



# Model Curriculum

**QP Name: Drone Operator – Warehouse**

**QP Code: LSC/Q0402**

**QP Version: 1.0**

**NSQF Level: 4**

**Model Curriculum Version: 1.0**

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## Training Parameters

<b>Sector</b>	Logistics
<b>Sub-Sector</b>	Warehousing (Storage and Packaging)
<b>Occupation</b>	Engineering/Maintenance
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Aligned to NCO/ISCO/ISIC Code</b>	NC0-2015/3139.9900 & ISCO-08/3139
<b>Minimum Educational Qualification and Experience</b>	12th grade pass OR Completed 2nd year of 3-year diploma (after 10th) and pursuing a regular diploma OR 10th Grade Pass + 2 years of relevant experience in warehousing OR Previous relevant Qualification of NSQF Level 3.0 (warehousing) with minimum education as 8th Grade pass + 3 years of relevant experience
<b>Pre-Requisite License or Training</b>	Drone Pilot License
<b>Minimum Job Entry Age</b>	18
<b>Last Reviewed On</b>	03/05/2023
<b>Next Review Date</b>	03/05/2026
<b>NSQC Approval Date</b>	03/05/2023
<b>QP Version</b>	1.0
<b>Model Curriculum Creation Date</b>	03/01/2023
<b>Model Curriculum Valid Up to Date</b>	03/05/2026
<b>Model Curriculum Version</b>	1.0
<b>Minimum Duration of the Course</b>	510
<b>Maximum Duration of the Course</b>	570

## 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 will be able to:

Detail the various functions of a drone operator – warehouse

- Demonstrate the steps to be performed in assembling and preparing of drone as per SOP
- Detail the appropriate steps for conducting drone flight stimulation and flight testing as per SOP
- Discuss the steps to be performed for identification and assessment of risks
- Demonstrate the steps to be followed for repair and maintenance of drone
- Describe health, safety, and security procedures to be followed for usage of drones
- Illustrate the standard protocol to be followed during emergency situations, accidents, and breach of safety
- Perform the essential steps for effective inventory management using drones
- Discuss the steps to be performed for collection, analysis and utilization of data using drones
- Detail the steps to be performed for preparation of drone for warehouse security surveillance
- Detail the essential steps to be followed for effective warehouse security surveillance using drones

### Compulsory Modules

The table lists the modules, their duration and mode of delivery.

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>20</b>	<b>10</b>			<b>30</b>
Module 1: Introduction to Drone Operator - Warehouse	20	10			30
<b>LSC/N0407 – Assemble and prepare the drone for use V1.0 NSQF Level 4</b>	<b>20</b>	<b>60</b>	<b>10</b>		<b>90</b>

Module 2: Assembling and preparation of drone	20	60	10		90
<b>LSC/N0408 – Carry out drone flight simulation and test flight V1.0 NSQF Level 4</b>	<b>20</b>	<b>60</b>	<b>10</b>		<b>90</b>
Module 3: Drone flight stimulation and flight testing	20	60	10		90
<b>LSC/N0409 - Identify and assess risks in drone operations V1.0 NSQF Level 4</b>	<b>20</b>	<b>35</b>	<b>5</b>		<b>60</b>
Module 4: Identification and assessment of risks	20	35	5		60
<b>LSC/N0410 – Maintain the drone in working condition V1.0 NSQF Level 4</b>	<b>20</b>	<b>35</b>	<b>5</b>		<b>60</b>
Module 5: Maintenance of drones	20	35	5		60
<b>LSC/N0411 – Follow appropriate health and safety measures in drone operations V1.0 NSQF Level 4</b>	<b>20</b>	<b>40</b>			<b>60</b>
Module 6: Compliance to health and safety standards	20	40			60
<b>Employability Skills DGT/VSQ/N0102</b>	<b>30</b>	<b>30</b>			<b>60</b>
<b>Total Duration</b>	<b>150</b>	<b>270</b>	<b>30</b>		<b>450</b>

## Elective Modules

The table lists the option modules, their duration and mode of delivery.

### Elective 1: Inventory Management

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
<b>LSC/N0412 - Perform inventory management using drones V1.0 NSQF Level 4</b>	15	15			30
Module 7: Inventory management using drones	15	15			30
<b>LSC/N0413 – Collect, analyze and utilize the drone data concerning the inventory V1.0 NSQF Level 4</b>	15	15			30
Module 8: Collection, analysis, and utilization of drone data	15	15			30
<b>Total Duration</b>	<b>30</b>	<b>30</b>			<b>60</b>

## Elective 2: Warehouse Security Surveillance

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
<b>LSC/N0414 - Prepare the drone for warehouse security surveillance V1.0</b> <b>NSQF Level 4</b>	15	15			30
Module 9: Drone preparation for security surveillance	15	15			30
<b>LSC/N0415 – Perform warehouse security surveillance using drones V1.0</b> <b>NSQF Level 4</b>	15	15			30
Module 10: Warehouse security surveillance using drones	15	15			30
<b>Total Duration</b>	<b>30</b>	<b>30</b>			<b>60</b>

## Module Details

### Module 1: Introduction to Drone Operator – Warehouse

#### *Mapped to Bridge Module*

#### Terminal Outcomes:

- Describe the basic structure and function of supply chain
- Detail the various functions of a drone operator - warehouse

<b>Duration: 20:00</b>	<b>Duration: 10:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Classify the components of supply chain and logistics sector</li> <li>• Detail the various sub-sectors and the opportunities in them</li> <li>• Illustrate the job role of a drone operator – and its connection with various other job roles</li> <li>• Describe the various activities in a warehouse</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the various MHEs used in warehouse</li> <li>• Perform various operations functions of a drone operator</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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	



## Module 2: Assembling and Preparation of Drone

*Mapped to LSC/N0407, v1.0*

### Terminal Outcomes:

- Detail the steps to be performed in assembling and preparing of drone as per SOP

<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>• Detail the list of steps to be performed during inspecting the drone for damages</li> <li>• List the steps to be performed for assembling the drone</li> <li>• Detail the list of pre-flight checks to be performed on the drone</li> </ul>	<p><b>Practical – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the various steps to be performed during inspection of drone for damages</li> <li>• Perform the steps for assembling the drone</li> <li>• Demonstrate the several pre-flight checks on the drone</li> <li>• Examine the propeller of the drone for correct orientation and free movement</li> <li>• Demonstrate the appropriate test to check the functioning of the RTH system</li> <li>• Prepare necessary documentation regarding the pre-flight checks on the drone</li> <li>• Perform pre-flight troubleshooting as per SOP</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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 3: Drone flight stimulation and flight testing

*Mapped to LSC/N0408, v1.0*

### Terminal Outcomes:

- Detail the appropriate steps for conducting drone flight stimulation as per SOP
- Demonstrate the appropriate steps for flight testing as per SOP

<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>• List the steps to be performed for stimulating the drone flight</li> <li>• Detail the steps to be performed for undertaking drone test flight</li> <li>• List the important parameters and features to be tested</li> <li>• Detail the safety precautions to be followed while test-flying the drone</li> <li>• Discuss the process of recording necessary data regarding drone test flight.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the steps to be performed for stimulating the drone flight</li> <li>• Perform drone demo flight in the drone flight stimulator</li> <li>• Perform testing of all important parameters and features while flight testing</li> <li>• Demonstrate the safety precautions while test flying the drone</li> <li>• Record necessary data regarding drone test flight</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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 4: Identification and assessment of risks

Mapped to LSC/N0409, v1.0

### Terminal Outcomes:

- Detail the steps to be performed for identification and assessment of risks

<b>Duration: 20:00</b>	<b>Duration: 35:00</b>
<p><b>Theory – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Discuss the identification process of relevant risks</li> <li>• List the possible risks from drones such as injury to user and others, fire, privacy risks etc</li> <li>• Detail the various risk mitigation strategies regarding payload delivery, injury to others etc</li> </ul>	<p><b>Practical – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the identification process of relevant risks while using drones               <ul style="list-style-type: none"> <li>• Identify the possible risks from drones such as injury to user and others, fire, privacy risks etc</li> <li>• Assess the various risks while using drones such as injury, fire, privacy risks, payload delivery etc</li> <li>• Demonstrate the process of conducting fire risk analysis to determine the risk of fire</li> <li>• Implement the appropriate risk mitigation techniques depending on the type of risk such as selection of drone, payload specifications, using drones only in intended area, creating a safe distance from the drone etc.</li> </ul> </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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 5: Maintenance of drone

Mapped to LSC/N0410, V1.0

### Terminal Outcomes:

- Detail the steps to be followed for repair and maintenance of drone as per SOP

<b>Duration: 20:00</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>• Detail the steps to identify the repair and maintenance needs of drone</li> <li>• Determine the necessary tool, equipments and spare parts for maintenance</li> <li>• Discuss the steps to be performed if tools are not available</li> <li>• Detail the steps to be followed for carrying out repair and maintenance</li> <li>• Discuss the process of regarding details regarding drone repair and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the repair and maintenance needs of a drone</li> <li>• Assess the requirements of replacing the drone components</li> <li>• Demonstrate the testing procedure of drones</li> <li>• Perform the appropriate steps when the tools are not available inhouse</li> <li>• Demonstrate the steps in carrying out drone repair and maintenance</li> <li>• Record the details regarding drone maintenance and repair to identify and resolve recurring issues</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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 6: Compliance to health and safety standards

*Mapped to LSC/N0411, v1.0*

### Terminal Outcomes:

- Describe health, safety, and security procedures to be followed for usage of drones
- Illustrate the standard protocol to be followed during emergency situations, accidents, and breach of safety

<b>Duration: 20:00</b>	<b>Duration: 40:00</b>
<p><b>Theory – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Detail health, safety and security procedures for usage of drones</li> <li>• Details the precautions to be followed for protecting the drone from adverse conditions</li> <li>• Detail the drone safety regulations</li> <li>• Discuss the precautionary methods to be followed for safety of drones from wires and obstructions</li> <li>• Discuss the precautionary methods to be followed for protection of drones</li> <li>• Detail the safety precautionary method to be followed from protection of others from drones</li> <li>• Explain the inspection procedure to ensure appropriate and safe conditions of activity area and equipment</li> <li>• Detail hygiene and sanitation standards as per regulatory bodies</li> <li>• Discuss the standard protocol to be followed during emergency situations, accidents and breach of safety</li> </ul>	<p><b>Practical – Key Learning Outcomes</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the steps for health, safety and security for usage of drones</li> <li>• Follow the precautions for protecting the drone from adverse conditions</li> <li>• Discuss the precautionary methods to be followed for safety of drones from wires and obstructions</li> <li>• Inspect activity area prior to operating drones to ensure safety.</li> <li>• Maintain hygiene and sanitation standards as per regulatory bodies while operating drones.</li> <li>• Follow safety protocol during emergency situations, accidents and breach of safety</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>MS Project, MS Office, Computer, Projector, TV, Stationery, Personal Protective Equipment (PPEs), Drone, WMS (learning version), LLMS (learning version).</p>	

## Module 7: Inventory management using drones

*Mapped to LSC/N0412, v1.0*

### Terminal Outcomes:

- Detail the steps to be performed during inventory management using drones as per SOP

<b>Duration:</b> 15:00	<b>Duration:</b> 15:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Detail the steps to be performed for planning drone flight</li> <li>• Discuss the steps to be performed during monitoring and inspecting of inventory</li> <li>• Detail the process of searching inventory using drones</li> <li>• Discuss the process of inventory audit using drones</li> <li>• List the steps to be followed while moving inventory using drones</li> <li>• Discuss the process of recording important data regarding monitoring, inspection, movement and audit of inventory</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the steps to be performed for planning drone flight</li> <li>• Dramatize the steps to be performed during monitoring and inspecting of inventory</li> <li>• Locate inventory using drones</li> <li>• Perform inventory audit using drones</li> <li>• Demonstrate the steps to be followed while moving inventory using drones</li> <li>• Record important data regarding monitoring, inspection, movement, and audit of inventory</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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 8: Collection, analysis, and utilization of drone data

*Mapped to LSC/N0413, v1.0*

### Terminal Outcomes:

- Detail the steps to be performed for collection of data using drones
- Detail the steps involved in analysis and utilization of drone data

<b>Duration:</b> 15:00	<b>Duration:</b> 15:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Detail the steps to be followed for collection of data using drones</li> <li>• Discuss the various categories of inventory such as MRO inventory, finished goods inventory etc.</li> <li>• Detail the steps to be followed in analysis and utilization of drone data</li> <li>• Discuss the different types of data to be analysed</li> </ul>	<ul style="list-style-type: none"> <li>• Perform the various steps for collection of data using drone as per SOP</li> <li>• Identify the various categories of inventory such MRO inventory, finished goods inventory etc.</li> <li>• Demonstrate the different types of analysis of drone data, images, atmospheric data, QR codes etc</li> <li>• Use the analysed data for effective management of inventory</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>	
MS Project, MS Office, Computer, Projector, TV, Stationery, Worksheets, Statistical Tools, Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 9: Drone preparation for security surveillance

*Mapped to LSC/N0414, v1.0*

### Terminal Outcomes:

- Detail the steps to be performed for preparation of drone for warehouse security surveillance
- Detail the steps to be followed prior drone operations.

<b>Duration: 15:00</b>	<b>Duration: 15:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe the steps to be performed for identifying areas for identifying warehouse areas for security surveillance</li> <li>• Define the requirements for choosing the areas for security surveillance in the warehouse.</li> <li>• Detail the steps to be followed prior drone operations.</li> <li>• Describe the work area preparation for drone operations.</li> <li>• Explain the process for obtaining the necessary approvals and certifications for deploying drones.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform the steps for identifying warehouse areas for security surveillance</li> <li>• Identify the sensitive areas requiring security surveillance.</li> <li>• Make arrangements for adequate space availability of safe drone operations in designated areas.</li> <li>• Analyze the fly areas for any obstructions or safety hazards, that may impact the drone operations.</li> <li>• Demonstrate the important steps to be followed for obtaining the required approvals and certifications for deploying drones</li> <li>• Record the approvals obtained for deploying drones in the warehouse for security surveillance</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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	



## Module 10: Warehouse security surveillance using drones

Mapped to LSC/N0415, v1.0

### Terminal Outcomes:

- Demonstrate the steps to be followed for performing warehouse security surveillance using drones

<b>Duration: 15:00</b>	<b>Duration: 15:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe the various steps to be followed for security surveillance in warehouse.</li> <li>• Define activities to be monitored during surveillance by drones.</li> <li>• Explain inventory surveillance procedure.</li> <li>• Detail the procedure reporting discrepancies.</li> <li>• Explain the data retrieval steps from drone.</li> <li>• Describe the image, video processing methods.</li> <li>• Explain photogrammetry and image geotagging.</li> <li>• Detail the post analysis actions to be taken after surveillance.</li> <li>• Define security incident management in the warehouse.</li> <li>• Detail the steps for maintaining security surveillance archives</li> <li>• Define data security guidelines in warehouse</li> </ul>	<ul style="list-style-type: none"> <li>• Perform security surveillance in the identified areas as per the SOP</li> <li>• Demonstrate the important steps to be followed for effective security surveillance in the warehouse</li> <li>• Identify security concerns during security surveillance and report to the concerned authority</li> <li>• Demonstrate the process of using drones for security incident management in the warehouse</li> <li>• Maintain archives of the security surveillance data as per the organizational policy</li> <li>• Follow the data security 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>	
Personal Protective Equipment (PPEs), Drone, WMS (learning version).	

## Module 11: 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

<b>Duration: 30:00</b>	<b>Duration: 30:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Discuss the Employability Skills required for jobs in various industries</li> <li>• List different learning and employability related GOI and private portals and their usage</li> <li>• 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</li> <li>• Discuss importance of relevant 21st century skills.</li> <li>• Describe the benefits of continuous learning.</li> <li>• Explain the importance of active listening for effective communication</li> <li>• Discuss the significance of working collaboratively with others in a team</li> <li>• Discuss the significance of escalating sexual harassment issues as per POSH act.</li> <li>• List the common components of salary and compute income, expenditure, taxes, investments etc.</li> <li>• Discuss the legal rights, laws, and aids</li> <li>• Describe the role of digital technology in today's life</li> <li>• Discuss the significance of displaying responsible online behaviour while browsing, using various social media platforms, e-mails, etc., safely and securely</li> <li>• Explain the types of entrepreneurship and enterprises</li> </ul>	<ul style="list-style-type: none"> <li>• Practice different environmentally sustainable practices.</li> <li>• 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.</li> <li>• Demonstrate to use basic English sentences for everyday conversation in different contexts, in person and over the telephone</li> <li>• Read and interpret text written in basic English</li> <li>• Write a short note/paragraph / letter/e - mail using basic English</li> <li>• Create a career development plan with well-defined short- and long-term goals</li> <li>• Communicate effectively using verbal and nonverbal communication etiquette.</li> <li>• Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD</li> <li>• Outline the importance of selecting the right financial institution, product, and service</li> <li>• Demonstrate how to carry out offline and online financial transactions, safely and securely</li> <li>• Operate digital devices and use the associated applications and features, safely and securely</li> </ul>

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|--|---|
| <ul style="list-style-type: none"> <li>• Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan</li> <li>• Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement</li> <li>• Detail the significance of analyzing different types and needs of customers</li> <li>• Explain the significance of identifying customer needs and responding to them in a professional manner.</li> <li>• Discuss the significance of maintaining hygiene and dressing appropriately</li> <li>• Explain the significance of maintaining hygiene and confidence during an interview</li> <li>• List the steps for searching and registering for apprenticeship opportunities</li> </ul> | <ul style="list-style-type: none"> <li>• Create sample word documents, excel sheets and presentations using basic features</li> <li>• Utilize virtual collaboration tools to work effectively</li> <li>• Devise a sample business plan, for the selected business opportunity</li> <li>• Create a professional Curriculum Vitae (CV)</li> <li>• Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively</li> <li>• Perform a mock interview</li> </ul> |
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**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 , WMS (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 <sup>th</sup> Pass		3	Drones	1	Drones	

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Drone operator – warehouse ” mapped to QP: “LSC/Q0402, v1.0”. 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”. Minimum accepted score is 80%

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
12 <sup>th</sup> Pass	NA	2	Drones	1		

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role: “Drone operator – warehouse ” mapped to QP: “LSC/Q0402, v1.0”. Minimum accepted score is 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, 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>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of the training.</b>
<b>Terminal Outcome</b>	Terminal outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of a module.</b> 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