

LOGISTICS/TRANSPORTATION/DISTR (330TRNS)

Logistics/Transportation/Distr (330TRNS) 111

Introduction to Diesel Technology

This course introduces the student to the fundamentals of basic, personal and shop safety industry requirements for Diesel Technology. In this course the student will learn to identify, use and care for hand and power tools commonly found in the diesel repair industry. Students will gain an understanding of the basic movement and parking procedures of vehicles and equipment. They will also learn about the history of the industry and explore career and employment opportunities in dealerships and independent shops, from maintenance to major overhaul. Additional topics of discussion include hazardous material handling and storage. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 101 and MATH 107.

3 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 112

Diesel Electrical Systems I

This course will include electrical safety practices; tool use; connecting and disconnecting techniques; direct current symbols, components, and schematics; principles of DC voltage and current; Ohm's Law; and troubleshooting, repairing and calibration of electrical/electronic systems. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 101 and MATH 107. Grade of C or better in 330TRNS 111 and 330TRNS 113.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 113

Introduction to Diesel Engine Construction

In this course students will learn the fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, disassembly, repair and reassembly of the engine. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 101 and MATH 107.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 114

Diesel Engine Construction I

This course will provide students with concepts and skills required for engine construction, tune-up and troubleshooting procedures of diesel engines. Students will gain an understanding of alphanumeric coding and the integration of additional foundational skills required to identify and repair diesel engines. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 101 and MATH 107. Grade of C or better in 330TRNS 111 and 330TRNS 113.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 115

Suspension and Steering

This course will introduce students to the basic fundamental skills, technology, and service of automotive suspension and steering systems. Areas of studies include; diagnosis and repair of steering systems, diagnosis and repair of front suspension systems, diagnosis and repair of rear suspension systems, miscellaneous suspension and steering systems, and diagnosis and adjustment of wheel alignment. Group and individual activities engage students in problem-solving techniques and manipulative skills while completing industry related activities. Safety instruction is integrated into all activities. Students will also learn to identify and describe various steering systems used on diesel-powered vehicles and have an opportunity to inspect, diagnose, and repair steering problems. They will make needed repairs on the suspension system and perform wheel alignments. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 101 and MATH 107. Grade of C or better in 330TRNS 111 and 330TRNS 113.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 116

Diesel Brakes

This course is designed to provide the student with an introduction to the basic principles of brake systems of diesel powered equipment. Emphasis is on maintenance, repairs and troubleshooting. The student will apply knowledge and understanding of the basic theory and operation of the brake systems, diagnose brake components for wear and usability, repair brake components by rebuilding or replacing parts, and adjust brake components. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for ENGLISH 101 and MATH 107. Grade of C or better in 330TRNS 111,112,113,114,115, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 209

Diesel Electrical Systems II

This course will include the study of DC resistance and conductors, principles of DC circuits, fundamentals of alternating current and semiconductors, basic electronic circuits, and digital electronics. Writing assignments, as appropriate to the discipline, are part of the course.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 211

Diesel Preventive Maintenance

This course introduces the student to the knowledge base and technical skills for all courses in the diesel preventative maintenance and inspection concentration. Areas of study include engine system maintenance, under hood and cab maintenance, electrical/electronic systems, frame and chassis maintenance. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 213

Diesel Engine Construction II

This course will provide students with concepts and skills required for engine construction, advanced diagnostics of diesel engines, rebuilding and testing, repair of injection pumps and governors; troubleshooting engines and fuel system failures as well as the operation and adjustment of Cummins Pressure-Time System. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 214

Emission Controls

This course will provide students with in-depth study of how technology is used in the trucking industry. Current emissions control systems operations, troubleshooting and repair will be thoroughly addressed. Regulatory compliance, electronic vehicle management systems diagnostics, testing and adjustments will be discussed, along with hands on electronic diagnostic systems testing. Various OEM electronic fuel systems and diagnostic software will also be discussed and used. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 215

Diesel Engine Performance

This course will provide students with theoretical and practical applications needed for the operation, servicing, and troubleshooting of various types of diesel engines. It will include the study of diesel fuels, diesel fuel supply systems, mechanical and electronic injection systems, computerized engine controls, as well as soot particle reductions. Diagnostic tools usage and problem solving to enhance engine performance are also incorporated in to the class. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 216

Heavy Duty Drives I (Manual)

This course introduces students to power train systems used on medium/ heavy duty trucks. Topics include: introduction to power trains, clutches and flywheels, powertrain electronic systems, auto-shift mechanical transmissions, power take-offs, trucks drive lines, differentials and final drives, torque converters, and automatic transmissions. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 217

Heavy Duty Drives II (Automatic)

This course will provide students with theoretical and practical applications of power train systems used on medium and heavy duty trucks. Areas of focus will include power take-offs, truck drive lines, introduction to power trains, clutches and flywheels, powertrain electronic systems, differentials and final drives, torque converters and automatic transmissions. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 218

Heating and Air Conditioning

This course introduces systems used in medium/heavy duty trucks and heavy equipment. Classroom instruction on HVAC theory and operation along with local, state, and federal regulations are strongly emphasized. Topics include: HVAC safety, HVAC system theory and operation, A/C system component diagnosis and repair, HVAC system diagnosis and repair, HVAC operating systems and related controls, and refrigeration recovery, recycling, and handling procedures. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213, and PHY SCI 112.

2 Laboratory hours. 2 Lecture hours. 3 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 219

Hydraulic Systems

This course will provide students with theoretical and practical applications of hydraulic principles into mobile hydraulic circuits. Students will gain an enhanced learning of basic hydraulic components including assembly and disassembly of valves, pumps and cylinders; servicing, diagnosing, and preventive maintenance procedures will be performed on trucks and heavy equipment. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213,214,215,216,218, and PHY SCI 112.

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: OH

Logistics/Transportation/Distr (330TRNS) 220

Advanced Diagnostics

This course will challenge students and expand upon skills and knowledge learned in previous Diesel Technology-related courses. Students will perform diagnostic testing, and engage in problem-solving techniques and replicate real-world diesel maintenance and repair conditions. Topics include diagnosis and repair of emission systems, computerized engine performance systems, and advanced low and high-pressure fuel systems; proper use of advanced engine performance diagnostic equipment will be addressed. Prepares students for ASE A9 certification test. Writing assignments, as appropriate to the discipline, are part of the course.

Eligibility for English 101 and Math 107. Grade of C or better in 330TRNS 111,112,113,114,115, 116,209,211,213,214,215,216,218 and PHY SCI 112.

2 Laboratory hours. 3 Lecture hours. 4 Credit Hours.

Offered At: OH