



# Model Curriculum

**QP Name: Commercial Vehicle Driver - LMO**

**QP Code: LSC/Q1005**

**QP Version: 3.0**

**NSQF Level: 4**

**Model Curriculum Version: 3.0**

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## Training Parameters

<b>Sector</b>	Logistics
<b>Sub-Sector</b>	Land Transportation, Liquid Logistics
<b>Occupation</b>	Transport Operations, Vehicle Operations, Liquid Transport Operations
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/8331.0301
<b>Minimum Educational Qualification and Experience</b>	8th Class pass with 3 years of experience as HMV driver (as per HMV regulations of Central motor vehicle rule 1989 - Should have the ability to read and write in English + at least 1 official language) Or Previous relevant Qualification of NSQF Level 3 with 3 years of experience as HMV driver.
<b>Pre-Requisite License or Training</b>	HMV License
<b>Minimum Job Entry Age</b>	20 Years
<b>Last Reviewed On</b>	06/02/2026
<b>Next Review Date</b>	06/02/2029
<b>NSQC Approval Date</b>	06/02/2026
<b>QP Version</b>	3.0
<b>Model Curriculum Creation Date</b>	26/09/2025
<b>Model Curriculum Valid Up to Date</b>	06/02/2029
<b>Model Curriculum Version</b>	3.0
<b>Minimum Duration of the Course</b>	480
<b>Maximum Duration of the Course</b>	480

## Program Overview

This section summarizes the end objectives of the program along with its duration.

### Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Detail the various functions of a Commercial Vehicle Driver – LMO
- Describe the roles and responsibilities of Commercial Vehicle Driver - LMO
- Assess the road worthiness of the vehicle as per organizational requirements, CMVR guidelines, safety requirements for Liquid Medical Oxygen (LMO).
- Demonstrate efficient driving of LMO tankers as per SOP and safety guidelines.
- Demonstrate defensive driving techniques.
- Discuss the various types of emergencies during LMO transportation
- Detail the SOPs and safety protocols to be followed while handling emergencies.
- Follow company’s guidelines on safe driving practices; system and processes to ensure safe driving
- Follow appropriate safety measures while driving LMO tankers.
- Follow appropriate health and safety precautions while driving LMO tankers.

### Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
<b>Bridge Module</b>	<b>10</b>	<b>20</b>			<b>30</b>
Module 1: Introduction to Commercial Vehicle Driver - LMO	10	20			30
<b>LSC/N1014: Carry out maintenance and ensure roadworthiness of LMO vehicle</b> NOS Version 2.0 NSQF Level 4	<b>20</b>	<b>60</b>	<b>10</b>		<b>90</b>
Module 2: Vehicle Inspection	20	60	10		90
<b>LSC/N1015: Operate and Drive the LMO Tanker safely and efficiently</b> NOS Version 2.0 NSQF Level 4	<b>20</b>	<b>60</b>	<b>10</b>		<b>90</b>
Module 3: Driving LMO tankers safely and efficiently	20	60	10		90
<b>LSC/N1013: Handle Liquid Medical Oxygen</b> NOS Version 2.0 NSQF Level 4	<b>20</b>	<b>60</b>	<b>10</b>		<b>90</b>

Module 4: Handling of Liquid Medical Oxygen	20	60	10		90
<b>LSC/N1017: Handle Emergencies during LMO Transportation NOS Version 1.0 NSQF Level 4</b>	<b>20</b>	<b>60</b>	<b>10</b>		<b>90</b>
Module 5: Handling of Emergencies	20	60	10		90
<b>LSC/N1304: Health, safety and security procedures for drivers Version 2.0 NSQF Level 4</b>	<b>15</b>	<b>35</b>	<b>10</b>		<b>60</b>
Module 6: Compliance to health, safety and security procedures	15	35	10		60
<b>Employability Skills DGT/VSQ/N0101</b>	<b>15</b>	<b>15</b>			<b>30</b>
<b>Total Duration</b>	<b>120</b>	<b>310</b>	<b>50</b>		<b>480</b>

# Module Details

## Module 1: Introduction to Commercial Vehicle Driver - LMO

### Mapped to Bridge Module

#### Terminal Outcomes:

- Detail the various functions of a Commercial Vehicle Driver - LMO
- Describe the roles and responsibilities of Commercial Vehicle Driver - LMO

<b>Duration:</b> 10:00	<b>Duration:</b> 20:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Classify the components of logistics sector</li> <li>• Detail the various sub-sectors and the opportunities in them</li> <li>• Explain job roles in Land Transportation</li> <li>• Detail your job role as Commercial Vehicle Driver – LMO and its interface with other job roles</li> <li>• Describe the various MHEs and equipment used in Land transportation</li> <li>• Discuss the documentation requirements land transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the various MHEs and equipment’s used in land transportation</li> <li>• Perform the various functions of a Commercial Vehicle Driver - LMO</li> </ul>
<b>Classroom Aids</b>	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
<b>Tools, Equipment and Other Requirements</b>	
Computer with MS Office, TMS (learning version), LLMS (Learning Version)	

## Module 2: Vehicle Inspection

Mapped to LSC/N1014, V2.0

### Terminal Outcomes:

- Assess the road worthiness of the vehicle as per organizational requirements, CMVR guidelines, safety requirements for LMO

<b>Duration: 20:00</b>	<b>Duration: 60:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Explain the requirements related to legal and compliance matters such as CMVR guidelines.</li> <li>List the steps of performing basic technical check before the trip.</li> <li>Explain the process of escalating vehicle defects and other issues to superiors.</li> <li>Interpret technical standards of vehicle operation.</li> <li>Discuss the details of the key elements involved in deciding when the vehicle should not be used due to technical and/or compliance issues.</li> <li>List the steps involved in Pre-Trip planning.</li> <li>Describe the special conditions to be considered for LMO.</li> <li>Describe the organization’s policies on road worthiness requirement.</li> </ul>	<ul style="list-style-type: none"> <li>Examine the road worthiness as per guidelines for driving bulk liquid containers, health, and LMO guidelines.</li> <li>Demonstrate the checks to be performed in the pre-trip planning of transporting LMO tankers.</li> <li>Record all preventive maintenance activities, including parts replaced, inspection dates, and any issues identified.</li> <li>Check if toolkit is cleaned for oxygen service and securely stored away from the LMO cargo (as per safety norms).</li> <li>Follow the planned and approved route during transportation to ensure compliance with safety and regulatory guidelines.</li> </ul>
<b>Classroom Aids:</b>	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
<b>Tools, Equipment and Other Requirements</b>	
Computer with MS Office, Simulators, Cut sectioned models, Heavy motor vehicle for practical, TMS (learning version).	

## Module 3: Driving LMO tankers safely and efficiently

*Mapped to LSC/N1015, V2.0*

### Terminal Outcomes:

- Demonstrate efficient driving of LMO tankers as per SOP and safety guidelines.
- Demonstrate defensive driving techniques.

<b>Duration: 20:00</b>	<b>Duration: 60:00</b>
<p><b>Theory – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Describe the standard driving practices for driving LMO tankers.</li> <li>• List the traffic rules and regulations.</li> <li>• Discuss the mechanism of managing cargo pressure on the road, driving on curvy roads, braking hazards, etc.</li> <li>• Discuss the various defensive driving techniques regarding overtaking, parking, stopping, driving in the rain, driving at night etc.</li> <li>• Explain the steps and safety precautions to be followed while parking LMO tankers.</li> <li>• Describe the steps and safety precautions to be followed during the empty return of LMO tankers.</li> <li>• Explain the various eco-driving techniques</li> <li>• Discuss the protocols for interacting respectfully with the public, including pedestrians</li> <li>• Detail the appropriate responses in stressful driving situations such as congestion, accidents, or emergency detours.</li> </ul>	<p><b>Practical – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Demonstrate driving of LMO tankers as per SOP and safety guidelines.</li> <li>• Demonstrate safe loading and unloading of LMO tankers as per SOP and safety guidelines.</li> <li>• Demonstrate the usage of cones, signs, PPE, emergency kit etc.</li> <li>• Demonstrate defensive driving techniques.</li> <li>• Demonstrate parking of LMO tankers as per SOP and safety guidelines.</li> <li>• Demonstrate the use of local language to communicate effectively.</li> <li>• Demonstrate eco-driving techniques using simulator or on-road HMV vehicle</li> <li>• Demonstrate effective conflict management techniques through simulated scenarios involving pedestrians, traffic personnel, and public interactions</li> </ul>
<p><b>Classroom Aids:</b></p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p><b>Tools, Equipment and Other Requirements</b></p> <p>Computer with MS Office, HMV vehicle for practical, Cut sectional models, Simulator, TMS (learning version).</p>	

## Module 4: Handling of Liquid Medical Oxygen

*Mapped to LSC/N1013, V2.0*

### Terminal Outcomes:

- Apply safety precautions while handling liquid medical oxygen as per SOP and guidelines.

<b>Duration:</b> 20:00	<b>Duration:</b> 60:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the dangers of LMO.</li> <li>• Detail the safety precautions to be followed while handling LMO</li> <li>• Explain the standard operating procedure for handling LMO tankers.</li> <li>• Discuss the SOP to be followed in case of leaks, spills, rupture disks failure, valve malfunctions etc.</li> <li>• Explain the use of diffusers during cryogenic oxygen transfer</li> <li>• Explain the use of cryogenic-compatible transfer lines and equipment</li> <li>• Detail the SOP for the loading and decantation process for liquid oxygen</li> <li>• Discuss the safety guidelines to be followed while monitoring pressure gauges</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the appropriate clothing and PPE to be worn while handling LMO</li> <li>• Demonstrate the safety precautions while driving LMO tankers.</li> <li>• Detect unsafe working conditions.</li> <li>• Inspect adherence to SOP while handling LMO tankers.</li> <li>• Inspect the loading and decantation process being followed for liquid oxygen</li> <li>• Demonstrate the use of a diffuser during LMO transfer.</li> </ul>
<b>Classroom Aids:</b>	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
<b>Tools, Equipment, and Other Requirements</b>	
Computer with MS Office, Fire extinguisher, HMV, LMO tanker for practical, safety equipment, TMS (learning version).	

## Module 5: Handling of Emergencies

Mapped to LSC/N1017, V1.0

### Terminal Outcomes:

- Discuss the various types of emergencies during LMO transportation
- Detail the SOPs and safety protocols to be followed while handling emergencies.

<b>Duration: 20:00</b>	<b>Duration: 60:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the types of emergencies that may occur during LMO transportation, including oxygen leakage, fire, vehicle breakdowns etc.</li> <li>• Explain the standard procedures for containing fires, including the use of Class D extinguishers and precautions to avoid using water on LMO fires.</li> <li>• Describe first aid protocols, including the treatment of frostbite, cryogenic burns, and symptoms of hypoxia.</li> <li>• List the immediate actions to take in case of vehicle breakdowns or road accidents.</li> <li>• Describe evacuation and communication protocols to be followed with control centres and emergency response services.</li> <li>• Discuss preventive measures, such as regular emergency drills, equipment inspections, and pre-trip safety checks.</li> <li>• Explain legal and compliance requirements, including the documentation of incidents in line with SOPs and PESO guidelines.</li> <li>• Emphasize the importance of maintaining detailed emergency incident documentation, including time, nature, and response details.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the early warning signs of oxygen-related leaks, such as unusual sounds, gas odour, and fluctuations in pressure gauges.</li> <li>• Demonstrate how to activate shut-off valves and isolate the leak using appropriate PPE.</li> <li>• Demonstrate how to use firefighting equipment suitable for oxygen-enriched environments and perform evacuation procedures.</li> <li>• Demonstrate emergency braking and hazard setup, including the placement of cones and activation of hazard lights during simulated breakdowns.</li> <li>• Perform basic first aid for emergencies such as burns, oxygen exposure, or panic attacks (if trained).</li> <li>• Perform vehicle evacuation protocols, including guiding bystanders to safety and coordinating with emergency services.</li> <li>• Conduct pre-trip emergency preparedness checks, including inspection of safety kits, fire extinguishers, and PPE.</li> <li>• Demonstrate incident reporting, including completing a mock incident report with details such as location, actions taken, and communications made.</li> <li>• Participate in an emergency drill, coordinating with fire and police services.</li> </ul>
<b>Classroom Aids:</b>	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
<b>Tools, Equipment, and Other Requirements</b>	
Computer with MS Office, Fire extinguisher, HMV, LMO tanker for practical, safety equipment, TMS (learning version). Spill Containment Kit, Class D Fire Extinguisher, PPE, First Aid Kit, vehicle maintenance tools, Communication Radio, SOP manuals, Pressure Gauge Demo Unit	

## Module 6: Compliance to health, safety and security measures

### Mapped to LSC/N1304, V2.0

#### Terminal Outcomes:

- Discuss the safety and security measures while driving LMO tankers as per SOP and guidelines.

<b>Duration: 15:00</b>	<b>Duration: 35:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe the health, safety, and security procedures in driving the commercial vehicle – LMO tankers.</li> <li>• Explain the dangers of LMO.</li> <li>• Describe the health and safety precautions to be followed while driving LMO tankers.</li> <li>• Explain the concept of 5S at the workplace.</li> <li>• Explain the standard operating procedure for handling LMO tankers.</li> <li>• Discuss the standard protocol in case of emergency situations, accidents, and breach of safety.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the safety precautions while driving LMO tankers.</li> <li>• Demonstrate the 5S procedure at the workplace.</li> <li>• Inspect the vehicle for appropriate and safe conditions.</li> <li>• Detect unsafe working conditions.</li> <li>• Inspect adherence to SOP while handling LMO tankers.</li> <li>• Prepare a note on health, safety, and security violations.</li> </ul>
<b>Classroom Aids:</b>	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
<b>Tools, Equipment and Other Requirements</b>	
Computer with MS Office, Fire extinguisher, PPE, HMV for practical, safety equipment, TMS (learning version), LLMS (learning version)	

## Module 7: Employability Skills

Mapped to, DGT/VSQ/N0101, V1.0

### Terminal Outcomes:

- Appraise the significance of employability skills in meeting the job requirements
- Identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices.
- Illustrate English and communication skills, customer service, entrepreneurship, and getting ready for jobs and apprenticeship.

<i>Duration: 15.00</i>	<i>Duration: 15.00</i>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>● Detail the importance of Employability Skills in meeting the job requirements</li> <li>● Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.</li> <li>● Describe positive attitude, self - motivation, problem solving, time management skills and continuous learning mindset in different situations.</li> <li>● Discuss the significance of reporting sexual harassment issues in time</li> <li>● Appraise the significance of using financial products and services safely and securely.</li> <li>● Explain the importance of managing expenses, income, and savings.</li> <li>● Detail the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws</li> <li>● Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely</li> <li>● Categorize the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges</li> <li>● Discuss the significance of maintaining hygiene and dressing appropriately</li> <li>● Discuss how to search and register for apprenticeship opportunities</li> </ul>	<ul style="list-style-type: none"> <li>● Analyze 21st century skills.</li> <li>● Practice appropriate basic English sentences/phrases while speaking</li> <li>● Demonstrate how to communicate in a well -mannered way with others.</li> <li>● Illustrate working with others in a team</li> <li>● Demonstrate how to conduct oneself appropriately with all genders and PwD</li> <li>● Operate digital devices and use the associated applications and features, safely and securely</li> <li>● Differentiate between types of customers</li> <li>● Create a biodata</li> <li>● Experiment with various sources to search and apply for jobs</li> <li>● Identify customer needs and address them</li> <li>● Compose the significance of dressing up neatly and maintaining hygiene for an interview</li> </ul>
<b>Classroom Aids</b>	

Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser, UPS, LCD Projector, Computer Tables & chairs

**Tools, Equipment and Other Requirements**

Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below), Scanner cum Printer, LLMS

## Annexure

### Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Any degree	LMO Storage and Transportation Handling	2	LMO Storage and Transportation Handling			

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Commercial vehicle driver - LMO" mapped to QP: "LSC/Q1005 V3.0". Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and Skills)", mapped to the Qualification Pack: "MEP/Q2601, V3.0" with minimum score of 80%

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Any degree	LMO Storage and Transportation Handling	2	LMO Storage and Transportation Handling			

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Commercial Vehicle Driver – LMO” mapped to QP: “LSC/Q1005 V3.0” with minimum score of 80%.	Recommended that the Assessor is certified for the Job Role: “Assessor (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, V3.0” with minimum score of 80%

## Assessment Strategy

The emphasis is on 'learning-by-doing' and practical demonstration of skills and knowledge based on the performance criteria. Accordingly, assessment criteria for each job role is set and made available in qualification pack.

The assessment papers for both theory and practical would be developed by Subject Matter Experts (SME) hired by Logistics Sector Skill Council or with the LSC accredited Assessment Agency as per the assessment criteria mentioned in the Qualification Pack. The assessments papers would also be checked for the various outcome-based parameters such as quality, time taken, precision, tools & equipment requirement etc.

Each NOS in the Qualification Pack (QP) is assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Element/Performance Criteria in the NOS is assigned marks on relative importance, criticality of function and training infrastructure.

The following tools would be used for final assessment:

**1. Practical Assessment:** This comprises of a creation of mock environment in the skill lab which is equipped with all equipment required for the qualification pack.

Candidate's soft skills, communication, aptitude, safety consciousness, quality consciousness etc. is ascertained by observation and marked in observation checklist. The outcome is measured against the specified dimensions and standards to gauge the level of their skill achievements.

**2. Viva/Structured Interview:** This tool is used to assess the conceptual understanding and the behavioral aspects with regard to the job role and the specific task at hand. It also includes questions on safety, quality, environment, and equipment etc.

**3. On-Job Training:** OJT would be evaluated based on standard log book capturing departments worked on, key observations of learner, feedback and remarks of supervisor or mentor.

**4. Written Test:** Question paper consisting of 100 MCQs (Hard:40, Medium:30 and Easy: 30) with questions from each element of each NOS. The written assessment paper is comprised of following types of questions:

- i. True / False Statements
- ii. Multiple Choice Questions
- iii. Matching Type Questions.
- iv. Fill in the blanks
- v. Scenario based Questions
- vi. Identification Questions

### QA Regarding Assessors:

Assessors are selected as per the "eligibility criteria" laid down by LSC for assessing each job role. The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to LSC Assessment Framework, competency-based assessments, assessors guide etc. LSC conducts "Training of Assessors" program from time to time for each job role and sensitize

assessors regarding assessment process and strategy, which is outlined on following mandatory parameters:

- 1) Guidance regarding NSQF
- 2) Qualification Pack Structure
- 3) Guidance for the assessor to conduct theory, practical and viva assessments
- 4) Guidance for trainees to be given by assessor before the start of the assessments.
- 5) Guidance on assessments process, practical brief with steps of operations  
practical observation checklist and mark sheet
- 6) Viva guidance for uniformity and consistency across the batch.
- 7) Mock assessments
- 8) Sample question paper and practical demonstration

## References

## Glossary

Term	Description
<b>Key Learning Outcome</b>	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
<b>Terminal Outcome</b>	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

## Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards