

DESL 1003 : Diesel Fundamentals

3 credit hours (2 lecture/2 lab)

This course introduces the student to KCC's Diesel Program, focused on diesel power overview, shop safety, tools, equipment, courses, overall layout and expectations for courses and program. The student will be introduced to diesel engines, repairs, brakes, electrical, suspension and transmissions as well as employment options in transportation and agriculture. The course is a mixture of textbook, videos, lecture, hands-on exercises, and on-site instruction at a local diesel repair facility. This course prepares students to complete the Snap On NC3 Tool ID and Safety Certification.

Topical Outline

- Safe shop and equipment practices
- Oil and lubrication requirements
- Maintenance procedures and requirements
- Component inspection procedures
- Federal Motor Carrier Regulations usage
- Annual Federal Vehicle Inspection requirements
- Pre-trip inspections

Course Outcomes

At the end of this course, students will be able to:

1. Identify proper shop safety practices while in the labs.
2. Identify tools, equipment, & fasteners used in truck repair.
3. Identify and explain how the truck repair industry is structured.
4. Identify and explain operation of the major systems of the trucks.
5. Identify and explain what EPA, CAFÉ, FMCSR, CDL, and NHTSA regulations are and how they affect the transportation industry.
6. Perform complete FMC annual inspection of tractors and trailers.
7. Examine maintenance requirements and procedures for heavy duty trucks.
8. Perform CDL pre-trip inspections.