

Part I



North Central
MICHIGAN COLLEGE
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Master Course

Syllabus

Course Name: Tractor-Trailer Operations

Course Number: TRK 100

Credit Hrs. 17 Lecture Hrs. 7 Lab Hrs. 8 Clinical Hrs. 25 Variable Hrs. 0

Total Hours of Instruction: 600

Total Contact Hours: 704

(Total Contact Hours Formula: (lecture hrs. + lab hrs. + clinical hrs.) x 17.6)

Course Description:

TRK 100 Tractor-Trailer Operations Variable 17 (7-8-25)

Module 1: A cognitive and practical introduction to the trucking industry, vehicle systems and controls, preventive maintenance, basic maneuvering, shifting, backing, coupling and uncoupling, FMC Safety Regulations, handling, documenting, and logging cargo, as well as preparation for the Training Instruction Permit.

Module 2: Extends the practical instruction from Module 1 to the driving range using a variety of rigs and standard safety practices.

Module 3: Accompanies Modules 1 and 2 and provides structured structured work time to complete assignments and review material.

Module 4: Places students with approved carriers for approximately ten weeks of 40 hour per week on-the-road driving.

Must be completed with a grade of "C" or better to qualify for the Certificate of Development.

PREREQUISITES: Admission to the Truck Driver Certificate of Development Program

Meets Lumina Objectives: 2, 3, 6, 7, 10, 11, 13, 15

Course Objectives and Outcomes:

- Identify the requirements for obtaining a Commercial Driver's License;
- Demonstrate and identify Hours of Service practices;
- Demonstrate proper trip planning
- Identify proper load loading, securing, and unloading cargo;
- Identify the legal terms of a shipping contract;
- Identify proper preventative maintenance procedures;

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- Identify and demonstrate proper railroad crossing procedures;
- Understand international shipments including NAFTA and FAST;
- Demonstrate knowledge of the FMCSR;
- Demonstrate understanding of the Whistle Blower Protection program;
- Demonstrate speed and space management;
- Demonstrate visual search techniques;
- Demonstrate night driving best practices;
- Demonstrate proper procedures for left and right hand turns;
- Demonstrate ability to identify various types of power units and trailers;
- Demonstrate proper accident procedures;
- Demonstrate proper shifting, braking, and mirror use;
- Demonstrate safe backing procedures;
- Demonstrate safe and proper procedure for coupling and uncoupling;
- Demonstrate proper procedure for pre-trip and post-trip procedures.

Part II

Suggested Methods of Instruction:

Lecture, Demonstration, Labs, Discussion, Videos, Powerpoints, Driving a tractor-trailer in a commercial setting.

Suggested Methods of Evaluation:

Written exams, homework, group work; daily vehicle inspections, daily logbook entries, weekly driving assessment, final road exam, Successful attainment of Temporary Instruction Permit, Weekly range maneuverability exams, Commercial Driver's License Test, Internship road evaluation.

Adopted Text at Time of Course Adoption/Revision:

Michigan Commercial Driver's License Manual; Trucking: Tractor and Trailer Driver Handbook/Workbook (Delmar/Cengage Learning 3rd Ed.); Truck Driver's Guidebook (Michigan Center for Truck Safety 11th Ed.)

Topics Covered During the Semester:

Sequence of topics and time allowance are at the discretion of the instructor.

Module 1 (Weeks 1,2,and5):

Week 1:

Attendance/Objectives; Explanation of Commercial Driver's License and DOT Physical/Drug Screening process;

Personal Health and Safety; Employer/Employee Relations and Public Relations/Customers

Intro to the Trucking Industry; Vehicle Controls; Vehicle Systems; Air Brakes; Air Brakes State Test and Review;

Engines, Coolant System, Oil System, Drive Train, Electrical System, Tires

Basic Maneuvering; Shifting; Backing; Coupling/Uncoupling; Federal Motor Carriers Safety Regulations

Visual Search; Communications; Speed Management; Space Management; Night Driving; Hazard Perception; Emergency Maneuvering; Skid Control and Recovery

Week 2:

Vehicle Inspection; Special Rigs; Extreme Driving Conditions; Railroad Crossings; Hazardous Materials;

Sliding Tandem Axles/Fifth Wheels, Bridge Formulas; Preventative Maintenance; Recognizing/Reporting Malfunctions; Handling Cargo; Cargo Documentation; General Knowledge, Combination Vehicle State Review Test

Mid-term Exam; pre-Secretary of State Question/Answer Discussion and Answers; Secretary of State paperwork, social security card check; driver's license check; State Written Test, TIP

Hours of Service Video and Video Quiz; Monthly summary; Logging exercises

Trip planning and objectives; Route planning exercises; Final exam; Dress code for range driving; directions to range

Part II

Week5:

Presentation on Doubles and Triples, practice tests and review; Presentation on Tankers, practice tests and review; Presentation on Hazmat, practice tests and review;

Secretary of State testing

Skid Pad Training

First Aid and CPR training

Monthly summary and log book review, Review of coupling and backing skills; “graduation” to internship

Module 2 (Weeks 3 and 4)

Week3:

Pre-trip inspection; Road skills: vehicle coupling/uncoupling; vehicle shifting (bobtail only); vehicle shifting (w/trailer)

Basic Skills maneuvers—Forward Stop, Straight Line Backing, Right-hand turn, 90-degree alley dock

Park vehicles and perform post-trip inspection

Week4:

Pre-trip inspection; Road skills: Forward Stop, Straight Line Backing, Right-hand turn, 90-degree alley dock

Michigan Third-Party Exam

Module 3 (Weeks 1 through 5)

Support Modules 1 and 2 with structured independent study time

Module 4 (Weeks 6 through 15)

40 hours driving each week with approved carrier.

Reasonable accommodations can be provided for students with documented disabilities. Please contact Learning Support Services to arrange for these — (231) 348-6687 or (231) 348-6817, kflewelling@ncmich.edu, Room 533 SCRC.

Approved by CRDAP: 02 06 13