
Vice President Workforce and Community Development

LUZERNE COUNTY COMMUNITY COLLEGE

Public Safety Training Institute

COURSE SYLLABUS

I. COURSE TITLE: Professional Truck Driving Program

II. NUMBER OF HOURS: 240 **LEC HRS.** 105 **LAB HRS.** 135

III. NUMBER OF SESSIONS/DAYS: 30

IV. GENERAL COURSE DESCRIPTION:

In today's world, if you have it, a truck brought it. To meet the needs of the fast-paced world, the transportation industry is always looking for well-trained, professional drivers to keep their truck on the move.

This need for drivers will continue to grow through the next century. As consumer needs increase, so will the need for trucks. This driver shortage is creating unlimited career opportunities for any man or woman who is willing to meet the challenge.

The Luzerne County Community College's Professional Truck Driver Program is dedicated to providing quality training for anyone wanting to be employed as a professional entry level tractor trailer driver. Our program emphasizes safety and driver courtesy as well as the skills needed to operate the equipment successfully.

You must:

- be at least 21 years of age
- possess a high school diploma or GED
- possess a valid driver's license
- have no more than 3 current points on your Motor Vehicle Report
- have no current drug or alcohol charges on your Motor Vehicle Report
- have no outstanding suspensions or tickets on your Motor Vehicle Report
- meet eligibility requirements for a Commercial Driver's License
- pass a DOT physical and drug screening
- show your ability to benefit from training
- complete an application and interview with the Program Director

V. COURSE OBJECTIVES:



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The student will understand the profession of truck driving. The program will provide the student with the skill and workable knowledge to become an entry level tractor trailer driver. Skills and knowledge will include the following:

- | | |
|--|---|
| a. regulating agencies | m. extreme driving conditions |
| b. commercial motor vehicles control systems | n. hazard awareness |
| c. hours of service | o. emergency maneuvers |
| d. vehicle inspections | p. skid control |
| e. basic controls shifting | q. accident procedures |
| f. backing | r. sliding fifth wheels & tandem axles |
| g. coupling and uncoupling | s. special rigs |
| h. visual search | t. preventive maintenance |
| i. communication | u. recognizing & reporting malfunctions |
| j. space management | v. handling cargo & documentation |
| k. speed moment | w. personal health & safety |
| l. night driving | x. trip planning |
| Public relations and employer-employee relations | |

VI. LEARNING OUTCOMES:

Upon completion of this program, the student will have a thorough understanding and workable knowledge of:

- | | |
|--------------------------|--|
| 1. The Trucking Industry | 15. Extreme driving conditions |
| 2. Control systems | 16. Hazard awareness |
| 3. Hours of service | 17. Emergency maneuvers |
| 4. Vehicle inspections | 18. Skid control |
| 5. Vehicle systems | 19. Accident procedures |
| 6. Basic controls | 20. Sliding tandems and fifth wheels |
| 7. Shifting | 21. Special rigs |
| 8. Backing | 22. Preventive maintenance & servicing |
| 9. Coupling & Uncoupling | 23. Recognizing & reporting malfunctions |
| 10. Visual search | 24. Handling cargo |
| 11. Communication | 25. Cargo documentation |
| 12. Space management | 26. Personal health and safety |
| 13. Speed management | 27. Trip planning |
| 14. Night driving | 28. Public Relations & Employer/Employee Relations |

VII. LEARNING OUTCOMES ASSESSMENT:

(How will the students be assessed to see if they have achieved their learning outcomes?)

Written tests for classroom portion-evaluation on the range and road by the instructor.
The program has two established test courses and finally the state administered CDL test.

VIII. MATERIAL/FACILITIES NEEDED: (Include the type or facilities needed, i.e., room,



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tables, supplies, books, tables, AV equipment, etc.)

Classroom with table and chair for each student, overhead projector, VCR, books, maps, fully equipped tractor trailer, range area for shifting-backing-parking and docking practice

IX. COURSE OUTLINE:

A. Introduction to Trucking

1. Introduce driver to tractor trailer driving
2. Have a working knowledge of trucking
3. Explain why trucking is vital to economy
4. Rules and regulations
5. Understand the main systems of tractor trailers
6. Describe professionalism drivers should develop

B. Control Systems

1. Describe engine controls
2. State name, location, function for:
 - a. starting engine
 - b. shutting down
 - c. shifting
 - d. accelerating
 - e. braking
 - f. parking
3. Know location of controls for lights, signals and comfort
4. Understand the importance of using seatbelts
5. Describe the acceptable operating range for fuel, oil, air, cooling, and exhaust and electrical systems
6. Understand the use of warning devices

C. Hours of Service

1. Explain how to record the driver's time and activities while on the road
2. Describe the format for making entries in a log book and what information must be included
3. Compute on-duty hours and required rest stops while on the road

D. Vehicle Inspections

1. Describe ways to make a quick and complete pre-trip inspection
2. Discuss the effects of unknown malfunctions
3. Explain the importance of correcting malfunctions quickly
4. Provide a working knowledge of federal and state regulations for inspections
5. Explain the procedures for en route and post trip inspections

E. Vehicle Systems

1. Describe the suspension, fuel, air intake and exhaust, lubrication, cooling, electrical, steering and coupling systems
2. Explain where the frame, axles, wheels and their parts, engine, drive train and brakes are located and how they operate.
3. Show how all these parts relate to one another



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F. Basic Controls

1. Explain the routines for starting, warming up, cooling down, and shutting off two and four cycle diesel engines
2. Show how to test the trailer hook up
3. Explain the proper way to put a rig into motion
4. Describe the correct way to stop a rig
5. Describe backing in a straight line
6. Explain the correct procedures for turning right and left
7. Define off tracking

G. Shifting

1. Describe gear shifting patterns
2. Explain shift patterns for major types of transmissions
3. Present methods of shifting up and down through the gears for all major types of transmissions
4. Describe double clutching and timing of shifts for a smooth and fuel efficient performance
5. Explain how to select proper gears for speed and road conditions
6. Understand common shifting errors and their results

H. Backing

1. Explain the procedures for backing and parking
2. Explain correct method to prepare to back
3. Explain principles of reverse steering when driving articulated vehicles
4. Avoid hazards of backing
5. Show how to check before backing

I. Coupling and Uncoupling

1. Explain the correct way to couple tractor with a trailer
2. Show proper way to uncouple a rig
3. Describe the controls used when coupling and uncoupling
4. Explain the hazards of coupling and uncoupling improperly

J. Visual Search

1. Show importance of knowing what you see when you drive
2. Look ahead and scan the environment
3. Explain different types of mirrors, their adjustment and how to use them
4. Describe the truck driver's responsibilities to other drivers

K. Communication

1. Understand the importance of using signals to tell others when they plan to change positions in traffic
2. Describe how to give and receive communications

L. Space Management

1. Explain the right following distance for different conditions
2. Show the importance of keeping enough room between the rig and other vehicles to be able to drive defensively.



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M. Speed Management

1. Explain the relationship of speed to:
 - a. stopping distance
 - b. accidents
 - c. hydroplaning
 - d. ability to control the rig
 - e. fuel economy
2. Discuss Effects of Speed on:
 - a. the rig's weight
 - b. the rig's center of gravity
 - c. loss of stability
3. Show how the driver's available sight distance and the road surface conditions affect choosing a safe speed

N. Night Driving

1. Show how the amount of light affects the ability to see
2. Present the three factors that most affect night driving:
 - a. the driver
 - b. the road
 - c. the rig
3. Detail how to get the rig ready for night driving
4. Describe the general factors affecting night vision

O. Extreme Driving Conditions

1. Discuss conditions that reduce traction, such as rain, snow, ice and mud
2. Show effects of rain, snow and ice on the ability to control the rig
3. Describe causes of skidding and jackknifing and how to avoid them
4. Show effects of ice, snow, water and mud and debris on the rig's brakes
5. Understand hot weather driving procedures
6. Discuss the best ways of driving in the mountains

P. Hazard Awareness

1. Help drivers recognize possible hazards
2. Explain how to tell when the road or surroundings may be dangerous
3. Explain why a driver must always be alert to the changing scene
4. Explain dangerous road conditions
 - a. slippery surfaces
 - b. soft surfaces
 - c. uneven surfaces
 - d. sloping roads
 - e. curves
5. Present clues that tell a driver when other road users may be a possible safety hazard
6. Explain why hazards must be recognized early

Q. Emergency Maneuvers

1. Think ahead to avoid possible emergencies
2. Show how driving through an emergency may be better than trying to stop



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3. Describe correct ways to make quick stops and quick turns off the road
 4. Describe the safe way to return to the highway
 5. Explain methods of handling brake failure blow outs

R. Skid Control and Recovery

1. Show how skid control can prevent accidents
2. Explain vehicle control factors, including traction, wheel load and force of motion
3. Describe causes of skidding
4. Explain recovery techniques
5. Show why most skids can be prevented and can occur at any speed
6. Describe ways to recover from a skid

S. Accident Procedures

1. Explain correct procedures for a driver to follow at an accident scene
2. Detail information needed for an accident scene
3. Explain which subjects driver should never discuss at an accident
4. Describe driver's responsibility at an emergency
5. How to protect the scene
6. Evaluate injuries and use correct first aid measures
7. Describes types of fires and how to put them out
8. Explain the special skills needed if there is a spill of hazardous materials
9. Detail special reports needed when hazardous materials are involved

T. Sliding Fifth Wheels and Tandems

1. Describe reasons for sliding fifth wheel or trailer tandem axles
2. Explain concept of shifting weight between tractor and trailer
3. Explain the effects of sliding the fifth wheel or trailer tandem axles on:
 - a. overall length
 - b. maneuverability
 - c. off tracking
4. Describe procedure for locking and unlocking fifth wheel
5. Explain correct way to slide fifth wheel of a tractor with trailer attached
6. Explain locking and unlocking tandem axles on a trailer and how to slide them
7. Hazards of sliding fifth wheel or trailer tandems improperly

U. Special Rigs

1. Identify command special rigs
2. Describe functions, operating characteristics, size, special features and hazards of special rigs
3. Special skills and training needed to operate some rigs
4. Types of cargoes that are carried

V. Preventive Maintenance

1. Explain different types
2. Know his responsibilities in maintenance
3. Show dangers of certain types of maintenance



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4. Understand the inspection, repair and maintenance requirements of the Federal Motor Carrier safety regulations

W. Handling Cargo

1. Explain importance of handling cargo correctly
2. Specify driver's responsibilities
3. Outline carriers responsibilities
4. Describe methods of containing and securing cargo
5. Explain distribution of weight
6. Describe "special" handling for certain material

X. Cargo Documentation

1. Describe how to check shipping documents to verify cargo and quantity
2. Explain how to check documents for compliance with the law
3. Legal terms of shipping contracts
4. Specify the documentation and communication requirements for hazardous materials

Y. Personal Health and Safety

1. Why a trucking job demands good physical condition
2. Describe causes and cures of fatigue
3. Explain FMCSR with regard to alcohol or drug use
4. Show benefits of good diet, exercise and plenty of rest
5. Describe how to lift objects safely
6. List causes of stress
7. Show causes of accidents

Z. Trip Planning

1. Use a motor carrier atlas
2. Explain how to locate starting point and destination of a trip on a map
3. Plan trip routes
4. Explain how to choose alternate routes
5. How to estimate mileage
6. How to obtain necessary permits
7. Explain where to get information about special requirements
8. Describe how to plan for personal needs and expense money for a trip
9. Describe different types of enforcement procedures

AA. Public relations and Employer and Employee relations

1. Public relations
2. Customer relations
3. Employer relations
4. Basic job requirements

X. REFERENCES:

1. Driver Trainer Manual-J.J.Keller
2. Tractor Trailer Manual-Career Publishing



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3. Interstate Drivers Handbook-Keller
 4. Federal Motor Carriers Rules and Regulations-Keller
 5. Hazardous Materials Compliance Book-Keller
 6. North American Emergency Response-Keller
 7. Log Books
 8. Rand McNally Road Atlas
 9. Driver's Handbooks
 - a. air brakes
 - b. logging-a driver's guide
 - c. driving techniques
 - d. extreme weather driving
 - e. city driving
 - f. speed and space management
 - g. backing
 - h. emergency maneuvers

XI. COURSE AND FACULTY EVALUATION:

- A. An evaluation will be distributed to obtain the students reactions to the course and various aspects of instruction.
- B. The form will then be sent to the Office of Continuing Education for further study.



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