

## Transportation Technology/Auto

### Level III Unit Outline

#### **Unit 1: Safety in the Shop**

- Identify safety concerns in the shop.
- Protective clothing/equipment- Safety glasses, boots, pants, gloves etc.
- Identify safety equipment i.e., fire extinguishers, eye wash etc.
- Demonstrate first aid procedures.
- OSHA
- Tool safety
  - Hand tool safety
  - Power tool safety
- Shop equipment safety
- Spills, Blood Borne Pathogens (BBP's)
- Around the vehicle safety
- Hazards in the work place

#### **Unit 2: Electrical Systems**

- Identify custom concerns and vehicle history
- Serial circuits, diagrams, and electrical diagnosis
- Troubleshooting electrical circuits and possible repair
- Inspect electrical components and methods of repair

#### **Unit 3: Electronics**

- Battery testing and state of charge
- Batteries and related components
- Electric and/or hybrid battery systems

#### **Unit 4: Starting and Charging Systems**

- Perform, inspect, and test components
- Inspect, test, and replace starter relays and solenoids
- Mechanical problems with crank conditions
- Charging systems and diagnosis
- Alternator diagnosis and repair
- Circuit tests and diagnosis

#### **Unit 5: Gauges and Warning Devices**

- Gauges and readings

- Operation and repair of warning devices
- Inspection and testing of circuit sensor/sending units and components in gauges and warning devices.

#### **Unit 6: General Transmission and Transaxle**

- Obtain vehicle information
- Transmission/transaxle tests
- Noise, gear, and pressure concerns

#### **Unit 7: Career Planning 9.2 Career Awareness, Exploration and Preparation**

- Review career goals and determine steps necessary for attainment.
- Modify personalized student learning plans to support attainment of goals.
- Identify transferrable career skills and design alternate career plans.
- Identify industry credentials and attainment goals.
- Analyze employment laws and best practices.
- Analyze the correlation between personal and financial behavior and employability.
- Meet with guidance counselor to review academic standing and prepare for structure learning experiences.

Transportation Technology/Auto  
New Jersey Student Learning Standards (NJSLs)

**NJ Learning Standards: CTE.9.3**

<b>CONTENT AREA:</b>	<b>9.3 CAREER AND TECHNICAL EDUCATION</b>
<b>TRANSPORTATION, DISTRIBUTION &amp; LOGISTICS CAREER CLUSTER<sup>®</sup></b>	
<b>Number</b>	<b>Standard Statement</b>
<i>By the end of Grade 12, Career and Technical Education Program completers should be able to:</i>	
<b>CAREER CLUSTER<sup>®</sup>:</b>	<b>TRANSPORTATION, DISTRIBUTION &amp; LOGISTICS (TD)</b>
<b>PATHWAY:</b>	<b>SALES &amp; SERVICE (TD-SAL)</b>
<b>9.3.12.TD-SAL.1</b>	<b>Analyze the ongoing performance of transportation, logistics and distribution-related sales and service operations.</b>
<b>9.3.12.TD-SAL.2</b>	<b>Demonstrate the use of sales and ongoing service of products and services that are transportation related to promote development of existing and future clients and customers.</b>