Model Curriculum

QP Name: Cluster In-Charge

QP Code: TEL/Q4101

QP Version: 3.0

NSQF Level: 5

Model Curriculum Version: 2.0

Telecom Sector Skill Council
Estel House, 3rd Floor, Plot No:- 126, Sector 44
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Training Parameters

Sector	Telecom
Sub-Sector	Passive Infrastructure
Occupation	Operation and Maintenance
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3113.0901
Minimum Educational Qualification & Experience	Completed 2nd year of 3-year/ 4-years UG **OR** Pursuing 2nd year of 3-year/ 4-years UG and continuing education **OR** Completed 2nd year of diploma (after 12th) **OR** Pursuing 2nd year of 2-year diploma after 12th with No Experience required **OR** 12th pass with 2 years of any combination of NTC/NAC/CITS or equivalent. With No Experience required **OR** Previous relevant Qualification of NSQF Level 4 with 3-year relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	21 Years
Last Reviewed On	27/01/2022
Next Review Date	27/01/2025
NSQC Approval Date	27/01/2022
QP Version	3.0
Model Curriculum Creation Date	27/12/2022
Model Curriculum Valid Up to Date	27/01/2025
Model Curriculum Version	2.0
Minimum Duration of the Course	540 Hours, 0 Minutes
Maximum Duration of the Course	540 Hours, 0 Minutes

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.

- Explain the role, responsibilities and scope of work of Cluster In-Charge.
- Maintain site hygiene and up-time.
- Manage site issues and expenditures.
- Plan work effectively while implementing safety practices and optimizing the use of resources.
- Develop interpersonal skills and sensitization towards all genders and persons with disability.

Compulsory Modules

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

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	**20:00**	**10.00**	**00:00**	**00:00**	**30:00**
Module 1: Role and Responsibilities of a Cluster In-Charge *Bridge Module*	20:00	10.00	00:00	00:00	30:00
TEL/N4133 – Maintain Cluster Telecom Site NOS Version No. 1.0 NSQF Level 5	**60:00**	**80:00**	**40:00**	**00:00**	**180:00**
Module 2: Maintain site hygiene and up-time	60:00	80:00	40:00	00:00	180:00
TEL/N4136 – Manage Issues and Operational Expenditures (OPEX) NOS Version No. 1.0 NSQF Level 5	**50:00**	**80:00**	**80:00**	**00:00**	**210:00**
Module 3: Manage Issues, Maintenance and Operational Expenditures	50:00	80:00	80:00	00:00	210:00
TEL/N9103 – Implement effective interaction at workplace NOS Version No.1.0 NSQF Level 5	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 4: Communication and Interpersonal skills	10:00	20:00	00:00	00:00	30:00

TEL/N9104 – Manage work, Resource and safety at workplace **NOS Version No.1.0NSQF Level 5**	**10:00**	**20:00**	**00:00**	**00:00**	**30:00**
Module 5: Working effectivelyand optimizing resources for a safe workplace	10:00	20:00	00:00	00:00	30:00
DGT/VSQ/N0102 Employability Skills (60 Hours)	60:00	00:00	00:00	00:00	60:00
Total Duration	**210:00**	**210:00**	**120:00**	**120:00**	**540:00**

Module Details

Module 1: Role and Responsibilities of a Cluster In-Charge
Bridge Module

Terminal Outcomes:

- Describe the role and responsibilities to be performed by a Cluster In-Charge.
- Explain the scope of work for a Cluster In-Charge.

Duration: *20:00*	**Duration**: *10:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Outline the course objectives and outcomes. - Explain the pre-requisites for the course - Discuss the size and scope of the Telecom industry and Passive Infrastructure sub-sector. - Examine opportunities for a Cluster In-Charge in the Passive Infrastructure sub-sector and the Telecom industry. - Explain the responsibilities of a Cluster In-Charge. - Describe the process workflow at a cluster site and the role of Cluster In-Charge in the process. - List the various daily, weekly, monthly operations/activities that take place at the site under supervision of a Cluster In-Charge. - Discuss the organisational policies on workplace ethics, managing sites, quality standards, personnel management and Public Relations (PR).	- Chart the process flow of a cluster site - Evaluate case studies outlining the role, responsibilities, and challenges for a Cluster In-Charge. - Analyse the requirements for the course and prepare an action/learning plan for updating skills as per the pre-requisites of the course.
Classroom Aids:	
Whiteboard and Markers, Chart paper and sketch pens, LCD Projector and Laptop for presentations	
Tools, Equipment and Other Requirements	
PCs/Laptops, Internet with Wi-Fi (Min. 2 Mbps Dedicated)	

Module 2: Maintain Cluster Telecom Site
Mapped to TEL/N4133, v1.0

Terminal Outcomes:

- Demonstrate how to maintain site hygiene.
- Perform steps to manage site up-time.

Duration: *60:00*	**Duration**: *80:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the Operating Company (OPCOs) policies/standards and guidelines for maintenance/repair of sites. • List the various electrical/electronic components, tools and equipment used in site maintenance as per their purpose. • Describe the different types of networks cables and their features. • Explain the functioning of various site equipment (such as AC, DG, PIU, SMPS/IPMS and battery bank) and the standard operating procedures (SOPs) for their use, repair and maintenance. • Define the parameters to analyse the quality of site conditions, including correct temperature and other settings inside the shelter of a site. • Identify the recommended layout of assets at the site and the methods used to maintain the site's hygiene and cleanliness. • Describe the procedure to examine the condition of the tower(s) including civil, electrical and other infrastructure. • Explain how to calculate power/fuel consumption patterns of the equipment and usage/wastage of energy at site. • Discuss various measures to minimize pilferage and other malpractices. • Describe common faults and their root-causes to arrive at appropriate solutions and rectification procedures. • Discuss methods to conduct compliance audit of technicians/vendors/spares • Outline the steps for creating a preventive maintenance (PM) plan for the site and Related methods/protocols for inspections. • List the steps for creating an effective site visit/beat plan. • Explain the safety measures w.r.t. equipment and components during fault diagnosis.	• Demonstrate the use of tools and equipment required for site maintenance as per SOPs. • Create a sample preventive maintenance plan (PM), including the asset layout, of the site. • Prepare sample site visit plan/s and schedules for inspection. • Employ appropriate techniques to perform audit of site conditions (including civil, electrical and other infrastructure) as well as technicians, vendors and spares. • Perform repair/maintenance of AC, DG, PIU/SMPS /IPMS and battery bank as per the work requirements given by the manager. • Apply basic techniques to check quality and quantity of spares, engine oil, voltage, loose connections, cable heating etc. • Perform root cause analysis for recurring faults and their rectification procedures. • Analyse power/fuel consumption and usage/wastage of energy at sites using appropriate method. • Demonstrate use of applications such as MS Excel, CRM etc. for keeping record of processes carried out for site maintenance.

• Discuss the reasons for site down-time and best practices to maintain site up-time so as to ensure zero breakdown in the cluster.	

Classroom Aids:

Whiteboard and Markers, LCD Projector and Laptop for presentations, Chart paper and sketch pens

Tools, Equipment and Other Requirements

Network cables, tools and equipment, AC, DG, PIU, SMPS and battery bank, Sample of PM formats and checklists, Laptop with software such as MS Office and CRM

Module 3: Manage Issues and Operational Expenditures (OPEX)
Mapped to TEL/N4136, v1.0

Terminal Outcomes:
- Resolve site issues
- Perform corrective maintenance
- Manage OPEX

Duration: *50:00*	Duration: *80:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Discuss various training-need analysis methods used for evaluating the performance of technicians. - Explain the importance of effectively managing technicians, vendors and landlords for smooth workflow. - Discuss the process of liaising with the electricity board (EB) for various issues. - Describe the steps to perform corrective maintenance of site equipment. - Outline the procedure for performing alarm integration with network operating centre (NOC). - Discuss the ways to ensure 100% site automation, optimum system parameters and performance. - Describe the process to maintain log cards and their compliance to policies - Discuss the process of escalating faults/issues at site to concerned departments - Analyse ways to ensure timely closure of issues. - Explain the methods to Optimise Operating Expenditure (OPEX) for the cluster by avoiding site-wise penalty and reducing rental/personnel/maintenance costs.	- Design a plan to conduct training-need analysis and corresponding schedule for the performance review of technicians. - Employ appropriate techniques to create service request number (SRN) for assets. - Chart the process flow to conduct the lock-site management process. - Perform corrective maintenance of equipment as per SOP. - Demonstrate alarm integration with network operating centre (NOC). - Employ appropriate techniques to troubleshoot common site faults. - Demonstrate how to perform repair/replacement of equipment at site. - Employ proper ways for maintaining logs for compliance. - Apply basic techniques for filling required checklists/formats w.r.t. corrective maintenance/repair of equipment.

Classroom Aids:

Whiteboard and Markers, Chart paper and sketch pens. LCD Projector and Laptop for presentations

Tools, Equipment and Other Requirements

Network cables, tools and equipment, AC, DG, PIU, SMPS and battery bank, Sample of PM formats and checklists. Laptop with software such as MS Office and CRM

Module 4: Communication and Interpersonal skills
Mapped to TEL/N9103 v1.0

Terminal Outcomes:

- Communicate effectively and develop interpersonal skills
- Develop sensitivity towards differently abled people.

Duration: *10:00*	**Duration**: *20:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Identify roles and responsibilities and understand organisation's policies. - List organisational guidelines for dress code, time schedules, language and other soft skill aspects. - List the different methods of communication. - Explain the importance of effective communication and interpersonal skills. - Analyse the common reasons for interpersonal conflicts and ways of managing them effectively. - Identify types of information needed by colleagues and its importance. - Identify the need for implementing standards, guidelines and practices pertaining to gender sensitivity, including work ethics and workplace etiquettes. - Explain the work ethics, workplace etiquettes as well as standards and guidelines for all genders and PwD. - List health and safety requirements for persons with disability. - List the rights, duties and benefits available at workplace for person with disability. - Identify the process of recruiting people with disability for a specific job. - Analyse the specific ways to help persons with disability overcome the challenges.	- Demonstrate how to interact with superiors in terms of escalating problems, reporting work completion and receiving feedback. - Apply team building skills to assist colleagues in maximizing effectiveness and efficiency of carrying out tasks. - Demonstrate appropriate communication skills and etiquettes while interacting with others. - Resolve conflicts with colleagues and adhere to commitment. - Demonstrate ideal workplace ethics while interacting with colleagues with respect to sharing information, co-ordinating work and showing respect. - Follow organisation's policy for working with team members. - Illustrate importance of team goals over individual goals. - Use inclusive language irrespective of the gender/ disability of the person. - Demonstrate appropriate behaviour towards all genders and differently abled people.
Classroom Aids:	
White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector	
Tools, Equipment and Other Requirements	
Sample of escalation matrix, organisation structure.	

Module 5: Working effectively and optimizing resources for a safe workplace
Mapped to TEL/N9104 v1.0

Terminal Outcomes:

- Plan work effectively, implement safety practices and optimize use of resources

Duration: *10:00*	**Duration**: *20:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- List the importance of following the standard operating procedures of the company w.r.t. privacy, confidentiality and security. - List the key performance indicators for the new tasks. - Identify the opportunities for team building workshops and motivational trainings. - List and explain work requirements to be followed by the team. - Identify the issues with and handle them. - Discuss correct way to show emotions at workplace. - Describe the importance of timely completion of tasks. - Explain the importance of escalation matrix. - Explain the importance of providing and receiving feedback constructively. - Analyse ways to optimize usage of resources. - List the importance, cause and effect of greening of jobs. - Identify different types of hazards such as illness, accidents, fires etc. - List the causes of risks and potential hazards in a work area and ways to prevent them. - List the steps to report accident and health related issues as per SOP. - Explain the concept of waste management. - List the methods of waste disposal. - Identify the different categories of waste for the purpose of segregation. - Differentiate between recyclable and non-recyclable waste.	- Demonstrate techniques to save on cost and time. - Demonstrate routine cleaning of tools, equipment and machines to ensure team follows the same. - Use resources such as water judiciously. - Check for malfunctions in equipment and report as per SOP. - Report any breaches in safety and security to the concerned person. - Illustrate ways to keep work area clean such as mopping spills and leaks, cleaning grease stains etc. - Check for spills and leaks and plug the same. - Demonstrate segregation of types of hazardous waste. - Illustrate steps to minimise waste. - Illustrate proper waste disposal procedures and how to dispose-off hazardous waste. - Illustrate ways to find exact cause of a problem and validate the same in case done by a team member.

• List electronic waste disposal procedures.	

Classroom Aids:

White board/ black board marker / chalk, duster, computer or Laptop attached to LCD projector

Tools, Equipment and Other Requirements

Personal Protection Equipment: safety glasses, head protection, rubber gloves, safety footwear, warning signs and tapes, fire extinguisher and first aid kit

Module 6: On-the-Job Training
Mapped to Cluster In-Charge

Mandatory Duration: *120:00*	Recommended Duration: *100:00*
Location: On-Site	

Terminal Outcomes

1. Use of tools and equipment required for site maintenance.

2. Prepare a sample of preventive maintenance.

3. Plan for site visits as per plan for inspection.

4. Conduct audit of site conditions (including civil, electrical, and other infrastructure).

5. Carry out repair/maintenance of AC, DG, PIU/SMPS /IPMS and battery bank.

6. Verify the quality and quantity of spares, engine oil, voltage, loose connections, cable heating etc.

7. Conduct root cause analysis for recurring faults and their rectification procedures.

8. Assess power/fuel consumption and usage/wastage of energy at sites.

9. Use required applications such as MS Excel, CRM etc. for keeping records of processes carried out for site maintenance.

10. Plan to conduct training as per need analysis and corresponding schedule for the performance review of technicians.

11. Prepare service request number (SRN) for assets.

12. Conduct the lock-site management as per the defined process.

13. Carry out corrective maintenance of equipment as per SOP.

14. Perform alarm integration with network operating centre (NOC).

15. Troubleshoot common site faults.

16. Conduct repair/replacement of equipment at site.

17. Prepare required checklists/formats for corrective maintenance/repair of equipment.

Module 7: DGT/VSQ/N0102 Employability Skills (60 hours)
Mapped to Cluster In-Charge

Mandatory Duration: *60:00*

Location: On-Site

S.No.	Module Name	Key Learning Outcomes	Duration (hours)
1.	Introduction to Employability Skills	• Discuss the Employability Skills required for jobs in various industries. • List different learning and employability related GOI and private portals and their usage.	1.5
2.	Constitutional values - Citizenship	• 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. • Show how to practice different environmentally sustainable practices.	1.5
3.	Becoming a Professional in the 21st Century	• Discuss importance of relevant 21st century skills. • Exhibit 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. • Describe the benefits of continuous learning.	2.5
4.	Basic English Skills	• Show how to use basic English sentences for every day. conversation in different contexts, in person and over the telephone. • Read and interpret text written in basic English • Write a short note/paragraph / letter/e -mail using basic English.	10
5.	Career Development & Goal Setting	• Create a career development plan with well-defined short- and long-term goals.	2
6.	Communication Skills	• Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette. • Explain the importance of active listening for effective communication. • Discuss the significance of working collaboratively with others in a team.	5
7.	Diversity & Inclusion	• Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD. • Discuss the significance of escalating sexual harassment issues as per POSH act.	2.5
8.	Financial and Legal Literacy	• Outline the importance of selecting the right financial institution, product, and service. • Demonstrate how to carry out offline and online financial transactions, safely and securely. • List the common components of salary and compute income, expenditure, taxes, investments etc. • Discuss the legal rights, laws, and aids.	5
9.	Essential Digital	• Describe the role of digital technology in today's life.	10

	Skills	• Demonstrate how to operate digital devices and use the associated applications and features, safely and securely. • Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely. • Create sample word documents, excel sheets and presentations using basic features. • Utilize virtual collaboration tools to work effectively.	
10.	Entrepreneurship	• 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. • Create a sample business plan, for the selected business opportunity.	7
11	Customer Service	• Describe the significance of analyzing different types and needs of customers. • Explain the significance of identifying customer needs and responding to them in a professional manner. • Discuss the significance of maintaining hygiene and dressing appropriately.	5
12	Getting Ready for Apprenticeship & Jobs	• Create a professional Curriculum Vitae (CV). • Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively. • Discuss the significance of maintaining hygiene and confidence during an interview. • Perform a mock interview. • List the steps for searching and registering for apprenticeship opportunities.	8

LIST OF TOOLS & EQUIPMENT FOR EMPLOYABILITY SKILLS		
S No.	Name of the Equipment	Quantity
1.	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)	As required
2.	UPS	As required
3.	Scanner cum Printer	As required
4.	Computer Tables	As required
5.	Computer Chairs	As required
6.	LCD Projector	As required
7.	White Board 1200mm x 900mm	As required
Note: Above Tools &Equipment not required, if Computer LAB is available in the institute.		

Annexure

Trainer Requirements
(Cluster In-Charge)

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	Specialization	Years	Specialization	
B.E./B.Tech/BCA/B.Sc	Science/Electronics/Telecom/IT and other relevant fields	3	Tower Maintenance			NA

Trainer Certification	
Domain Certification	**Platform Certification**
Job Role: "Cluster In Charge Level 5" "TEL/Q4101" version "3.0", Minimum accepted score is 80%	Job Role: "Trainer **(VET and Skills)**", "MEP/Q2601 v2.0", Minimum accepted score is 80%

Assessor Requirements (Cluster In-Charge)

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
B.E./B.Tech/BCA/B.Sc	Electrical/ Mechanical/Electronics & Communication/Computer Science and other relevant domain	1	Tower Maintenance	0-1	Electrical/ Mechanical/Electronics & Communication/Computer Science	**NA**

Assessor Certification	
Domain Certification	Platform Certification
Job Role: "Cluster In Charge Level 5" "TEL/Q4101" version "3.0", Minimum accepted score is 80%	Job Role: "Assessor **(VET and Skills)**" "MEP/Q2701 v2.0", Minimum accepted score is 80%

Trainer Requirements (Employability Skills 60 hours)

Trainer Prerequisites					
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	*Specialization*	*Years*	*Specialization*	
Graduate/CITS	Any discipline			2	Teaching experience	Prospective ES trainer should:
Current ITI trainers	Employability Skills Training (3 days full-time course done between 2019-2022)					• have good communication skills • be well versed in English • have digital skills • have attention to detail • be adaptable • have willingness to learn
Certified current EEE trainers (155 hours)	from Management SSC (MEPSC)					
Certified Trainer	Qualification Pack: Trainer (MEP/Q0102)					

Trainer Certification	
Domain Certification	**Platform Certification**
Certified in 60-hour Employability NOS (2022), with a minimum score of 80% OR Certified in 120-, 90-hour Employability NOS (2022), with a minimum score of 80%	NA

Master Trainer Requirements (Employability Skills 60 hours)

Master Trainer Prerequisites					
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Graduate/CITS	Any discipline			3	Employability Skills curriculum training experience with an interest to train as well as orient other peer trainers	Prospective ES Master trainer should: • have good communication skills • be well versed in English • have basic digital skills • have attention to detail • be adaptable • have willingness to learn • be able to grasp concepts fast and is creative with teaching practices and likes sharing back their learning with others
Certified Master Trainer	Qualification Pack: Master Trainer (MEP/Q2602			3	EEE training of Management SSC (MEPSC) (155 hours)	

Master Trainer Certification	
Domain Certification	**Platform Certification**
Certified in 60-hour Employability NOS (2022), with a minimum score of **90%.** **OR** Certified in 120-, 90-hour Employability NOS (2022), with a minimum score of **90%**	NA

Assessment Strategy

1. Assessment System Overview:
    *   Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP oremail
    *   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
    *   Center 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 fromCloud Storage
    *   Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

Assessment Strategy (Employability Skills 60 hours)

The trainee will be tested for the acquired skill, knowledge and attitude through formative/summative assessment at the end of the course and as this NOS and MC is adopted across sectors and qualifications, the respective AB can conduct the assessments as per their requirements.

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
SOP	Standard Operating Procedures
CRM	Customer Relationship Management
AC	Air Conditioner
DG	Diesel Generator
PIU	Power Interface Unit
SMPS	Switch Mode Power Supply
BB	Battery Bank
IPMS	Integrated Power Management System
OPCO	Operating Company
PM	Preventive Maintenance
OPEX	Operating Expenditure
PPE	Personal Protective Equipment
RCA	Root Cause Analysis
PwD	Persons with Disabilities
EB	Electricity Board
RFS	Radio Frequency Services
NOC	Network Operating Centre
SRN	Service Request Number
ES	Employability Skills