



Model Curriculum

QP Name: Telecom Infrastructure Inspection Engineer (Drone-based)

QP Code: TEL/Q6801

Version: 1.0

NSQF Level: 5.5

Telecom Sector Skill Council || 3rd Floor, Plot No. 126, Sector – 44
Gurgaon – 122003

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Training Parameters

Sector	Telecom
Sub-Sector	Network Managed Services
Occupation	Network Operation and Maintenance
Country	India
NSQF Level	5.5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/2153.9900
Minimum Educational Qualification and Experience	Completed 2nd year of 3-year/ 4-years UG** with no experience required Or Completed 2nd year of diploma* (after 12th) with 1.5 years experience required Or Previous relevant Qualification of NSQF Level 4.5 with 1.5 years of relevant experience*** Or Previous relevant Qualification of NSQF Level 4 with 3 years of relevant experience*** <i>*Diploma in Electronics, Telecommunications, IT, Computer Science, Mechatronics, or related fields.</i> <i>** UG: Engineering/Technology (preferably in Telecom, Electronics, IT, Computer Science or UAV-related fields).</i> <i>***Relevant experience in Drone operations, Telecom deployment, UAV-based infrastructure inspection or other relevant domains.</i> <i>The relevant experience would include work, internship, or apprenticeship after completing relevant educational qualifications.</i>
Pre-Requisite License or Training	NA
Minimum Job Entry Age	NA
Last Reviewed On	24-12-2025
Next Review Date	24-12-2028
NSQC Approval Date	06-02-2026
QP Version	1.0

Model Curriculum Creation Date	24-12-2025
Model Curriculum Valid Up to Date	24-12-2028
Model Curriculum Version	1.0
Minimum Duration of the Course	570 Hours
Maximum Duration of the Course	570 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:

- Plan drone-based inspection operations by analyzing site-specific parameters, defining inspection scope, and ensuring regulatory compliance with safety and airspace norms.
- Execute aerial inspections using drones equipped with appropriate payloads (RGB, thermal, LiDAR), maintaining data accuracy, flight safety, and mission efficiency.
- Collect and organize visual and sensor data using standardized practices for data integrity, geotagging, classification, and secure storage.
- Analyze inspection data to detect anomalies, assess structural integrity, and interpret findings in alignment with engineering drawings and telecom standards.
- Generate structured inspection reports and digital visual models, integrating annotated visuals, defect prioritization, and corrective action recommendations in a format suitable for client and regulatory use.

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
TEL/N6803: Plan Drone-Based Inspection of Telecom Infrastructure NOS Version-1.0 NSQF Level- 5.5	30:00	40:00	50:00	-	120:00
Module 1: Introduction to the role of Telecom Infrastructure Inspection Engineer (Drone-based)	10:00	0:00	0:00	-	10:00
Module 2: Plan drone-based inspection of telecom infrastructure	20:00	40:00	50:00	-	110:00
TEL/N6299: Conduct Aerial Inspection Using Drones NOS Version-1.0 NSQF Level- 5.5	10:00	40:00	40:00	-	90:00
Module 3: Conduct aerial inspection using drones	10:00	40:00	40:00	-	90:00

TEL/N6801: Collect and Analyse Inspection Data NOS Version-1.0 NSQF Level- 5.5	30:00	40:00	50:00	-	120:00
Module 5: Collect and analyse inspection data	30:00	40:00	50:00	-	120:00
TEL/N6802: Generate Inspection Reports and Visual Models NOS Version-1.0 NSQF Level- 5.5	30:00	40:00	50:00	-	120:00
Module 5: Generate inspection reports and visual models	30:00	40:00	50:00	-	120:00
TEL/N6292: Implement Safety and Regulatory Procedures in Drone Operations NOS Version-1.0 NSQF Level- 5.5	10:00	20:00	30:00	-	60:00
Module 6: Implement safety and regulatory procedures in drone operations	10:00	20:00	30:00	-	60:00
DGT/VSQ/N0102: Employability Skills (60 Hours) NOS Version No. 1 NSQF Level- 5.5	60:00	00:00	00:00	-	60:00
Module 8: Employability Skills (60 hours)	60:00	00:00	00:00	-	60:00
Total Duration	170:00	180:00	220:00	-	570:00

Module Details

Module 1: Introduction to the role of Telecom Infrastructure Inspection Engineer (Drone-based)

Mapped to NOS: TEL/N6803, v1.0

Terminal Outcomes:

- Discuss the job role of Telecom Infrastructure Inspection Engineer (Drone-based).
- Explain the scope of work for Telecom Infrastructure Inspection Engineer (Drone-based).

Duration: 10:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
● Describe the size and scope of the Telecom industry and its sub-sectors. ● Discuss the role and responsibilities of a Telecom Infrastructure Inspection Engineer (Drone-based). ● Identify various employment opportunities for a Telecom Infrastructure Inspection Engineer (Drone-based). ● Discuss the organisational policies on workplace ethics, managing sites, quality standards, personnel management and public relations (PR). ● Describe the workflow process in the organisation and the role of the Telecom Infrastructure Inspection Engineer (Drone-based). ● List the various daily, weekly, and monthly operations/activities that take place at the site under the Telecom Infrastructure Inspection Engineer (Drone-based).	
Classroom Aids	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
NA	



Module 2: Plan drone-based inspection of telecom infrastructure

Mapped to NOS: TEL/N6803, v1.0

Terminal Outcomes:

- Analyse telecom infrastructure site parameters, structural layouts, and environmental constraints to determine inspection feasibility and coverage strategy.
- Design optimal drone flight plans incorporating payload selection, signal integrity protocols, and operational logistics in compliance with regulatory norms.
- Implement pre-inspection compliance procedures, crew coordination strategies, and calibration protocols to ensure safe and effective drone-based inspections.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
● Explain the structure and functions of key drone components, including the airframe, motors, ESCs, flight controller, GPS, and battery systems. ● Interpret basic design specifications and parameters such as frame size, payload capacity, motor ratings, and their implications on performance. ● Describe common mechanical and operational issues in drone systems, focusing on wear-and-tear zones and field-based causes of malfunction. ● Discuss the standard tools and safe techniques used for removing, replacing, and reassembling modular drone parts. ● Explain the purpose, scope, and components of drone-based inspection for telecom infrastructure. ● Evaluate historical inspection records and client scope documents to define inspection objectives. ● Describe the types of telecom towers, antenna configurations, and associated mounted equipment. ● Interpret site maps, layout drawings, and tower specifications to identify inspection zones. ● Discuss environmental, terrain, and electromagnetic considerations for safe	● Demonstrate identification and replacement of minor drone components, such as propellers, arms, and mounts, using appropriate tools and safety measures. ● Apply basic payload customization techniques, including sensor or camera integration aligned with specific mission objectives. ● Collaborate with engineers and document repair logs, field performance feedback, and proposed design improvements for continuous drone enhancement. ● Assess tower characteristics such as height, structure type, tilt angle, and mounted components. ● Use site maps to identify electromagnetic interference zones, no-fly areas, and environmental constraints. ● Develop optimised flight plans with calculated overlaps, optimal altitudes, and camera angles. ● Select appropriate drones and sensor payloads based on inspection type and deliverables. ● Plan for battery usage, storage capacity, signal handoff protocols, and mission sequencing. ● Show how to integrate weather forecast data into inspection schedules, including buffer

drone operations. ● Determine appropriate take-off and landing locations based on terrain, obstructions, and access. ● Explain flight planning parameters, including camera angles, line of sight, overlap percentages, and signal interference. ● List types of drones and payload sensors (RGB, thermal, LiDAR) and their selection criteria based on inspection needs. ● Describe GPS calibration, ground control points (GCPs), and data precision techniques. ● Explain regulatory requirements, including DGCA guidelines, airspace classifications, and NPNT/UTM permissions. ● Describe the roles and responsibilities of the flight crew, including visual observers and data handlers. ● Discuss the documentation required for compliance, including flight logs, SOPs, calibration records, and risk mitigation plans.	planning for delays. ● Role-play to assign crew roles and responsibilities in accordance with SOPs for drone inspections. ● Check UAV registration, pilot credentials, and pre-flight airworthiness documentation. ● Role-play to coordinate with authorities to obtain airspace clearances and permissions (NPNT, UTM, etc.). ● Conduct calibration of gimbals, cameras, IMUs, and GNSS systems before the flight. ● Show how to set Return-to-Home (RTH) points and configure compass settings to avoid interference. ● Use appropriate techniques to compile pre-inspection documentation, including mission checklists, SOPs, and approval records. ● Employ appropriate methods to maintain organised records of flight plans, approvals, calibrations, and risk mitigation strategies.
Classroom Aids:	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
UAV (Drone) with compatible payloads (RGB, thermal, LiDAR), Drone flight planning software, Telecom tower layout drawings and site maps, Tablet or Ground Control Station (GCS), GPS/RTK modules, Digital Compass/IMU calibration tools, 3D modelling and mapping tools, Airspace map (digital or printed), Inspection report templates, Protective Gear (Helmet, High visibility vest, Goggles), Data storage devices (USB drive, SSDs), Calibration checklists and SOP documents, Safety cones and markers (for demo zones), First aid kit.	

Module 3: Conduct aerial inspection using drones

Mapped to NOS: TEL/N6299, v1.0

Terminal Outcomes:

- Execute drone-based aerial inspections of telecom infrastructure while adhering to flight path protocols, data capture specifications, and operational safety standards.
- Demonstrate proficiency in configuring UAV systems, calibrating payload sensors, and adjusting in-flight parameters to ensure high-quality visual and geospatial data collection.

Duration: 10:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
● Explain basic aerodynamics and UAV flight principles influencing drone stability and maneuverability. ● Describe key specifications and operational uses of RGB, thermal, and LiDAR payloads for infrastructure inspection. ● Identify critical telecom tower components such as antennas, RRUs, feeders, mounts, and cable trays for inspection. ● Recognise common sources of electromagnetic interference and strategies to mitigate them during flight. ● Differentiate GNSS accuracy levels and explain the application of RTK/PPK techniques for precise geotagging. ● Outline standard drone pre-flight and post-flight checklist procedures and safety validations. ● Discuss the function of UTM systems and communication protocols for coordinated airspace management. ● Explain the importance of briefing the crew on operational roles, emergency procedures, and safety protocols. ● Discuss the significance of implementing failsafe actions (pause, RTH, emergency landing).	● Demonstrate pre-flight inspection of drone hardware, battery status, firmware updates, and sensor connectivity. ● Demonstrate the process of calibrating the compass, IMU, gimbal, and payload sensors. ● Show how to set appropriate geofencing limits, flight parameters, and return-to-home conditions before launch. ● Plan and establish VLOS or BVLOS operation modes based on mission requirements and approvals. ● Perform the steps to launch and operate the drone in alignment with pre-defined flight paths, maintaining stability and safe altitude. ● Perform slow fly-bys and hover over targeted tower components to ensure optimal image capture. ● Show how to capture high-resolution images and videos with proper overlap settings for 3D model generation. ● Use and calibrate thermal or LiDAR payloads for advanced inspection, such as identifying hotspots or structural lean. ● Employ appropriate techniques to adjust payload settings (zoom, tilt, frame rate) dynamically during inspection based on lighting and target detail. ● Annotate visuals in real-time using inspection software to highlight anomalies or markers. ● Show how to track telemetry data (altitude, GPS, IMU, battery) to ensure consistency and

	safety during operations. ● Demonstrate collision avoidance techniques when operating near tower components and wires. ● Demonstrate the procedure of landing the drone safely at the designated point. ● Use suitable methods to back up mission data with complete metadata tagging.
Classroom Aids:	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
UAV (Drone) with compatible payloads (RGB, thermal, LiDAR), drone flight planning software, Remote Controller with Display Unit, GNSS Receiver or RTK/PPK System, Gimbal Stabilizer, Battery Packs, Charging Station, Compass Calibration Pad, 3D Modelling Software (e.g., Pix4D, Agisoft Metashape), Photogrammetry Software (e.g., Pix4D, DroneDeploy), Protective Gear (Helmet, High visibility vest, Goggles), First Aid Kit.	

Module 4: Collect and analyse inspection data

Mapped to NOS: TEL/N6801, v1.0

Terminal Outcomes:

- Organise inspection data accurately, ensuring all files are categorised, stored, and backed up following organisational protocols.
- Analyse visual and sensor data to identify anomalies, assess structural integrity, and provide actionable insights for infrastructure improvement.
- Interpret inspection data against historical records and engineering designs, generating actionable reports that prioritise maintenance or repair actions.

Duration: 30:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
● Explain various data formats captured during drone-based inspections (JPEG, MP4, LiDAR, etc.). ● Identify standard defects and anomalies in telecom towers using visual, thermal, and LiDAR data. ● Explain basic concepts of photogrammetry, orthomosaic generation, and 3D modelling. ● Describe the use of AI/ML tools for automated anomaly detection and validation. ● Describe methods to verify, store, and manage drone inspection data securely. ● Interpret metadata attributes such as GPS, time-stamps, and flight logs for inspection traceability. ● Discuss data comparison and pattern recognition techniques using historical datasets. ● Explain industry standards, grading systems, and impact assessments for infrastructure integrity.	● Show how to retrieve and verify visual and sensor data from drone storage or cloud sync systems. ● Apply file integrity checks, naming conventions, and version control protocols for inspection data. ● Use inspection or GIS tools to geotag images and synchronise them with flight telemetry logs. ● Use appropriate techniques to convert and compress media files without compromising the visual clarity needed for analysis. ● Organise and store data using secure repositories with appropriate metadata tags. ● Demonstrate analysis of images to identify anomalies like rust, tilt, cracks, or missing components. ● Use LiDAR point clouds and thermal overlays to detect structural and thermal irregularities. ● Perform annotation and categorisation of inspection data based on asset type and defect severity. ● Compare inspection visuals with tower layouts, historical data, or engineering designs to identify deviations. ● Role-play to collaborate with telecom engineers to interpret ambiguous data and

	assess operational impact. ● Display the steps to generate condition reports, defect logs, and summary dashboards aligned with client deliverables and standards.
Classroom Aids	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.	
Tools, Equipment and Other Requirements	
UAV (Drone) with compatible payloads (RGB, thermal, LiDAR), GNSS Receiver or RTK/PPK System, 3D Modelling Software (e.g., Pix4D, Agisoft Metashape), GIS Tools (e.g., QGIS, ArcGIS), Image Processing Software (e.g., Adobe Photoshop, GIMP), Data storage devices (USB drive, SSDs), Cloud Storage Access (e.g., Google Drive, OneDrive), Flight Telemetry Software, Inspection Software (e.g., DroneDeploy, Skycatch), Telecom Infrastructure Schematics, Protective Gear (Helmet, High visibility vest, Goggles).	

Module 5: Generate inspection reports and visual models

Mapped to NOS: TEL/N6802, v1.0

Terminal Outcomes:

- Create comprehensive inspection reports by compiling findings, annotated visuals, and relevant metadata in standardised formats.
- Generate accurate 2D and 3D visual models from drone-captured data, integrating annotations, overlays, and thermal or multispectral layers where applicable.
- Maintain organised documentation and communication records in compliance with organisational, regulatory, and audit standards.

Duration: 30:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
● Describe the components and structure of a telecom infrastructure inspection report. ● Explain how to incorporate annotated visuals, metadata, and environmental parameters into inspection documentation. ● Illustrate the organisational formats and client-specific templates for reporting. ● Summarise structural conditions, deviations, and defect severity using technical terminology. ● Explain the classification and prioritisation of defects based on risk to telecom operations. ● Identify tools and techniques used for creating 2D and 3D visual models from drone data. ● Explain how to overlay RF layouts or structural blueprints onto drone imagery. ● Describe methods for integrating thermal, LiDAR, or multispectral data into inspection visuals. ● Explain standard protocols for maintaining communication logs and inspection records. ● Discuss confidentiality, data security, version control, and audit-readiness in documentation practices.	● Demonstrate the technique to compile inspection findings into a structured report using organisational or client-approved templates. ● Show how to integrate annotated visuals, geotags, time-stamps, and environmental metadata to enrich reports. ● Prioritise inspection issues and recommend appropriate corrective actions based on standard guidelines. ● Generate 2D orthophotos, stitched panoramas, and annotated overlays using mapping software. ● Create 3D tower models or digital twins using photogrammetry or LiDAR datasets. ● Show how to overlay RF diagrams or tower blueprints onto captured visuals for comparative analysis. ● Annotate digital models to flag anomalies and corrective action zones. ● Employ appropriate techniques to integrate thermal or multispectral layers into visual reports where applicable. ● Use suitable methods to maintain digital and physical documentation, including flight logs, inspection records, and communication logs.

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| <ul style="list-style-type: none"> ● Define inspection-specific terminology and standard nomenclature for clear communication. ● Discuss the importance of archiving inspection reports and visual assets in a secured, access-controlled repository. | <ul style="list-style-type: none"> ● Compose client-ready reports that meet clarity, accuracy, and compliance standards. |
|---|---|

Classroom Aids

Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen.

Tools, Equipment and Other Requirements

Drone Inspection Sample Data Sets, Image Processing Software (e.g., Adobe Photoshop, GIMP), 3D Modelling Software (e.g., Pix4D, Agisoft Metashape), GIS Tools (e.g., QGIS, ArcGIS), Visual Annotation Tools, Report Templates, Data storage devices (USB drive, SSDs), Cloud Storage Access (e.g., Google Drive, OneDrive).

Module 6: Implement Safety and Regulatory Procedures in Drone Operations

Mapped to NOS: TEL/N6292, v1.0

Terminal Outcomes:

- Valuate potential safety risks in drone operations and formulate appropriate mitigation strategies in accordance with organisational and environmental conditions.
- Implement standard operating procedures to ensure regulatory compliance and monitor adherence to national drone guidelines, safety protocols, and airspace regulations.
- Demonstrate the ability to record, report, and respond to safety incidents and near-misses using organisational tools and reporting frameworks.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
● Explain the key safety risks involved in drone operations, including risks during take-off, landing, and payload handling. ● Identify common weather-related and environmental hazards affecting drone flights. ● Describe organisational safety protocols and standard operating procedures for drone deployment. ● Outline personal protective equipment (PPE) and operational safety standards for drone operators and support staff. ● Discuss procedures for documenting and reporting safety checks, incidents, near misses, and corrective actions. ● Explain the importance of reviewing incident reports to suggest preventive strategies. ● Describe the coordination mechanisms for emergency response planning in drone operations. ● Explain national and local airspace regulations and drone operation guidelines. ● Discuss about the certification, licensing, and airworthiness requirements for drones.	● Monitor and interpret weather data and environmental alerts relevant to drone operations. ● Demonstrate adherence to safety protocols during drone take-off, flight, landing, and payload handling. ● Conduct safety checks and log inspection results in organisational record systems. ● Role-play to report safety breaches, incidents, and near misses using designated organisational procedures. ● Propose preventive and corrective measures based on past incident records. ● Coordinate with emergency response teams and facilitate simulations or drills based on organisational plans. ● Use digital tools and dashboards to track flight paths, delivery logs, and safety parameters. ● Support compliance audits by maintaining updated documentation and responding to inspection requirements. ● Update internal teams through briefings or reports on new regulations and policy changes. ● Promote safety awareness and

● Describe data protection, privacy, and security compliance standards in drone operations. ● Explain protocols for internal and external safety and compliance audits. ● Identify the role of digital tools in monitoring, logging, and analysing safety and regulatory data. ● Explain methods to promote a culture of safety and compliance through training and communication.	regulatory adherence by facilitating regular training and workshops.
Classroom Aids	
Training Kit (Trainer Guide, Presentations), Whiteboard, Markers, Notebooks, Pens, Laptop/Computer with an Internet connection, Speakers, Projector or Large screen	
Tools, Equipment and Other Requirements	
Drone safety checklists, Compliance documentation templates, Drone operation manuals, Protective Gear (Helmet, High visibility vest, Goggles), First Aid Kit, Emergency response plan charts, Sample incident report forms, and Regulatory guideline documents.	

Module 7: DGT/VSQ/N0102: Employability Skills (60 Hours)

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 Hours
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 Hours
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 Hours
4.	Basic English Skills	- Show how to use basic English sentences for everyday 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 Hours
5.	Career Development & Goal Setting	Create a career development plan with well-defined short- and long-term goals	2 Hours
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 Hours
7.	Diversity & Inclusion	Demonstrate how to behave, communicate, and conduct oneself appropriately with all	2.5 Hours

		genders and PwD. Discuss the significance of escalating sexual harassment issues as per the POSH Act.	
8.	Basic English Skills	- Show how to use basic English sentences for everyday 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 Hours
9.	Career Development & Goal Setting	Create a career development plan with well-defined short- and long-term goals	2 Hours
10.	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 Hours
11.	Essential Digital Skills	- Describe the role of digital technology in today's life - Demonstrate how to operate digital devices and use the associated applications and features safely and securely - Discuss the significance of displaying responsible online behaviour while browsing, using various social media platforms, e-mails, etc., safely and securely - Create sample Word documents, excel sheets and presentations using basic features - Utilise virtual collaboration tools to work effectively	10 Hours
12.	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 the requirement - Create a sample business plan for the selected business opportunity	7 Hours
13.	Customer Service	- Describe the significance of analysing different types and needs of customers - Explain the significance of identifying customer	5 Hours

		needs and responding to them in a professional manner. Discuss the significance of maintaining hygiene and dressing appropriately	
14.	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 Hours

LIST OF TOOLS & EQUIPMENT FOR EMPLOYABILITY SKILLS		
Sl 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
<i>Note: Above Tools & Equipment not required, if Computer LAB is available in the institute.</i>		

Module 8: On-the-Job Training

Mapped to QP: TEL/Nxxxx, v1.0

Mandatory Duration: 220:00	Recommended Duration: 00:00
Location: On-Site	
Terminal Outcomes ● Demonstrate the process of compiling drone inspection findings into a structured reporting format. ● Use annotated images or video snapshots to highlight defects or anomalies in the report. ● Apply metadata, including geo-coordinates, time-stamps, and environmental data in inspection documentation. ● Classify issues based on severity and impact on telecom operations. ● Use standardised organisational report templates for formatting and consistency. ● Proofread inspection reports to ensure accuracy and clarity of information. ● Customise reports based on specific client or project requirements. ● Generate 2D maps, orthophotos, or visual overlays using appropriate software tools. ● Construct 3D models or digital twins from captured photogrammetry or LiDAR data. ● Stitch aerial images using mapping tools to create continuous panoramic views. ● Overlay RF layout diagrams or tower blueprints onto drone visuals for enriched analysis. ● Annotate 3D or 2D visual models with defect markers and action points. ● Integrate thermal or multispectral data into composite visual models. ● Maintain organised digital and physical records of inspections, flight logs, and checklists. ● Log communications with clients, team members, or external reviewers accurately. ● Archive inspection reports and models in secure, access-controlled systems. ● Develop a risk-based grading or scoring system for infrastructure health assessment. ● Collaborate with cross-functional teams to interpret, validate, and finalise inspection findings and visuals.	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialisation	Years	Specialisation	
BE/B. Tech	Any Field	2	Drone operations, Telecom infrastructure deployment, UAV-based infrastructure inspection or other relevant domains.	-	-	Eligible for ToT program
ME/M. Tech	Any Field	1	Drone operations, Telecom infrastructure deployment, UAV-based infrastructure inspection or other relevant domains.	-	-	Eligible for ToT program

Trainer Certification	
Domain Certification	Platform Certification
Certified for Job Role “ Telecom Infrastructure Inspection Engineer (Drone-based) ”, “TEL/Q6801, v1.0”, Minimum accepted score is 80%	Certified for Job Role: “ Trainer (VET and Skills) ”, “ MEP/Q2601 ” v3.0, Minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialisation	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialisation	Years	Specialisation	
BE/B. Tech	Any Field	2	Drone operations, Telecom infrastructure deployment, UAV-based infrastructure inspection or other relevant domains.	-	-	Eligible for ToA program
ME/M. Tech	Any Field	1	Drone operations, Telecom infrastructure deployment, UAV-based infrastructure inspection or other relevant domains.	-	-	Eligible for ToA program

Assessor Certification	
Domain Certification	Platform Certification
Certified for Job Role “ Telecom Infrastructure Inspection Engineer (Drone-based) ”, “TEL/Q6801, v1.0”, Minimum accepted score is 80%	Certified for Job Role: “ Assessor (VET and Skills) ”, “ MEP/Q2701 ” v3.0, 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: • have good communication skills • be well versed in English • have digital skills • have attention to detail • be adaptable • have willingness to learn
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)					

Assessor Certification	
Domain Certification	Platform Certification
Certified in 90-hour Employability NOS (2022), with a minimum score of 80% OR Certified in 120-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 trainer should: • have good communication skills • be well versed in English • have digital skills • have attention to detail
Certified Master Trainer	Qualification Pack: Master Trainer (MEP/Q2602)			3	EEE training of Management SSC (MEPSC) (155 hours)	• be adaptable • have willingness to learn

Assessor Certification	
Domain Certification	Platform Certification
Certified in 90-hour Employability NOS (2022), with a minimum score of 90%. OR Certified in 120-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 or e-mail.
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC.
- The 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.
- An assessor must be ToA certified & the trainer must be ToT Certified.
- The 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:

- A surprise visit to the assessment location.
- A random audit of the batch.
- Random audit of any candidate.

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

- Hard copies of the documents are stored.

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

References

Glossary

Term	Description
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	A key learning outcome is a 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	The 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
NOS	National Occupational Standard (s)
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
QP	Qualifications Pack
PwD	People with Disability
PPE	Personal Protective Equipment