



Automotive Technology Curriculum Map

CIP Code 47 .0604

Industry Standards
 Safety and Pollution Prevention (S/P2)
 Environmental Protection Agency (EPA)
 PA Department of Transportation (PennDOT)
 Automotive Lift Institute (ALI)

| Level I | <u>1st Quarter</u> | <u>2nd Quarter</u> | <u>3rd Quarter</u> | <u>4th Quarter</u> |
|-----------|---|---|---|--|
| | <u>Introduction to Automotive Technology</u> Hand and Power Tools <i>Automotive Service Safety (S/P2 Cert.)</i> <i>Vehicle Lifting and Supporting (ALI Cert.)</i> Service Information and Procedure Exploring Career Paths Vehicle Construction Writing Work Orders Multi-Point Vehicle Inspections Basic Vehicle Maintenance Fasteners and Fastener Repair Tire Construction and Service | <u>Brake System</u> Properties of Hydraulics Hydraulic System Bleeding Fabrication/Inspection of Brake Lines Master Cylinders/Brake Calipers Disc Brakes/Brake Calipers Drum Brakes/Wheel Cylinders Parking Brakes Industry Measurements/Tools Machining Brakes | <u>Engine Repair</u> Properties of Combustion Components of a Combustion Engine Fuel Delivery Fasteners and Fastener Repair Small Engine Repair Engine Teardown and Rebuild | <u>Basic Automotive Electrical</u> Construction of an Atom Types of Current Multimeter Operation Electrical Testers and Functions Automotive Batteries Wiring Diagrams Soldering Starting/Charging Systems Electrical Components |
| Level II | <u>1st Quarter</u> | <u>2nd Quarter</u> | <u>3rd Quarter</u> | <u>4th Quarter</u> |
| | <u>Suspension Systems</u> <i>Service Pollution Prevention (S/P2 Cert.)</i> Suspension System Operation and Safety Coil Spring Service Strut/Shock Absorber Service Leaf Spring Service Torsion Bar Service Stabilizer Bar Service | <u>Steering Systems</u> Properties of Vehicle Steering Rack and Pinion Steering Parallelogram Steering Hydraulic Steering Assist Electrical Steering Assist 4-Wheel Steering Vehicle Alignments | <u>Service Brake Systems</u> Hydraulic Assist Systems ABS/Stability Control Systems Hybrid/Electric Regenerative Braking Wheel Bearings | <u>Advanced Electrical/Diagnosis</u> Scan Tool Data and Trouble Codes Retrieving/Recording Trouble Codes Measuring/Diagnosing Parasitic Draw Body Systems Restraint/Airbag Systems High Voltage System Safety |
| Level III | <u>1st Quarter</u> | <u>2nd Quarter</u> | <u>3rd Quarter</u> | <u>4th Quarter</u> |
| | <u>Engine Performance</u> Ignition Systems Fuel Systems Engine Sensors and Diagnostics Engine Compression and Vacuum Emissions Components Scan Tool Diagnosing | <u>Vehicle HVAC</u> Refrigerant Types and Safety Principles and Components of AC Servicing AC Systems Vehicle Cabin Heating Cabin Air Distribution <i>609 Certification (EPA and ASE)</i> | <u>Transmissions/Drivetrain</u> Automatic Transmission Operation Transmission Fluid and Filters Manual Transmission Operation Transfer Case Operation Differential Operation Vehicle Mounts and Cradles NOCTI Preparation | <u>Workforce Preparation</u> NOCTI Testing Resume and Mock Interview Job Shadow/Co-op <i>PA State Inspection (State Certification)</i> <i>PA Emission Inspection (State Certification)</i> |