DIESEL TECHNOLOGY (DSLT)

DSLT 1015 Introduction to Diesel Technology
3.0 credit hours
75.0 Classroom Hours = 30.0 Lecture Hours + 45.0 Lab Hours
Teaches safe work practices, proper use of shop tools, how to manage hazardous materials, precision measuring tools, how to navigate technical manuals both printed and online, and work order management. Safety using SP2.

DSLT 1100 Intro to Diesel Engines
4.0 credit hours
120.0 Classroom Hours = 30.0 Lecture Hours + 90.0 Lab Hours
Exploration of diesel engine history, theory, and operation. Also, provides the learner with a diesel engine component overview. Expands on engine compenent fuction and understanding through complete engine disassembly and overhaul, proper tune-up procedures and application of special tools is also emphasized. Corequisite: DSLT 1015 Fee: $15

DSLT 1130 Intro to Electrical Systems
4.0 credit hours
120.0 Classroom Hours = 30.0 Lecture Hours + 90.0 Lab Hours
This course will cover basic electrical theory with an emphasis on batteries starting and charging systems. It will also cover diagnostics and repair of direct current electrical systems. Along with component testing and schematic reading. Corequisite: DSLT 1015 Fee: $20

DSLT 1170 Fastners & Hardware
1.0 credit hours
15.0 Classroom Hours = 15.0 Lecture Hours
Introduction to standard and metric fastners. Proper use of snag rings, hose clamps, roller chain, and keyways. Use of copper tubing, flaring, compression, and fitting types. Study of hydraulic lines, hoses, and fittings. Corequisite: DSLT 1015

DSLT 1190 Preventive Maintenance
3.0 credit hours
75.0 Classroom Hours = 30.0 Lecture Hours + 45.0 Lab Hours
Theory and fundamentals of periodic maintenance of heavy-duty equipment, including fuel systems, air systems, cooling, and lubrication. Inspecting and adjusting as needed, clutches and brake componenets to account for normal wear. Inspect for premature faulure and replace items to prevent failure and downtime. Prerequisite: DSLT 1015

DSLT 1200 Heavy Duty Power Trains
4.0 credit hours
120.0 Classroom Hours = 30.0 Lecture Hours + 90.0 Lab Hours
Focuses on the variuos components that comprise the heavy-duty drive train of heavy-duty trucks and tractors. Students will learn to service and adjust heavy duty clutches. Students will also learn overhaul procedures on manual transmissions, axles, and differentials, as well as service procedures for driveshaft components. Prerequisite: DSLT 1015 Fee: $15

DSLT 1215 Hydraulics
4.0 credit hours
120.0 Classroom Hours = 30.0 Lecture Hours + 90.0 Lab Hours
This course covers Hydraulic theory and the components that are used in the agriculture and construction fields. Students will learn how to diagnose and repair hydraulic systems in a safe manner. Prerequisite: DSLT 1015 Fee: $15

DSLT 1220 Advanced Hydraulics
5.0 credit hours
150.0 Classroom Hours = 37.0 Lecture Hours + 113.0 Lab Hours
This advanced course dives into the principles and applications of hydraulic and hydrostatic systems in diesel mechanics and agricultural equipment. Designed for professionals and students with a foundational understanding of hydraulics, the course emphasizes the integration, troubleshooting, and optimization of hydraulic systems in agricultural and construction machinery.

DSLT 1230 Mobile HVAC
2.0 credit hours
60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours
This course will cover the theory and fundamentals of HVAC pertaining to trucks and mobile equipment. Students will learn how to safely and properly diagnose and repair faulty HVAC systems. Prerequisite DSLT 1015 Fee: $10

DSLT 1235 Diesel Exhaust After Treatment
2.0 credit hours
45.0 Classroom Hours = 20.0 Lecture Hours + 25.0 Lab Hours
An in-depth look at Diesel Exhaust Aftertreatment Systems. With discussion of diesel exhaust make-up, aftertreatment system history, federal emission standards, theory, and operation. A detailed analysis on individual system components and sub-systems including Diesel Oxidation Catalyst (DOC). Diesel Particulate Filter (DPF) and Selective Catalyst Reduction (SCR), system troubleshooting and diagnosis. Prerequisite: DSLT 1015

DSLT 1250 Diesel Applied Welding
2.0 credit hours
45.0 Classroom Hours = 22.0 Lecture Hours + 23.0 Lab Hours
Soldering, brazing, gas welding, and cutting torches used in the transportation and prime mover fields. Prerequisite: DSLT 1015.

DSLT 2300 Fuel Systems
4.0 credit hours
210.0 Classroom Hours = 30.0 Lecture Hours + 180.0 Lab Hours
The study of fuel systems in heavy duty equipment used in current industries such as agriculture, commercial trucking, construction equipment, and power generation. Students will learn about common rail, amplified common rail, rotary distribution, inline pump technology, injectors, nozzles, manual and electronic controls of various major systems. Fee: $15 Prerequisite: DSLT 1015 & DSLT 1100

DSLT 2350 Suspension Systems
2.0 credit hours
60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours
Study of suspension systems for medium duty and heavy-duty systems. Systems components controls consisting of spring type, leaf spring, air type suspension, overload devices, proper adjustments, service and inspection, proper replacement and maintenance. Prerequsitions: DSLT 1015 & DSLT 1200

DSLT 2400 Engine Troubleshooting & Repair
4.0 credit hours
150.0 Classroom Hours = 15.0 Lecture Hours + 135.0 Lab Hours
Studies the use of Diagnostic tools and special tools to diagnose and repair heavy duty diesel engines. This class also studies the testing, repair, and replacement of major and minor subcomponents needed for repair of the overall system. Prerequisites: DSLT 1015 & DSLT 1100

DSLT 2460 Diesel Systems Electronic Controls
4.0 credit hours
120.0 Classroom Hours = 30.0 Lecture Hours + 90.0 Lab Hours
Study of electronic controls of heavy-duty systems consisting of components such as engines, transmissions, braking systems, traction control, service data, catastrophic warning systems, and shutdown controls. Students will study how these systems provide control and self-diagnostics while multi-tasking with other components. Prerequisites: DSLT 1015 & DSLT 1130

DSLT 2470 Brake Systems
2.0 credit hours
60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours
Study of servicing, diagnosing, troubleshooting, and repair of various brake systems. Students will have hands on learning with hydraulic brake, air brake, and electric braking systems found on today's heavy-duty equipment. Indentifying components, make proper adjustments, learn DOT inspection criteria required for all commercial highway trucks. Prerequisite: DSLT 1015

DSLT 2490 Automatic Transmissions
2.0 credit hours
60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours
Study of multiple automatic transmission unit systems such as Allison, Caterpillar, Eaton Fuller automated manual. Students will learn to properly service and maintain, troubleshoot complaints, and make repairs or replace components. Prerquisites: DSLT 1015 & DSLT 1200

DSLT 2690 Pneumatic & Hydraulic Fundamentals
2.0 credit hours
60.0 Classroom Hours = 15.0 Lecture Hours + 45.0 Lab Hours
Pneumatics and Hydraulics applied to design and function, troubleshooting and repair. Prerequisite(s): Instructor Permission.