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## Diesel Technology (DT)

### **DT 050 State Laws and Fed Regulations (3)**

*Class Hours: 54 Lecture*

*Prerequisite(s): Valid Class C license and be at least 18 years of age.:*

State Laws and Federal Regulations

DT 050 provides students with an introduction to the trucking industry, rules and regulations to prepare students for the written test to obtain a CLP (Commercial Learners Permit) from the state of California. Students will also complete the FMCSA (Federal Motor Carrier Safety Administration) requirements for the theory portion of the ELDT (Entry Level Drivers Training).

### **DT 052 Safe Operation Fundamentals (3)**

*Class Hours: 18 Lecture | 108 Laboratory*

Safe Operation Fundamentals

DT 052 provides practical and theoretical instruction in the techniques needed to inspect, drive and maneuver a Class A combination vehicle. Students will adjust brakes and perform basic maintenance tasks on commercial vehicles and trailers. The course also explains and demonstrates safe practices in using and selecting proper tools for the job, both in the shop and on the road. Students will also complete the FMCSA (Federal Motor Carrier Safety Administration) requirements for the behind-the-wheel range portion of the ELDT (Entry Level Drivers Training).

### **DT 053 Cargo Handling and Securement (1)**

*Class Hours: 27 Lecture | 9 Laboratory*

Cargo Handling and Securement

DT 053 provides practical and theoretical training in the operation of material handling equipment (forklift and pallet jack), and the loading and securement of cargo on various types of commercial vehicles. Students receive training in loading commercial vehicles to comply with both axle weight and securement laws. In addition, students also develop their skills in minor maintenance for an inspection of load securement devices.

### **DT 055 Trip Planning and Budgeting (3)**

*Class Hours: 54 Lecture*

Trip Planning and Budgeting

DT 055 provides student with practical and theoretical training related to the planning of trips using a Rand McNally Road Atlas and finding the most effective and efficient routing between pickup and delivery points. The course will also include a review of basic math and industry math applications.

### **DT 057 Job Prep Skills (1)**

*Class Hours: 18 Lecture*

Job Prep Skills

DT 057 provides information on how to find available positions as well as improve job-seeking skills in order to apply for, and interview with both small and large transportation companies. Additionally, it provides information and resources on how to prepare appropriate documents (application, resume, and cover letter) for job search and to assist in the interview process.

### **DT 058 Operations of Commercial Vehic (3)**

*Class Hours: 18 Lecture | 108 Laboratory*

Operations of Commercial Vehicles I

DT 058 provides practical and theoretical knowledge in the operation of two- and three-axle tractor-trailer combinations on a driving range and highway. Students will drive commercial vehicles equipped with automatic transmissions and be introduced to shifting a dual-range transmission. Additionally, students will be oriented in California state laws pertaining to a commercial motor vehicle, which prepares them for the CDL Skills and Knowledge Test for the Class A license. Students will also complete the FMCSA (Federal Motor Carrier Safety Administration) requirements for the behind-the-wheel public road portion of the ELDT (Entry Level Drivers Training).

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- DT 059 Operations of Commercial Vehi (3)**  
*Class Hours: 108 Lecture | 18 Laboratory*  
*Prerequisite(s): DT 058*  
Operations of Commercial Vehicles II  
DT 059 provides practical and theoretical knowledge in the operation of two- and three-axle tractor-trailer combinations on a driving range and highway with lengths over 65 feet, including single and double trailers. Students will develop hand, eye, and foot coordination for shifting various types of dual-range transmissions on the driving range and in real-life city and highway traffic.
- DT 074 Hazardous Materials Transporta (1)**  
*Class Hours: 18 Lecture*  
Hazardous Materials Transportation  
DT 074 provides theoretical training for the transportation of hazardous materials and satisfies the Federal Motor Carriers Entry Level Drivers Training requirement.
- DT 079 Commercial Driver Testing (0.5)**  
*Class Hours: 27 Laboratory*  
*Co-Requisite(s): DT 050, DT 052, and DT 058*  
Commercial Driver Testing  
DT 079 offers students the opportunity to test for a commercial drivers license with the California DMV (Department of Motor Vehicles). Students will utilize classroom and laboratory experiences to license as a commercial driver.
- DT 094 Introduction to Diesel Engine (3)**  
*Class Hours: 36 Lecture | 54 Laboratory*  
Introduction to Diesel Engine Repair  
DT 094 explores the operation and repair of modern diesel engines. Principles and theories are studied by running, testing, diagnosing, disassembling and reassembling components, systems and engines.
- DT 095 Advanced Diesel Engine Repair (3)**  
*Class Hours: 36 Lecture | 54 Laboratory*  
*Prerequisite(s): DT 094*  
Advanced Diesel Engine Repair  
DT 095 explores the operation and repair of modern computer controlled diesel engines, emissions systems and components. Advanced principles and theories are studied by testing, diagnosing, disassembling and reassembling engine components and systems.
- DT 096 Hydraulics (3)**  
*Class Hours: 36 Lecture | 54 Laboratory*  
Hydraulics  
DT 096 explores the operation and repair of agriculture and industrial heavy equipment hydraulic systems; pumps, valves, cylinders, motors, hydrostatic drives, hoses and fittings as well as electronic controls. Advanced principles and theories operation, pressure and flow are studied by testing, diagnosing, disassembling, repairing and reassembling heavy equipment hydraulic components and systems.
- DT 097 Equipment Systems (3)**  
*Class Hours: 36 Lecture | 54 Laboratory*  
Equipment Systems  
DT 097 explores the operation and repair of agriculture and industrial heavy equipment systems including: drive systems, brakes and braking, tracks and tires, auxiliaries, air conditioning, electronics, and computer controls. Advanced principles and theories are studied by testing, diagnosing, disassembling, repairing and reassembling heavy equipment components and systems.
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