

Automotive		Curriculum Map				
Program Outcomes: Upon completion of the program, graduates will be able to...	Institutional Skills	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.
	Courses					
AUTO 151 Auto Safety and Shop Practices	CPW	IRA				
AUTO 1053/AUTO 105L Electrical I	CPW	IRA	IR	IRA	IRA	
AUTO 1073/AUTO 107L Brakes	CPW	IRA	IRA	IRA	IRMA	
AUTO 1123/AUTOL Suspension & Steering	CPW	IRA	IRA	IRA	IRA	
AUTO 1043/AUTO 104L Manual Drive Trains & Axles	CPW	IRA	IRA	IRA	IRA	
AUTO 100 Small Gasoline Engines	CPW			IRA	IRA	IRA
AUTO 1093/AUTO 109L Heating & Air Conditioning	CPW	IRA	IRA	IRA	IRA	
AUTO 1113/AUTO 111L Automatic Transmission	CPW	IRMA	IRA	IRMA	IRA	IRMA
AUTO 102 Maintenance and Light Repair	CPW		IRA	IRA	IRA	IRA
AUTO 1033/AUTO 103L Engine Repair	CPW		IRMA	IRA	IRA	IRMA
AUTO 1063/AUTO 106L Engine Performance I	CPW	IRA	IRMA	IRMA	IRMA	IRMA
AUTO 1083/AUTO 108L Engine Performance II	CPW	IRA	IRMA	IRA	IRMA	IRMA

Mapping	
I	Introduced
R	Reinforced
M	Mastered
A	Assessed/Artifact

Essential Skills	
1	written communication
2	oral communication
3	critical thinking
4	cultural diversity
5	social responsibility

Employability Skills	
C	communication
P	problem solving
W	work ethic



		AAS				
		CERTC				
AUTO 151 Introduction to Safety and Shop Practices		<i>Curriculum Map</i>				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
<b>Course SLO: Students will be able to</b>						
articulate safety policies and procedures critical to their personal safety in the auto shop.	IRA					
reflect on the importance and significance of safety accountability in shop settings.	IRA					
gain basic safety knowledge to get you started right on the job.						
understand and learn the hazards and risks that auto technicians	IRA					
learn the importance of Personal Protective Equipment and what PPE is required for various tasks.	IRA					
learn to identify and report hazards in the workplace.	IRA					

		AAS				
		CERTC				
AUTO 1053 / AUTO 105L Electrical I		Curriculum Map				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
Course SLO: Students will be able to						
explain basic electricity and electrical theory.	IRA	IR	IR	IRA		
explain how the modern automotive electrical and electronic systems operate.			IR	IRA		
identify the various devices, system actuators and components used to operate and control the vehicle's starting, charging, and accessories systems and their relationship to the mechanical systems functions required for everyday vehicle operation.			IRA	IRA		
correctly analyze and repair electrical systems malfunctions through the use of various test equipment and procedures.			IRA	IRA		
demonstrate the use of manufacturer's service manual guidelines, wiring diagrams and the application of diagnostic flow charts and test procedures required to accurately troubleshoot the vehicles electrical systems and components.			IRA	IRA		

		AAS				
		CERTC				
AUTO 1073 / AUTO 107L Brakes		<i>Curriculum Map</i>				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
<b>Course SLO: Students will be able to</b>						
explain the proper methods of safely servicing brake systems and the various hazards associated with brake repair.	IRA	IRA	IRA	IRMA		
explain how modern brake systems operate		IRA		IRA		
identify conventional, ABS and traction control brake system types and all of the component parts as used within those systems.		IRA		IRA		
correctly diagnose both conventional and computerized braking system symptoms and failures.				IRA		
explain industry demands and demonstrate professionalism.						

		AAS				
		CERTC				
AUTO 1123 / AUTO 112L Steering and Suspension		Curriculum Map				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
<b>Course SLO: Students will be able to</b>						
recognize and apply shop safety procedures.	IRA					
demonstrate the ability to use various automotive repair and specification manuals and software.	IRA	IRA	IRA	IRA		
define the various terms used in alignment, suspension and steering.			IRA	IRA		
identify the names of the various components used on MacPherson strut, modified strut and short/long arm suspension systems and parallelogram and rack-and-pinion steering gears.			IRA	IRA		
demonstrate the ability to use various specialty tools and equipment utilized in the diagnosis, service and repair of alignment, suspension and steering systems.		IRA	IRA	IRA		
discuss vehicle problem(s) with vehicle owner and/or instructor and test drive to determine needed service and/or repairs.			IRA			

		AAS			
		CERTC			
AUTO 1043 / AUTO 104L Manual Drivetrains & Axles		<i>Curriculum Map</i>			
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.
<b>Course SLO: Students will be able to</b>					
explain how the modern automotive manual drive train systems operates.			IRA	IRA	
identify manual drive train system types and all of the component parts as used within those systems.			IRA	IRA	
correctly diagnose manual drive train system symptoms and failures.		IRA	IRA	IRA	
demonstrate service and repair or replacement of present manual drive train and drive axle system components as outlined in the appropriate manufacturer's service manuals.		IRA	IRA	IRA	
demonstrate the use of manufacturer's service manual guidelines and the application of diagnostic flow charts and test procedures required to accurately troubleshoot the vehicles manual drive train systems and components.	IRA		IRA	IRA	

AAS
CERTC

AUTO 100 Small Gasoline Engines	Curriculum Map				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.
Course SLO: Students will be able to					
understand basic internal combustion operational theory of both 2 cycle and 4 cycle engines.			IRA	IRA	
be capable of identifying the various parts, systems, and component operations used in the engine and their relationship to the other mechanical systems required for everyday vehicle operation.			IRA	IRA	
understand the function of the parts that make up the compression, ignition, governor, and fuel systems of small internal combustion gas engines.			IRA	IRA	
understand industry demands and professionalism.					IRA
correctly diagnose and repair engine and engine system malfunctions using various test equipment and procedures.				IRA	



		AAS				
		CERTC				
AUTO 1093 / AUTO 109L Heating & Air Conditioning		<i>Curriculum Map</i>				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
<b>Course SLO: Students will be able to</b>						
explain how the modern automotive heating and air conditioning systems operate.	IRA		IRA	IRA		
identify the various devices, system actuators and components used to operate and control the vehicle's environmental system and their relationship to the drivability and overall operation of today's vehicles.	IRA		IRA	IRA		
correctly diagnose environmental systems malfunctions through the use of various test equipment and procedures.			IRA	IRA		
demonstrate the use of manufacturer's service manual guidelines, wiring diagrams and the application of diagnostic flow charts and test procedures required to accurately troubleshoot the vehicles heating and air conditioning systems and components.		IRA	IRA	IRA		

		AAS				
		CERTC				
AUTO 1113 / AUTO 111L Automatic Transmission		Curriculum Map				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
<b>Course SLO: Students will be able to</b>						
recognize and apply shop safety procedures.	IRMA				IRMA	
define the various terms used in the automatic transmission and transaxle repair industry.			IRA			
identify the names and location of the various components of both automatic transmissions and transaxles.			IRMA	IRA		
discuss vehicle problem(s) with vehicle owner and/or instructor and test drive to determine needed service and/or repairs.			IRA		IRA	
demonstrate the ability to use various specialty tools and equipment utilized in the diagnosis, service and repair of automatic transmission and transaxle assemblies.		IRA		IRA		
remove and replace various automatic transmission and transaxle assemblies.			IRA	IRA		

AAS
CERTC

AUTO 102 Maintenance and Light Repair	<i>Curriculum Map</i>				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.
<b>Course SLO: Students will be able to</b>					
be capable of identifying these systems and all the component parts as used within those systems.			IRA	IRA	
research vehicle service information including fluid type, vehicle service history, service precautions, and technical service bulletins.			IRA		
locate and interpret appropriate service information.			IRA		
demonstrate industry standard professionalism that includes dress, attendance, communication, and customer service.			IRA		IRA
perform common fastener and thread repair, to include remove broken bolt, restore internal and external threads, and repair internal threads with thread insert.		IRA	IRA	IRA	
examine vehicles to determine extent of damage or malfunctions.			IRA		
perform routine and scheduled maintenance services, such as oil changes, lubrication, and tune-ups.			IRA		

		AAS				
		CERTC				
AUTO 1033 / AUTO 103L Engine Repair		Curriculum Map				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
Course SLO: Students will be able to						
explain basic internal combustion operational theory.			IRA	IRA	IRMA	
explain how the modern automotive multi-cylinder engine operates.			IRA	IRA		
be capable of identifying the various parts, systems, and component operations used in the engine and their relationship to the other mechanical systems required for everyday vehicle operation.		IRMA	IRA	IRA		
correctly diagnose and repair engine and engine system malfunctions through the use of various test equipment and procedures.		IRMA	IRA	IRA		
demonstrate the use of the manufacturer's service manual, inspection guidelines, overhaul procedures, and the application of diagnostic flow charts and test procedures required to accurately troubleshoot the vehicles engine systems and components.			IRA	IRA		
identify industry demands and demonstrate professionalism.					IRMA	

		AAS				
		CERTC				
AUTO 1063 / AUTO 106L Engine Performance		<i>Curriculum Map</i>				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
Course SLO: Students will be able to						
explain how the modern automotive computer controlled electronic systems operate.	IRA		IRA	IRA	IRMA	
identify the various microprocessors, input devices and system actuators used to monitor and control the vehicle's engine and accessories and their relationship to the mechanical systems functions required for everyday vehicle operation.		IRMA	IRA	IRMA		
correctly diagnose and repair electronic system malfunctions through the use of various test equipment and procedures.		IRA	IRA	IRA		
demonstrate the use of manufacturer's service manual guidelines and the application of diagnostic flow charts and test procedures required to accurately troubleshoot the vehicles electronic systems and components.			IRMA	IRA		

		AAS				
		CERTC				
AUTO 1083 / AUTO 108L Engine Performance II		Curriculum Map				
Program Outcomes	follow established procedures for safety and accident prevention in the automotive service industry.	operate precision automotive diagnostic and repair equipment.	service a variety of automotive systems.	diagnose mechanical malfunctions and performance problems and make necessary repairs.	practice customer service skills with customers, employers, and fellow employees.	
Course SLO: Students will be able to						
explain how the modern automotive computer controlled electronic systems operate.	IRA	IRMA	IRA	IRA		
identify the various microprocessors, input devices and system actuators used to monitor and control the vehicle's engine and their relationship to the mechanical systems functions required for everyday vehicle operation.			IRA	IRA		
correctly diagnose modern fuel and evaporative system malfunctions through the use of various test equipment and procedures.		IRA	IRA	IRMA		
demonstrate the use of manufacturer's service manual guidelines and the application of diagnostic flow charts and test procedures required to accurately troubleshoot the vehicles electronic systems and components.		IRA	IRA	IRA	IRMA	