



Tooele Technical College

88 S Tooele Blvd, Tooele, UT 84074

435-248-1800

Certificate Syllabus		Heavy Duty Diesel Technician
Certificate 1 Year (Catalog Year: 2020)		
Tooele Tech Core (1150 hours required)		Hours
<i>Heavy Duty Diesel Technician (1150 hours required)</i>		<i>Hours</i>
<i>Computer Skills for Technicians (BTEC1903)</i>		10.00
<i>Basic Computer Principles (1)</i>		3.00
<i>Word 2016 (2)</i>		2.00
<i>Excel 2016 (3)</i>		2.00
<i>PDF (4)</i>		3.00
<i>Workplace Relations (WKSK1501)</i>		20.00
<i>Attitude (1)</i>		5.00
<i>Time Management (2)</i>		5.00
<i>Communication (3)</i>		5.00
<i>Conflict Resolution/Relationship Building (4)</i>		5.00
<i>Safety and Shop Skills (HVDD1701)</i>		5.00
<i>Safety In The Work Place (1)</i>		5.00
<i>Tool Usage in the Diesel Profession (HVDD1902)</i>		49.00
<i>Basic Tools (1)</i>		4.00
<i>Reusable Type Fitting (2)</i>		4.00
<i>Measuring Instruments and Procedures (3)</i>		14.00
<i>Using a Pressure Washer (4)</i>		2.00
<i>Fasteners (5)</i>		2.00
<i>Using a Torque Wrench (6)</i>		3.00
<i>Using a Power Cut-Off Saw (7)</i>		4.00
<i>Using a Drill Press (8)</i>		4.00
<i>Using Shop Manual (9)</i>		4.00
<i>Making Gaskets (10)</i>		1.00
<i>Using a Tire Machine Automotive/Semi (11)</i>		4.00
<i>Proficiency Test (12)</i>		3.00
<i>Welding in the Diesel Profession (HVDD1703)</i>		65.00
<i>Welding Safety (1)</i>		5.00
<i>Oxy/Weld, Brazing & Cutting (2)</i>		20.00
<i>Arc Welding in 3 positions (3)</i>		20.00
<i>Mig Welding in 3 positions (4)</i>		20.00
<i>Math For The Automotive/Diesel Trades (HVDD1704)</i>		60.00
<i>Whole Numbers (1)</i>		4.00

<i>Decimals (2)</i>	4.00
<i>Fractions (3)</i>	4.00
<i>Geometry, Angle Measurement, and the Metric System (4)</i>	4.00
<i>Integers and Signed Numbers (5)</i>	4.00
<i>Ratios, Proportions, and Percentages (6)</i>	4.00
<i>Business and Statistics (7)</i>	4.00
<i>Completing Repair Orders (8)</i>	4.00
<i>Measurement Tools (9)</i>	4.00
<i>Automotive Engine (10)</i>	4.00
<i>Automotive Engine Systems (11)</i>	4.00
<i>Automobile Electrical Systems (12)</i>	4.00
<i>Automobile Drive Train (13)</i>	4.00
<i>Automobile Chassis (14)</i>	4.00
<i>Automobile HVAC (15)</i>	4.00
Heavy Duty Brakes 1 (HVDD1905)	75.00
<i>Inspection/Repair of Hydraulic Brakes (1)</i>	30.00
<i>Remove and Replace Front Wheels (2)</i>	6.00
<i>Remove and Replace Dual Wheels (3)</i>	6.00
<i>Pack Grease Style Wheel Bearings (4)</i>	15.00
<i>Adjust and Replace Oil Bath Bearings (5)</i>	8.00
<i>Operation/Air Brakes (6)</i>	10.00
Heavy Duty Brakes 2 (HVDD1706)	45.00
<i>Replace and Inspect Brakes/Hardware (1)</i>	20.00
<i>Repair/Replace Brake Chambers (2)</i>	10.00
<i>Electrical- ABS Brakes Inspection/Adjustment (3)</i>	10.00
<i>Brakes Proficiency (4)</i>	5.00
Steering/Suspension 1 (HVDD1907)	47.00
<i>Steering/Suspension Part Identification (1)</i>	3.00
<i>Replace King Pins - Straight Type (2)</i>	8.00
<i>Overhaul Steering Geer (3)</i>	16.00
<i>Replace Front Leaf Springs (4)</i>	20.00
Steering/Suspension 2 (HVDD1708)	24.00
<i>Check and Replace Tie Rods (1)</i>	4.00
<i>Semi-Truck Alignment (2)</i>	14.00
<i>Power Steering Pump/Gearbox Pressures (3)</i>	4.00
<i>Check/Adjust Electrical-ride Height Sensors (4)</i>	2.00
Electrical/Electronic Systems 1 (HVDD1709)	62.00
<i>Fundamentals of Atoms (1)</i>	3.00
<i>Electrical Components/Solder Wires (2)</i>	4.00
<i>Battery's/ Battery Charging (3)</i>	4.00
<i>Voltmeter Basics (4)</i>	4.00
<i>Electrical Circuits (5)</i>	6.00
<i>How to Read Wiring Diagrams (6)</i>	6.00
<i>Inspection/Repair of Alternators (7)</i>	15.00

<i>Inspection/Repair of Starter Motors (8)</i>	14.00
<i>Electrical Engine Adjustment/Testing (9)</i>	6.00
Electrical/Electronic Systems 2 (HVDD1910)	73.00
<i>Electrical Meters (1)</i>	25.00
<i>Operating Electrical Circuits (2)</i>	25.00
<i>Drop Voltage Testing (3)</i>	8.00
<i>Electrical Proficiency (4)</i>	5.00
<i>Basic Oscilloscope Testing (5)</i>	10.00
Heavy Duty HVAC 1 (HVDD1711)	48.00
<i>Theory of Operation (1)</i>	4.00
<i>HVAC Basic Components (2)</i>	6.00
<i>HVAC Compressor Controls (3)</i>	6.00
<i>HVAC Evaporator Controls (4)</i>	6.00
<i>A/C Test Preparation Procedures (5)</i>	6.00
<i>A/C Leak Test Procedures (6)</i>	6.00
<i>A/C Evacuating Recovery Procedures (7)</i>	8.00
<i>A/C Servicing Procedures (8)</i>	6.00
Heavy Duty HVAC 2 (HVDD1712)	63.00
<i>A/C Charging System (1)</i>	10.00
<i>A/C Component Repair (2)</i>	21.00
<i>A/C Electrical Circuits (3)</i>	16.00
<i>Retrofitting A/C Systems (4)</i>	4.00
<i>HVAC Proficiency Test (5)</i>	12.00
Drive Train 1 (HVDD1713)	34.00
<i>Drive Train Terminology (1)</i>	3.00
<i>Drive Line Inspection/Repair (2)</i>	3.00
<i>Clutch Inspection/Adjustment (3)</i>	3.00
<i>Small Transmissions Rebuild (4)</i>	25.00
Drive Train 2 (HVDD1914)	63.00
<i>Large Transmissions Rebuild/Replace (1)</i>	38.00
<i>Differentials Rebuild/Replace (2)</i>	24.00
<i>Transmission and Differential Proficiency (3)</i>	1.00
Preventive Maintenance/Inspection 1 (HVDD1715)	34.00
<i>Gasoline Engine Timing (1)</i>	4.00
<i>In Cab Inspection (2)</i>	15.00
<i>Circle Inspection/Fifth Wheel Inspection/Repair (3)</i>	15.00
Preventive Maintenance/Inspection 2 (HVDD1716)	33.00
<i>Tires and Wheel Inspection/Replacement (1)</i>	5.00
<i>Under Hood Inspection/Repair (2)</i>	23.00
<i>Under Vehicle Inspection/Repair (3)</i>	5.00
Preventive Maintenance/Inspection 3 (HVDD1917)	45.00
<i>Inspect Drivelines (1)</i>	3.00
<i>Inspect and Change U-joints (2)</i>	6.00
<i>Lubrication Levels Inspection/Oil and Filters (3)</i>	12.00

<i>Run Diesel Engine Over Head (4)</i>	6.00
<i>Lab Scopes Diagnostics (5)</i>	10.00
<i>Scanner Diagnostics (6)</i>	4.00
<i>Advanced Oscilloscope Testing (7)</i>	4.00
Preventive Maintenance/Inspection 4 (HVDD1718)	45.00
<i>Air Bag Inspection and Removal (1)</i>	10.00
<i>Trailer Preventive Maintenance/Repair (2)</i>	20.00
<i>Preventive Maintenance Inspection Proficiency Test (3)</i>	15.00
Heavy Duty Engines 1 (HVDD1919)	44.00
<i>Engine Operation and Theory (1)</i>	12.00
<i>Engine Testing/Compression (2)</i>	6.00
<i>Removing External Engine Parts (3)</i>	8.00
<i>Cylinder head Repair/Inspection (4)</i>	18.00
Heavy Duty Engines 2 (HVDD1720)	55.00
<i>Crankshafts/Inspection (1)</i>	15.00
<i>Engine Blocks/Inspection (2)</i>	15.00
<i>Pistons, Rings, Connecting Rods Inspect/Replace (3)</i>	20.00
<i>Injection Pump, Injectors, Accessory Install & Test (4)</i>	5.00
Heavy Duty Diesel Engines 1 (HVDD1921)	71.00
<i>Large Diesel Engine Rebuilds, Part 1 (1)</i>	23.00
<i>Large Diesel Engine Rebuilds, Part 2 (2)</i>	23.00
<i>Cummins ISX 450 Engine Rebuild (3)</i>	25.00
Hydraulics 1 (HVDD1722)	42.00
<i>Hydraulic Basics, Components and Safety (1)</i>	5.00
<i>Hydraulic Symbol Identification (2)</i>	7.00
<i>Advanced Hydraulic and Hydrostatic Fundamentals (3)</i>	5.00
<i>Practical Hydraulics (4)</i>	25.00
Hydraulics 2 (HVDD1723)	38.00
<i>Troubleshooting Hydraulic Components (1)</i>	20.00
<i>Advanced Troubleshooting (2)</i>	18.00
Tooele Tech Recommended Course (0 hours required)	Hours
Heavy Duty Diesel Technician (0 hours required)	Hours
Keyboarding Basics (BTEC1000)	30.00
<i>Lesson 1-6 (1)</i>	10.00
<i>Lesson 7-12 (2)</i>	10.00
<i>Lesson 13-18 & final assessment (3)</i>	10.00