



# Model Curriculum

**QP Name: Automotive Sustainability Engineer**

**QP Code: ASC/Q8316**

**QP Version: 1.0**

**NSQF Level: 6**

**Model Curriculum Version: 1.0**

Automotive Skills Development Council | E-113, Gr Floor, Okhla Industrial Area, Phase – III,  
New Delhi – 110020

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## Training Parameters

<b>Sector</b>	Automotive
<b>Sub-Sector</b>	Research & Development
<b>Occupation</b>	Automotive Product Development
<b>Country</b>	India
<b>NSQF Level</b>	6
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/3122.6502
<b>Minimum Educational Qualification and Experience</b>	3 years Diploma (Mechanical/Automobile/ Electrical / Electronics) after class 10th from recognized regulatory body with 3 years of relevant experience OR B.E./B.Tech in the relevant field with 1 Year of relevant experience, OR M.E./M.Tech in the relevant field OR Certificate-NSQF (Automotive Prototype Manufacturing Lead Technician/ Electric Vehicle Product Design Engineer Level 5) with 3 Years of relevant experience
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	22 years
<b>Last Reviewed On</b>	05/01/2023
<b>Next Review Date</b>	05/01/2026
<b>NSQC Approval Date</b>	05/01/2023
<b>QP Version</b>	1.0
<b>Model Curriculum Creation Date</b>	05/01/2023
<b>Model Curriculum Valid Up to Date</b>	05/01/2026
<b>Model Curriculum Version</b>	1.0

<b>Minimum Duration of the Course</b>	630 Hours
<b>Maximum Duration of the Course</b>	630 Hours

## 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.

- Review existing Organizational Processes, Product Development Cycle & current market trends suitable
- Planning of Sustainable majors to improve current processes to meet organizational targets
- Ensure implementation of action plan & reporting progress to managements
- Maintain sustainability score for the organization to the level & strive to improve further
- Implement safety practices.
- Use resources optimally to ensure less wastage and maximum conservation.

### 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>					
Module 1: Introduction to the role of an Automotive Sustainability Engineer	5:00	0:00			5:00
<b>ASC/N9810: Manage work and resources (Manufacturing)</b> NOS Version No. – 1.0 NSQF Level – 5	<b>20:00</b>	<b>35:00</b>			<b>55:00</b>
Module 2: Manage work and resources according to safety and conservation standards	20:00	35:00			55:00
<b>ASC/N8348– Review existing Organizational Processes, Product Development Cycle &amp; current market trends suitable</b> NOS Version No. –1.0 NSQF Level - 6	<b>29:00</b>	<b>46:00</b>	<b>45:00</b>		<b>120:00</b>
Module 3: Review existing Organizational Processes, Product Development Cycle & current market trends suitable	29:00	46:00	45:00		120:00

<b>ASC/ N8349 – Planning of Sustainable majors to improve current processes to meet organizational targets</b>	<b>20:00</b>	<b>55:00</b>	<b>45:00</b>		<b>120:00</b>
<b>NOS Version No. –1.0 NSQF Level – 6</b>					
Module 4: Planning of Sustainable majors to improve current processes to meet organizational targets	20:00	55:00	45:00		120:00
<b>ASC/ N8350– Ensure implementation of action plan &amp; reporting progress to managements</b> <b>NOS Version No. –1.0 NSQF Level – 6</b>	<b>20:00</b>	<b>55:00</b>	<b>45:00</b>		<b>120:00</b>
Module 5: Ensure implementation of action plan & reporting progress to managements	20:00	55:00	45:00		120:00
<b>ASC/ N8351 – Maintain sustainability score for the organization to the level &amp; strive to improve further</b> <b>NOS Version No. –1.0 NSQF Level – 6</b>	<b>25:00</b>	<b>50:00</b>	<b>45:00</b>		<b>120:00</b>
Module 6: Maintain sustainability score for the organization to the level & strive to improve further	25:00	50:00	:00		120:00
<b>DGT/VSQ/N0103- Employability Skills (90 hours)</b> <b>NOS Version No. – 1.0 NSQF Level – 6</b>	<b>36:00</b>	<b>54:00</b>			<b>90:00</b>
Module 7: Introduction to Employability Skills	1:00	2:00			3:00
Module 8: Constitutional values - Citizenship	0.5:00	1:00			1.5:00
Module 9: Becoming a Professional in the 21st Century	2:00	3:00			5:00
Module 10: Basic English Skills	4:00	6:00			10:00
Module 11: Career Development & Goal Setting	1.5:00	2.5:00			4:00
Module 12: Communication Skills	4:00	6:00			10:00

Module 13: Diversity & Inclusion	1:00	1.5:00			2.5:00
Module 14: Financial and Legal Literacy	4:00	6:00			10:00
Module 15: Essential Digital Skills	8:00	12:00			20:00
Module 16: Entrepreneurship	3:00	4:00			7:00
Module 17: Customer Service	4:00	5:00			9:00
Module 18: Getting ready for apprenticeship & Jobs	3:00	5:00			8:00
<b>Total Duration</b>	<b>150:00</b>	<b>300:00</b>	<b>180:00</b>		<b>630:00</b>

# Module Details

## Module 1: Introduction to the role of an Automotive Sustainability Engineer

### Bridge module

#### Terminal Outcomes:

- Discuss the role and responsibilities of an Automotive Sustainability Engineer.

<b>Duration:</b> <05:00>	<b>Duration:</b> <00:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• List the role and responsibilities of an Automotive Sustainability Engineer.</li> <li>• Discuss the job opportunities for an Automotive Sustainability Engineer in the automobile industry.</li> <li>• Explain about Indian automobile manufacturing market.</li> <li>• List various automobile Original Equipment Manufacturers (OEMs) and different products/ models manufactured by them.</li> <li>• Discuss dealership standards and procedures followed in the company.</li> </ul>	
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	



## Module 2 Manage work and resources according to safety and conservation standards

### Mapped to ASC/N9810, v1.0

#### Terminal Outcomes:

- Employ appropriate ways to maintain safe and secure working environment
- Apply material and energy conservation practices at the workplace.

Duration: <20:00>	Duration: <35:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Discuss organisational procedures for health, safety and security and individual role and responsibilities related to the same.</li> <li>• List the potential workplace related risks, threats and hazards, their causes and preventions.</li> <li>• List personal protective equipment like safety gloves, glasses, shoes and mask used at the workplace.</li> <li>• List various types of fire extinguisher.</li> <li>• Identify various safety boards/ signs placed on the shop floor.</li> <li>• Explain 5S standards, procedures and policies followed at workplace.</li> <li>• Discuss organisational procedures to deal with emergencies and accidents at the workplace and importance of following them.</li> <li>• State the importance of conducting safety drills or training sessions.</li> <li>• Explain the process of filling daily check sheet for reporting to the concerned authorities about improvements done and risks identified.</li> <li>• Discuss how and when to report about potential hazards identified in the workplace and limits of responsibility for dealing with them.</li> <li>• Outline the importance of keeping workplace, equipment, restrooms etc. clean and sanitised.</li> <li>• Explain the importance of following hygiene and sanitation regulations developed by organisation at the workplace.</li> <li>• Discuss the importance of maintaining the availability of running water, hand wash and alcohol-based sanitizers at the</li> </ul>	<ul style="list-style-type: none"> <li>• Apply appropriate ways to implement safety practices to ensure safety of people at the workplace.</li> <li>• Display the correct way of wearing and disposing PPE.</li> <li>• Demonstrate the use of fire extinguisher.</li> <li>• Demonstrate how to provide first aid procedure in case of emergencies.</li> <li>• Demonstrate how to evacuate the workplace in case of an emergency.</li> <li>• Employ various techniques for checking malfunctions in the machines with the support of maintenance team and as per Standard Operating Procedures (SOP).</li> <li>• Demonstrate to arrange tools/ equipment/ fasteners/ spare parts into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions.</li> <li>• Apply appropriate ways to organise safety drills or training sessions for others on the identified risks and safety practices.</li> <li>• Prepare a report about the health, safety and security breaches.</li> <li>• Apply appropriate ways to check that workplace, equipment, restrooms etc. are cleaned and sanitised.</li> <li>• Role play a situation to brief the team about the hygiene and sanitation regulations developed by organisation.</li> <li>• Demonstrate the correct way of washing hands using soap and water and alcoholbased hand rubs.</li> <li>• Apply appropriate methods to support the employees to cope with stress, anxiety etc.</li> <li>• Demonstrate proper waste collection and disposal mechanism depending upon types of waste.</li> </ul>

<p>workplace.</p> <ul style="list-style-type: none"> <li>• Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol based hand sanitizers or soap.</li> <li>• Recall ways of reporting advanced hygiene and sanitation issues to the concerned authorities.</li> <li>• Elucidate various stress and anxiety management techniques.</li> <li>• Discuss the significance of greening.</li> <li>• Classify different categories of waste for the purpose of segregation.</li> <li>• Differentiate between recyclable and nonrecyclable waste.</li> <li>• Discuss various methods of waste collection and disposal.</li> <li>• List the various materials used at the workplace.</li> <li>• Explain organisational recommended norms for storage of tools, equipment and material.</li> <li>• Discuss the importance of efficient utilisation of material and water.</li> <li>• Explain basics of electricity and prevalent energy efficient devices.</li> <li>• Explain the processes to optimize usage of material and energy/electricity.</li> <li>• Enlist common practices for conserving electricity at workplace.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform the steps involved in storage of tools, equipment and material after completion of work.</li> <li>• Employ appropriate ways to resolve malfunctioning (fumes/ sparks/ emission/ vibration/ noise) and lapse in maintenance of equipment as per requirements.</li> <li>• Perform the steps to prepare a sample material and energy audit reports.</li> <li>• Employ practices for efficient utilization of material and energy/electricity.</li> </ul>
<p><b>Classroom Aids:</b></p>	
<p>Whiteboard, marker pen, projector</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<ul style="list-style-type: none"> <li>• Housekeeping material: Cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel, fire extinguisher</li> <li>• Safety gears: Safety shoes, ear plug, goggles, gloves, helmet, first-aid kit</li> </ul>	

## Module 3 Review existing Organizational Processes, Product Development Cycle & current market trends suitable

*Mapped to ASC/N8348, v1.0*

### Terminal Outcomes:

- Assessing organisational processes
- Assessing product development cycle for existing product range

<b>Duration:</b> <29:00>	<b>Duration:</b> <46:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe range of standard templates and tools available and how to use them</li> <li>• Illustrate process layouts, Drawings &amp; other technical details</li> <li>• Discuss energy consumptions &amp; usages, electronics &amp; networking protocols</li> <li>• Describe energy controlling &amp; monitoring systems, its maintenance schedules &amp; losses</li> <li>• Discuss updated internal and external regulations</li> <li>• Discuss impacts of organisational processes &amp; products on the environment and human health</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate organisation processes considering operational requirements and working parameters, Vision, Mission statement and policies</li> <li>• Interpret the processes by obtaining information from layouts &amp; discussion with the teams involved in various departments</li> <li>• Decide on the core and auxiliary support process as per specifications &amp; drawings, mapping processes flows as per existing conditions</li> <li>• Identify gaps in the organisation processes and possible improvements options without affecting existing productivities</li> <li>• Identify and Selection of required hardware &amp; software changes for improvements with rough budgeting situation</li> <li>• Prepare the outline of the development process and its requirements for both material and resources</li> <li>• Prepare a product development cycle layout where to apply improvements and to justify its cost</li> <li>• Review similar product development cycles for applying the most suitable one</li> <li>• Review similar organisation market trends to benchmark</li> <li>• Analyse &amp; prepare achievable sustainability target in line with organisational &amp; global target</li> <li>• Discuss &amp; get approval from management to proceed for accepting targets</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

Diagnostic tools, testing tools, simulation tools, software testing tools, hand tools, measuring tools, measuring instruments, gauges

## Module 4 Planning of Sustainable majors to improve current processes to meet organizational targets

*Mapped to ASC/ N8349, v1.0*

### Terminal Outcomes:

- Define the strategies for sustainability goals implementation
- Development of action plan, steps, timeline & costing
- Make & Present impact assessment study, expected outcomes & budget approval for implementation

Duration: <20:00>	Duration: <55:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Product portfolio of organization</li> <li>• Responsibility of Leadership &amp; role of top management team</li> <li>• Planning of sustainability in automotive designs</li> <li>• Design feasibility and viability study, validation procedures</li> <li>• Integrating sustainability in Vision, Mission and organisation policies</li> <li>• Creating business model or revamping business model</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the gaps in existing Organisational Process where improvements are feasible</li> <li>• Identify most cost effective and efficient solutions available for improvements</li> <li>• Conduct workshops with teams involved and stakeholders to define boundaries for implementation</li> <li>• Define implementation various strategies for achieving sustainability goals before finalising</li> <li>• Development of action plan, steps, timeline &amp; costing</li> <li>• Prepare the various action plans of execution of the project for ease of implementation</li> <li>• Prepare the cost list to execute the project with selected hardware, materials, and resources</li> <li>• Prepare the timeline and resource requirements for the selected models of execution</li> <li>• Prepare and present impact assessment study based on study of current organisation processes, products, and proposed changes to achieve sustainability goals</li> <li>• Define clear outcomes from each improvements proposed to achieve sustainability goals</li> <li>• Prepare budget needed with outcomes expected by proposed improvements &amp; get management approval to proceed for implementation</li> <li>• Identify all departments involved based on process and product study selected for improvements</li> <li>• Define core team for implementation</li> </ul>

	<p>across organisation as per action plan with clear roles and responsibilities, authorities</p> <ul style="list-style-type: none"> <li>• Define steering committee with management representation to monitor, support &amp; control core team activities during implementation plan</li> <li>• Define reporting structure &amp; escalation mechanism to avoid miscommunication and on time delivery schedules for milestones</li> </ul>
<p><b>Classroom Aids:</b></p>	
<p>Whiteboard, marker pen, projector</p>	
<p><b>Tools, Equipment and Other Requirements</b></p>	
<p>testing tools, simulation tools, software testing tools, hand tools, measuring tools, measuring instruments, gauges</p>	

## Module 5 Ensure implementation of action plan & reporting progress to managements

### Mapped to ASC/ N8350, v1.0

#### Terminal Outcomes:

- Testing of majors implemented to the date & review its outcome
- Monitoring goals achieved till date
- Review meeting with Task force & prepare minutes

<b>Duration:</b> <20:00>	<b>Duration:</b> <55:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Scope of automotive supply chain &amp; its targets to achieve sustainability goals</li> <li>• Management of Sustainable Production, usage of parts &amp; parts supply chain inwards &amp; outwards</li> <li>• Knowledge about Automotive processes and materials</li> <li>• Knowledge about various vehicle testing methodologies and its expected results</li> <li>• Creating Ecosystem for Change Management, Stakeholder Mobilisation, Impact</li> <li>• Assessment &amp; Outcome measurement</li> <li>• Integrated Reporting to all stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct testing of majors implemented till the date</li> <li>• Record outcomes and improvements due to implemented actions</li> <li>• Review results with respect to planned goals</li> <li>• Ensure actions in line with agreed implementation plan</li> <li>• Regularly monitor action status as per milestone plan with respect of cost &amp; timeline targets</li> <li>• Record gaps with defined plan vs actual</li> <li>• Conduct review meeting with core team</li> <li>• Discuss and review action points status as per cost and timeline</li> <li>• Record minutes of meeting in alignment with all team members</li> <li>• Generate the cold data to test the connectivity, latency, packet size, and bandwidth,</li> <li>• Test the data processing tools with cold data and different sample sets to test its alarm and warnings, process output, processing time, command, and control latency. Generate the report on these.</li> <li>• Attend and present core team meeting report to Management Team</li> <li>• Circulate action point status &amp; meeting decisions to all stakeholders</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	
Diagnostic tools, testing tools, simulation tools, software testing tools, hand tools, measuring tools, measuring instruments, gauges	

## Module 6 Maintain sustainability score for the organization to the level & strive to improve further

*Mapped to ASC/ N8351, v1.0*

### Terminal Outcomes:

- Monitor sustainability score on regular basis
- Create and maintain dashboard with all important information to the team
- Monitor market trends and participate in forums to align with industry practices

<b>Duration:</b> <25:00>	<b>Duration:</b> <50:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Basics of electricity and prevalent energy efficient devices</li> <li>• Common practices of conserving electricity</li> <li>• Common sources and ways to minimize pollution</li> <li>• Categorisation of waste into dry, wet, recyclable, non-recyclable, and items of single-use plastics</li> <li>• Waste management techniques</li> <li>• The updated internal and external regulations</li> <li>• Various forums involved in Sustainability targets preparation and monitoring</li> <li>• Integrating sustainability with organisation goals, actions, and products</li> <li>• How to arrange brainstorming workshops &amp; generating feasible ideas</li> <li>• Motivating team and networking with internal and external stakeholders</li> <li>• Latest Automotive trends &amp; development strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Review sustainability score for all measures on regular basis</li> <li>• Review sustainability score with organisational goals</li> <li>• Highlight difference to goal if any to all stakeholders</li> <li>• Create sustainability dashboard at prominent locations</li> <li>• Update sustainability score card with respect to organisational goals regularly on the dashboard</li> <li>• Promote awareness among teams about sustainability goals</li> <li>• Regularly monitor market trends for best sustainability practices across the industry</li> <li>• Attend/ Participate in Sustainability forums to align internal goals with global trends</li> <li>• Conduct workshops on regular basis to generate ideas on sustainability</li> <li>• Motivate team to follow sustainability practices among all work activities</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	
Diagnostic tools, testing tools, simulation tools, software testing tools, hand tools, measuring tools, measuring instruments, gauges	

## Module: 7 Introduction to Employability Skills

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Discuss about Employability Skills in meeting the job requirements

<b>Duration:</b> <1:00>	<b>Duration:</b> <2:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Outline the importance of Employability Skills for the current job market and future of work</li> </ul>	<ul style="list-style-type: none"> <li>• List different learning and employability related GOI and private portals and their usage</li> <li>• Research and prepare a note on different industries, trends, required skills and the available opportunities</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	



## Module 8 Constitutional values - Citizenship

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Discuss about constitutional values to be followed to become a responsible citizen

<b>Duration:</b> <0.5:00>	<b>Duration:</b> <1:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.</li> </ul>	<ul style="list-style-type: none"> <li>• Practice different environmentally sustainable practices</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 9: Becoming a Professional in the 21st Century

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Demonstrate professional skills required in 21<sup>st</sup> century

<b>Duration:</b> <2:00>	<b>Duration:</b> <3:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Discuss 21st century skills required for employment</li> </ul>	<ul style="list-style-type: none"> <li>• Highlight the importance of practicing 21st century skills like Self-Awareness, Behavior 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>• Create a pathway for adopting a continuous learning mindset for personal and professional development</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 10 Basic English Skills

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Practice basic English speaking.

<b>Duration:</b> <4:00>	<b>Duration:</b> <6:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Describe basic communication skills</li> <li>Discuss ways to read and interpret text written in basic English</li> </ul>	<ul style="list-style-type: none"> <li>Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone</li> <li>Read and understand text written in basic English</li> <li>Write a short note/paragraph / letter/e mail using correct basic English</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 11 Career Development & Goal Setting

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Demonstrate Career Development & Goal Setting skills.

<b>Duration:</b> <1.5:00>	<b>Duration:</b> <2.5:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Identify well-defined short- and long-term goals</li> </ul>	<ul style="list-style-type: none"> <li>• Create a career development plan</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 12 Communication Skills

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Practice basic communication skills.

<b>Duration:</b> <4:00>	<b>Duration:</b> <6:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the importance of communication etiquette including active listening for effective communication</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette</li> <li>• Write a brief note/paragraph on a familiar topic</li> <li>• Role play a situation on how to work collaboratively with others in a team</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 13 Diversity & Inclusion

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Describe PwD and gender sensitisation.

<b>Duration:</b> <1:00>	<b>Duration:</b> <1.5:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Discuss the significance of reporting sexual harassment issues in time</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 14 Financial and Legal Literacy

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Describe ways of managing expenses, income, and savings.

<b>Duration:</b> <4:00>	<b>Duration:</b> <6:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Discuss various financial institutions, products, and services</li> <li>Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), tax deductions</li> <li>Discuss the legal rights, laws, and aids</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate how to conduct offline and online financial transactions, safely and securely and check passbook/statement</li> <li>Calculate income and expenditure for budgeting</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module 15 Essential Digital Skills

### Mapped to DGT/VSQ/N0103

#### Terminal Outcomes:

- Demonstrate procedure of operating digital devices and associated applications safely.

<b>Duration: &lt;8:00&gt;</b>	<b>Duration: &lt;12:00&gt;</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe the role of digital technology in day-to-day life and the workplace</li> <li>• Discuss the significance of displaying responsible online behavior while using various social media platforms</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to operate digital devices and use the associated applications and features, safely and securely</li> <li>• Demonstrate how to connect devices securely to internet using different means</li> <li>• Follow the dos and don'ts of cyber security to protect against cyber crimes</li> <li>• Create an e-mail id and follow e- mail etiquette to exchange e -mails</li> <li>• Show how to create documents, spreadsheets and presentations using appropriate applications</li> <li>• Utilize virtual collaboration tools to work effectively</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	



## Module: 16 Entrepreneurship

### Mapped to DGT/VSQ/N0103

**Terminal Outcomes:**

- Describe opportunities as an entrepreneur.

<b>Duration: &lt;3:00&gt;</b>	<b>Duration: &lt;4:00&gt;</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Explain the types of entrepreneurship and enterprises</li> <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> </ul>	<ul style="list-style-type: none"> <li>Create a sample business plan, for the selected business opportunity</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module: 17 Customer Service

### *Mapped to DGT/VSQ/N0103*

- Describe ways of maintaining customer.

<b>Duration:</b> <4:00>	<b>Duration:</b> <5:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Classify different types of customers</li> <li>Discuss various tools used to collect customer feedback</li> <li>Discuss the significance of maintaining hygiene and dressing appropriately</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate how to identify customer needs and respond to them in a professional manner</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

## Module: 18 Getting ready for apprenticeship & Jobs

### Mapped to DGT/VSQ/N0103

- Describe ways of preparing for apprenticeship & Jobs appropriately.

<b>Duration:</b> <3:00>	<b>Duration:</b> <5:00>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Discuss the significance of maintaining hygiene and dressing appropriately for an interview</li> <li>List the steps for searching and registering for apprenticeship opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Draft a professional Curriculum Vitae (CV)</li> <li>Use various offline and online job search sources to find and apply for jobs</li> <li>Role play a mock interview</li> </ul>
<b>Classroom Aids:</b>	
Whiteboard, marker pen, projector	
<b>Tools, Equipment and Other Requirements</b>	

# Annexure

## Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B.E/B.Tech	Mechanical/Automobile/ Electrical/ Electronics	4	Mechanical/ Automobile/ Electronics/ Instrumentation	1	Mechanical/ Automobile/ Electronics/ Instrumentation	NA
B.E/B.Tech	Mechanical/Automobile/ Electrical/ Electronics	5	Mechanical/ Automobile/ Electronics/ Instrumentation	0	Mechanical/ Automobile/ Electronics/ Instrumentation	NA
Diploma	Mechanical/Automobile/ Electrical/ Electronics	3	Mechanical/ Automobile/ Electronics	1	Mechanical/ Automobile/ Electronics	NA
Diploma	Mechanical/Automobile/ Electrical/ Electronics	4	Mechanical/ Automobile/ Electronics	0	Mechanical/ Automobile/ Electronics	NA
M.E/M.Tech	Mechanical/Automobile/ Electrical/ Electronics	2	Mechanical/Automobile/ Electrical/ Electronics	1	Mechanical/Automobile/ Electrical/ Electronics	NA
M.E/M.Tech	Mechanical/Automobile/ Electrical/ Electronics	3	Mechanical/Automobile/ Electrical/ Electronics	0	Mechanical/Automobile/ Electrical/ Electronics	NA

Trainer Certification	
Domain Certification	Platform Certification
“Automotive Sustainability Engineer, ASC/Q8309, version 1.0”. Minimum accepted score is 80%.	“Trainer, MEP/Q2601 v1.0” Minimum accepted score is 80%.

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B.E./B.Tech	Mechanical/Automobile/ Electrical/ Electronics	5	Mechanical/ Automobile/ Electronics/ Instrumentation	1	Mechanical/ Automobile/ Electronics/ Instrumentation	NA
B.E./B.Tech	Mechanical/Automobile/ Electrical/ Electronics	6	Mechanical/ Automobile/ Electronics/ Instrumentation	0	Mechanical/ Automobile/ Electronics/ Instrumentation	NA
Diploma	Mechanical/Automobile/ Electrical/ Electronics	4	Mechanical/ Automobile/ Electronics	1	Mechanical/ Automobile/ Electronics	NA
Diploma	Mechanical/Automobile/ Electrical/ Electronics	5	Mechanical/ Automobile/ Electronics	0	Mechanical/ Automobile/ Electronics	NA
M.E./M.Tech	Mechanical/Automobile/ Electrical/ Electronics	3	Mechanical/Automobile/ Electrical/ Electronics	1	Mechanical/Automobile/ Electrical/ Electronics	NA
M.E./M.Tech	Mechanical/Automobile/ Electrical/ Electronics	4	Mechanical/Automobile/ Electrical/ Electronics	0	Mechanical/Automobile/ Electrical/ Electronics	NA

Assessor Certification	
Domain Certification	Platform Certification
“Automotive Sustainability Engineer, ASC/Q8309, version 1.0”. Minimum accepted score is 80%.	“Assessor; MEP/Q2701 v1.0” Minimum accepted score is 80%.

## Assessment Strategy

### 1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

### 2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

### 3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME verified by the other subject Matter Experts
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

### 4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

### 5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

### 6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

## References

## Glossary

Term	Description
<b>Declarative Knowledge</b>	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.
<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>Procedural Knowledge</b>	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.
<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

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
SOP	Standard Operating Procedure
WI	Work Instructions
PPE	Personal Protective equipment