



# Model Curriculum

**QP Name: Drone Manufacturing and Assembly Technician**

**QP Code: ELE/Q7307**

**QP Version: 3.0**

**NSQF Level: 4**

**Model Curriculum Version: 3.0**

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## Training Parameters

<b>Sector</b>	Electronics
<b>Sub-Sector</b>	E-Mobility and Battery
<b>Occupation</b>	Assembly-EM&B
<b>Country</b>	India
<b>NSQF Level</b>	4
<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/8212.0400
<b>Minimum Educational Qualification and Experience</b>	<p>12th grade or equivalent</p> <p>Or</p> <p>10th grade or equivalent with 3 years' relevant experience</p> <p>Or</p> <p>Certificate-NSQF (Level-3 in relevant domain) with 3 years of relevant experience</p> <p># Relevant Experience in Electronics Domain</p>
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	NA
<b>Last Reviewed On</b>	16/12/2025
<b>Next Review Date</b>	27/10/2028
<b>NSQC Approval Date</b>	16/12/2025
<b>QP Version</b>	3.0
<b>Model Curriculum Creation Date</b>	16/12/2025
<b>Model Curriculum Valid Up to Date</b>	27/10/2028
<b>Model Curriculum Version</b>	3.0
<b>Maximum Duration of the Course</b>	510 Hours

# Program Overview

This section summarizes the end objectives of the program along with its duration.

## Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills:

- Explain the role and responsibilities of an entrepreneur/businessman.
- Demonstrate basic flying physics and drone motion principles using a flight simulator.
- Demonstrate the process of assembling and disassembling different types of drones.
- Demonstrate the process of inspecting various drone components for testing purposes.
- Explain the procedure for testing a drone to ensure correct functionality after assembly.
- Explain the process of manufacturing, configuring, and deploying a drone.
- Explain the importance of adhering to quality standards and providing effective customer service.
- Explain the importance of inclusive practices for all genders and persons with disabilities (PWD) in the workplace.
- Demonstrate the correct use of health, safety, and ESD equipment during work.

## 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>ELE/N7311: Understanding Drone Fundamentals, Types, Applications, and Assembly NOS Version No. 1.0 NSQF Level 4</b>	<b>45:00</b>	<b>60:00</b>	<b>30:00</b>	<b>00:00</b>	<b>135:00</b>
<b>Module 1: Fundamentals of Drones</b>	15:00	20:00	05:00	00:00	40:00
<b>Module 2: Drone Components and Assembly Design</b>	15:00	20:00	10:00	00:00	45:00
<b>Module 3: Assembly Procedure and Documentation</b>	15:00	20:00	15:00	00:00	50:00
<b>ELE/N7312 Testing, Calibration, Programming, and Quality Assurance of Drones NOS Version No. 1.0 NSQF Level 4</b>	<b>45:00</b>	<b>90:00</b>	<b>60:00</b>	<b>00:00</b>	<b>195:00</b>
<b>Module 4: Pre-Flight Testing and Calibration</b>	15:00	30:00	20:00	00:00	65:00
<b>Module 5: Programming and Functional Validation</b>	15:00	30:00	20:00	00:00	65:00
<b>Module 6: Flight Testing and Quality Assurance</b>	15:00	30:00	20:00	00:00	65:00
<b>ELE/N7313 Troubleshooting, Repair, Upgrades, and Continuous Improvement of Drones NOS Version No. 1.0 NSQF Level 4</b>	<b>30:00</b>	<b>60:00</b>	<b>60:00</b>	<b>00:00</b>	<b>150:00</b>

<b>Module 7: Troubleshooting and Repair</b>	10:00	20:00	20:00	00:00	50:00
<b>Module 8: Upgrades and Design Feedback</b>	10:00	20:00	20:00	00:00	50:00
<b>Module 9: Documentation and Innovation</b>	5:00	10:00	15:00	00:00	30:00
<b>Module 10: Safety, Work Ethics, and Compliance</b>	5:00	10:00	05:00	00:00	20:00
<b>DGT/VSQ/N0101 – Employability Skills (30 Hours)</b> <b>NOS Version No. 1.0 NSQF Level 4</b>	<b>30:00</b>	<b>00:00</b>	<b>00:00</b>	<b>00:00</b>	<b>30:00</b>
<b>Module 11: Employability Skills (30 Hours)</b>	30:00	00:00	00:00	00:00	30:00
<b>Total Duration</b>	<b>150:00</b>	<b>210:00</b>	<b>150:00</b>	<b>00:00</b>	<b>510:00</b>

## Module Details

### Module 1: Fundamentals of Drones

*Mapped to ELE/N7311 & V1.0*

#### Terminal Outcomes:

- Identify drone types, categories, and applications, and relate application demands to design and manufacturing changes.

Duration: 15:00	Duration: 20:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Understand different drone types (fixed-wing, rotary-wing, hybrid) and categories (nano, micro, small, medium, large).</li> <li>Learn applications of drones in agriculture, defense, logistics, surveillance, mapping, cinematography, and disaster management.</li> <li>Understand how application demands (payload, sensors, range, endurance, flight conditions) influence drone design and manufacturing decisions.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and describe various drone types and categories during practical sessions.</li> <li>Demonstrate examples of drone applications across different sectors.</li> <li>Analyze case studies or examples showing how payload, sensor requirements, and flight conditions affect drone design choices.</li> <li>Relate real-life application needs to selection of drone type and manufacturing adaptations.</li> </ul>
<b>Classroom Aids</b>	
Training kit - Trainer guide, Presentations, Whiteboard, Marker, projector, laptop	
<b>Tools, Equipment and Other Requirements</b>	
NA	

## Module 2: Drone Components and Assembly Design

Mapped to ELE/N7311 & V1.0

### Terminal Outcomes:

- Identify drone components, interpret assembly designs, prepare BOMs, and verify components to ensure precise assembly as per industry standards.

Duration: 15:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>Understand the function of major drone components: frame, motors, ESCs, flight controllers, GPS, sensors, batteries, propellers, antennas.</li> <li>Learn to interpret CAD drawings, exploded views, wiring diagrams, and technical datasheets for different drone categories.</li> <li>Understand the preparation of Bills of Materials (BOM) and part lists using ERP or design software.</li> <li>Learn about tools, jigs, and fixtures necessary for precision assembly and fastening of drone components.</li> <li>Understand the procedure for verifying incoming components against BOM and quality standards.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and describe major drone components practically.</li> <li>Interpret and analyze CAD drawings, exploded views, and wiring diagrams.</li> <li>Prepare a sample BOM and part list using ERP or design software tools.</li> <li>Demonstrate the use of assembly tools, jigs, and fixtures for precise component assembly.</li> <li>Inspect incoming components to verify they match BOM specifications and meet quality tolerances.</li> </ul>
Classroom Aids	
Drone videos, Whiteboard, Marker, projector, laptop	
Tools, Equipment and Other Requirements	
Screwdrivers, wire strippers, pliers, digital multimeter, soldering iron, and anti-static wrist straps. Essential equipment includes a computer with CAD and BOM software, a power supply, and a digital caliper. Practical training involves using key drone components such as frames, BLDC motors, ESCs, flight controllers, GPS modules, sensors, batteries, propellers, antennas, and wiring. Sample BOM templates, assembly drawings, and an ESD-safe workstation setup are also needed to support hands-on learning.	

## Module 3: Assembly Procedure and Documentation

Mapped to ELE/N7311 & V1.0

### Terminal Outcomes:

- Plan and execute drone assembly steps by integrating structural components, electronics, and power systems as per design specifications, while ensuring correct documentation and pre-power checks.

Duration: 15:00	Duration: 20:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Understand the process of planning assembly sequence based on drone type and complexity.</li> <li>Learn torque, alignment, and balance specifications for frame assembly.</li> <li>Understand motor configurations (X, +, H orientation) and their impact on flight stability.</li> <li>Learn standard soldering and crimping techniques for wiring harness and connector integration.</li> <li>Understand vibration isolation requirements for installing flight controllers, sensors, and GPS units.</li> <li>Understand integration of communication modules (RF, telemetry, GPS).</li> <li>Learn the correct assembly and connection of battery units including power safety mechanisms (fuses, BMS).</li> <li>Understand the importance of inspecting for loose fittings, short circuits, and misalignments.</li> <li>Learn proper documentation methods for assembly steps, component traceability, and deviations.</li> </ul>	<ul style="list-style-type: none"> <li>Plan the drone assembly sequence considering type and complexity.</li> <li>Assemble the drone frame and structure maintaining correct torque, alignment, and balance.</li> <li>Mount motors, ESCs, and propellers in specified configurations.</li> <li>Connect wiring harnesses, power boards, and connectors using soldering and crimping methods.</li> <li>Install flight controllers, sensors, and GPS with correct vibration isolation.</li> <li>Integrate RF and telemetry communication modules as per design.</li> <li>Assemble and connect battery units safely using fuses and BMS.</li> <li>Inspect assemblies for loose parts, circuit errors, and misalignments.</li> <li>Document assembly steps, component traceability, and deviations using templates.</li> </ul>
<b>Classroom Aids</b>	
Whiteboard, Marker, projector, laptop	
<b>Tools, Equipment and Other Requirements</b>	
screwdrivers, torque wrenches, hex key sets, wire strippers, pliers, soldering irons with solder wire, crimping tools, and digital multimeters. Additional equipment includes anti-static wrist straps, digital calipers, power supplies for dry-run testing, and magnifying lamps for detailed inspections. The workstation must be ESD-safe and equipped with sample BOM and assembly documentation templates to support proper recording of the assembly process.	

### Module 4: Pre-Flight Testing and Calibration

#### Mapped to ELE/N7312 & V1.0

### Terminal Outcomes:

- Perform pre-flight functional checks, inspect and calibrate drone components using appropriate tools to ensure safe and accurate operation.

<b>Duration: 15:00</b>	<b>Duration: 30:00</b>
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Understand the importance of pre-flight functional checks and visual inspections.</li> <li>Learn how to verify battery health, charging cycles, and current ratings.</li> <li>Understand testing of electronic subsystems (ESCs, motors, GPS modules, sensors) using multimeters, oscilloscopes, and diagnostic tools.</li> <li>Learn continuity checks and insulation resistance testing procedures for wiring harnesses.</li> <li>Understand sensor calibration methods (IMU, accelerometer, gyroscope, barometer, magnetometer) based on drone category.</li> <li>Learn GPS unit calibration and lock-on performance verification under various conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct functional checks and visual inspections on drones of different categories.</li> <li>Verify battery health, charging cycles, and current ratings using test equipment.</li> <li>Test ESCs, motors, GPS modules, and sensors using multimeters, oscilloscopes, and diagnostic tools.</li> <li>Perform continuity checks and insulation resistance testing of wiring harnesses.</li> <li>Calibrate IMU, accelerometer, gyroscope, barometer, and magnetometer sensors as per category needs.</li> <li>Calibrate GPS units and confirm lock-on performance under different environmental conditions.</li> </ul>
<b>Classroom Aids</b>	
Whiteboard, Marker, projector, laptop	
<b>Tools, Equipment and Other Requirements</b>	
digital multimeters, oscilloscopes, insulation resistance testers, battery testers, and specialized diagnostic tools. Additional equipment includes power supplies for testing, calibration kits for sensors and GPS modules, and test rigs for simulating environmental conditions. ESD-safe workstations and documentation templates	

## Module 5: Programming and Functional Validation

Mapped to ELE/N7312 & V1.0

### Terminal Outcomes:

- Configure flight controllers, program communication protocols, simulate flight dynamics, adjust configurations, and validate redundancy mechanisms to ensure drone readiness and safety.

Duration: 15:00	Duration: 30:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>Understand flight controller configuration including firmware updates, PID tuning, and setting category-specific parameters (payload balance, hovering stability, altitude limits).</li> <li>Learn programming of communication protocols (RC transmitters, telemetry systems, failsafe modes) for safe drone operation.</li> <li>Understand simulation of drone flight dynamics (lift, drag, thrust, pitch, roll, yaw, stability) using flight simulators.</li> <li>Learn to adjust thrust-to-weight ratio based on different payload requirements.</li> <li>Understand validation of redundancy mechanisms such as dual GPS, dual IMU, and return-to-home functionality in the control logic.</li> </ul>	<ul style="list-style-type: none"> <li>Configure flight controllers with firmware updates, PID tuning, and category-specific parameters.</li> <li>Program communication protocols for safe flight operations using RC transmitters and telemetry systems.</li> <li>Simulate drone flight dynamics in software simulators to analyze lift, drag, thrust, pitch, roll, and yaw.</li> <li>Adjust thrust-to-weight configurations practically to meet different payload needs.</li> <li>Validate redundancy mechanisms like dual GPS and dual IMU during practical exercises.</li> </ul>
Classroom Aids	
Whiteboard, Marker, projector, laptop	
Tools, Equipment and Other Requirements	
computers with drone configuration software, flight simulators, RC transmitter and receiver sets, diagnostic programming tools, and telemetry systems. The setup must include ESD-safe workstations and sample configuration templates to help trainees simulate and validate flight dynamics, perform PID tuning, adjust thrust configurations, and test redundancy mechanisms in a controlled environment.	

## Module 6: Flight Testing and Quality Assurance

Mapped to ELE/N7312 & V1.0

### Terminal Outcomes:

- Conduct live flight tests, analyze performance data, document results, and validate the drone's compliance with design and safety standards before release.

Mandatory Duration: 15:00	Recommended Duration: 30:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Understand the procedure for conducting controlled live flight tests (take-off, hovering, forward flight, soft landing).</li> <li>Learn how to assess drone performance against key design requirements such as flight time, payload endurance, and stability.</li> <li>Understand methods for recording real-time telemetry and flight data.</li> <li>Learn how to compare flight test results with design specifications to identify discrepancies.</li> <li>Understand proper documentation of test results, calibration reports, and corrective actions.</li> <li>Learn the use of QA/PLM software tools for updating product history and compliance logs.</li> <li>Understand the criteria and process to approve the drone for release based on performance and safety validation.</li> </ul>	<ul style="list-style-type: none"> <li>Perform controlled live flight tests including take-off, hovering, forward flight, and soft landing.</li> <li>Assess drone performance in real conditions against design parameters.</li> <li>Record real-time telemetry and flight data during test flights.</li> <li>Compare actual test data against design specifications and identify any gaps or discrepancies.</li> <li>Document flight test results, calibration data, and any corrective actions taken using standardized QA templates.</li> <li>Use QA/PLM software to update the drone's product history and compliance records.</li> <li>Approve drones for release only after confirming all performance and safety requirements are met.</li> </ul>
<b>Classroom Aids</b>	
Whiteboard, Marker, projector, laptop	
<b>Tools, Equipment and Other Requirements</b>	
fully configured drone ready for flight tests, telemetry data loggers, real-time flight monitoring software, QA/PLM software tools, and calibrated measuring instruments. A safe and open flight test area with predefined test zones and ESD-safe workstations for data recording are also required. Test templates and documentation formats for performance results and calibration reports are provided to support systematic learning and ensure compliance with industry quality standards.	

## Module 7: Troubleshooting and Repair

*Mapped to ELE/N7313 & V1.0*

### Terminal Outcomes:

- Systematically diagnose technical faults, repair or replace defective components, and validate drone functionality and flight readiness.

Mandatory Duration: 10:00	Recommended Duration: 20:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>• Understand systematic troubleshooting methods and the use of diagnostic software for detecting faults in drones.</li> <li>• Learn the repair and replacement process of key components (motors, ESCs, sensors, GPS modules, wiring, batteries).</li> <li>• Understand validation procedures for ensuring repaired drones meet functional and flight-readiness standards.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform systematic diagnostics of drone faults using appropriate diagnostic tools and software.</li> <li>• Repair or replace faulty components such as motors, ESCs, sensors, GPS modules, wiring, or batteries following standard procedures.</li> <li>• Conduct integrated functional tests and flight-readiness checks to validate the effectiveness of the repair.</li> </ul>
<b>Classroom Aids</b>	
Whiteboard, Marker, projector, laptop	
<b>Tools, Equipment and Other Requirements</b>	
digital multimeters, oscilloscopes, diagnostic software tools, soldering irons, crimping tools, screwdrivers, pliers, and replacement components like motors, ESCs, sensors, GPS modules, wiring, and batteries.	

## Module 8: Upgrades and Design Feedback

Mapped to ELE/N7313 & V1.0

### Terminal Outcomes:

- Upgrade drone hardware and software to improve performance and provide design feedback for continuous improvement.

Mandatory Duration: 10:00	Recommended Duration: 20:00
<b>Theory – Key Learning Outcomes</b>	<b>Practical – Key Learning Outcomes</b>
<ul style="list-style-type: none"> <li>Understand methods to upgrade drone capacity (payload, endurance, flight range) through hardware changes and optimized programming.</li> <li>Learn the process of implementing software and firmware upgrades to enhance drone performance specific to category requirements.</li> <li>Understand how to analyze feedback on recurring failures to improve CAD designs, BOM accuracy, and manufacturing processes.</li> </ul>	<ul style="list-style-type: none"> <li>Perform hardware upgrades to improve payload capacity, endurance, and flight range using suitable components and design modifications.</li> <li>Apply software and firmware updates to flight controllers and communication modules to enhance stability and performance.</li> <li>Analyze and review documented feedback on recurring failures and implement improvements in CAD designs, BOM accuracy, and assembly processes.</li> </ul>
<b>Classroom Aids</b>	
Whiteboard, Marker, projector, laptop	
<b>Tools, Equipment and Other Requirements</b>	
computers with CAD and BOM software, firmware upgrade kits, programming interfaces for flight controllers, component upgrade kits (higher-capacity batteries, advanced motors, optimized ESCs), and diagnostic software tools	

## Module 9: Documentation and Innovation

*Mapped to ELE/N7313 & V1.0*

### Terminal Outcomes:

- Maintain records of repairs, upgrades, and improvements while supporting prototyping and staying updated with new drone technologies and methods.

Duration: 05:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>• Understand the importance of maintaining accurate records of repair, upgrade, and improvement activities according to organizational formats.</li> <li>• Learn about emerging drone technologies, new programming techniques, and evolving manufacturing trends.</li> <li>• Understand the role of prototyping, pilot testing, and documentation in developing new drone models and innovative assembly methods.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain organized records of repair, upgrade, and improvement work using standardized documentation templates.</li> <li>• Research and stay informed about the latest trends in drone technologies, programming practices, and industry developments.</li> <li>• Assist in prototyping new drone designs, perform pilot testing, and document the testing process and results for further development.</li> </ul>

Classroom Aids
Training kit (Trainer guide, Presentations)
Tools, Equipment and Other Requirements
computers with word processing and spreadsheet software for record maintenance, access to industry publications and online resources for staying updated, and prototyping tools such as CAD software and breadboards for testing new designs.

## Module 10: Safety, Work Ethics, and Compliance

Mapped to ELE/N7313 & V1.0

### Terminal Outcomes:

- Apply ESD safety practices, adhere to workplace discipline and ethical standards, comply with regulatory standards, and maintain data confidentiality across drone processes.

Duration: 05:00	Duration: 10:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>Understand ESD safety practices, proper use of PPE, and grounding techniques in drone assembly, testing, and repair.</li> <li>Learn organizational policies on workplace discipline, professional ethics, and environmental sustainability.</li> <li>Understand national and international compliance standards related to drone assembly, testing, and operations.</li> <li>Learn the importance of maintaining confidentiality of organizational data and respecting intellectual property rights.</li> </ul>	<ul style="list-style-type: none"> <li>Apply ESD safety practices, use PPE appropriately, and follow grounding requirements during practical tasks.</li> <li>Demonstrate workplace discipline, ethical behavior, and environmentally sustainable practices in all activities.</li> <li>Follow standard operating procedures (SOPs) to ensure compliance with applicable national and international standards.</li> <li>Maintain confidentiality of technical documents and organizational data during tasks and communication.</li> </ul>

### Classroom Aids

Training kit (Trainer guide, Presentations)

### Tools, Equipment and Other Requirements

ESD-safe workstations, grounding mats, anti-static wrist straps, PPE (gloves, safety glasses), and documented organizational SOPs.

## Module 11: Employability Skills (30 Hours)

## Mapped to DGT/VSQ/N0101 & V1.0

### Terminal Outcomes:

- Discuss about Employability Skills in meeting the job requirements
- Describe opportunities as an entrepreneur.
- Describe ways of preparing for apprenticeship & Jobs appropriately.

Duration: 30:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> <li>Explain constitutional values, civic rights, responsibility towards society to become a responsible citizen</li> <li>Discuss 21<sup>st</sup> century skills</li> <li>Explain use of basic English phrases and sentences.</li> <li>Demonstrate how to communicate in a well-behaved manner</li> <li>Demonstrate how to work with others</li> <li>Demonstrate how to operate digital devices</li> <li>Discuss the significance of Internet and Computer/ Laptops</li> <li>Discuss the need for identifying business opportunities</li> <li>Discuss about types of customers.</li> <li>Discuss on creation of biodata</li> <li>Discuss about apprenticeship and opportunities related to it.</li> </ul>	
<b>Classroom Aids</b>	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
<b>Tools, Equipment and Other Requirements</b>	
Computer, UPS, Scanner, Computer Tables, LCD Projector, Computer Chairs, White Board OR Computer Lab	

## Module 12: On-The-Job Training

**Mandatory Duration: 150:00**

**Recommended Duration: 00:00**

### Terminal Outcomes

1. Explain the fundamental concept of a Drone
2. Illustrate the preliminary tasks involve in the Manufacture and Assembly of a Drone
3. Demonstrate how to perform preliminary checks on a Drone
4. Demonstrate how to carry out Testing of a Drone prior to deployment
5. Test functioning of the Drone post assembly
6. Communicate product and service-related information to the customer
7. Interact and coordinate with supervisor and colleagues
8. Perform assigned work within timelines and with defined quality
9. Demonstrate how to maintain a healthy, safe and secure working environment

# Annexure

## Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma / Degree in Electronics (related fields) or Aeronautical Engineering/ Certified in relevant CITS Trade	Should have knowledge of Aerospace engineering/ Electronics Engineering	2	Drone Manufacturing & Assembly Technician	1	Electronics	

Trainer Certification	
Domain Certification	Platform Certification
“Drone Manufacturing & Assembly Technician”, “ELE/Q7307, v3.0”, Minimum accepted score is 80%	Recommended that the Trainer is certified for the <b>Drone Manufacturing &amp; Assembly Technician</b> “Trainer (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2601, V2.0”, with minimum score of 80%

## Assessor Requirements

Assessor Prerequisites						Remarks	
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience			
		Years	Specialization	Years	Specialization		
Diploma / Degree in Electronics or Aeronautical Engineering/ Certified in relevant CITS Trade	Should have knowledge of aerospace engineering/ Electronics Engineering	3	Drone Manufacturing & Assembly Technician	2	Electronics		

Assessor Certification	
Domain Certification	Platform Certification
“Drone Manufacturing & Assembly Technician”, “ELE/Q7307, v3.0”, Minimum accepted score is 80%	Recommended that the Assessor is certified for the <b>Drone Manufacturing &amp; Assembly Technician</b> “Assessor (VET and Skills)”, mapped to the Qualification Pack: “MEP/Q2701, V2.0”, with minimum score of 80%

## Assessment Strategy

### 1. Assessment System Overview:

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

### 2. Testing Environment

To ensure a conducive environment for conducting a test, the trainer will:

- 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 are 10 a.m. and 5 p.m. respectively
- Ensure there are 2 Assessors if the batch size is more than 30.
- Check that the allotted time to the candidates to complete Theory & Practical Assessments 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
- The assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

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

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

### 5. Method of verification or validation:

To verify the details submitted by the training centre, the assessor will undertake:

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

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

To protect the assessment papers and information, the assessor will ensure:

- 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 on the Harddrive

# 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</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 on-site training
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of on-site training
<b>Procedural Knowledge</b>	Procedural knowledge addresses how to do something, or how to perform a
<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
<b>AMC</b>	Annual Maintenance Contract
<b>CPR</b>	Cardiopulmonary Resuscitation
<b>DC</b>	Direct Current
<b>EM&amp;B</b>	E-Mobility & Battery
<b>GPS</b>	Global Positioning System
<b>IC</b>	Integrated Circuit
<b>NCO</b>	National Occupational Standards
<b>NOS</b>	National Skills Qualification Committee
<b>NSQF</b>	National Skills Qualification Framework
<b>OMR</b>	Optical Mark Recognition
<b>OJT</b>	On-the-Job Training
<b>PC</b>	Performance Criteria
<b>PwD</b>	Persons with Disabilities
<b>QP</b>	Qualification Pack
<b>SDMS</b>	Skill Development & Management System
<b>SIP</b>	Skill India Portal
<b>SME</b>	Small and Medium Enterprises
<b>SOP</b>	Standard Operating Procedure
<b>SSC</b>	Sector Skill Council
<b>TAB</b>	Tablet
<b>TC</b>	Trainer Certificate
<b>ToA</b>	Training of Assessors
<b>ToT</b>	Training of Trainers
<b>TP</b>	Training Provider
<b>VTP</b>	Vocational Training Provider