



# Automotive Technology Curriculum Map CIP # 47.0604

**INDUSTRY STANDARDS**  
 Safety and Pollution Prevention (S/P2)  
 Automotive Service Excellence (ASE)  
 Environmental Protection Agency (EPA)  
 Pennsylvania Department of Transportation  
 (PennDOT)  
 Automotive Lift Institute (ALI)

<b>L e v e l  1</b>	<p><b>1st Quarter</b></p> <p><b>Introduction to Automotive Technology</b>          Hand and Power Tools (205)  <u>Automotive Service Safety (S/P2 Cert)</u>  <u>Vehicle Lifting and Supporting (ALI Cert)</u>          Service Information and Procedure (110)          Vehicle Construction (111)          Multi-Point Vehicle Inspections          Basic Vehicle Maintenance</p>	<p><b>2nd Quarter</b></p> <p><b>Engine Repair</b>          Properties of Combustion (900)          Components of a Combustion Engine (909)          Fasteners and Fastener Repair (301)          Industry Measurements (303)          Engine Rebuild (910)</p>	<p><b>3rd Quarter</b></p> <p><b>Basics of Electricity</b>          Construction of an Atom          Types of Current          Multimeter Operation(747)          Electrical Testers and Functions(705-710)          Wiring Diagrams(705)          Soldering(713)          Electrical Components</p>	<p><b>4th Quarter</b></p> <p><b>Basic Automotive Electrical</b>          High Voltage System Safety(715)          Automotive Batteries (716-720)          Starting Systems(723- 728)          Charging Systems(728-732)          Body Systems(739-746)          Restraint/Airbag Systems</p>
<b>L e v e l  2</b>	<p><b>1st Quarter</b></p> <p><b>Suspension Systems</b>  <u>Service Pollution Prevention (S/P2 Cert)</u>          Tire Construction and Service(536-547)          Suspension System Operation and Safety          Coil Spring Service(523)          Strut/Shock Absorber Service(526)          Leaf Spring Service          Torsion Bar Service(524)          Stabilizer Bar Service(525)</p>	<p><b>2nd Quarter</b></p> <p><b>Steering Systems</b>          Properties of Vehicle Steering          Rack and Pinion Steering(507-508)          Parallelogram Steering (516)          Hydraulic Steering Assist(509-511)          Electrical Steering Assist(549)          4-Wheel Steering          Vehicle Alignments(531)</p>	<p><b>3rd Quarter</b></p> <p><b>Hydraulic Brake Systems</b>          Properties of Hydraulics          Fabrication/Inspection of Brake Lines(608-610)          Hydraulic System Bleeding(613)          Master Cylinders(606)          Hydraulic Assist Systems(632)          ABS/Stability Control Systems(641)</p>	<p><b>4th Quarter</b></p> <p><b>Service Brake Systems</b>          Disc Brakes(622–626)          Drum Brakes(615-619)          Parking Brakes(634)          Machining Brakes(627,616)          Wheel Bearings(633,639)          Hybrid/Electric Regenerative Braking(645)</p>
<b>L e v e l  3</b>	<p><b>1st Quarter</b></p> <p><b>Engine Performance</b>          Scan Tool Data and Trouble Codes(816)          Ignition Systems(822-824)          Fuel Systems(826-829)          Engine Sensors and Diagnostics          Engine Compression and Vacuum(810)          Emissions Components)831-841)</p>	<p><b>2nd Quarter</b></p> <p><b>Vehicle HVAC</b>          Refrigerant Types and Safety(1207)          Principles and Components of AC          Servicing AC Systems          Vehicle Cabin Heating          Cabin Air Distribution  <u>609 Certification (EPA and ASE)</u></p>	<p><b>3rd Quarter</b></p> <p><b>Transmissions/Drivetrain</b>          Automatic Transmission Operation          Transmission Fluid and Filters          Manual Transmission Operation          Transfer Case Operation          Differential Operation          Vehicle Mounts and Cradles</p>	<p><b>4th Quarter</b></p> <p><b>Workforce Readiness</b>          NOCTI Preparation          Resume and Mock Interview          Job Shadow/Co-op  <u>PA State Inspection (State Certification)</u>  <u>PA Emission Inspection (State Certification)</u></p>

Items highlighted in Yellow indicate Certifications available to students.