

## Automotive Systems Technology - Program Learning Outcomes

	<b>Program Learning Outcomes</b>	<b>Student Learning Outcomes</b>	<b>Measure of Assessment and Criteria for Success</b>
1.	Students will demonstrate proficiency in the theory, diagnosis, repair, and service of automotive braking systems.	<ul style="list-style-type: none"> <li>• Students will demonstrate proper use of tools and equipment necessary for the diagnosis and repair of automotive brakes.</li> <li>• Students will successfully diagnose and repair automotive brake systems including replacing pads and shoes, machining drums and rotors.</li> <li>• Students will demonstrate an understanding the theory and operation of automotive brake systems, both drum and disc, by troubleshooting and servicing hydraulic and mechanical braking systems.</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of students will accumulate an average score of at least a level 4 on the NATEF brake task list.</li> <li>• 85% of students will score 85% on an ASE style test</li> </ul>
2.	Students will demonstrate proficiency in the theory, diagnosis, repair, and service of automotive electrical systems.	<ul style="list-style-type: none"> <li>• Students will demonstrate the proper use of tools and equipment used to diagnose and repair automotive electrical systems.</li> <li>• Students will understand electrical theory; Students should be able to define electricity and electronics, explain the electron theory, state and use ohms law to compute voltages, resistance, and current flow in DC circuits both parallel and series.</li> <li>• Students will successfully diagnose and repair automotive electrical systems.</li> <li>• Students will be able to explain the operation of solid-state devices and their application in a modern automobile.</li> <li>• Students will demonstrate the ability to use various test instruments to diagnose and check the operation of automobile circuits.</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of students will accumulate an average score of at least a level 4 on the NATEF electrical systems task list.</li> <li>• 85% of students will score 85% on an ASE style test</li> </ul>

3.	Students will demonstrate proficiency in the theory, diagnosis, repair, and service of automotive suspension and steering systems.	<ul style="list-style-type: none"> <li>• Students will show proper use of special tools needed for suspension and steering diagnosis and repair.</li> <li>• Students will demonstrate the ability to repair or replace steering and suspension components.</li> <li>• Students will be able to explain the components of SALA suspension system.</li> <li>• Students will be able to explain the Hotchkiss drive rear suspension system.</li> <li>• Students will demonstrate the ability to check, remove and service various components of both SALA and MacPherson suspension systems.</li> <li>• Students will understand the principles and types of wheels, tires, and tire balancing.</li> <li>• Students will demonstrate the ability to perform an off the car wheel balance.</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of students will accumulate an average score of at least a 4 on the NATEF suspension and steering task list.</li> <li>• 85% of students will score 85% on an ASE style test</li> </ul>
4.	Students will demonstrate proficiency in the theory, diagnosis, and repair of automotive engines.	<ul style="list-style-type: none"> <li>• Students will show proper use of special tools and equipment needed for engine repair.</li> <li>• Students will successfully remove overhaul and replace an automotive engine.</li> <li>• Students will demonstrate the ability to diagnose engine related problems.</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of students will accumulate an average score of at least a 4 on the NATEF suspension and steering task list.</li> <li>• 85% of students will score 85% on an ASE style test</li> </ul>
5.	Students will demonstrate proficiency in the theory, diagnosis, and repair of engine performance related problems.	<ul style="list-style-type: none"> <li>• Students will show proper use of special tools and equipment needed for engine performance.</li> <li>• Students will show ability to diagnose and repair engine performance related problems.</li> <li>• Students will show an understanding of the theory of engine operation.</li> </ul>	<ul style="list-style-type: none"> <li>• 80% of students will accumulate an average score of at least a 4 on the NATEF suspension and steering task list.</li> <li>• 85% of students will score 85% on an ASE style test</li> </ul>