



# Model Curriculum

**QP Name: Handheld Devices (Handset & Tablet) Technician**

**QP Code: TEL/Q2201**

**QP Version: 4.0**

**NSQF Level: 4**

**Model Curriculum Version: 1.0**

Telecom Sector Skill Council of India  
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## Training Parameters

Sector	Telecom
Sub-Sector	Handset
Occupation	Customer Service - Handset Segment
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7422.0203
Minimum Educational Qualification & Experience	<p>11th grade pass  <b>OR</b>            Completed 1st year of 3- year diploma (after 10th) and pursuing regular diploma  <b>OR</b>            10th grade pass and pursuing continuous schooling  <b>OR</b>            10th Grade Pass with 2-year relevant experience  <b>OR</b>            Previous relevant Qualification of NSQF Level 3 Hand Soldering Technician - Telecom Board with minimum education as 5th Grade pass with 2-year relevant experience</p>
Pre-Requisite License or Training	NA
Minimum Job Entry Age	17 Years
Last Reviewed On	30/12/2021
Next Review Date	30/12/2024
NSQC Approval Date	30/12/2021
QP Version	4.0
Model Curriculum Creation Date	30/12/2021
Model Curriculum Valid Up to Date	30/12/2024
Model Curriculum Version	1.0
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.

- Identify the role, responsibilities and scope of work of a Handset & Tablet Technician.
- Implement various techniques to repair and test Handsets and Tablets.
- Discuss how to plan work effectively, implement safety practices and optimize use of resources.
- Demonstrate how to communicate, develop interpersonal skills and become gender and Person with Disability (PwD) sensitive.

## 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>	<b>20:00</b>	<b>10:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>
Module 1: Role and Responsibilities of a Handheld Devices (Handset & Tablet) Technician	20:00	10:00	00:00	00:00	30:00
<b>TEL/N2213: Repair and test handsets</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>50:00</b>	<b>60:00</b>	<b>40:00</b>	<b>00:00</b>	<b>150:00</b>
Module 2: Repairing Handsets	50:00	60:00	40:00	00:00	150:00
<b>TEL/N2214: Repair and test tablets</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>30:00</b>	<b>50:00</b>	<b>40:00</b>	<b>00:00</b>	<b>120:00</b>
Module 3: Repairing Tablets	30:00	50:00	40:00	00:00	120:00
<b>ELE/N4631: Carry Out Chip level repair in Mobile Phone</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>30:00</b>	<b>50:00</b>	<b>40:00</b>	<b>00:00</b>	<b>120:00</b>
Module 4: Process of carrying out the chip-level repair of mobile phone	30:00	50:00	40:00	00:00	120:00

<b>TEL/N9101 – Organize Work and Resources as per Health and Safety Standards</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>10:00</b>	<b>20:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>
Module 5: Plan Work Effectively, Optimise Resources and Implement Safety Practices	10:00	20:00	00:00	00:00	30:00
<b>TEL/N9102 – Interact Effectively with Team Members and Customers</b> <b>NOS Version No. 1.0</b> <b>NSQF Level 4</b>	<b>10:00</b>	<b>20:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>
Module 6: Communication and interpersonal skills	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
<b>Total Duration</b>	<b>210:00</b>	<b>210:00</b>	<b>120:00</b>	<b>00:00</b>	<b>540:00</b>

# Module Details

## Module 1: Role and Responsibilities of a Handheld Devices (Handset & Tablet) Technician Bridge Module

### Terminal Outcomes:

- Identify the role and responsibilities of a handset and tablet technician.

<b>Duration:</b> 20:00	<b>Duration:</b> 10:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Describe the size and scope of the Telecom industry and its various sub-sectors.</li> <li>• Discuss the various opportunities for handset and tablet technician in the Telecom industry.</li> <li>• List the role and responsibilities of handset and tablet technician.</li> <li>• Analyse the organisational policies on incentives, delivery standards, personnel management and public relations (PR) pertinent to the job role.</li> <li>• Discuss the importance of seeking help from experts during any stage of main activity in order to avoid any escalation.</li> </ul>	<ul style="list-style-type: none"> <li>• Performing handset repair including hardware and software components.</li> <li>• Performing testing the handset for adequacy</li> <li>• post repair and maintaining inventory levels of the hardware components.</li> <li>• Determine components required based on fault diagnosis.</li> <li>• Explain complex technical issues to customers in a non-technical, simple to understand manner.</li> <li>• Provide repair and replacement estimates to customers.</li> </ul>
<b>Classroom Aids:</b>	
Laptop with software like MS Office and internet, white board, marker, projector	
<b>Tools, Equipment and Other Requirements</b>	
NA	

## Module 2: Repairing handsets

### Mapped to TEL/N2213 v1.0

#### Terminal Outcomes:

- Demonstrate how to diagnose and categorize faults in hardware or software of the handset.
- Employ proper techniques for preparing for handset repair.
- Perform the steps for repairing the handset and testing its functionality.
- Carry out various post-repair activities.

<b>Duration: 50:00</b>	<b>Duration: 60:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Identify the faulty handheld devices from the customer care executives or front-end executives.</li> <li>• Explain how to assist the supervisor in analysing the requirements, issues and functionality problems reported by the customer/front-end team.</li> <li>• Discuss the importance of following timelines and repair commitments as specified in the Service Level Agreement (SLA).</li> <li>• Explain how to plan and prioritize activities related to delivery timeline and issues under supervision.</li> <li>• Describe how to diagnose the fault and check if it is a hardware or software related issue.</li> <li>• Identify the root cause of the fault to determine if any part requires replacement.</li> <li>• List components available at the store or needs to be ordered from the regional service centre.</li> <li>• State all the options for rectifying the fault under supervisor's guidance.</li> <li>• List the parts to be replaced/repared from the store/inventory keeper.</li> <li>• List the tools and equipment required for repair/replacement of parts.</li> <li>• Explain calibration process as per the handset manufacturer.</li> <li>• Explain the use of lead-free soldering tools.</li> <li>• Describe the process of sending the repaired handset/replaced defective part to the authorized personnel.</li> <li>• State all Electrostatic Discharge (ESD) precautions.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform step to inspect the repair table and area for cleanliness.</li> <li>• Demonstrate how to dismantle handset and remove the components/parts as per organizational guidelines/procedures.</li> <li>• Show how to assist the supervisor in repairing the handset using authorized tools and equipment.</li> <li>• Illustrate how to replace components and parts as per the instructions received by supervisor.</li> <li>• Employ appropriate ways to insert the parts properly and verify they are contained within the body.</li> <li>• Demonstrate how to assemble the handset properly using appropriate tools and appropriate procedure.</li> <li>• Demonstrate how to escalate any emergency situation/unresolved issues to the supervisor.</li> <li>• Employ ways to assist supervisors in checking that the repairs conform to the quality targets in terms of bounce and repeat repair percentages, first time fix etc.</li> <li>• Perform steps to rectify software faults such as correction/upgradation, software replacement etc. under supervision.</li> <li>• Demonstrate how to test the effectiveness of the repair using appropriate testing equipment.</li> <li>• Employ appropriate ways to check that the fault has been rectified without any collateral damage to the handset.</li> <li>• Perform steps for usage of Ultimate Multi Tool (UMT) dongle for flashing.</li> </ul>

<ul style="list-style-type: none"> <li>• Discuss the importance of backing up all user data using authorized mechanism and medium.</li> <li>• Explain the importance of documenting all the necessary details.</li> <li>• Describe the procedure of receiving/returning all tools and spare components to the store.</li> <li>• Explain how to inform all relevant personnel about the completion of the repair activity.</li> <li>• Explain various flashing tools, Real Time Transmission (RT TX) Cable, etc. for flashing and International Mobile Equipment Identity (IMEI) repairing tools.</li> <li>• Identify the cost of repair and verify if it is within Beyond Economic Repair (BER)</li> <li>• Explain ways to ensure that no damage is caused to the components while repairing.</li> <li>• Explain the formation of alternating and direct Current.</li> <li>• Describe the various Diode-Function, Symbol, Denoting letter, Identification of Solid Transistor-Basics, Types, Symbol, PNP and NPN.</li> <li>• State the concepts of Embedded Multi-Media Card (EMMC) chip off, Re-balling and Soldering.</li> </ul>	<ul style="list-style-type: none"> <li>• Illustrate how to install/uninstall licensed and authorised software's to resolve issues.</li> <li>• Demonstrate how to use instruments such as a multi-meter to identify and repair faults in Charging Section, etc.</li> <li>• Perform steps to resolve display related issues by using OCA Lamination Machine, etc.</li> <li>• Employ proper ways of using troubleshooting devices such as F Finder Dongle, etc.</li> <li>• Implement necessary methods to test the functioning of hardware after repairing.</li> <li>• Employ ways to ensure that adequate soldering is used for fixing the component.</li> <li>• Illustrate steps to flash handsets online /offline, use of Miracle Box, Z3X Box for Samsung and setting up of creak Box to spot process disruptions and delay.</li> </ul>
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**Classroom Aids:**

Laptop with software like MS Office and Internet, White board, Marker, Projector

**Tools, Equipment and Other Requirements**

Mobile handset, various flashing tools such as Samsung, MediaTek, Qualcomm etc. Real Time Transmission (RT TX) Cable, EDL Cable etc. for flashing, multi-meter, hot air gun, screwdriver, PCB Assembly, Glue, Magnifying Glass, SMD Tester, Software, Adhesive and Soldering Equipment.



## Module 3: Repairing tablets

### Mapped to TEL/N2214 v1.0

#### Terminal Outcomes:

- Demonstrate how to diagnose issues and identify faults in tablets.
- Carry out rectification of fault and repair tablets.

<b>Duration:</b> 30:00	<b>Duration:</b> 50:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Identify faulty tablets from the customer care executives or front-end executives.</li> <li>• Discuss the importance of recording all the necessary details from the customer.</li> <li>• List the part/component available at the store or needs to be ordered from the regional service centre.</li> <li>• State all the options for rectifying the faults and confirm with supervisors, if required.</li> <li>• Describe the procedure of collecting the replacement/repair parts or tools/equipment from the store/inventory keeper.</li> <li>• Discuss how to inspect the repair table and area for cleanliness.</li> <li>• Explain equipment calibration process as per tablet manufacturer.</li> <li>• Explain use of lead-free soldering tools.</li> <li>• State the Electrostatic discharge precautions.</li> <li>• Discuss the importance of backing up all user data using authorized mechanism and medium.</li> <li>• Explain ways to ensure that the tablet was not damaged in any way during repair.</li> <li>• Describe the process of sending the repaired tablet/replaced defective part to the authorized personnel.</li> <li>• Describe the procedure of returning all tools and equipment to the store.</li> <li>• Discuss all the common brand of tablets, their functions, features and applications.</li> <li>• Explain the functionality of hardware components in a tablet like chipsets, processor, screen, touchpad, etc.</li> <li>• State standard fault-finding (troubleshooting) techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform steps to diagnose the faults and check if it is a hardware or software related issue.</li> <li>• Demonstrate how to dismantle tablet and remove the components/parts as per organizational guidelines/procedures.</li> <li>• Show how to assist the senior in repairing of tablet using authorized tools and equipment.</li> <li>• Illustrate how to replace components and parts under the supervisor of senior and as per manufacturer specifications.</li> <li>• Employ appropriate ways to insert parts properly and check that they are contained within the body.</li> <li>• Demonstrate how to assemble tablet properly by using appropriate tools and appropriate procedure.</li> <li>• Demonstrate how to escalate any issue or emergency situation/unresolved issues to the supervisor.</li> <li>• Perform steps to rectify software faults such as correction/upgradation, software replacement, etc. under senior supervision.</li> <li>• Illustrate how to use Block Diagram/Manual Schematics for Service Manual, Disassembly and Reassembly, Exploded view, Product specification and Troubleshooting.</li> <li>• Perform steps for chip level repair—re-balling function.</li> <li>• Show how to assist in testing the effectiveness of the repair by utilizing appropriate testing equipment.</li> <li>• Perform steps to clean the repair bench/table and ensure that no loose screws/parts are lying around.</li> <li>• Perform the procedure of dismantling and assembling the tablet and its components.</li> </ul>

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| <ul style="list-style-type: none"> <li>• List all the tablet related problems and their possible solutions.</li> <li>• Explain different operating system and user interface of popular tablets.</li> <li>• Discuss various software version/modules and basic software commands for data.</li> </ul> | <ul style="list-style-type: none"> <li>• Illustrate steps to interpret test results to identify and localize faults and fixing them.</li> </ul> |
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**Classroom Aids:**

Whiteboard and markers, chart paper and sketch pens, LCD Projector and Laptop for presentations

**Tools, Equipment and Other Requirements**

Tablet, service Manual, multi-meter, hot air gun, screwdriver, PCB Assembly, Glue, Magnifying Glass, SMD Tester, Software, Adhesive and Soldering Equipment.

## Module 4: Process of carrying out the chip-level repair of mobile phone

### Mapped to ELE/N4631 v1.0

- Describe the process of analysing the status of mobile phones and estimating the repair cost.
- Demonstrate the process of performing chip-level repairs.
- Demonstrate the process of preparing the necessary documentation.
- Explain the importance of achieving quality and productivity standards.

<b>Duration: 30:00</b>	<b>Duration: 50:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Explain the company's warranty policy for different products.</li> <li>• Explain the company's line of business and product portfolio.</li> <li>• Explain the company's policy on repair and Turn-around Time (TAT), etc.</li> <li>• Explain the use of denoting letters, colour coding, symbol and functions of the solid type and Surface Mounted Device (SMD) resistors.</li> <li>• Describe the symbol, types, identification and functions of SMD tester.</li> <li>• Explain how to test a capacitor using a multimeter and SMD tester.</li> <li>• Describe the symbol, types, properties, identification and functions of electromagnetic coils.</li> <li>• Describe the denoting letter, symbol and functions of solid and SMD type diodes.</li> <li>• Explain the difference between and functions of Positive-Negative-Positive (PNP) and Negative-Positive-Negative (NPN) transistors.</li> <li>• Explain different types of Metal Oxide Semiconductor Field-effect transistors (MOSFET) such as 3 leg MOSFET and 8 Leg MOSFET and the identification of N-Channel and P-Channels.</li> <li>• Explain the concept of Quartz, clock and pulse and measuring unit.</li> <li>• Describe the process of conducting a Quartz crystal test.</li> <li>• Describe the process of conducting diagnostic or power on tests for different types of Original Equipment Manufacturer (OEM) components.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate the use of various tools and equipment such as the multimeter, Surface Mounting Device (SMD) tester, F-Finder Tool, etc. to determine the chip-level issue with the mobile phone.</li> <li>• Demonstrate how to open the outer panel and inner casing of the mobile phone using the manufacturer-approved tools and equipment.</li> <li>• Demonstrate the process of removing the Liquid Crystal Display (LCD) screen from the panel using the appropriate tools and equipment such as a hot air gun.</li> <li>• Show how to preheat the Printed Circuit Board (PCB) and remove the module using a hot air gun.</li> <li>• Demonstrate how to place the new module on the board at the specified location using chip-level technology and relevant tools.</li> <li>• Show how to remove the solder remains from the PCB.</li> <li>• Demonstrate the use of OCA lamination machine to replace polarizer film, remove broken glass, replace blank/white LCD, replace broken glass edge / curved display.</li> <li>• Demonstrate the use of bubble remover to remove any bubbles formed on the screen and calibrate the touchscreen.</li> <li>• Demonstrate the process of performing the recommended quality checks of the repaired or replaced module to ensure the issue has been fixed.</li> <li>• Show how to prepare the required documents in the physical registers and/ or the company's Enterprise Resource Planning (ERP) software for tracking and future references.</li> </ul>

- Explain the features and operations of different models of chip-based mobile phones.
- Explain different types of mobile operating system (OS) and applications and the issues experienced with them.
- Explain the importance of using licensed/ approved OS and applications on mobile phones.
- Describe the process of repairing a variety of chip-based mobile phone modules.
- Describe frequently encountered software and hardware problems in a chip-based phone and how to fix them.
- Explain how to interpret and follow the service and repair manual for a variety of chip-based mobile phones.
- Explain various problem-solving techniques such as Plan-Do-Check-Act (PDCA) cycle, Root Cause Analysis (RCA), etc.
- Explain the importance of honouring the TAT given to the customer.

#### **Classroom Aids**

Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop

#### **Tools, Equipment and Other Requirements**

Machine Tools for Servicing the 4G and 5G Mobile Phone, Organizational Documents, PCB Assembly, Glue, Magnifying Glass, SMD Tester, Software, Adhesive and Soldering Equipment.

## Module 5: Plan Work Effectively, Optimise Resources and Implement Safety Practices

Mapped to TEL/N9101 v1.0

### Terminal Outcomes:

- Explain how to plan work effectively, implement safety practices and optimise use of resources.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• List the recent skills and technologies prevalent in the telecom industry.</li> <li>• Discuss the commonly occurring problems with their causes and solutions.</li> <li>• State the importance of keeping the workplace clean, safe and tidy.</li> <li>• List different types of hazards and the procedure to report it to the supervisor.</li> <li>• List the precautionary steps one needs to follow while handling hazardous materials.</li> <li>• State the importance of participating in fire drills and other safety workshops.</li> <li>• Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol-based hand sanitizers.</li> <li>• List the different methods of cleaning, disinfection, sanitization, etc.</li> <li>• Discuss the importance of self-quarantine or self-isolation.</li> <li>• Explain the path of disease transmission.</li> <li>• Discuss organizational hygiene and sanitation guidelines and ways of reporting breaches/gaps, if any.</li> <li>• Explain the ways to optimize usage of resources.</li> <li>• Discuss various methods of waste management and disposal.</li> <li>• List the different categories of waste for the purpose of segregation.</li> <li>• Differentiate between recyclable and non-recyclable waste.</li> <li>• State the importance of using appropriate color dustbins for different types of waste.</li> <li>• Discuss the common sources of pollution and ways to minimize it.</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a time schedule to complete the tasks on the given time.</li> <li>• Demonstrate the use of safety equipment such as goggles, gloves, ear plugs, shoes, etc.</li> <li>• Demonstrate the correct postures while working and handling hazardous materials at the workplace.</li> <li>• Demonstrate how to evacuate the workplace in case of an emergency.</li> <li>• Show how to sanitize and disinfect one's work area regularly.</li> <li>• Demonstrate the correct way of washing hands using soap and water.</li> <li>• Demonstrate the correct way of sanitizing hands using alcohol-based hand rubs.</li> <li>• Display the correct way of wearing and removing PPE such as face masks, hand gloves, face shields, PPE suits, etc.</li> <li>• Demonstrate warning labels, symbols and other related signages.</li> <li>• Perform basic checks to identify any spills and leaks and that need to be plugged /stopped.</li> <li>• Demonstrate different disposal techniques depending upon different types of waste.</li> <li>• Employ different ways to clean and check if equipment/machines are functioning as per requirements and report malfunctioning, if observed.</li> <li>• Demonstrate ways for efficient utilization of material and water.</li> </ul>
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: Communication and interpersonal skills

### Mapped to TEL/N9102 v1.0

#### Terminal Outcomes:

- Discuss how to communicate effectively and develop interpersonal skills
- Explain the importance of developing sensitivity towards differently abled people

<b>Duration: 10:00</b>	<b>Duration: 20:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Discuss the importance of following the standard operating procedures of the company w.r.t priority, confidentiality and security.</li> <li>• Explain the standard procedure of communication and escalations of issues at the workplace.</li> <li>• Discuss the importance of timely rectification of issues.</li> <li>• State the importance of coordinating and resolving conflicts with the team members to achieve smooth workflow.</li> <li>• Discuss about the different types of disabilities with their respective issues.</li> <li>• List health and safety requirements for persons with disability.</li> <li>• Describe the rights, duties and benefits available at workplace for person with disability.</li> <li>• Explain the process of recruiting people with disability for a specific job.</li> <li>• Discuss the specific ways to help people with disability to overcome the challenges.</li> </ul>	<ul style="list-style-type: none"> <li>• Use different modes of communication as per requirement and need.</li> <li>• Prepare a sample report of the commonly occurring errors and their solutions.</li> <li>• Demonstrate the use of gender and PwD (Person with Disability) inclusive language.</li> <li>• Prepare a list of institutes and government schemes that help PwD in overcoming challenges.</li> <li>• Demonstrate the ideal behavior with a PwD in an organization.</li> </ul>
<b>Classroom Aids</b>	
Whiteboard and Markers, Chart paper and sketch pens, LCD Projector and Laptop for presentations	
<b>Tools, Equipment and Other Requirements</b>	
Sample of escalation matrix, organisation structure	

## Module 7: On-the-Job Training

### Mapped to Handheld Devices (Handset & Tablet) Technician

<b>Mandatory Duration:</b> 120:00	<b>Recommended Duration:</b> 00:00
<b>Location: On-Site</b>	
<b>Terminal Outcomes</b>	
<ol style="list-style-type: none"> <li>1. Inspect the repair table and work area to ensure cleanliness.</li> <li>2. Dismantle the handset and remove the components/parts.</li> <li>3. Assist the supervisor in repairing the handset using authorized tools and equipment.</li> <li>4. Replace components and parts under guidance of the supervisor.</li> <li>5. Demonstrate how to assemble the handset.</li> <li>6. Rectify faults in software such as correction/upgradation, software replacement as well as other related issues.</li> <li>7. Perform various tests to check the repair using appropriate testing equipment.</li> <li>8. Use the Ultimate Multi Tool (UMT) dongle for flashing.</li> <li>9. Perform the installation/uninstallation of only licensed and authorized software and apps.</li> <li>10. Demonstrate how to resolve display-related issues using OCA Lamination Machine, etc.</li> <li>11. Test the functioning of hardware after repairing.</li> <li>12. Perform the proper steps to flash handsets online/offline to spot process disruptions and delay.</li> <li>13. Diagnose the issues in the tablet and check if it is a hardware or software-related issue.</li> <li>14. Dismantle the tablet and remove the components/parts.</li> <li>15. Assemble tablet properly by using appropriate tools and appropriate procedure.</li> <li>16. Fix software issues in tablets under senior supervision.</li> <li>17. Perform chip level repair/re- balling function.</li> <li>18. Test the effectiveness of the repair using proper testing equipment.</li> <li>19. Ensure that the repair bench/table is clean after repairs.</li> <li>20. Use of various tools and equipment appropriately such as the multimeter, Surface Mounting Device (SMD) tester, F-Finder Tool, etc.</li> <li>21. Remove the Liquid Crystal Display (LCD) screen from the panel using the appropriate tools and equipment.</li> <li>22. Demonstrate placing the new module on the PCB at the specified location using chip-level technology and relevant tools.</li> <li>23. Remove the solder remains from the PCB properly.</li> <li>24. Use of OCA lamination machine to replace polarizer film, remove broken glass, etc.</li> <li>25. Perform the steps to remove the bubbles from the screen and calibrate the touchscreen.</li> <li>26. Perform recommended quality checks of the repaired/replaced module/components to ensure the issue has been fixed in the handset/tablet.</li> <li>27. Prepare the required documents as per prescribed formats.</li> </ol>	



## Module 8: DGT/VSQ/N0102 Employability Skills (60 Hours)

### Mapped to Handheld Devices (Handset & Tablet) Technician

Mandatory Duration: 60:00			
Location: On-Site			
S.No.	Module Name	Key Learning Outcomes	Duration (hours)
1.	Introduction to Employability Skills	<ul style="list-style-type: none"> <li>Discuss the Employability Skills required for jobs in various industries.</li> <li>List different learning and employability related GOI and private portals and their usage.</li> </ul>	1.5
2.	Constitutional values - Citizenship	<ul style="list-style-type: none"> <li>Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen.</li> <li>Show how to practice different environmentally sustainable practices.</li> </ul>	1.5
3.	Becoming a Professional in the 21st Century	<ul style="list-style-type: none"> <li>Discuss importance of relevant 21st century skills.</li> <li>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.</li> <li>Describe the benefits of continuous learning.</li> </ul>	2.5
4.	Basic English Skills	<ul style="list-style-type: none"> <li>Show how to use basic English sentences for every day conversation in different contexts, in person and over the telephone.</li> <li>Read and interpret text written in basic English</li> <li>Write a short note/paragraph / letter/e -mail using basic English.</li> </ul>	10
5.	Career Development & Goal Setting	<ul style="list-style-type: none"> <li>Create a career development plan with well-defined short- and long-term goals.</li> </ul>	2
6.	Communication Skills	<ul style="list-style-type: none"> <li>Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.</li> <li>Explain the importance of active listening for effective communication.</li> <li>Discuss the significance of working collaboratively with others in a team.</li> </ul>	5
7.	Diversity & Inclusion	<ul style="list-style-type: none"> <li>Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD.</li> <li>Discuss the significance of escalating sexual harassment issues as per POSH act.</li> </ul>	2.5
8.	Financial and Legal Literacy	<ul style="list-style-type: none"> <li>Outline the importance of selecting the right financial institution, product, and service.</li> <li>Demonstrate how to carry out offline and online financial transactions, safely and securely.</li> <li>List the common components of salary and compute income, expenditure, taxes, investments etc.</li> <li>Discuss the legal rights, laws, and aids.</li> </ul>	5
9.	Essential Digital Skills	<ul style="list-style-type: none"> <li>Describe the role of digital technology in today's life.</li> <li>Demonstrate how to operate digital devices and use the</li> </ul>	10

		<p>associated applications and features, safely and securely.</p> <ul style="list-style-type: none"> <li>• Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely.</li> <li>• Create sample word documents, excel sheets and presentations using basic features.</li> <li>• Utilize virtual collaboration tools to work effectively.</li> </ul>	
10.	Entrepreneurship	<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> <li>• Create a sample business plan, for the selected business opportunity.</li> </ul>	7
11	Customer Service	<ul style="list-style-type: none"> <li>• Describe the significance of analyzing different types and needs of customers.</li> <li>• Explain the significance of identifying customer needs and responding to them in a professional manner.</li> <li>• Discuss the significance of maintaining hygiene and dressing appropriately.</li> </ul>	5
12	Getting Ready for Apprenticeship & Jobs	<ul style="list-style-type: none"> <li>• Create a professional Curriculum Vitae (CV).</li> <li>• Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively.</li> <li>• Discuss the significance of maintaining hygiene and confidence during an interview.</li> <li>• Perform a mock interview.</li> <li>• List the steps for searching and registering for apprenticeship opportunities.</li> </ul>	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 (Handheld Devices (Handset & Tablet) Technician)

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Science/Electronics/ Telecom/IT and other related domains	2	Handset Repairing	0	NA	Eligible for ToT program
Graduate	Science/Electronics/ Telecom/IT and other relevant domains	1	Handset Repairing	0	NA	Eligible for ToT program

Trainer Certification	
Domain Certification	Platform Certification
Job Role: “Handheld Devices (Handset & Tablet)Technician” “TEL/Q2201 v2.0”, Minimum accepted score is 80%.	Job Role: “Trainer”, “MEP/Q2601” v1.0, Minimum accepted score is 80%.

## Assessor Requirements (Handheld Devices (Handset & Tablet) Technician)

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Science/Electronics/ Telecom/IT and other related domains	2	Handset Repairing	0	NA	Eligible for ToT program
Graduate	Science/Electronics/ Telecom/IT and other relevant domains	1	Handset Repairing	0	NA	Eligible for ToT program

Assessor Certification	
Domain Certification	Platform Certification
Job Role: “Handheld Devices (Handset & Tablet) Technician” “TEL/Q2201 v2.0”, Minimum accepted score is 80%	Job Role: “Assessor” “MEP/Q2701 v1.0, 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: <ul style="list-style-type: none"> <li>• have good communication skills</li> <li>• be well versed in English</li> <li>• have digital skills</li> <li>• have attention to detail</li> <li>• be adaptable</li> <li>• have willingness to learn</li> </ul>
Current ITI trainers	Employability Skills Training (3 days full-time course done between 2019-2022)					
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: <ul style="list-style-type: none"> <li>• have good communication skills</li> <li>• be well versed in English</li> <li>• have basic digital skills</li> </ul>
Certified Master Trainer	Qualification Pack: Master Trainer (MEP/Q2602			3	EEE training of Management SSC (MEPSC) (155 hours)	<ul style="list-style-type: none"> <li>• have attention to detail</li> <li>• be adaptable</li> <li>• have willingness to learn</li> <li>• be able to grasp concepts fast and is creative with teaching practices and likes sharing back their learning with others</li> </ul>

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

## Assessment Strategy

1. Assessment System Overview:
  - Batches assigned to the assessment agencies for conducting the assessment on SDSM/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
  - 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 from Cloud 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
<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 <b>upon the completion of the training.</b>
<b>Terminal Outcome</b>	Terminal outcome is a statement of what a learner will know, understand and be able to do <b>upon the completion of a module.</b> A set of terminal outcomes help to achieve the training outcome.



## Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
SOP	Standard Operating Procedures
CRM	Customer Relationship Management
PR	Public Relations
SDH	Synchronous Digital Hierarchy
DWDM	Dense Wavelength Division Multiplexing
BTS	Base Transceiver Station
RCA	Root Cause Analysis
PwD	Persons with Disabilities
EB	Electricity Board
PPE	Personal Protective Equipment
NOC	Network Operating Centre
SLA	Service Level Agreement
PM	Preventive Maintenance
CM	Corrective Maintenance
NMS	Network Monitoring System
ESD	Electro Static Discharge
RT TX	Real Time Transmission
IMEI	International Mobile Equipment Identity
UMT	Ultimate Multi Tool
EMMC	Embedded Multi Media Card
ES	Employability Skills