emphasis is placed on engines, transmissions, brakes, starters, generators, distributors, and replacement or fabrication of upholstery. Upon completion, students should be able to restore, rebuild, or replace specific components in a wide range of classic vehicles.

ARS 117 Automotive Engines 1-3-0-2
This course covers the repair, rebuilding, and troubleshooting of internal combustion engines. Emphasis is placed on use of tools and equipment to measure reconditioning tolerances of the internal combustion engine. Upon completion, students should be able to disassemble, repair and/or replace, and reassemble an internal combustion engine.

ARS 118 Wood & Metal Restoration 2-2-0-3
This course introduces various wood materials used in early automobile construction including a general overview of woodworking techniques. Emphasis is placed on wood material, metal behavior, and trim construction. Upon completion, students should be able to perform simple woodworking techniques, attach and remove trim, and be familiar with basic hardware techniques.

ARS 131 Chassis and Drive Trains 2-3-0-3
This course introduces principles of operation of automotive drive trains, perimeter/ ladder/ full-framed vehicles, and related restoration processes. Emphasis is placed on the technology related to restoration of manual and automatic transmissions, transaxles, and final drive components used on vehicles. Upon completion, students should be able to describe, diagnose, and determine needed service and repairs in the vehicle restoration industry.

AUB 111 Painting & Refinishing I 2-6-0-4
This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

AUB 112 Painting & Refinishing II 2-6-0-4
Prerequisite: Take AUB 111
This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinishing problems.

AUB 121 Non-Structural Damage I 1-4-0-3
This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/replacing of body panels to accepted standards.

ENG 102 Applied Communications II 3-0-0-3
This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications.

MAT 110 Math Measurement & Literacy 2-2-0-3
Prerequisite: Take DMA 010; DMA 020; DMA 030
This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and technology to solve practical problems, and to analyze and communicate results.

TRN 110 Intro to Transport Tech 1-2-0-2
This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to
demonstrate appropriate safety procedures, identify and use
basic shop tools, and describe government regulations
regarding transportation repair facilities.

**TRN 120 Basic Transp Electricity  4-3-0-5**
This course covers basic electrical theory, wiring diagrams, test
equipment, and diagnosis, repair and replacement of batteries,
starters, and alternators. Topics include Ohm's Law, circuit
construction, wiring diagrams, circuit testing, and basic
troubleshooting. Upon completion, students should be able to
properly use wiring diagrams, diagnose, test, and repair basic
wiring, battery, starting, charging, and electrical concerns.

**TRN 180 Basic Welding for Transp  1-4-0-3**
This course covers the terms and procedures for welding
various metals used in the transportation industry with an
emphasis on personal safety and environmental health. Topics
include safety and precautionary measures, setup/operation of
MIG equipment, metal identification methods, types of
welds/joints, techniques, inspection methods, cutting
processes and other related issues. Upon completion, students
should be able to demonstrate a basic knowledge of welding
operations and safety procedures according to industry
standard.