Undergraduate Certificate in Automotive Technology

The Undergraduate Certificate in Automotive Technology provides students with the technical education and training necessary to be successful in today’s automotive industry. Students will study the various vehicle systems, including electrical and electronics, computerized engine controls, and the numerous mechanical components that make up today’s complex vehicles.

Admission Requirements

Satisfy the Application and Admission Requirements for Undergraduate Certificate Programs (http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/).

Advising

Students should consult the ADT faculty for assistance in curriculum planning toward the undergraduate certificate.

Computer Competency Requirement

The Automotive Technology certificate requires demonstrated computer competency. Computer competency may be demonstrated in any of the following ways:

- A 3-credit course in a computer language or an introductory course in data processing or microcomputers.
- Work-related experience verifying computer competency as approved by the faculty advisor.
- Self-initiated computer competency as approved by the faculty advisor.

Graduation Requirements

- Satisfy the General University Requirements for Undergraduate Certificates (http://catalog.uaa.alaska.edu/undergraduateprograms/certificaterequirements/).
- Complete the Program Requirements below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td></td>
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</tr>
<tr>
<td>ADT A102</td>
<td>Introduction to Automotive Technology</td>
<td>3</td>
</tr>
<tr>
<td>ADT A121</td>
<td>Basic Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>ADT A131</td>
<td>Auto Electrical II</td>
<td>3</td>
</tr>
<tr>
<td>ADT A150</td>
<td>Brake Systems</td>
<td>4</td>
</tr>
<tr>
<td>ADT A195</td>
<td>Automotive Practicum I</td>
<td>2</td>
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<tr>
<td>Second Semester</td>
<td></td>
<td></td>
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<tr>
<td>ADT A122</td>
<td>Engine Theory and Diagnosis</td>
<td>3</td>
</tr>
<tr>
<td>ADT A160</td>
<td>Manual Drive Trains and Axles</td>
<td>4</td>
</tr>
<tr>
<td>ADT A162</td>
<td>Suspension and Alignment</td>
<td>4</td>
</tr>
<tr>
<td>ADT A195</td>
<td>Automotive Practicum I</td>
<td>2</td>
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</tbody>
</table>

Third Semester

- ADT A140 Automotive Engine Repair 3
- ADT A225 Mobile Heating, Ventilation and Air Conditioning Systems 3
- ADT A227 Auto Electrical III 3
- ADT A195 Automotive Practicum I 2

Fourth Semester

- ADT A202 Auto Fuel and Emissions Systems 4
- ADT A222 Automotive Engine Performance 3
- ADT A260 Electronic and Automatic Transmissions 3
  or ADT A295 Automotive Practicum II

Total 49

A total of 49 credits is required for the certificate.

Program Student Learning Outcomes

At the completion of this undergraduate certificate program, students are able to:

- Demonstrate technical knowledge and skills necessary for success in the automotive maintenance and repair industry.
- Demonstrate academic proficiency necessary to pass national examinations.
- Demonstrate proficiency in performing occupationally related tasks in a professional setting.
- Integrate knowledge from diverse areas to develop effective diagnostic and repair strategies involving complex systems.
- Demonstrate effective oral and written communication skills necessary for success in the workplace.