Model Curriculum

QP Name: Web Developer

QP Code: SSC/Q0503

Version: 4.0

NSQF Level: 4.0

Model Curriculum Version: 4.0

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Training Parameters

Sector	IT-ITeS
Sub-Sector	IT Services
Occupation	Application Deployment
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 2513.0101
Minimum Educational Qualification and Experience	12th Grade* Pass OR 10th Grade Pass with 3-year of experience in relevant field** OR Previous relevant Qualification of NSQF Level 3 with 3 years of experience in relevant field** *With Computer Knowledge **Relevant field: Experience in Programming languages (Such as HTML, CSS, Javascript, etc.) The relevant experience would include work, internship and apprenticeship after completion of relevant educational qualifications.
Pre-Requisite License or Training	Training programs in customer orientation, dealing with difficult customers, Telephone etiquette, etc.
Minimum Job Entry Age	15 years
Last Reviewed On	18-02-2025
Next Review Date	18-02-2028
NSQC Approval Date	18-02-2025
QP Version	4.0
Model Curriculum Creation Date	18-02-2025
Model Curriculum Valid Up to Date	18-02-2028
Model Curriculum Version	4.0

Minimum Duration of the Course	360 Hours
Maximum Duration of the Course	360 Hours

Program Overview

This section summarises 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 to:

- Explain the key concepts of Software Requirements Analysis and Design Fundamentals, including their role in developing effective software solutions.
- Discuss the principles of UI/UX design and their integration with Full-Stack Development for creating user-centric applications.
- Describe the advanced techniques for deployment, optimization, and AI integration in modern software systems.
- Explain the fundamentals of media content creation and graphic design, including key tools and techniques used in modern design workflows.
- Elucidate the principles of responsive web design and accessibility, and their importance in creating inclusive digital experiences.
- Describe the processes for dynamic content integration and review, ensuring quality and engagement in multimedia projects.
- Discuss the Employability and Entrepreneurship Skills.

Compulsory Modules

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

NOS and Module Details	Theory Duration (Hours)	Practical Duration (Hours)	On-the-Job Training Duration (Mandatory) (Hours)	On-the-Job Training Duration (Recommended) (Hours)	Total Duration (Hours)
SSC/N0501: Contribute to the design of software products and applications NOS Version No.: 3.0 NSQF Level: 4.0	**30:00**	**60:00**	**30:00**	**00:00**	**120:00**
Module 1: Introduction to the IT-ITeS Industry and the Job Role of a Web Developer	05:00	00:00	00:00	00:00	05:00
Module 2: Software Requirements Analysis and Design Fundamentals	05:00	20:00	10:00	00:00	35:00

Module 3: UI/UX Principles and Full-Stack Development	10:00	20:00	10:00	00:00	40:00
Module 4: Advanced Deployment, Optimization, and AI Integration	10:00	20:00	10:00	00:00	40:00
SSC/N0503: Develop media content and graphic designs for software products and applications **NOS Version No.: 3.0** **NSQF Level: 4.0**	**60:00**	**120:00**	**30:00**	**00:00**	**210:00**
Module 5: Media Content and Graphic Design Fundamentals	20:00	30:00	10:00	00:00	60:00
Module 6: Responsive Web Design and Accessibility	20:00	45:00	10:00	00:00	75:00
Module 7: Dynamic Content Integration and Review Processes	20:00	45:00	10:00	00:00	75:00
DGT/VSQ/N0101: Employability Skills (30 Hours) **NOS Version No.: 1.0** **NSQF Level: 2.0**	**30:00**	**00:00**	**00:00**	**00:00**	**30:00**
Module 8: Employability Skills (30 Hours)	30:00	00:00	00:00	00:00	30:00
Total Duration	**120:00**	**180:00**	**60:00**	**000:00**	**360:00**

Module Details

Module 1: Introduction to the IT-ITeS Industry and the Job Role of a Web Developer

Mapped to SSC/N0501, v4.0

Terminal Outcomes:

- Explain the importance of IT-ITeS Sector.
- Discuss the roles and responsibilities of a Web Developer.

Duration (in hours): 05:00	**Duration (in hours): 00:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Define the IT-ITeS industry. • Describe the various sub-sectors within the IT-ITeS industry. • Discuss the scope of employment in the IT-ITeS industry. • Describe the roles and responsibilities of a Web Developer responsible for designing, developing, and maintaining web-based applications. • Discuss the basics of collaborating with application or functional developers to integrate web components into more extensive solutions or work independently on standalone projects. • Discuss the future trends and career growth opportunities for a Web Developer.	-
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
-	

Module 2: Software Requirements Analysis and Design Fundamentals

Mapped to SSC/N0501, v4.0

Terminal Outcomes:

- Explain how to design and document software structures that meet business and software requirements, ensuring alignment with project objectives.
- Describe how to validate and collaborate with stakeholders to develop effective software design structures that adhere to industry standards and best practices.

Duration (in hours): 05:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of Business Requirements Specification (BRS), User Requirements Specification (URS), and Software Requirements Specification (SRS) in software design. • Describe the role of High-Level Design (HLD) concepts in structuring software functionality. • Discuss the process of collaborating with stakeholders to ensure alignment with business and software requirements. • Elucidate the principles of designing basic programming structures to meet specified requirements. • Explain the significance of conducting design reviews to validate programming structures against industry standards. • Describe the methods for identifying, resolving, and recording design defects for continuous improvement. • Enlist the standard templates and tools (e.g., UML diagrams, wireframes) used for documenting software designs. • Discuss the importance of compliance with organizational policies and procedures during the software design process. • Explain the role of feedback loops in improving design quality and user satisfaction.	• Demonstrate how to interpret and apply information from BRS, URS, and SRS documents to the design process. • Show how to engage with project stakeholders to clarify and finalize business and software requirements. • Demonstrate the creation of basic programming structures that align with BRS, URS, SRS, and HLD guidelines. • Show how to organize and conduct design review meetings to validate software designs with experts and senior developers. • Demonstrate methods for analyzing design inputs to identify and resolve defects effectively. • Show how to document software designs using standard templates and tools, including the creation of UML diagrams and wireframes. • Demonstrate adherence to organizational compliance requirements when documenting and designing software structures. • Show how to record feedback during the design review process and implement necessary improvements.
Classroom Aids	

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films
Tools, Equipment and Other Requirements
Project Management Tools (e.g. Trello, Microsoft Visio, draw.io, etc.)

Module 3: UI/UX Principles and Full-Stack Development

Mapped to SSC/N0501, v4.0

Terminal Outcomes:

- Explain how to develop responsive, user-centric UI/UX designs and integrate them with front-end and back-end development technologies to create functional web applications.
- Discuss how to ensure compliance with accessibility standards and optimize designs across different platforms to deliver seamless user experiences.

Duration (in hours): 10:00	Duration (in hours): 20:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the fundamentals of user-centric design principles and their application in creating intuitive interfaces. • Describe the process of developing wireframes, prototypes, and mockups to meet user expectations. • Elucidate the significance of accessibility standards, including WCAG, in ensuring inclusive web designs. • Discuss the differences between responsive and adaptive design and their role in improving user experience. • Explain the importance of cross-browser compatibility testing in maintaining consistent application performance. • Describe mobile-first design principles and the advantages of using frameworks like Bootstrap for responsiveness. • Enlist the key technologies for front-end development, such as HTML5, CSS3, JavaScript, and modern frameworks like React and Angular. • Explain the role of databases in back-end development and the advantages of using relational (MySQL) and non-relational (MongoDB) databases. • Describe the basics of server-side programming with languages such as Node.js, PHP, or Python and their integration with databases.	• Demonstrate the creation of user-focused wireframes, prototypes, and mockups that align with project requirements. • Show how to ensure UI/UX designs comply with WCAG accessibility standards for inclusivity. • Demonstrate cross-browser testing to verify functionality and design consistency across various platforms and browsers. • Show how to apply mobile-first and responsive design practices using frameworks like Bootstrap. • Demonstrate front-end development by creating web pages using HTML5, CSS3, and JavaScript. • Show how to implement front-end features with frameworks such as React or Angular. • Demonstrate the integration of databases (e.g., MySQL, MongoDB) into back-end applications to manage data efficiently. • Show how to develop back-end functionality using server-side programming languages like Node.js, PHP, or Python. • Demonstrate the process of integrating front-end and back-end components to create a fully functional full-stack application.
Classroom Aids	

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films
Tools, Equipment and Other Requirements
UI/UX design and prototyping tools (e.g. Visual Studio Code, React.js, GitHub, etc.)

Module 4: Advanced Deployment, Optimization, and AI Integration

Mapped to SSC/N0501, v4.0

Terminal Outcomes:

- Describe how to implement version control and CI/CD pipelines for efficient software development and deployment, ensuring smooth project workflow.
- Elucidate how to leverage Generative AI tools to enhance development, automate repetitive tasks, and improve software performance and testing outcomes.

Duration (in hours): 10:00	**Duration (in hours): 20:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the process of using version control tools such as Git to manage code changes and facilitate team collaboration throughout the development cycle. • Discuss the importance and implementation of Continuous Integration/Continuous Deployment (CI/CD) pipelines in ensuring smooth software deployment and efficient workflow automation. • Describe techniques for optimizing web performance, including lazy loading, code splitting, and resource management, to improve user experience and loading times. • Elucidate the role of testing and debugging in software development and explain how to utilize tools like Chrome DevTools and frameworks like Jest and Mocha to ensure reliable, high-quality code. • Describe the application of Generative AI tools like OpenAI, Google Bard, and Microsoft Copilot to automate software development tasks, such as ticket categorization and incident documentation.	• Demonstrate how to use Git for version control to manage and track code changes, collaborate with other developers, and resolve conflicts in a project. • Show how to implement CI/CD pipelines using popular tools (e.g., Jenkins, GitLab) to automate the build, test, and deployment processes, ensuring smooth and rapid releases. • Demonstrate techniques to optimize web page performance, such as lazy loading of images and code splitting, to enhance the overall user experience and reduce loading times. • Show how to debug front-end issues using Chrome DevTools and optimize web performance by analyzing network activity, inspecting elements, and modifying CSS and JavaScript in real time. • Demonstrate how to create unit and integration tests using frameworks like Jest or Mocha, ensuring that individual units of code and system interactions function correctly. • Show how to leverage Generative AI tools for automating tasks like generating documentation, creating resolutions for incidents, and streamlining repetitive tasks to improve development efficiency and accuracy.
Classroom Aids	

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films
Tools, Equipment and Other Requirements
CI/CD Tools (e.g. Docker, Kubernetes, Google Lighthouse, Jenkins, etc.)

Module 5: Media Content and Graphic Design Fundamentals

Mapped to SSC/N0503, v4.0

Terminal Outcomes:

- Explain how to create media content and graphic designs based on business requirements, ensuring consistency with brand guidelines and user needs.
- Enlist methods to integrate reusable components and optimize media designs for efficiency and responsiveness, meeting project objectives.

Duration (in hours): 20:00	Duration (in hours): 30:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the process of converting Business Requirements Specification (BRS) and Software Requirements Specification (SRS) into effective media content and graphic designs. • Describe the importance of accessing and utilizing reusable components and media packages to streamline the design process. • Elucidate how reusable components contribute to creating dynamic and responsive media content and graphic designs. • Discuss methods to ensure alignment of media content and graphic designs with overall business objectives and design specifications. • Explain the role of stakeholder collaboration in gathering feedback and refining media content and graphic designs. • Describe the significance of maintaining design consistency with brand guidelines and user interface standards. • Enlist current trends and emerging technologies in media content creation and graphic design. • Explain how standard templates and tools are used for documenting media content and graphic designs. • Discuss the importance of staying within competency and authority levels when executing design work.	• Demonstrate how to convert BRS and SRS into media content and graphic designs using tools and resources. • Show how to access and utilize reusable components, media, and graphical packages from the organization's knowledge base. • Demonstrate the creation of dynamic and responsive media content using reusable design elements. • Show how to validate media content and graphic designs to ensure alignment with business objectives and design specifications. • Demonstrate effective collaboration with stakeholders to gather feedback and refine media content and graphic designs. • Show how to apply brand guidelines and user interface standards to maintain design consistency. • Demonstrate the use of standard templates and tools to document media content and graphic designs. • Show how to incorporate stakeholder feedback to improve the quality and effectiveness of media content and graphic designs. • Demonstrate the integration of emerging technologies and trends into media content creation processes.
Classroom Aids	

Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films
Tools, Equipment and Other Requirements
Designing Tools (e.g. Blender, Figma, etc.)

Module 6: Responsive Web Design and Accessibility

Mapped to SSC/N0503, v4.0

Terminal Outcomes:

- Discuss how to design responsive media content and graphics optimized for various screen sizes and devices, ensuring usability across platforms.
- Describe how to ensure media content and graphics meet accessibility standards (e.g., WCAG), promoting inclusivity for all users.

Duration (in hours): 20:00	**Duration (in hours): 45:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the principles of responsive web design and their importance in delivering optimal user experiences across various devices and screen sizes. • Elucidate mobile-first design principles and the use of frameworks like Bootstrap to create adaptable web designs. • Discuss the significance of web accessibility standards, such as WCAG, in ensuring inclusivity for users with disabilities. • Describe methods for optimizing media content and graphics for fluid layouts across platforms and devices. • Enlist key accessibility barriers in web and graphic designs and strategies to overcome them. • Explain the process of testing and evaluating designs for compliance with web accessibility standards. • Describe the importance of collaborating with accessibility experts to refine designs and achieve full inclusivity.	• Demonstrate how to design media content and graphics optimized for responsiveness across various screen sizes and devices. • Show how to apply mobile-first design principles using frameworks like Bootstrap to create responsive web designs. • Demonstrate the process of testing media content and graphic designs for compliance with WCAG accessibility standards. • Show how to collaborate with accessibility experts to identify and address potential barriers in designs. • Demonstrate adjustments to media content and graphics to ensure inclusivity for users with diverse needs. • Show how to create fluid layouts that maintain visual consistency and usability across platforms. • Demonstrate the use of tools and techniques to validate the accessibility and responsiveness of web and graphic designs.
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Designing Tools (e.g. Blender, Figma, etc.)	

Module 7: Dynamic Content Integration and Review Processes

Mapped to SSC/N0503, v4.0

Terminal Outcomes:

- Explain how to integrate dynamic content elements (e.g., interactive graphics, data-driven media) into software applications, enhancing user interaction.
- Discuss how to refine and document media content and graphic designs based on feedback and review processes, ensuring continuous improvement and alignment with project objectives.

Duration (in hours): 20:00	**Duration (in hours): 45:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the process of integrating dynamic content elements, such as interactive graphics or data-driven media, into software applications. • Describe the importance of assessing media content and graphic designs with superiors to measure quality and effectiveness. • Discuss how feedback can be incorporated into media content and graphic designs to ensure alignment with project objectives and specifications. • Elucidate the role of recording defects and corrective actions during the design process to enhance future design quality. • Explain how documenting insights and experiences from developing media content can improve the organization's knowledge base. • Describe how to present finalized media content and graphic designs to supervisors for approval, ensuring adherence to guidelines and standards. • Discuss the significance of complying with organizational policies, procedures, and guidelines in creating media content and graphic designs. • Enlist the common issues and defects in media content development and the methods to resolve them. • Explain the criteria for assessing the suitability of reusable components in media content and graphic design	• Demonstrate how to integrate dynamic content elements, such as interactive graphics or data-driven media, into web or software applications. • Show how to assess media content and graphic designs with superiors, gathering feedback for improvements. • Demonstrate how to modify media content and graphic designs based on feedback to meet project objectives and specifications. • Show how to record defects and document corrective actions taken during the design process for future improvements. • Demonstrate how to document insights gained from media content and graphic design development to update the organization's knowledge base. • Show how to present finalized media content and graphic designs to supervisors, ensuring they meet organizational standards. • Demonstrate how to ensure media content and graphic designs comply with organizational policies and procedures. • Show how to integrate dynamic content into web designs to enhance user engagement and interactivity. • Demonstrate the process of testing media content and graphic designs to ensure they deliver expected outcomes.

projects.	
Classroom Aids	
Training Kit - Facilitator's Guide, Participant's Handbook, Presentations and Software, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Designing Tools (e.g. Blender, Figma, etc.), Project Management Tools (e.g. Trello, Microsoft Visio, draw.io, etc.)	

Module 8: Employability Skills (30 Hours)

Mapped to DGT/VSQ/N0101, v1.0

Duration: 30:00 Hours

Key Learning Outcomes

After completing this programme, participants will be able to:

Introduction to Employability Skills Duration: 1 Hour

1. Discuss the importance of Employability Skills in meeting the job requirements

Constitutional values - Citizenship Duration: 1 Hour

2. Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen.

3. Show how to practice different environmentally sustainable practices

Becoming a Professional in the 21st Century Duration: 1 Hour

4. Discuss 21st-century skills.

5. Display a positive attitude, self-motivation, problem-solving, time management skills and continuous learning mindset in different situations.

Basic English Skills Duration: 2 Hours

6. Use appropriate basic English sentences/phrases while speaking

Communication Skills Duration: 4 Hours

7. Demonstrate how to communicate in a well-mannered way with others.

8. Demonstrate working with others in a team

Diversity & Inclusion Duration: 1 Hour

9. Show how to conduct oneself appropriately with all genders and PwD

10. Discuss the significance of reporting sexual harassment issues in time

Financial and Legal Literacy Duration: 4 Hours

11. Discuss the significance of using financial products and services safely and securely.

12. Explain the importance of managing expenses, income, and savings.

13. Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws

Essential Digital Skills Duration: 3 Hours

14. Show how to operate digital devices and use the associated applications and features, safely and securely

15. Discuss the significance of using the internet for browsing, and accessing social media platforms, safely and securely

Entrepreneurship Duration: 7 Hours

16. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges

Customer Service Duration: 4 Hours

17. Differentiate between types of customers

18. Explain the significance of identifying customer needs and addressing them

19. Discuss the significance of maintaining hygiene and dressing appropriately

Getting ready for Apprenticeship & Jobs Duration: 2 Hours

20. Create a biodata

21. Use various sources to search and apply for jobs

22. Discuss the significance of dressing up neatly and maintaining hygiene for an interview

23. Discuss how to search and register for apprenticeship opportunities

Module 9: On-the-Job Training

Mapped to Web Developer

Mandatory Duration (in hours): 60:00	Recommended Duration (in hours): 00:00
Location: On-Site	

Terminal Outcomes

- Demonstrate the process of collaborating with stakeholders to fully understand Business Requirements Specification (BRS), User Requirements Specification (URS), and Software Requirements Specification (SRS) for effective design contribution.
- Show how to design basic programming structures in line with BRS/URS, SRS, and High-Level Design (HLD), and resolve design defects for future improvements.
- Demonstrate how to apply UI/UX design principles in creating user-centric wireframes, prototypes, and mock-ups that meet user expectations and comply with accessibility standards.
- Show how to use version control tools like Git for managing code changes and facilitating collaboration across teams.
- Demonstrate the implementation of responsive and adaptive design techniques to ensure cross-browser compatibility and optimal mobile-first design using frameworks like Bootstrap.
- Show how to leverage Generative AI tools to automate repetitive tasks, improve issue resolution, and generate documentation to streamline software development processes.
- Demonstrate how to convert business and software requirements into media content and graphic designs, ensuring alignment with the project objectives and business goals.
- Show how to integrate dynamic content like interactive graphics and data-driven media into software applications to improve user engagement.
- Demonstrate how to test media content and graphic designs for compliance with web accessibility standards (WCAG) to ensure usability for all users.
- Show how to test media content and graphics for responsiveness, ensuring they adapt fluidly across different screen sizes and devices.
- Demonstrate how to engage in the review and feedback process for media content and graphic designs, refining and improving the design based on stakeholder input.
- Show how to document defects, corrective actions, and insights gained from developing media content and graphic designs to inform future work and enhance the design process.

Annexure

Trainer Requirements

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	**Educational Qualification:** Graduate in any discipline. **Industry & Training Experience:** 2 years of industry experience in Programing languages (Such as HTML, CSS, JavaScript etc.) **Certification:** "Trainer" mapped to the Qualification Pack "MEP/Q2601" Minimum accepted score is 80% aggregate.
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	**Educational Qualification:** Graduate in any discipline. **Industry & Training Experience:** 4 years of industry experience in Programing languages (Such as HTML, CSS, JavaScript etc.) **Certification:**" Master Trainer" mapped to the Qualification Pack "MEP/Q2602" Minimum accepted score is 90% aggregate.
3.	**Tools and Equipment Required for Training**	☒Yes ☐No (*If "Yes", details to be provided in Annexure)*
4.	**In Case of Revised Qualification, Details of Any Upskilling Required for Trainer**	NA

Assessor Requirements

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	**Educational Qualification:** Graduate in any discipline. **Industry & Training Experience:** 2 years of industry experience in Programing languages (Such as HTML, CSS, JavaScript etc.) **Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2701" Minimum accepted score is 80% aggregate.
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines), (wherever applicable)*	**Educational Qualification:** Graduate in any discipline. **Industry & Training Experience:** 2 years of industry experience in Programing languages (Such as HTML, CSS, JavaScript etc.) **Certification:** "Assessor" mapped to the Qualification Pack "MEP/Q2701" Minimum accepted score is 80% aggregate.
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	**Educational Qualification:** Graduate in any discipline. **Industry & Training Experience:** 4 years of industry experience in Programing languages (Such as HTML, CSS, JavaScript etc.) **Certification:** "Lead Assessor" mapped to the Qualification Pack "MEP/Q2702" Minimum accepted score is 90% aggregate.
4.	**Assessment Mode** *(Specify the assessment mode)*	The assessment will consist of a blend of hands-on practical evaluations, viva-voce, and online proctored scenario-based multiple-choice questions ensuring a thorough evaluation of the individual's proficiency in learning outcomes, practical understanding, and real-world application of concepts.
5.	**Tools and Equipment Required for Assessment**	☒ Same as for training ☐ Yes ☐ No *(details to be provided in Annexure-if it is different for Assessment)*

Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

Training Providers (TP) or Training Centers (TC), including any other authorized partner of Ministry/ Department create batches / push batches on the SIDH portal. Assessment requests are submitted through the SIDH portal or via email or other media as authorized from time to time. For NON-SIDH schemes, assessment requests are received electronically or through respective State Skill Mission portals. TP/TC initiates the assessment request through the InSDMS portal and processes the payment (where applicable).

Batch Alignment & Confirmation:

Upon payment confirmation, batches are assigned to the Assessment Agency based on factors like:

- Assessment readiness
- Availability of certified assessors for the specific job role
- Assessment capping to an assessment agency as prescribed from time to time for an AB An email communication / prescribed mode communication is sent to TP/TC for confirmation of the assessment date, with IT-ITeS SSC in the loop. Once confirmation is received, the Assessment Agency designates a TOA-certified assessor to conduct or facilitate the assessment.
- Batches are only formed when the Qualification is active.

Candidate Verification & Assessment Execution:

Candidate details are verified and documented at the beginning of the assessment by a certified assessor. A Quality Assurance (QA) mechanism is enforced, requiring an undertaking from the TC. Regular feedback is collected from TP/TC to ensure continuous improvement.

Evidence Collection & Validation:

Proctors or assessors capture date/time-stamped and geo-tagged photographs of the assessment location during the process. Attendance is also ensured offline. A PC-wise result analysis is conducted to refine assessment standards.

Monitoring & Compliance:

Batch monitoring follows established protocols, ensuring adherence to assessment guidelines. Sample based surprise visits are conducted at TC locations during both training and assessments to verify compliance. This structured approach ensures transparency, quality control, and validation throughout the assessment process.

Testing Environment:

- Check the Assessment location, date and time
- 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.

Assessment Quality Assurance levels/Framework:

IT-ITeS SSC nasscom is responsible for the development and periodic review of the question bank developed for a specific job role. We publish an openly accessible sample /model question paper on our website for all stakeholders. The quality of the Question Bank created by the assessment designer is validated by a Subject matter experts on the following parameters:

- Appropriateness of the Question Bank in terms of facts, data and information.
- Checks for grammar, spellings, scripting and formatting.
- The information provided should be specific enough to remove any ambiguity in answers/solutions to the question.
- Relevance – Assessing the topic well w.r.t. the job role.
- Check if the difficulty level of each question is as per the matrix.
- Check if the images used in the question are clear and relevant.
- All variables, symbols and abbreviations used must be declared.
- The correct answer option should be unique, and the options should not be overlapping

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 it 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
NCVET	National Council for Vocational Education and Training
QP	Qualification Pack
MC	Model Curriculum
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
NCO	National Classification of Occupations
ES	Employability Skills
OJT	On the Job Training
NASSCOM	National Association of Software and Service Companies
IT-ITeS	Information Technology and Information Technology Enabled Services
Gen AI	Generative Artificial Intelligence
BRS	Business Requirements Specification
URS	User Requirements Specification
SRS	Software Requirements Specification
HLD	High-Level Design
WCAG	Web Content Accessibility Guidelines
HTML	Hypertext Mark-up Language
CSS	Cascading Style Sheets
CI/CD	Continuous Integration/Continuous Deployment
UML	Unified Modelling Language