



Model Curriculum

QP Name: Commercial Vehicle Driver - LMO

QP Code: LSC/Q1005

QP Version: 2.0

NSQF Level: 4

Model Curriculum Version: 2.0

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Training Parameters

Sector	Logistics
Sub-Sector	Land Transportation
Occupation	Vehicle/Transport Operations
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/8331.0301
Minimum Educational Qualification and Experience	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 Commercial Vehicle Driver + 3 years of experience as HMV driver.
Pre-Requisite License or Training	HMV License
Minimum Job Entry Age	20 Years
Last Reviewed On	28/02/2023
Next Review Date	28/02/2026
NSQC Approval Date	28/02/2023
QP Version	2.0
Model Curriculum Creation Date	07/10/2022
Model Curriculum Valid Up to Date	28/02/2026
Model Curriculum Version	2.0
Minimum Duration of the Course	510 hrs
Maximum Duration of the Course	510 hrs

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.
- 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
Bridge Module	10	20			30
Module 1: Introduction to Commercial Vehicle Driver - LMO	10	20			30
LSC/N1014: Assess and ensure road worthiness of the vehicle (LMO) NOS Version 1.0 NSQF Level 4	25	65	30		120
Module 2: Assessment of vehicle for road worthiness	25	65	30		120
LSC/N1015: Drive safely and efficiently (LMO) NOS Version 1.0 NSQF Level 4	25	65	30		120
Module 3: Driving safely and efficiently	25	65	30		120
LSC/N9905: Follow health, safety and security procedures. Version 2.0 NSQF Level 4	15	35	10		60
Module 4: Compliance to health and safety measures	15	35	10		60

LSC/N1013: Handling of Liquid Medical Oxygen	25	65	30		120
<u>Module 5: Handling of Liquid Medical Oxygen</u>	25	65	30		120
Employability Skills DGT/VSQ/N0102	30	30			60
Total Duration	130	280	100		510

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

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

Module 2: Assessment of vehicle for road worthiness

Mapped to LSC/N1014, v.1.0

Terminal Outcomes:

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

Duration: 25:00	Duration: 65:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Explain the requirements related to legal and compliance matters such as CMVR guidelines. List the steps of performing basic technical check before the trip. Explain the process of escalating vehicle defects and other issues to superiors. Interpret technical standards of vehicle operation. Discuss the details of the key elements involved in deciding when the vehicle should not be used due to technical and/or compliance issues. List the steps involved in Pre-Trip planning. Describe the special conditions to be considered for LMO. Describe the organization’s policies on road worthiness requirement. 	<ul style="list-style-type: none"> Examine the road worthiness as per guidelines for driving bulk liquid containers, health, and LMO guidelines. Demonstrate the checks to be performed in the pre-trip planning of transporting LMO tankers.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Simulators, Cut sectioned models, Heavy motor vehicle for practical, TMS (learning version).	

Module 3: Driving safely and efficiently.

Mapped to LSC/N1015; v.1.0

Terminal Outcomes:

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

Duration: 25:00	Duration: 65:00
<p>Theory – Key Learning Outcomes</p> <ul style="list-style-type: none"> ● Describe the standard driving practices for driving LMO tankers. ● List the traffic rules and regulations. ● Discuss the mechanism of managing cargo pressure on the road, driving on curvy roads, braking hazards, etc. ● Discuss the various defensive driving techniques regarding overtaking, parking, stopping, driving in the rain, driving at night etc. ● Explain the steps and safety precautions to be followed while parking LMO tankers. ● Describe the steps and safety precautions to be followed during the empty return of LMO tankers. 	<p>Practical – Key Learning Outcomes</p> <ul style="list-style-type: none"> ● Demonstrate driving of LMO tankers as per SOP and safety guidelines. ● Demonstrate safe loading and unloading of LMO tankers as per SOP and safety guidelines. ● Demonstrate the usage of cones, signs, PPE, emergency kit etc. ● Demonstrate defensive driving techniques. ● Demonstrate parking of LMO tankers as per SOP and safety guidelines. ● Demonstrate the use of local language to communicate effectively.
<p>Classroom Aids:</p> <p>Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser</p>	
<p>Tools, Equipment and Other Requirements</p> <p>HMV vehicle for practical, Cut sectional models, Simulator, TMS (learning version).</p>	

Module 4: Compliance to health and safety measures

Mapped to LSC/N9905, v.2.0

Terminal Outcomes:

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

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

Module 5: Handling of Liquid Medical Oxygen

Mapped to LSC/N1013, v.1.0

Terminal Outcomes:

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

Duration: 25:00	Duration: 65:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Detail the appropriate clothing and PPE while handling LMO Explain the dangers of LMO. Detail the safety precautions to be followed while handling LMO Explain the standard operating procedure for handling LMO tankers. Discuss the standard protocol in case of leaks, spills, rupture disks, etc. Detail the SOP for the loading and decantation process for liquid oxygen Discuss the safety guidelines to be followed while monitoring pressure gauges 	<ul style="list-style-type: none"> Identify the appropriate clothing and PPE while handling Demonstrate the safety precautions while driving LMO tankers. Detect unsafe working conditions. Inspect adherence to SOP while handling LMO tankers. Inspect the loading and decantation process being followed for liquid oxygen Demonstrate the standard protocol to be followed in case of leaks, spills, rupture disks, etc Demonstrate the protocol for monitoring pressure gauges.
Classroom Aids:	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment, and Other Requirements	
Fire extinguisher, HMV, LMO tanker for practical, safety equipment, TMS (learning version).	

Module 6: Employability Skills

Mapped to, DGT/VSQ/N0102, v1.0

Terminal Outcomes:

- Discuss the Employability Skills required for jobs in various industries
- Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
- Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan

Duration: 30:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> ● Discuss the Employability Skills required for jobs in various industries ● List different learning and employability related GOI and private portals and their usage ● Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen ● Discuss importance of relevant 21st century skills. ● Describe the benefits of continuous learning. ● Explain the importance of active listening for effective communication ● Discuss the significance of working collaboratively with others in a team ● Discuss the significance of escalating sexual harassment issues as per POSH act. ● List the common components of salary and compute income, expenditure, taxes, investments etc. ● Discuss the legal rights, laws, and aids ● Describe the role of digital technology in today's life ● Discuss the significance of displaying responsible online behaviour while browsing, using various social media 	<ul style="list-style-type: none"> ● Practice different environmentally sustainable practices. ● Exhibit 21st century skills like Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life. ● Demonstrate to use basic English sentences for everyday conversation in different contexts, in person and over the telephone ● Read and interpret text written in basic English ● Write a short note/paragraph / letter/e-mail using basic English ● Create a career development plan with well-defined short- and long-term goals ● Communicate effectively using verbal and nonverbal communication etiquette. ● Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD ● Outline the importance of selecting the right financial institution, product, and service ● Demonstrate how to carry out offline and online financial transactions, safely and securely

<p>platforms, e-mails, etc., safely and securely</p> <ul style="list-style-type: none"> ● Explain the types of entrepreneurship and enterprises ● Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan ● Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement ● Detail the significance of analyzing different types and needs of customers ● Explain the significance of identifying customer needs and responding to them in a professional manner. ● Discuss the significance of maintaining hygiene and dressing appropriately ● Explain the significance of maintaining hygiene and confidence during an interview ● List the steps for searching and registering for apprenticeship opportunities 	<ul style="list-style-type: none"> ● Operate digital devices and use the associated applications and features, safely and securely ● Create sample word documents, excel sheets and presentations using basic features ● Utilize virtual collaboration tools to work effectively ● Devise a sample business plan, for the selected business opportunity ● Create a professional Curriculum Vitae (CV) ● Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively ● Perform a mock interview
Classroom Aids	
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, TMS (learning version), LLMS (learning version).	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
12 th pass		2	LMO Storage and Transportation Handling	-		Trainer must be Training of Trainers (TOT) certified

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: "Commercial vehicle driver - LMO" mapped to QP: "LSC/Q1005 v2.0". 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, V2.0" with minimum score of 80%

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
12th pass	N/A	2	LMO Storage and Transportation Handling	-		Assessor must be Training of Assessors (TOA) Certified

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Commercial Vehicle Driver – LMO” mapped to QP: “LSC/Q1005 v2.0” 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, V2.0” 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, assessorsguide 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
Key Learning Outcome	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).
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	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