

Ascot High School
Industrial Technology Department
Motor Vehicle Repairs Course Outline: Grade 10

Duration	Topics	Sub-Topics	Specific objectives	Assessments and due dates
September 9-25, 2025	Safety	Maintaining a safe and secure working environment	<p>Differentiate between a hazard and an accident</p> <p>List several hazards in the workshop</p> <p>List the three entities needed to start and sustain a fire</p> <p>Discuss four fire safety preventative measures</p> <p>State four general workshop rules</p> <p>Classify fires and fire extinguishers according to their types</p> <p>Explain the term first aid.</p> <p>Discuss its application to various injuries.</p>	<p>Written Assessment: Due Date</p> <p>Practical Group Assessment: Demonstrate knowledge of to handle a situation involving a fire. Due Date</p> <p>Practical Group Assessment: Demonstrate ability to apply first aid in an accident situation Due Date</p>
September 29-October 11, 2025	Orientation to the Occupation	Introduction to Auto Mechanics	<p>List several careers in Auto Mechanics</p> <p>Discuss the impact of these careers on the Jamaican society</p>	<p>Individual Assignment Scrapbook: Compile pictures with detailed information on Careers in Auto Mechanics</p>

			and the Jamaican economy	Due Date
October 14-30, 2025	Engine	Four Stroke Cycle	To get students to understand the basic operation of an engine by being able to explain the four-stroke cycle.	<i>Practical Assessment:</i> In a scrap book, draw a diagram of each stroke of the four-stroke cycle Due
November 4-27, 2025	Engine	Engine Top End	Demonstrate knowledge of camshaft. Demonstrate knowledge of valve train mechanism. Demonstrate knowledge of valves operation and construction Demonstrate knowledge of pushrods and rocker arms. Demonstrate knowledge of the operation of the valve train parts. Remove and replace valve train parts. Demonstrate knowledge of the cylinder head and its parts. Diagnose valve train faults and give solutions for these.	<i>Practical Group Assignment:</i> Identify the valve train parts: camshaft, valve, valve spring, retainer, collets, rocker arms, pushrods. Due Date Remove and replace valve train parts. Due Date Inspect valve train Due Date Inspect cylinder head Due Date Diagnose valve train faults Due Date
December 2, 2025	Engine	Engine Top End	Disassemble the engine top end.	<i>Practical Assessment:</i> Identify the engine top end parts.
January 6-13, 2025	Engine Classification	Cylinder Arrangement	Demonstrate knowledge of the number of cylinders of four stroke engines Demonstrate knowledge of the cylinder types: inline, V, slant, opposed	<i>Practical Group Assessment:</i> Identify the number of cylinders in a four-stroke cycle. Identify the various cylinders types: inline, V, slant, opposed

January 15-29, 2025	Engine	Engine Bottom End	Identify and explain the purpose of the piston, rings, connecting rod, crankshaft.	<i>Practical Assignment:</i> Use miscellaneous materials to design each of the Engine bottom end parts.
	Engine	Engine Bottom End	Disassemble the engine bottom end.	<i>Practical Assessment:</i> Identify the engine bottom end parts.
February 3-March 26, 2025	Performing Cooling and Lubrication Services	Cooling System	<p>Explain the purpose of the cooling system</p> <p>Differentiate between liquid and air cooled engines</p> <p>Identify and explain the function of the components of the cooling system</p> <p>Explain and demonstrate the procedure to perform a system flush</p> <p>Inspect, remove and replace cooling systems cooling system parts</p> <p>Diagnose and troubleshoot cooling system faults and solutions</p>	<i>Practical Group Assessment:</i> Identify cooling system parts Due Date Remove and replace radiator Due Date Adjust water pump belt Due Date Change coolant Change radiator cap Flush radiator Due Date Inspect cooling system Diagnose cooling system faults Due Date Assignment: Scrapbook Due Date:
		Lubrication System	Explain the purpose of the lubrication system	<i>Practical Group Assessment:</i> Identify lubrication system parts

			<p>Identify and explain the function of the parts of the lubrication system</p> <p>Explain methods of lubrication</p> <p>Discuss lubrication service and maintenance operation procedures</p> <p>Diagnose and troubleshoot lubrication system faults and solutions</p>	<p>Due Date</p> <p>Inspect lubrication system parts</p> <p>Due Date</p> <p>Service lubrication system</p> <p>Assignment</p> <p>Scrapbook</p> <p>Due Date:</p>
April 2-28, 2025	Fuel System	Carburetion	<p>Explain the purpose of the fuel system</p> <p>Demonstrate knowledge of a carburetor type fuel system</p> <p>Demonstrate knowledge of the operation of the carburetor type fuel system.</p> <p>Demonstrate knowledge of carburetor type fuel system faults</p> <p>Demonstrate knowledge of solutions for carburetor type fuel system faults</p> <p>Diagnose carburetor type fuel system faults.</p>	<p><i>Practical Group Assessment:</i></p> <p>Identify a carburetor and its parts</p> <p>Due Date</p> <p>Inspect carburetor</p> <p>Due Date</p> <p>Clean carburetor</p> <p>Due Date</p>
May 5-June 4, 2025		Fuel Injection	<p>Demonstrate knowledge of the operation of the fuel injector type fuel system</p> <p>Demonstrate knowledge of the function of the parts fuel injector type fuel system.</p>	<p><i>Practical Group Assessment:</i></p> <p>Identify fuel injection parts</p> <p>Due Date</p> <p>Remove and replace fuel injection parts</p> <p>Due Date</p>

			<p>Demonstrate knowledge of the fuel injector type fuel system faults.</p> <p>Demonstrate knowledge of solutions for the fuel injector type fuel system faults.</p> <p>Diagnose fuel injector type fuel system problems.</p>	<p>Inspect fuel injection system parts</p> <p>Due Date</p> <p>Service fuel injection system</p> <p>Due Date</p> <p>Diagnose fuel injection system faults</p> <p>Due Date</p>
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