Model Curriculum

QP Name: Supply Chain Sustainability Specialist

QP Code: LSC/Q2901

QP Version: 1.0

NSQF Level: 6

Model Curriculum Version: 1.0

Table of Contents

Training Parameters

Sector	Logistics
Sub-Sector	Supply Chain
Occupation	Sustainability
Country	India
NSQF Level	6
Aligned to NCO/ISCO/ISIC Code	NC0-2015/1324
Minimum Educational Qualification and Experience	Post Graduate (Completed 2-year PG program (Supply chain/ Environmental studies) with 1 Year of experience in supply chain OR Completed 3-year UG degree (Supply chain/ Environmental studies) with 2 Years of experience in supply chain OR Completed 2-year Diploma after 12th grade with 3 Years of experience in supply chain OR Previous relevant Qualification of NSQF Level (5) with 3 Years of experience in supply chain
Pre-Requisite License or Training	NA
Minimum Job Entry Age	23
Last Reviewed On	15/03/2024
Next Review Date	15/03/2027
NSQC Approval Date	15/03/2024
QP Version	1.0
Model Curriculum Creation Date	01/02/2024
Model Curriculum Valid Up to Date	15/03/2027
Model Curriculum Version	1.0
Minimum Duration of the Course	600
Maximum Duration of the Course	600

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:

- Describe the basic functions of Supply Chain Management
- Explain UN Sustainable Development Goals (SDGs)
- Discuss the environmental Impacts of Logistics.
- Detail the process of data collection and its sources.
- Perform various analyses based on the data collected.
- Detail the steps involved in planning sustainable solutions.
- Perform various steps involved in developing Sustainable practices.
- Perform the steps involved in implementing Sustainable Freight Transport.
- Analyse and optimise last-mile deliveries and reverse logistics with customer coordination
- Explain various Sustainability Solutions that can be implemented in the warehouse.
- Perform the steps involved in implementing sustainable packing.
- Execute various methods involved in implementing sustainable solutions in warehouse.
- Perform the steps involved in implementing sustainable solutions.
- Build a monitoring system for calculating the impact of each sustainability factor and practice.
- Maintain personal health and hygiene.
- Practise basic first aid methods.
- Explain 5s at workplace and code of ethics.

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
Bridge Module	**20**	**10**			**30**
Module 1: Introduction to Supply Chain Sustainability Specialist	20	10			30
LSC/N2901 - Analyse the opportunities V1.0 NSQF Level 6	**20**	**60**	**10**		**90**
Module 2: Sustainability Analysis	20	60	10		90
LSC/N2902 - Develop Sustainable Practices as per UN SDGs (Sustainable Development Goals) V1.0 NSQF Level 6	**20**	**60**	**10**		**90**
Module 3: Developing sustainable practices	20	60	10		90
LSC/N2903 - Implement Sustainability in Transportation as per SDG 13 & 11 V1.0 NSQF Level 6	**20**	**60**	**10**		**90**

Module 4: Sustainable Transportation	20	60	10		90
LSC/N2904 - Implement Sustainability in Warehouse as per SDG 7 & 11 **V1.0** **NSQF Level 6**	**20**	**60**	**10**		**90**
Module 5: Sustainability in Warehouse	20	60	10		90
LSC/N2905 - Implement sustainable practices as per SDGs and Measure results **V1.0** **NSQF Level 6**	**20**	**60**	**10**		**90**
Module 6: Implementing sustainable practices and **m**easuring results	20	60	10		90
LSC/N9911 - Follow health, safety, security procedures and maintain integrity, ethics at workplace **V1.0** **NSQF Level 6**	**05**	**15**	**10**		**30**
Module 7: Compliance with health, safety, integrity and ethics at workplace	05	15	10		30
Employability Skills **DGT/VSQ/N0103**	**30**	**60**			**90**
Total Duration	**155**	**385**	**60**		**600**

Module Details

Module 1: Introduction to Supply Chain Sustainability Specialist
Mapped to Bridge Module

Terminal Outcomes:

- Describe the basic functions of Supply Chain Management
- Explain UN Sustainable Development Goals (SDGs)
- Discuss the environmental Impacts of Logistics.

Duration: 20:00	Duration: 10:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain the components of supply chain and logistics sector - Detail the various sub-sectors in Logistics and the opportunities in them - Explain UN Sustainable Development Goals (SDGs) - Discuss the different facets of sustainability and how sustainability permeates the Logistics. - Detail your job role as supply chain Sustainability Specialist and its interface with other job roles	- Identify various activities in supply chain operations - Illustrate through examples the sources of GHG emission in Logistics. - Discuss the environmental Impacts of Logistics. - Provide an overview on Renewable Energy. - Speak about the Significance of CO2 emissions and its impact on Global warming.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version), videos on carbon footprints created by logistics, Print out of UN Sustainable Development Goals (SDGs)	

Module 2: Sustainability Analysis
Mapped to LSC/N2901, v1.0

Terminal Outcomes:

- Detail the process of data collection and its sources.
- Perform various analyses based on the data collected.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the impact of data collection and analysis for developing sustainable practices. - List down the sources of data collection. - Explain the steps involved in data collection. - Detail the subsidies and benefits offered by the Government and different organisations for investments in sustainability/ greening factors. E.g. setting up Solar energy plants. - Explain cost-benefit analysis.	- Differentiate the indicators of conventional management practices that lead to unutilised or waste of resources. - Perform materiality analysis of the products/ services acquired and used frequently. - Identify processes where material utilisation can be optimised. - Perform various analyses based on the data collected.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version), scanners, system tools	

Module 3: Developing Sustainable Practices
Mapped to LSC/N2902, v1.0

Terminal Outcomes:

- Detail the steps involved in planning sustainable solutions.
- Perform various steps involved in developing Sustainable practices.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the steps involved in planning sustainable solutions. - List sustainable business practices followed that can be found on sustainability indices. - Explain the methods for developing Sustainable practices. - Describe SOP and how to create one.	- Perform the steps involved in planning sustainable solutions. - Create a ground plan to reduce/negate emissions/carbon footprints currently generated by the company. - Propose methods of lean manufacturing - Perform cost-benefit analysis for the new investments containing factors like long-term benefits, capex, opex expenditures etc. - Perform various steps involved in developing Sustainable practices. - Ensure that an SOP is created for all the set processes.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version), scanners, system tools, sample videos on sustainable products.	

Module 4: Sustainable Transportation
Mapped to LSC/N2903, v1.0

Terminal Outcomes:

- Perform the steps involved in implementing Sustainable Freight Transport.
- Analyse and optimise last-mile deliveries and reverse logistics with customer coordination

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Brief about UN SDG on Sustainable Freight Transport. - Explain the process of implementing Sustainable Freight Transport. - Describe ethical sourcing and it's impact on sustainability. - Discuss the Environmental impact created by different modes of freight transport.	- Perform the steps involved in implementing Sustainable Transportation. - List down the alternative solutions in transportation that can improve sustainability. - Ensure that the drivers and end users follow the fuel efficiency practices. - Analyse and optimise last-mile deliveries and reverse logistics with customer coordination.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version), Videos on eco-friendly road transport options like EV, LNG, CNG, GH2 etc, Print out of UN SDG on Sustainable Freight Transport	

Module 5: Sustainability in Warehouse
Mapped to LSC/N2904, v1.0

Terminal Outcomes:

- Explain various Sustainability Solutions that can be implemented in the warehouse.
- Perform the steps involved in implementing sustainable packing.
- Execute various methods involved in implementing sustainable solutions in warehouse.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain Sustainable packing in detail. - Describe the methods for optimum utilization of packing materials. - List down various sustainable packing materials and their advantages. - Elaborate RRR - Reduce, reuse, recycle. - Discuss how automation is a Sustainability Solution for the warehouse. - Explain various Sustainability Solutions that can be implemented in the warehouse.	- Calculate the packing waste created during the entire process from loading to delivery to the seller/ end user. - Perform the steps involved in implementing sustainable packing. - Execute various methods involved in implementing sustainable solutions in warehouse. - Ensure health & safety and material handling procedures are properly followed.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version), sample videos on sustainable packing.	

Module 6: Implementing sustainable practices and measuring results
Mapped to LSC/N2905, v1.0

Terminal Outcomes:

- Perform the steps involved in implementing sustainable solutions.
- Build a monitoring system for calculating the impact of each sustainability factor and practice.

Duration: 20:00	Duration: 60:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Describe the process of implementing sustainable practices. - Explain the procedure involved in building sustainability indicators. - Detail about corporate social responsibility. - Elaborate guidelines and standards of measuring sustainability in India and Internationally. - Explain the methods of measuring results.	- Perform the steps involved in successfully implementing sustainable solutions. - Execute the methods to build indicators for the sustainable solutions implemented. - Build a monitoring system for calculating the impact of each sustainability factor and practice. - Maintain reports and publish as and when required for carbon auditing.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version).	

Module 7: Compliance with health, safety, integrity and ethics at workplace
Mapped to LSC/N9911, v1.0

Terminal Outcomes:

- Maintain personal health and hygiene.
- Practise basic first aid methods.
- Explain 5s at workplace and code of ethics.

Duration: 05:00	Duration: 15:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Detail the safety regulations and procedures w.r.t fire hazards, biohazards, etc. - Explain various PPE utilized in logistics and their uses. - Describe data safety regulations and clear worktable policy. - Explain the importance of taking care of personal health and hygiene. - Detail the standard procedures to be followed during emergency situations. - Explain 5s at workplace and code of ethics.	- Follow health, safety and security measures during all activities. - Wear all safety equipment including protective gear, helmets etc., in relevant bay areas. - Recognize unsafe conditions and safety practices at the workplace and report it to concerned authorities. - Comply with data safety regulations of the organization and follow clear worktable policy. - Maintain personal health and hygiene. - Practise basic first aid methods. - Follow procedures to handle emergency situations. - Protect data and information related to business or commercial decisions. Prevent company and customer information leakage. - Refrain from indulging in corrupt practices and consult senior management when in an ethical dilemma. - Follow organization procedures with respect to documentation.
Classroom Aids	
Charts, Models, Video presentation, Flip Chart, Whiteboard/Smart Board, Marker, Board eraser	
Tools, Equipment and Other Requirements	
Computers with web camera, MS Office, WMS (learning version), TMS (learning version), PPE, system tools, LLMS (learning version), First Aid Kit and Equipment used in Medical Emergencies, PPE	

Module 8: Employability Skills
Mapped to DGT/VSQ/N0103, 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**: **60:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Outline the importance of Employability Skills for the current job market and future of work - 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 relevant 21st century skills required for employment - Highlight the importance of practicing 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 - Explain the importance of communication etiquette including active listening for effective communication - Discuss the significance of escalating sexual harassment issues as per POSH act - Discuss various financial institutions, products, and services - Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), tax deductions - Discuss the legal rights, laws, and aids - Describe the role of digital technology in day-to-day life and the workplace	- Research and prepare a note on different industries, trends, required skills and the available opportunities - Demonstrate how to practice different environmentally sustainable practices - Create a pathway for adopting a continuous learning mindset for personal and professional development. - Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone - Write a short note/paragraph / letter/e - mail using correct basic English - Create a career development plan - Identify well-defined short- and long-term goals - Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette - Write a brief note/paragraph on a familiar topic - Role play a situation on how to work collaboratively with others in a team - Demonstrate how to behave, communicate, and conduct appropriately with all genders and PwD - Demonstrate how to conduct offline and online financial transactions, safely and securely and check passbook/statement - Calculate income and expenditure for budgeting - Demonstrate how to operate digital devices and use the associated applications and features, safely and securely - Demonstrate how to connect devices securely to internet using different means

- Discuss the significance of displaying responsible online behaviour while using various social media platforms
- 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
- Discuss various tools used to collect customer feedback
- Discuss the significance of maintaining hygiene and dressing appropriately
- Discuss the significance of maintaining hygiene and dressing appropriately for an interview
- List the steps for searching and registering for apprenticeship opportunities

- Follow the dos and don'ts of cyber security to protect against cyber crimes
- Create an e-mail id and follow e- mail etiquette to exchange e -mails
- Show how to create documents, spreadsheets and presentations using appropriate applications
- Utilize virtual collaboration tools to work effectively
- Create a sample business plan, for the selected business opportunity
- Classify different types of customers
- Demonstrate how to identify customer needs and respond to them in a professional manner
- Draft a professional Curriculum Vitae (CV)
- Use various offline and online job search sources to find and apply for jobs
- Role play 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

Annexure

Trainer Requirements

Trainer Prerequisites					
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Any degree	Supply Chain	2	Supply Chain			

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Supply Chain Sustainability Specialist" mapped to QP: "LSC/Q2901, 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*	
Any degree	Supply Chain	2	Supply Chain			

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Supply Chain Sustainability Specialist" mapped to QP: "LSC/Q2901, 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". Minimum accepted score is 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 the 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
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
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).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
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