

DEM - DIESEL MECHANICS

DEM 1229 Preventive Maintenance 2 Credit Hours (1 Lec, 3 Lab)

Course Type: Technical/Vocational Course

DEM 1281 Cooperative Education 2 Credit Hours (1 Lec, 8 Lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Course Type: Cooperative Course, Technical/Vocational Course

DEM 1301 Shop Safety and Procedures 3 Credit Hours (2 Lec, 4 Lab)

A study of shop safety rules, basic shop tools, and test equipment.

Course Type: Technical/Vocational Course

DEM 1310 Diesel Engine Testing and Repair I 3 Credit Hours (2 Lec, 4 Lab)

An introduction to testing and repairing diesel engines including related systems and specialized tools.

Course Type: Technical/Vocational Course

DEM 1316 Basic Hydraulics 3 Credit Hours (2 Lec, 4 Lab)

Fundamentals of hydraulics including components and related systems.

Course Type: Technical/Vocational Course

DEM 1317 Basic Brake Systems 3 Credit Hours (2 Lec, 4 Lab)

Course Type: Technical/Vocational Course

DEM 1321 Power Train I 3 Credit Hours (2 Lec, 4 Lab)

Fundamental repair and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair.

Course Type: Technical/Vocational Course

DEM 1323 Heating Ventilation and Air Conditioning Troubleshooting and Repair 3 Credit Hours (2 Lec, 4 Lab)

Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigeration reclamation, safety procedures, specialized tools, and repairs.

Course Type: Technical/Vocational Course

DEM 1327 Tractor Trailer Service and Repair 3 Credit Hours (2 Lec, 4 Lab)

An introduction to and familiarization with components and systems related to tractor trailer service. Emphasis on records required by the Department of Transportation.

Course Type: Technical/Vocational Course

DEM 1329 Preventative Maintenance 3 Credit Hours (2 Lec, 4 Lab)

An introductory course designed to provide the students with basic knowledge of proper servicing practices. Content includes record keeping and condition of major systems.

Course Type: Technical/Vocational Course

DEM 1330 Steering and Suspension I 3 Credit Hours (2 Lec, 4 Lab)

A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components.

Course Type: Technical/Vocational Course

DEM 1405 Basic Electrical Systems 4 Credit Hours (3 Lec, 4 Lab)

Basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, and batteries.

Course Type: Technical/Vocational Course

DEM 1410 Diesel Engine Testing and Repair I 4 Credit Hours (3 Lec, 4 Lab)

An introduction to testing and repairing diesel engines including related systems' specialized tools.

Course Type: Technical/Vocational Course

DEM 1416 Basic Hydraulics 4 Credit Hours (3 Lec, 4 Lab)

Fundamentals of hydraulics including components and related systems.

Course Type: Technical/Vocational Course

DEM 1417 Basic Brake Systems 4 Credit Hours (3 Lec, 4 Lab)

Basic principles of brake systems of diesel powered equipment.

Emphasis on maintenance, repairs, and troubleshooting.

Course Type: Technical/Vocational Course

DEM 1421 Power Train I 4 Credit Hours (3 Lec, 4 Lab)

Fundamental repair and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair.

Course Type: Technical/Vocational Course

DEM 1423 Heating, Ventilation and Air Conditioning Troubleshooting and Repair 4 Credit Hours (3 Lec, 4 Lab)

Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigerant reclamation, safety procedures, specialized tools, and repairs.

Course Type: Technical/Vocational Course

DEM 1427 Tractor and Trailer Service and Repair 4 Credit Hours (3 Lec, 4 Lab)

Extended applications of the mechanics and theory of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components.

Course Type: Technical/Vocational Course

DEM 1447 Power Train II 4 Credit Hours (3 Lec, 4 Lab)

Continuation of fundamentals and theory of power train systems. Emphasis on disassembly, inspection, and repair of power train components.

Course Type: Technical/Vocational Course

DEM 2331 Advanced Brake Systems 3 Credit Hours (2 Lec, 4 Lab)

An advanced brake systems course for diesel powered equipment.

Advanced concepts and schematics including anti-lock, air, pneumatic, and hydraulic brake systems and related components.

Course Type: Technical/Vocational Course

DEM 2334 Advanced Diesel Engine Tune Up and Troubleshooting 3 Credit Hours (2 Lec, 4 Lab)

Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common-sense approach.

Course Type: Technical/Vocational Course

DEM 2346 Advanced Heating Ventilation and Air Conditioning 3 Credit Hours (2 Lec, 2 Lab)

Advanced concepts in heating, ventilation, and air conditioning. Emphasis on systematic troubleshooting.

Course Type: Technical/Vocational Course

DEM 2348 Failure Analysis 3 Credit Hours (2 Lec, 3 Lab)

An advanced course designed for analysis of typical part failures on equipment.

Course Type: Technical/Vocational Course

DEMR 2412 Diesel Engine Testing and Repair II 4 Credit Hours (3 Lec, 4 Lab)

Continuation of Diesel Engine Testing and Repair I. Coverage of testing and repairing diesel engines including related systems and specialized tools.

Course Type: Technical/Vocational Course

DEMR 2432 Electronic Controls 4 Credit Hours (3 Lec, 4 Lab)

Advanced skills in diagnostic and programming techniques of electronic control systems.

Course Type: Technical/Vocational Course

DEMR 2434 Advanced Diesel Tune Up and Troubleshooting 4 Credit Hours (3 Lec, 4 Lab)

Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach.

Course Type: Technical/Vocational Course

DEMR 2439 Advanced Electrical Systems 4 Credit Hours (3 Lec, 4 Lab)

A continuation of basic electrical systems to include lighting, computer controls and accessories. Emphasis on diagnosis, testing, and repair using the various diagnostic tools and procedures for current electronic systems.

Course Type: Technical/Vocational Course