

Skilling India in Electronics

QUALIFICATIONS HANDBOOK

A comprehensive information handbook to
foster career in Electronics Sector



SEMICONDUCTOR



EMBEDDED SYSTEMS



IOT



AUTOMATION



CONSUMER
ELECTRONICS

**Electronics Sector Skills
Council of India**

www.essc-india.org



Skilling is building a better India.

“If we have to move India towards development then Skill Development should be our mission and become the skill capital of the world”.

Shri. Narendra Modi
Prime Minister of India

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Electrical Sector Skills Council of India

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About Electronics Sector Skills Council of India

The Electronics Sector Skills Council of India (ESSCI) is a not-for-profit organization established in 2012 to develop a future-ready workforce for the Electronics System Design & Manufacturing (ESDM) sector. Headquartered in New Delhi, ESSCI works closely with industry and academia to bridge the skill gap through industry-driven skilling, upskilling, and reskilling initiatives. Over the years, ESSCI has successfully trained 2.8 million professionals across India. With a strong focus on innovation and industry relevance, ESSCI is committed to strengthening the capacity and capability of human resources, enabling a globally competitive workforce for the ESDM sector.

ESSCI brings together all stakeholders:



Industry



Workforce



Academia

National Council for Vocational Education and Training (NCVT) has recognised Electronics Sector Skills Council of India as its Awarding Body



VISION

Our vision is to create a robust eco-system for creating a future ready workforce for the Electronic System Design and Manufacturing sectors worldwide for sustainable Livelihood.



MISSION

To build a dynamic, industry-powered skilling grid that equips a future-ready workforce to scale and sustain the global ESDM ecosystem.



Promoters

Electronics Sector Skills Council of India



**Electronic Industries
Association of India**



**India Electronics &
Semiconductor Association**



**Consumer Electronics and Appliances
Manufacturers Association**



**Manufacturer's Association
for Information Technology**



**Electrical Lamp and Component
Manufacturers Association of India**



**INDIAN PRINTED
CIRCUIT ASSOCIATION**

**Indian Printed
Circuit Association**

SUB-SECTORS

Electronics Sector Skills Council of India



Consumer Electronics
& IT Hardware



Communication &
Broadcasting



Electronics
Manufacturing Services



E-Mobility &
Battery



Industrial
Automation



PCB Design &
Manufacturing



Solar & LED



Security &
Surveillance



Semiconductor &
Components

ACHIEVEMENTS

Electronics Sector Skills Council of India



Industry Partners



Electronics Sector Skills Council of India



HCLTech



FESTO



VOLTAS



• • and many more... • •

Growth Drivers

Electronics System Design and Manufacturing

Large Consumer Base

1.2 billion consumers are engaged in rapid urbanization and digitization with increasing penetration of electronic products.

Growth of ESDM Industry

The Indian ESDM industry is expected to have one of the highest growth rates, representing a demand CAGR of 25% from 2022 to 2027.

Increased Local Demand

Consistent local demand for electronic products, along with increasing manufacturing investment, is anticipated to catapult the industry into a high growth phase.

Third Largest Startup Ecosystem

New innovations, start-ups, designs, and technology propelling digitization across India.

Ease of Doing Business

'Make in India' and 'Digital India' initiatives, along with the government's impetus on EoDB.

Technology Advancement

Rollout of 5G & industrial use of Internet of Things (IoT) technology. Robust R&D Ecosystem.

Electric Mobility Market

Electric Mobility Market Size to hit USD 1,507.21 billion, at a CAGR of 27.2% by 2028. The electric vehicle market is expected to be worth around at least Rs. 475 billion by 2026.

Semicon India Program (ISM)

Schemes for setting up Semiconductor Fabs, Display Fabs, Compound Semiconductors, OSAT / ATMP, Design Linked Incentive (DLI).

India - A Drone Hub

For the boost of the domestic manufacturing of drones in India, Govt. launched the PLI Scheme worth Rs. 120 crore and it aims to make India a drone hub by 2030

PLI Schemes

Production Linked Incentive (PLI) Schemes for Large Scale Electronics Manufacturing and IT Hardware.

Schemes to Promote Manufacturing

Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), Modified Electronics Manufacturing Clusters Scheme (EMC 2.0)

Job Lucrative Sector

The Indian ESDM industry, currently characterized by the low value addition, is expected to witness investment in manufacturing and thereby is likely to transform into a high-value-adding sector by 2027.

WorldSkills - 'Olympics of Skills'

ESSCI Preparation for WorldSkills Shanghai 2026



WorldSkills Competition is the largest skill competition in the world and is also considered as 'Olympics of Skills'. This competition brings students, industries, and educators together to give youth the chance to compete, experience, and learn how to become the best in their skill of choice. At the 47th WorldSkills Competition, held in Lyon, France, from 10–15 September 2024, India won 4 Bronze Medals and 12 Medallions for Excellence, showcasing the country's growing strength and commitment to excellence in vocational skills on the global stage. In the upcoming WorldSkills Competition, ESSCI is managing the following skills:



Electronics



Intelligent Security Technology



Autonomous Mobile Robotics



Optoelectronic Technology



Electrical Installation



Refrigeration and Air Conditioning



Mechatronics



Unmanned Aerial Systems

IndiaSkills 2026 National Winners



**Debashish Panda, Aditya
Prakash**

Autonomous Mobile Robotics
SILVER MEDALLIST



Mohanraj
Electronics
GOLD MEDALLIST



Md. Dilkhush
Refrigeration & Air Conditioning
Gold MEDALLIST



Nikhilan M
Unmanned Aerial Systems
SILVER MEDALLIST

Futuristic Job Roles

Advanced Program on Nano Science & Technology

System

AI Embedded Product Developer (Electronics)

Assistant Robotics Technician (Introduction)

Basics of Semiconductor Manufacturing Process

Battery System Design Engineer

Clean-Room Operations (for semiconductors)

Electronic Hardware Design Engineer

Embedded Full Stack IoT Analyst

Embedded Product Design - Technical Lead

Embedded Software Engineer



Essential Fundamentals of IoT

Foundation of System on Chip (SoC) Design

Foundation Program on Nano Science & Technology

Fundamentals of Cleanroom - Semiconductors

IoT Hardware Analyst

Junior Engineer Drone (R & D)

Mechatronics Maintenance Specialist

Motor and Controller Design Engineer

Semiconductor Process Technology Engineer – Upskilling

VLSI Design Engineer

HOW TO APPLY

Select the relevant category below and contact the respective ESSCI representative.



TRAINING PARTNER

✉ affiliations@essc-india.org



TOT PARTNER

✉ kapil@essc-india.org
✉ affiliations@essc-india.org



INDUSTRY PARTNER / COE PARTNER

✉ saroj@essc-india.org



GOVT PROJECTS

✉ saleem@essc-india.org



COURSE ENQUIRIES

✉ Ashish@essc-india.org



PLACEMENT & APPRENTICESHIP NAPS

✉ partnerships@essc-india.org



Additional Queries: info@essc-india.org



Empowering Talent.

Driving Innovation.

Transforming ESDM.



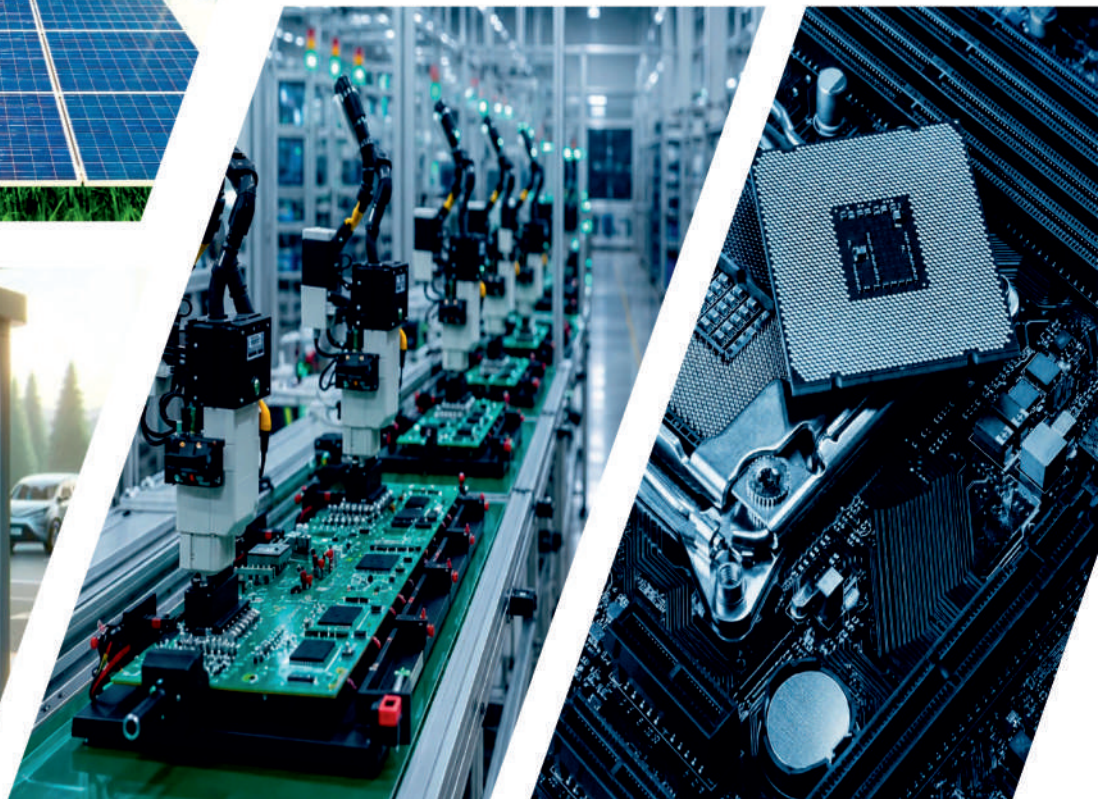
www.essc-india.org

List of Qualifications - <https://essc-india.org/qualification-packs.php>

Communication & Broadcasting			Industrial Automation			Industrial Safety for Semiconductor Manufacturing - Electrical		
1 Direct Attached Storage(DAS) Set Top Box Installation & Service Technician	L-4	26 HVAC * Technician	L-4	51 Assistant Robotics Technician (Introduction)	L-3	74 Industrial Safety for Semiconductor Manufacturing - Electrical	L-5	
2 Digital Cable Technician - Access	L-4	27 IT Hardware Support Coordinator	L-4	52 Building Management System Project Manager	L-6	75 Industrial Safety for Semiconductor Manufacturing - HAZCHEM	L-5	
3 Quality Manager - Electronics	L-6	28 Purchase Coordinator- Electronics	L-4	53 Building Management System Service Engineer	L-5	76 IoT Hardware Analyst	L-5	
4 DTH Set Top Box Installation & Service Technician	L-4	29 Service Technician - Home Appliances	L-4	54 Electrician - Smart Energy and IoT-enabled Systems	L-4	77 Semiconductor Process Technology Engineer - Upskilling	L-6	
5 Mobile Phone Hardware Repair Technician	L-4	30 Assistant Technician - TV	L-3	55 Electronic Hardware Design Engineer	L-5	78 Sr. Executive- Business Development (Electronics)	L-5	
6 Smartphone Assembly Technician	L-4	Electronics Manufacturing Services		56 Mechanical Engineering and Plumbing General Manager (Electronics)	L-6	79 VLSI Design Engineer	L-5	
Consumer Electronics & IT Hardware			31 Assembly Line Operator (Electronics Modules)	L-3	57 Mechatronics Maintenance Specialist	L-5	80 Winding Machine Operator (Electronics Component)	L-4
7 Assistant Technician - Weighing & Measuring Machine	L-3	32 Assembly Operator -RAC	L-4	58 Fundamentals of Robotronics	L-2.5	81 Essentials of Internet of Things	L-4.5	
8 Assistant Technician Smart Meter	L-3	33 Assembly Operator -TV	L-4	59 Fundamentals of AIOT (Artificial Intelligence of Things)	L-2.5	82 Essentials of Coding and Programming	L-4	
9 Sr. Technician RACW* *Refrigeration Air Conditioning & Washing Machine	L-5	34 Electronics Manufacturing Services (EMS) Technician	L-4	60 Assembly and Wiring Operator- Standard Control Panel	L-3	83 VLSI Design Fundamentals	L-4	
10 Field Technician Computing and Peripherals	L-4	35 Pick and Place Assembly Operator	L-4	61 Jr. Technician -Electrical and Electronics Sub-System	L-3	84 Foundation of System on Chip (SoC) Design	L-4	
11 In-Store Demonstrator	L-3	36 Through Hole Assembly Operator	L-4	62 Field Technician - UPS And Inverter	L-4	85 AI Embedded Product Developer (Electronics)	L-4.5	
12 Junior Field Technician - Basic Home Appliances	L-3	37 Wiring Harness Assembly Operator	L-3	63 Mechanical Fitter (Electronics)	L-4	86 Assistant Welding Operator (Electronics)	L-3	
13 Multi Skill Technician (Home Appliances)	L-4	38 Basic Electro-Pneumatics Technician	L-4.5	64 Wireman - Control Panel Electronics	L-3	87 Basics of Semiconductor Manufacturing Process	L-4.5	
14 Multi Skill Technician - Consumer Durables	L-4	E-Mobility & Battery		PCB Design & Manufacturing			88 Fundamentals of Cleanroom - Semiconductors	L-4.5
15 Quality Supervisor (Consumer Goods)	L-5	39 Assistant Drone Technician	L-3	65 PCB Assembly Technician	L-4	89 Basic Pneumatics in Semiconductor Manufacturing	L-4.5	
16 Remote Helpdesk Operator (Electronics Product)	L-3	40 Battery System Assembly Operator	L-4	Security & Surveillance			90 Integrate Vacuum Systems for Semiconductor Manufacturing Equipment	L-4.5
17 IT Hardware Maintenance Executive	L-5	41 Battery System Design Engineer	L-5	66 CCTV Installation Technician	L-4	Solar & LED		
18 Essentials of Refrigeration and Air Conditioning	L-3	42 Battery System Repair Technician	L-4	Semiconductor & Components			91 Solar LED Technician	L-4
19 Fundamentals of Big Data	L-4.5	43 Drone Service Technician	L-4	67 Advanced Program on Nano Science & Technology	L-6.5	92 LED Light Repair Technician	L-4	
20 Assistant Technician - Computer and Peripheral	L-3	44 Electronic Hardware Assembly Operator	L-4	68 Clean-Room Operations (for semiconductors)	L-4	93 LED Assembly and Testing Technician	L-4	
21 Customer Service Executive - Electronic Products	L-4	45 Junior Engineer Drone (R & D)	L-5.5	69 Embedded Full Stack IoT Analyst	L-5	94 Solar Panel Installation Technician	L-4	
22 Electronics Machine Maintenance Technician- Shop Floor	L-4	46 Motor & Controller Repairing Technician	L-4	70 Embedded Product Design - Technical Lead	L-5.5	95 ARC* Technician-Solar Cell	L-4.5	
23 Field Technician - Air Conditioner	L-4	47 Motor and Controller Design Engineer	L-5	71 Embedded Software Engineer	L-5	96 Fundamentals of Wet Process Operations in Solar Cell Manufacturing	L-4.5	
24 Field Technician Networking And Data Storage	L-4	48 Drone Manufacturing and Assembly Technician	L-4	72 Essential Fundamentals of IoT	L-4			
25 Field Technician-Kitchen Appliances	L-4	49 Unmanned Aerial Systems - Operation and Maintenance Supervisor	L-5	73 Foundation Program on Nano Science & Technology	L-6			
		50 Electric Vehicle Service Technician	L-4					

Qualifications

Sub-Sector Wise



Semiconductor & Components Qualifications

1

Job Role: Advanced Program on Nano Science & Technology, ELE/N6106

NQR Code: NG-6.5-EH-00198-2023-V1-ESSC

Reviewed on: Under renewal

Occupation: Design & Manufacturing

NSQF Level: 6.5

Validity: 3 years

Brief Job Description

Personnel working in the High-End research and development (Academic & Industry)/ Faculty in the Nanoelectronics, Microsystems, smart materials technologies, and related areas are responsible for the fabrication and characterization of the micro/nano-scale devices.

Minimum Education Qualification

8th Class with 2 years of relevant Experience OR 10th Class with 6 months of relevant experience OR I.T.I (after 8th) OR Certificate of NSQF Level-2 in the domain of (Electronics / Electrical / Mechanical) with 1 year of relevant Experience.

Applicable National Occupational Standards (NOS)

1. Module 1: Introduction to Facilities/Equipment
2. Module 2: Hands-on training on Fabrication modules
3. Module 3: Hands-on training on Characterization tools
4. Module 4: HW/Reading material
5. Module 5: Preparation of Research Proposal
6. Module 6: Research Proposal presentation
7. Module 7: MC Quiz



2

Job Role: AI Embedded Product Developer (Electronics), ELE/Q1407

NQR Code: QG-4.5-EH-03602-2025-V1-ESSCI

Reviewed on: 18-02-2028

Occupation: Product Design (S&C)

NSQF Level: 4.5

Validity: 3 years

Brief Job Description

The "SIC - Artificial Intelligence" Qualification will provide a comprehensive introduction to Python programming and essential libraries like NumPy and Pandas for data analysis. It will also cover data visualization using Matplotlib. The course emphasizes practical programming skills, offering hands-on experience to aspiring Python developers. Additionally, it introduces key Machine Learning concepts, allowing participants from any background to acquire the skills necessary to become an AI Engineer.

Minimum Education Qualification

1. UG Certificate (Electronics/Electrical/Computer science/Artificial Intelligence)
2. 3 Year diploma after 10th (Electronics/Electrical/Computer science/Artificial Intelligence)
3. 12th (Science) with 1.5 years relevant experience
4. Previous relevant Qualification of NSQF Level 4 with 1.5 years relevant experience

Applicable National Occupational Standards (NOS)

1. ELE/N1420: Introduction to Artificial Intelligence
2. ELE/N1421: Advanced Mathematics and Exploratory Data Analysis for Artificial Intelligence
3. ELE/N1422: Machine Learning
4. ELE/N1423: NLP, Neural Networks, Deep Learning, and AI Capstone



3

Job Role: Assistant Welding Operator (Electronics) , ELE/Q0102

NQR Code: QG-03-EH-044792025-V2-ESSCI

Reviewed on: 07-10-2028

Occupation: Manufacturing/Process

NSQF Level: 3

Validity: 3 years

Brief Job Description

An Assistant Welding Operator Electronics is responsible for bonding the electro-tinned copper lead wire to the center of the steel and the cap, of the resistor by the welding process.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade with 3 years of relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Semiconductor & Components.

Applicable National Occupational Standards (NOS)

1. ELE/N0171: Welding Preparation and Setup
2. ELE/N0170: Welding Execution and Quality Control
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



4

Job Role: Basics of Semiconductor Manufacturing Process LE/MCr-0003

NQR Code : NM-4.5-EH-045002025-V1-ESSCI

Reviewed on: 07- 10 - 2028

Occupation: Production

NSQF Level: 4.5

Validity: 3 years

Brief Job Description

The Basics of Semiconductor Manufacturing Process is an upskilling course that offers foundational skills in semiconductor manufacturing, focusing on equipment such as valves, actuators, chillers, sensors, and environmental control systems critical to the manufacturing process. Learners will gain overview of operation, maintenance, safety protocols, and quality standards, preparing them for technical roles in the semiconductor industry.

Minimum Education Qualification

1. Diploma after 10th in Electronics/Electrical domain with 6 months of experience
 2. 12th in Science or Equivalent in Science with 1.5 years of experience
 3. 10th or equivalent with 4.5 years of relevant experience
 4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience
- *Relevant Experience in the Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. Module 1: Introduction to Semiconductor Manufacturing Process



5

Job Role: Clean-Room Operations (for semiconductors) , ELE/N0166**Occupation:** Production**NQR Code:** NG-04-EH-02530-2024-V1-ESSC**NSQF Level:** 4**Reviewed on:** 30- 04- 2027**Validity:** 3 years**Brief Job Description**

Clean-Room Operations (for semiconductors) trains participants in managing clean room environments for industries like semiconductor manufacturing. Covering protocols, equipment maintenance, safety, and personnel management, it equips them to ensure cleanliness, safety, and efficiency in clean room facilities.

Minimum Education Qualification

1. Complete 12th or Equivalent (Science Stream)
2. 10th with 2 years ITI in the relevant area

Applicable National Occupational Standards (NOS)

1. Module 1: Clean Room Fundamentals and Design Principles
2. Module 2: Airflow Mechanics and Filtration Technologies
3. Module 3: Construction and Materials for Clean Rooms
4. Module 4: Contamination Control Strategies and Chemical Management
5. Module 5: Access Control, Personnel Practices, and Safety Procedures
6. Module 6: Automation, Maintenance, and Quality Assurance



7

Job Role: Embedded Product Design - Technical Lead, ELE/Q1403**Occupation:** Product Design**NQR Code:** QG-5.5-EH-03983-2025-V4-ESSCI**NSQF Level:** 5.5**Reviewed on:** 31- 04 - 2028**Validity:** 3 years**Brief Job Description**

The Embedded Product Design Engineer-Technical Lead designs, develops and debugs embedded systems and related products as per the given requirements, specifications, system architecture and feasibility analysis. The individual leads and performs the assigned responsibilities independently

Minimum Education Qualification

1. 3 or 4 year UG Degree in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 1.5 year of relevant experience
 2. 3 Year Diploma (Electronics/Electrical/Mechanical) after 10th with 3 Years of relevant experience
 3. .Previous relevant Qualification of NSQF Level (5) with 1.5 Years of relevant experience.
- # Relevant Experience in Semiconductor & Components.

Applicable National Occupational Standards (NOS)

1. ELE/N1432: Create Designs for Embedded Electronic product
2. ELE/N1433: Develop, Debug, and Verify Software for Embedded Products
3. ELE/N1434: Perform testing and rectify malfunctions in the prototype of the embedded product
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



6

Job Role: Embedded Full Stack IoT Analyst , ELE/Q1404**Occupation:** Product Design**NQR Code:** QG-05-EH-03981-2025-V4-ESSCI**NSQF Level:** 5**Reviewed on:** 30- 04- 2028**Validity:** 3 years**Brief Job Description**

The individual in this job role creates and implements new embedded OS based on system requirements and/or industry specifications. The individual builds and manages OS drivers for any custom hardware and to enhance existing application with new features.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Computer Science) with 1.5 year of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/ Computer Science) with 3 Years of relevant experience
 - 3.Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Semiconductor & Components.

Applicable National Occupational Standards (NOS)

1. ELE/N1429: Design, Develop, and Test an IoT-Based System
2. ELE/N1430: Create GUI and Applications in a framework
3. ELE/N1431: Perform Firmware Testing and Troubleshooting
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



8

Job Role: Embedded Software Engineer , ELE/Q1501**Occupation:** Product Design**NQR Code:** QG-05-EH-03972-2025-V4-ESSCI**NSQF Level:** 5**Reviewed on:** 31- 04 – 2028**Validity:** 3 years**Brief Job Description**

An Embedded Software Engineer is responsible for assessing the embedded systems specification requirement, develops software, tests and validates the software in coordination with design engineers for system integration.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Computer Science) with 1.5 years of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/ Computer Science) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Semiconductor and Components.

Applicable National Occupational Standards (NOS)

1. ELE/N1508: Understanding Project Needs Analysis and System Design using Agile and MBSE
2. ELE/N1509: Embedded Software Development with Modular Tools
3. ELE/N1510: Structured Digital Documentation with Quality and Traceability
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



9

Job Role: Essential Fundamentals of IoT , ELE/N1417	Occupation: Product Design
NQR Code: NG-04-EH-02529-2024-V1-ESSC	NSQF Level: 4
Reviewed on: 30-04-2027	Validity: 3 years

Brief Job Description

The "Essential Fundamentals of IoT" is a comprehensive training course designed for students, covering fundamental concepts, architectures, hardware platforms, connectivity protocols, security considerations, and future trends in the Internet of Things (IoT). This program equips students with essential skills and knowledge to excel in the evolving IoT landscape.

Minimum Education Qualification

1. Complete 12th or Equivalent (Science Stream)
2. Pursuing 12 or Equivalent (Science Stream)



Applicable National Occupational Standards (NOS)

1. Module 1: Understanding IoT Concepts and Technologies
2. Module 2: Building IoT Systems
3. Module 3: Implementation and Security

11

Job Role: Essentials of Internet of Things , ELE/N0167	Occupation: Production-S&C
NQR Code: NG-4.5-EH-02977-2024-V1-ESSC	NSQF Level: 4.5
Reviewed on: 27 – 08- 2027	Validity: 3 years

Brief Job Description

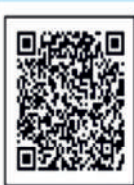
The 'SIC - Internet of Things' qualification is a comprehensive training program designed to equip participants with the knowledge and skills required to excel in the rapidly growing field of IoT. This course provides a deep dive into the fundamental concepts, hardware integration, programming, networking, and advanced applications of IoT. participants will acquire hands-on experience with Raspberry Pi configuration, sensor interfacing, circuit design, and basic electronics.

Minimum Education Qualification

1. UG Certificate or Equivalent (Relevant Field: Electronics, Electrical, Mechanical, Computer Science)
2. 12th with 1.5 years of relevant experience
3. 3-year diploma after 10th (Relevant Field: Electronics, Electrical, Mechanical, Computer Science)
4. 10 with 3 years of relevant experience
5. Previous NSQF Level 4 with 3 years of relevant experience

Applicable National Occupational Standards (NOS)

1. Module 1: IoT Overview
2. Module 2: Hardware & Sensor overview
3. Module 3: Git & Git/Hub Control
4. Module 4: Introduction to Python on Raspberry Pi
5. Module 5: Introduction to Network Communication
6. Module 6: IoT Capstone Project



10

Job Role: Essentials of Coding and Programming. ELE/N0801	Occupation: Programmer
NQR Code: NG-04-EH-02979-2024-V1-ESSC	NSQF Level: 4
Reviewed on: 27- 08- 2027	Validity: 3 years

Brief Job Description

The SIC - Coding and Programming is an upskilling course that offers an individual knowledge for developing applications and platforms in high level language in order to build a robust hack free system. They will be responsible for evaluating the technical performance of algorithmic models on the system on which it is being deployed. They will be responsible for developing, designing, building, testing and deploying programming solutions.

Minimum Education Qualification

1. 2nd year of 3 year diploma after 10th (Relevant Field : Electronics, Electrical, Mechanical, Computer Science)
2. 12th (equivalent) OR 10 with 3 year of relevant exp
3. Previous NSQF Level 3.5 with 3 year of relevant exp

Applicable National Occupational Standards (NOS)

1. Module 1: Sequential Planning Programming
2. Module 2: List, Tuple, Dictionary and Sequential Data Types
3. Module 3: Algorithm and Data Structures
4. Module 4: Python and Pandas for Data Processing
5. Module 5: Data Visualization Mini Project



12

Job Role: Foundation of System on Chip (SoC) Design, ELE/MCr-0002	Occupation: Production-S&C
NQR Code: NM-04-EH-02993-2024-V1-ESSC	NSQF Level: 4
Reviewed on: 27 – 08 – 2027	Validity: 3 years

Brief Job Description

In the System on Chip (ARM Cortex-M0) Design Foundation Course, students will learn core principles and practical skills for modern embedded system design. This intensive program focuses on SoC architectures, peripheral integration, and programming techniques essential for creating efficient embedded solutions.

Minimum Education Qualification

1. 3rd year of 3 year diploma after 10th (Relevant Field : Electronics, Electrical, Mechanical, Computer Science)
2. 12th (equivalent)
3. 10 with 3 year of relevant exp
4. Previous NSQF Level 3 with 3 year of relevant exp

Applicable National Occupational Standards (NOS)

1. Module 1: Introduction to SoC Design and Architecture



13

Job Role: Foundation Program on Nano Science & Technology, ELE/N6105	Occupation: Design & Manufacturing
NQR Code: QG-05-EH-01328-2023-V1.1-ESSC	NSQF Level: 6
Reviewed on: under renewal	Validity: 3 years

Brief Job Description

Familiarization introduces different aspects of Nanoelectronics and provides exposure to the research infrastructure available at the Nano centers. Familiarization is organized in modules, such as MEMS cantilever, microfluidics, spintronics, 2D MoS2 transistors, interdigitated electrode devices, GaN LEDs, photovoltaics and nano-photonics.

Minimum Education Qualification

1. Pursuing 4th year of UG – Engineering in the relevant field
2. Pursuing first year of M.Sc in the relevant field

Applicable National Occupational Standards (NOS)

1. Module 1: Literature survey
2. Module 2: Introduction to the Facilities
3. Module 3: Lecture on Nanoscience and Engineering
4. Module 4: HW/Reading material
5. Module 5: Research Proposal preparation
6. Module 6: Participant Poster presentations
7. Module 7: MC Quiz



15

Job Role: Industrial Safety for Semiconductor Manufacturing – Electrical , ELE/N1005	Occupation: Generic - Health Safety
NQR Code: NG-05-EH-02093-2024-V1-ESSC	NSQF Level: 5
Reviewed on: 31 -01 - 2027	Validity: 3 years

Brief Job Description

Industrial Safety in the Semiconductor Manufacturing - Electrical, plays a vital role in maintaining the safety and well-being of employees, protecting the environment, and ensuring the company's adherence to regulatory requirements. Their work helps prevent accidents, reduce risks, and create a safer and more productive work environment.

Minimum Education Qualification

1. Completed 3 year diploma after 10th (Electronics/Electrical/Mechanical) with 1 Year of experience relevant experience
2. Completed 2nd year of UG (UG Diploma) ((B.Sc/B.E./B.Tech) in the relevant field – Electrical / Electronics, Mechanical) with 1 Year of experience relevant Experience
3. 12th grade Pass with 2 Years of experience relevant experience
4. 10th grade pass with 4 Years of experience

Applicable National Occupational Standards (NOS)

1. Module 1: Introduction to the Basics of semiconductor
2. Module 2: Industrial Safety for Semiconductor manufacturing - Electrical



14

Job Role: Fundamentals of Cleanroom – Semiconductors ELE/MCr-0004	Occupation: Manufacturing
NQR Code: NM-4.5-EH-045012025-V1-ESSCI	NSQF Level: 4.5
Reviewed on: 7 -10 - 2028	Validity: 3 years

Brief Job Description

The Fundamentals of Cleanroom Semiconductor is an upskilling course that equips learners with the overview and knowledge to work effectively in a semiconductor manufacturing cleanroom environment. The curriculum emphasizes overview understanding cleanroom protocols, monitoring equipment, maintaining cleanliness, and ensuring contamination control to meet industry standards.

Minimum Education Qualification

1. Diploma after 10th in Electronics/Electrical domain with 6 months of experience
2. 12th in Science or Equivalent in Science with 1.5 years of experience
3. 10th or equivalent with 4.5 years of relevant experience
4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience

*Relevant Experience in Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. Module 1: Introduction to Cleanroom SOP in Semiconductor



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Job Role: Industrial Safety for Semiconductor Manufacturing – HAZCHEM , ELE/N1006	Occupation: Generic - Health Safety
NQR Code: NG-05-EH-02094-2024-V1-ESSC	NSQF Level: 5
Reviewed on: 31 – 01 - 2027	Validity: 3 years

Brief Job Description

Industrial Safety in the Semiconductor Manufacturing Hazchem play a vital role in maintaining the safety and well-being of employees, protecting the environment, and ensuring the company's adherence to regulatory requirements .

Minimum Education Qualification

1. Completed 2nd year of UG (UG Diploma) (Graduation B.sc/B.tech/B.E-Electrical/Electronics/Mechanical) with 1 Year of experience Relevant Experience
2. Diploma (After 10 Electronics/Electrical/Mechanical) with 1 Year of experience relevant Experience
3. 12th grade Pass with 2 Years of experience relevant Experience
4. 10th grade pass with 4 Years of experience relevant Experience

Applicable National Occupational Standards (NOS)

1. Module 1: Introduction to the Basics of semiconductor
2. Module 2: Industrial Safety for Semiconductor manufacturing - Hazchem



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Job Role: IoT Hardware Analyst , ELE/Q1405**Occupation:** Product Design**NQR Code:** QG-05-EH-03971-2025-V4-ESSCI**NSQF Level:** 5**Reviewed on:** 30-04-2028**Validity:** 3 years**Brief Job Description**

The individual in this job role prepares a complete blueprint of the hardware including schematics layout, quality verification requirements and perform PCB testing in compliance with regulatory standards to records them in a design document. The individual will also be responsible for working and efficient functioning of the system.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Computer Science) with 1.5 year of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/ Computer Science) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Electronics Domain.

Applicable National Occupational Standards (NOS)

1. ELE/N1424: Prepare detailed requirements and design specification documents
2. ELE/N1425: Develop the circuit schematic and PCB layout for the IoT system.
3. ELE/N1426: Assemble and perform testing of the complete IoT solution
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: VLSI Design Engineer , ELE/Q1201**Occupation:** Product Design**NQR Code:** QG-05-EH-03969-2025-V4-ESSCI**NSQF Level:** 5**Reviewed on:** 30-04 -2028**Validity:** 3 years**Brief Job Description**

The individual at work designs SOC module function using software and design tools as per the given specifications. The individual is also responsible for coordinating with other design teams involved in the SOC design.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 1.5 relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/Mechanical) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Semiconductor and components.

Applicable National Occupational Standards (NOS)

1. ELE/N1427: Developing Functional Design for SOC Modules
2. ELE/N1428: Coordinating and Implementing SOC Design Verification and Testing
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: Semiconductor Process Technology Engineer – Upskilling , ELE/Q1406**Occupation:** Product Design**NQR Code:** QG-06-EH-00817-2023-V1-ESSC**NSQF Level:** 6**Reviewed on:** 31- 08-2026**Validity:** 3 years**Brief Job Description**

In This qualification a person would attend the knowledge of Semiconductor High-End research and development, Nano electronics, Microelectronics, Micro-systems, smart materials technologies, smart sensors technologies, and related areas responsible for the fabrication and characterization and feasibility testing of the micro/ Nano scale semiconductor devices.

Minimum Education Qualification

1. Pursuing 4th Year of UG - Engineering in the ECE/EEE/EE/CS/Allied Field
2. Pursuing First Year of M.Sc in the VLSI/Allied field
3. Pursuing PhD in the relevant field

Applicable National Occupational Standards (NOS)

1. ELE/N1412: Advanced Hands- on Training on Semiconductor Process Technologies
2. ELE/N1413: Design & Packaging Techniques -Semiconductor Process Technologies
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: VLSI Design Fundamentals , ELE/N1419**Occupation:** Design**NQR Code:** QG-06-EH-00422-2023-V1.1-ESSC**NSQF Level:** 4**Reviewed on:** 27- 08 -2027**Validity:** 3 years**Brief Job Description**

Explore the basic theory and practice of VLSI design by covering transistor-level circuit design to chip assembly, gain hands-on experience and deep understanding of VLSI fundamentals. Develop skills essential for success in designing and verifying complex integrated circuits.

Minimum Education Qualification

1. 2nd year of 3-year diploma after 10th (Relevant Field: Electronics, Electrical, Mechanical, Computer Science)
2. 12th (equivalent)
3. 10 with 3 years of relevant experience
4. Previous NSQF Level 3 with 3 years of relevant experience

Applicable National Occupational Standards (NOS)

1. Module 1: Transistor Fundamentals and CMOS Basics
2. Module 2: Advanced Circuit Design Techniques
3. Module 3: Transistor-Level Analysis and Optimization
4. Module 4: Circuit Performance and Optimization
5. Module 5: Advanced Design Topics
6. Module 6: Verification, Test



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Job Role: Winding Machine Operator (Electronics Component) , ELE/Q0101	Occupation: Manufacturing/Process
NQR Code: QG-04-EH-04208-2025-V4-ESSC	NSQF Level: 4
Reviewed on: 8-05-2028	Validity: 3 years

Brief Job Description

The Winding Machine Operator (Electronics Component) winds the metal-alloy wire or metalized film on to a core by using an automated or semi-automated winding machine in the process of manufacturing of capacitors and resistors. The individual also samples the resistance or capacitance of the winding.

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) + 2 Year NAC/relevant Experience)
2. 10th Grade pass or equivalent + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in Maintenance Technician) with 2 Years of relevant Experience
4. 12th Class

Applicable National Occupational Standards (NOS)

1. ELE/N0168: Perform Winding Operations for Resistors and Capacitors
2. ELE/N0169: Quality Assurance, Maintenance, and Safety in Winding Operations
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Integrate Vacuum Systems for Semiconductor Manufacturing Equipment	Occupation: Manufacturing
NQR Code: XXXX	NSQF Level: 4.5
Reviewed on: 8-07 -2029	Validity: 3 years

Brief Job Description

This qualification equips learners with the foundational skills to work with vacuum systems in semiconductor manufacturing environments, focusing on vacuum principles, system integration with manufacturing equipment, performance monitoring, routine maintenance, and adherence to safety protocols to ensure reliable and efficient production operation

Minimum Education Qualification

1. Diploma after 10th in Electronics/Electrical domain with 6 months of experience
2. 12th in Science or Equivalent in Science with 1.5 years of experience
3. 10th or equivalent with 4.5 years of relevant experience
4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience

*Relevant Experience in the Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. Understand the principles of vacuum technology and their application in semiconductor manufacturing processes.
2. Operate and monitor vacuum systems and associated equipment to ensure stable and efficient process conditions.
3. Perform preventive maintenance activities on vacuum equipment to maintain performance and reduce downtime.
4. Identify and troubleshoot common vacuum system malfunctions and restore normal operation.
5. Apply safety practices and ensure environmental compliance during vacuum system operation and maintenance.

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Job Role: Sr. Executive- Business Development (Electronics) ELE/Q1101	Occupation: After-sales Service
NQR Code: QG-04-EQG-05-EH-03984-2025-V5-ESSCI	NSQF Level: 5
Reviewed on: 30-04-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for studying the market, understanding the customer requirement and offering products and services to satisfy the customer requirement. The individual at work coordinates and interacts with customers for sale of products and services.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 1.5 years of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/Mechanical) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Semiconductor & Components.

Applicable National Occupational Standards (NOS)

1. ELE/N1103: Conduct a market analysis
2. ELE/N1104: Present effective solutions to meet customer needs
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: Basic Pneumatics in Semiconductor Manufacturing	Occupation: Manufacturing
NQR Code: XXXXXX	NSQF Level: 4.5
Reviewed on: 8-07 -2029	Validity: 3 years

Brief Job Description

This qualification equips learners with the foundational skills to work with pneumatic systems in semiconductor manufacturing environments, focusing on air compression, distribution, treatment, and system optimization in ATMP/OSAT processes.

Minimum Education Qualification

1. Diploma after 10th in Electronics/Electrical domain with 6 months of experience
2. 12th in Science or Equivalent in Science with 1.5 years of experience
3. 10th or equivalent with 4.5 years of relevant experience
4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience

*Relevant Experience in the Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. Understand the properties and behavior of compressed air and area of application.
2. Knowledge of different types of pneumatic compressors and their efficiencies.
3. Identify and operate essential pneumatic system components like air filtering, regulation, distribution, lubrication, operation of actuators & valves.
4. Maintain, troubleshoot, and optimize pneumatic systems.
5. Apply knowledge of pneumatics to improve process efficiency in semiconductor manufacturing

PCB Design & Manufacturing Qualifications

Job Role: PCB Assembly Technician, ELE/Q7804	Occupation: Manufacturing/Production
NQR Code: QG-04-EH-044832025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

PCB Assembly Technician is responsible for manually placing different types of components on the PCB as per the design requirements and then soldering them.

Minimum Education Qualification

1. 12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

1. ELE/N5106: PCB Assembly Preparation
2. ELE/N5107: PCB Assembly, Quality Check, and Delivery
3. DGT/VSQ/N0101: Employability Skills (30 Hours)





Consumer Electronics & IT Hardware Qualifications

Job Role: Assistant Technician – Computer and Peripheral, ELE/Q4609	Occupation: After sales Service
NQR Code: QG-03-EH-044852025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual is responsible for installing newly purchased products, troubleshooting system problems and, configuring peripherals such as printers, scanners and network devices.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade with 3 year relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience from Consumer Electronics & IT Hardware domain

Applicable National Occupational Standards (NOS)

1. ELE/N5111: Engage with customers for IT hardware Services and repair
2. ELE/N5112: Install and Set Up Computing Devices and Peripherals
3. ELE/N5110: Coordinate, Communicate, and Ensure Safe Field Service Delivery
4. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Assistant Technician - Weighing & Measuring Machine , ELE/Q3126	Occupation: After sales Service
NQR Code: QC-03-EH-00816-2023-V1-ESSC	NSQF Level: 3
Reviewed on: 31-08-2028	Validity: 3 years

Brief Job Description

An Assistant Technician - Weighing & Measuring Machine will have the ability to identify problems and rectify the defects, and calibrate as per the statutory requirements in the weighing & measuring machines. The person will be skilled in systematic troubleshooting using both observation and diagnostic tools to pinpoint issues accurately.

Minimum Education Qualification

1. 8th grade pass (with 2 Year of NTC)
2. 8th grade pass with 2 Years of experience Relevant experience
3. 9th grade pass with 1 Year of experience Relevant Experience
4. 10th grade pass

Applicable National Occupational Standards (NOS)

1. ELE/N3172: Repairing of the Weighing & Measuring Machine
2. ELE/N3173: Performance & Calibration of Weighing & Measuring Machine
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Assistant Technician – TV , ELE/Q3101	Occupation: After Sales Service
NQR Code: QG-03-EH-044802025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

Assistant Technician- TV is responsible for interacting with the customer to install the TV as well as diagnose the problem. The individual also needs to assess possible causes of faults reported and rectify problems/faults.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade with 3 year relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Consumer Electronics & IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N3195: Customer Interaction and Service Support
2. ELE/N3102: Install and repair TVs
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Assistant Technician Smart Meter , ELE/Q5905	Occupation: After sales Service
NQR Code: QG-03-EL-05073-2026-V1-ESSCI	NSQF Level: 3
Reviewed on: 13-03-2029	Validity: 3 years

Brief Job Description

The incumbent at work is responsible for installation, replacement, and testing of smart energy, water, and gas meters at the consumer's place by following organizational procedures and standards.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade + 3 years of relevant experience
 3. Certificate NSQF (Level 2 in relevant domain) + 1.5 years of relevant experience
- # Relevant Experience in Electronics Domain

Applicable National Occupational Standards (NOS)

1. ELE/N5908: Installation and troubleshoot of smart energy meter
2. ELE/N5909: Installation & troubleshoot of Smart Water Meter
3. ELE/N5910: Installation & troubleshoot of Smart Gas Meter
4. ELE/N1007: Apply health and safety practices at the workplace..
5. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Customer Service Executive - Electronic Products , ELE/Q4603	Occupation: After Sales Support
NQR Code: QG-04-EH-044862025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for installing newly purchased products, troubleshooting system problems and, configuring peripherals such as printers, scanners, and network devices.

Minimum Education Qualification

8th Class with 2 Years of experience relevant OR Certificate-NSQF (Level-2 in the domain of (Repair and Maintenance of computing & peripherals) with 2 Years of experience relevant OR 10th Class with 6 Months of experience relevant OR I.T.I (after 8th).

Applicable National Occupational Standards (NOS)

1. ELE/N4601: Engage with customers for IT hardware service
2. ELE/N4602: Install, configure and setup hardware system
3. ELE/N9972: Communicate and coordinate effectively with others
4. ELE/N1003: Work effectively, sustainably and safely
5. DGT/VSQ/N0101: Employability Skills



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Job Role: Field Technician - Air Conditioner, ELE/Q3102	Occupation: After-sales Service
NQR Code: QG-04-EH-044952025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10 -2028	Validity: 3 years

Brief Job Description

Field Technician Air Conditioner provides after-sales service to customers, where he/she needs to interact with customers to diagnose the problem and assess possible causes. The individual identifies and rectifies minor problems or replaces faulty modules for failed parts or recommends factory repair for bigger faults

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Consumer Electronics & IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N3101: Engage with customer for service
2. ELE/N3108: Perform installation and repair of air conditioner
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Essentials of Refrigeration and Air Conditioning, ELE/MCr-0001	Occupation: After Sales Service
NQR Code: NM-03-EH-02835-2024-V1-ESSC	NSQF Level: 3
Reviewed on: 07-08-2027	Validity: 3 years

Brief Job Description

This Essentials of Refrigeration and Air Conditioning job role covers, air-conditioning fundamentals, service practices, refrigerant properties & alternative low GWP refrigerants, and safety protocols. It includes hands-on training on refrigerant charging & recovery, brazing, and installation, emphasizing technician certification and adherence to international standards for safe, efficient operations & environmental impacts.

Minimum Education Qualification

1. grade pass (with 1.5 years relevant experience)
2. 8th grade pass (with 3 years relevant experience)
3. NSQF Level 2.5 (with 3 years relevant experience)

Applicable National Occupational Standards (NOS)

1. ELE/N7911: Equipment Maintenance Planning & Preparation
2. ELE/N7910: Execution of Maintenance Activities & Quality Assurance
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Field Technician, Networking And Data Storage, ELE/Q4606	Occupation: After Sales Service
NQR Code: QG-04-EH-044962025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

Field Technician-Networking and Data Storage provides after-sales support services to customers, typically, at their premises, and is responsible for attending to customer complaints, installing newly purchased products, troubleshooting system problems, and configuring peripherals such as printers, scanners, and network devices

Minimum Education Qualification

8th Class (+ ITI (2 years after 8th) with 2 years of relevant Experience) OR 10th Class (With 2 years of relevant Experience OR I.T.I (after 10th) OR 12th Class OR Certificate (NSQF Level-3 in Safety Testing Technician RACWO with 2 years of relevant Experience).

Applicable National Occupational Standards (NOS)

1. ELE/N3101: Engage with customer for service
2. ELE/N3118: Install the water purifier
3. ELE/N3119: Repair dysfunctional water purifier
4. ELE/N3120: Repair dysfunctional mixer/juicer/grinder
5. ELE/N3121: Repair dysfunctional microwave oven
6. ELE/N9905: Work effectively at the workplace
7. ELE/N1002: Apply health and safety practices at the workplace
8. DGT/VSQ/N0102: Employability Skills



Job Role: Field Technician Computing and Peripherals , ELE/Q4601	Occupation: After sales Service
NQR Code: QG-04-EH-02776-2023-V1.1-ESSC	NSQF Level: 4
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

A Field Technician -- Computing & Peripherals is responsible for visiting customer premises to install and carry out repair and maintenance of a desktop computer. The individual carries out installation and troubleshooting of computer peripherals also. The individual may also carry out installation, repair, and maintenance of a laptop and relevant peripherals.

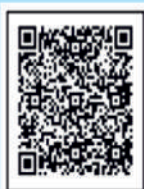
Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) + 2 Year NAC/relevant Experience)
2. 10th Grade pass + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in Maintenance Technician) with 2 Years of relevant Experience
4. 12th Class

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ELE/N4601: Evaluate the customer requirements and computer issues
2. ELE/N3155: Install the desktop computer and its peripherals
3. ELE/N4603: Carry out repair and maintenance of a desktop computer and its peripherals
4. ELE/N9905: Work effectively at the workplace
5. ELE/N1002: Apply health and safety practices at the workplace
6. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Field Technician-Kitchen Appliances , ELE/Q3104	Occupation: After-sales Service
NQR Code: QG-04-EH-044982025-V2-ESSCI	NSQF Level: 4.5
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

Field Technician is responsible for interacting with the customer to install the appliance as well as diagnose the problem. The individual also needs to assess possible causes of faults reported and rectify problems/faults

Minimum Education Qualification

1. 12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Consumer Electronics & IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N3101: Engage with customer for service
2. ELE/N3196: Perform Installation & Repairing of Water Purifier
3. ELE/N3197: Perform Repairing of Mixer/Juicer/Grinder
4. ELE/N3198: Perform Repairing of Microwave Oven
5. ELE/N3199: Perform Repairing of Induction Cooktop
6. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Fundamentals of Big Data, ELE/N1418	Occupation: Product Design-S&C
NQR Code: NG-4.5-EH-02978-2024-V1-ESSC	NSQF Level: 4.5
Reviewed on: 27-08-2027	Validity: 3 years

Brief Job Description

The " SIC - Big Data" upskilling course offers an in-depth look at fundamental big data concepts and technologies, including Hadoop, Spark, and distributed computing. Participants engage in hands-on exercises and real-world case studies to master efficient data management and analysis. Ideal for professionals, this course provides practical skills to navigate and solve large-scale data challenges across various industries. The curriculum covers data storage, processing, and analysis, ensuring participants gain a well-rounded expertise. By the end, learners will be equipped to excel in roles requiring proficiency in big data technologies and insights extraction.

Minimum Education Qualification

1. UG Certificate or Equivalent (Relevant Field: Electronics, Electrical, Mechanical, Computer Science)
2. 2nd with 1.5 years of relevant experience
3. 3-year diploma after 10th (Relevant Field: Electronics, Electrical, Mechanical, Computer Science)
4. 10 with 3 years of relevant experience
5. Previous NSQF Level 4 with 3 years of relevant experience

Applicable National Occupational Standards (NOS)

1. ELE/N3101: Engage with customer for service
2. ELE/N3112: Install and repair appliances
3. ELE/N9905: Work effectively at the workplace
4. ELE/N1002: Apply health and safety practices at the workplace
5. DGT/VSQ/N0102: Employability Skills



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Job Role: HVAC * Technician*Heating, Ventilation, and Air Conditioning , ELE/Q3112	Occupation: After sales Service
NQR Code: QG-04-EH-044992025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual in this job role maintains and repairs heating, air conditioning and ventilation systems in commercial and industrial areas. The individual engages with the client to understand the work requirement and follows organizational norms to complete the work.

Minimum Education Qualification

1. 12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Consumer Electronics & IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N3192: Engage with the customer for the service of the HVAC system
2. ELE/N3140: Service, troubleshoot, and repair an HVAC system (chillers)
3. ELE/N3141: Service, troubleshoot, and repair a packaged-type HVAC ducted system
4. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: IT Hardware Maintenance Executive , ELE/Q4607	Occupation: After sales Service
NQR Code: QG-05-EH-03977-2025-V3-ESSCI	NSQF Level: 4
Reviewed on: 30- 04- 2028	Validity: 3 years

Brief Job Description

The individual is responsible for attending to problems in IT hardware and related software systems problem either as a dedicated engineer at the customer premises (Facility Management) or remotely (Managed Services).

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Mechanical / Computer Science) with 1.5 years of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/Mechanical / Computer Science) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Consumer Electronics & IT Hardware.

Applicable National Occupational Standards (NOS)

1. ELE/N3190: Manage on-premises IT hardware for customers
2. ELE/N3191: Remotely manage and support customer IT systems
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: In-Store Demonstrator , ELE/Q3202	Occupation: Pre sales service
NQR Code: 2022/EHW/ESSC/06636	NSQF Level: 4
Reviewed on: 24-10-2027	Validity: 3 years

Brief Job Description

The individual in this job is responsible for effective engagement with the customers, understanding their buying requirements, explaining the promotions, schemes and offers of the store, assisting them in choosing the right model of appliance/device and completing the sales transaction.

Minimum Education Qualification

1. 10th Grade Pass
2. 8th Grade Pass + NTC (2 year after 8th)
3. 8th Grade Pass + 2 year relevant experience

Applicable National Occupational Standards (NOS)

1. ELE/N3203: Effectively interact with customers
2. ELE/N3204: Demonstrate product specifications and offerings
3. ELE/N9972: Communicate and coordinate effectively with others
4. ELE/N1003: Work effectively, sustainably and safely
5. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: IT Hardware Support Coordinator , ELE/Q4701	Occupation: After-sales Service
NQR Code: QG-04-EH-04472-2025-V2-ESSCI	NSQF Level: 4
Reviewed on: 27-10-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for operating and maintaining e-learning hardware as well as updating and operating the e-learning application. The individual also assists teachers and students in operating the eLearning applications.

Minimum Education Qualification

1. 12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N4701: Manage computing and display systems
2. ELE/N4702: Manage LMS
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Junior Field Technician - Basic Home Appliances , ELE/Q3117	Occupation: After sales Service
NQR Code: QG-04-EH-04689-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 11-08-2026	Validity: 3 years

Brief Job Description

The individual at work is responsible for interacting with the customers for the installation of the appliance and diagnosis of the problem to assess possible causes of malfunction, rectification of the problem, Replacement of faulty Parts.

Minimum Education Qualification

1. 10th grade or equivalent
 2. 8th grade pass with 3 Year relevant experience
 3. Certificate-NSQF (Level-2.5 in relevant domain) with 1.5 Years of relevant Experience
- # Relevant experience in Consumer Electronics & IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N7210: Engage with Customers and Electrical Service Skills
2. ELE/N7211: Install, Diagnose and Repair Domestic Fans and Coolers
3. ELE/N7212: Diagnose and Repair Solar LED and other lights
4. ELE/N7213: Diagnose and Repair Electric Kettle and Garment Care Appliances
5. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Quality Supervisor (Consumer Goods) , ELE/Q7901	Occupation: Quality Assurance
NQR Code: QG-05-EH-03982-2025-V5-ESSCI	NSQF Level: 5
Reviewed on: 30-04-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for ensuring compliance to quality regulations during product design identifying and implementing system evaluation and product assessment procedures in order to ensure conformance to standards and specifications.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 1.5 year of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/Mechanical) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Consumer Electronics & IT Hardware.

Applicable National Occupational Standards (NOS)

1. ELE/N4632: Support Product Development with Quality Control
2. ELE/N4633: Conduct quality tests and root-cause Analysis
3. ELE/N7903: Perform incoming and outgoing material testing
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



43

Job Role: Multi-Skill Technician - Consumer Durables , ELE/Q3118	Occupation: After sales Service
NQR Code: QG-04-EH-04690-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 18-11-2028	Validity: 3 years

Brief Job Description

The incumbent at work is responsible for installation, diagnose, troubleshoot and repair all consumer durables like refrigerator, TV, washing machine, water purifier, microwave etc. and communicate the Service Manager/Lead Mechanic regarding repair priorities and status

Minimum Education Qualification

1. 12th grade or equivalent
 2. 10th grade or equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant experience in Consumer Electronics & IT Hardware

Applicable National Occupational Standards (NOS)

1. ELE/N4614: Manage customer IT hardware at facility
2. ELE/N4615: Manage customer system remotely
3. ELE/N9905: Work effectively at the workplace
4. ELE/N1002: Apply health and safety practices at the workplace
5. DGT/VSQ/N0102: Employability Skills



44

Job Role: Remote Helpdesk Operator (Electronics Product) , ELE/Q4604	Occupation: After Sales Service
NQR Code: QG-03-EH-03976-2025-V4-ESSCI	NSQF Level: 5
Reviewed on: 30-04-2028	Validity: 3 years

Brief Job Description

The individual in this job role receives, understands, and resolves customers' technical queries through telephone and interacts with customer to identify the problem, understand the cause, to troubleshoot and Resolve the queries.

Minimum Education Qualification

1. Grade 10th
 2. Grade 8th with 3 year relevant experience
 3. Grade 8th with 2 year NTC/NAC
 4. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Consumer Electronics & IT Hardware.

Applicable National Occupational Standards (NOS)

1. ELE/N3186: Proactive Customer Engagement and Issue Resolution
2. ELE/N3187: Smart Troubleshooting and Resolution for Customer Queries
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Service Technician – Home Appliances , ELE/Q3111**NQR Code:** QG-04-EH-044772025-V2-ESSCI**Reviewed on:** 7-10-2028**Occupation:** After sales Service**NSQF Level:** 4**Validity:** 3 years**Brief Job Description**

A Service Technician Home Appliances is responsible to interact with customers to Install the appliance or diagnose the problem to assess possible causes of malfunction. Once the problem and causes have been identified, the individual rectifies the problems or replaces faulty modules/failed parts or recommends factory repairs.

Minimum Education Qualification

Diploma (3 Years) after 10th (Electrical or Electronics Engineering) with 3 Years of relevant experience Or after 12th (Electrical or Electronics Engineering) with 1 Year of Relevant experience) OR B.E./B.Tech (Degree in Electrical or Electronics Engineering) OR Certificate-NSQF (Level-4 in Quality Assurance) with 2 Years of experience relevant.

Applicable National Occupational Standards (NOS)

1. ELE/N7901: Provide quality support for product development
2. ELE/N7902: Perform quality tests and root-cause analysis
3. ELE/N7903: Perform incoming and outgoing material testing
4. ELE/N9905: Work effectively at the workplace
5. ELE/N1002: Apply health and safety practices at the workplace
6. DGT/VSQ/N0102: Employability Skills

**Job Role:** Sr. Technician RACW* *Refrigeration Air Conditioning & Washing Machine , ELE/Q3105**NQR Code:** QC-03-EH-00816-2023-V1-ESSC**Reviewed on:** 31/08/2023**Occupation:** After Sales Service**NSQF Level:** 3**Validity:** 3 years**Brief Job Description**

An Assistant Technician - Weighing & Measuring Machine will have the ability to identify problems and rectify the defects and calibrate as per the statutory requirements in the weighing & measuring machines. The person will be skilled in systematic troubleshooting using both observation and diagnostic tools to pinpoint issues accurately.

Minimum Education Qualification

10th grade pass OR 8th grade pass with 2 years of NTC (after 8th) OR 8th grade pass with 2 years of relevant Experience OR 9th grade pass with 1 year of relevant Experience

Applicable National Occupational Standards (NOS)

1. ELE/N3172: Repairing of the Weighing & Measuring Machine
2. ELE/N3173: Performance & Calibration of Weighing & Measuring Machine
3. DGT/VSQ/N0102: Employability Skills



Job Role: Multi Skill Technician - Consumer Durables, ELE/Q3118	Occupation: After Sales Service
NQR Code: QG-04-EH-04690-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 18-11-2028	Validity: 3 years

Brief Job Description

The incumbent at work is responsible for installation, diagnose, troubleshoot and repair all consumer durables like refrigerator, TV, washing machine, water purifier, microwave etc. and communicate the Service Manager/Lead Mechanic regarding repair priorities and status.

Minimum Education Qualificaton

8th grade pass + NTC (2 years after 8th) with 2 years of NAC/relevant experience OR 10th grade pass with 2 years NTC/NAC/relevant experience OR 12th grade pass OR Certificate (NSQF Level-3 in the Electrical Technician) with 2 years of relevant experience

Applicable National Occupational Standards (NOS)

Elective 1:

1. ELE/N3169: Installation and Repair of Refrigerator (DIOS)
2. ELE/N3170: Installation and Repair of Washing Machine
3. ELE/N3163: Installation and Repair of Dish Washer
4. ELE/N3162: Installation and Repair of Air Conditioner
5. ELE/N3161: Gas Charging in the Refrigerator and AC

Elective 2:

6. ELE/N3168: Installation and Repair of Television
7. ELE/N3167: Installation and Repair of Microwave
8. ELE/N3166: Installation and Repair of Water Purifier
9. ELE/N3165: Installation and Repair of basic refrigerator and washing machine
10. ELE/N3164: Installation and Repair of OLED/ Monitor

Compulsory NOS:

11. DGT/VSQ/N0102: Employability Skills



Job Role: Electronics Machine Maintenance Technician- Shop Floor , ELE/Q2501	Occupation: Equipment Maintenance
NQR Code: QG-04-EH-044932025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work is carries out scheduled maintenance of machines used on shop floor using manufacturer's manual and as per training given by manufacturer in order to have zero unscheduled downtime..

Minimum Education Qualificaton

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

1. ELE/N7911: Equipment Maintenance Planning & Preparation
2. ELE/N7910: Execution of Maintenance Activities & Quality Assurance
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Security & Surveillance Qualifications

Job Role: CCTV Installation Technician, ELE/Q4605

Occupation: After sales Service

NQR Code: QG-04-EH-03967-2025-V4-ESSCI

NSQF Level: 4

Reviewed on: 30-04-2028

Validity: 3 years

Brief Job Description

The individual at work is responsible for installing the CCTV system in the customer's premises. The individual understands the customer and site requirements, installs the camera, and integrates the Hardware for an effective CCTV surveillance system functioning

Minimum Education Qualification

1. 3 Year Diploma after 10th (Electronics/Electrical/Mechanical)
 2. 12th grade or Equivalent
 3. 10th with 2 Year NTC/NAC or 3 year relevant experience
 4. Certificate-NSQF (Level-3.5 in relevant domain) with 1.5 Years of relevant Experience
- # Relevant Experience in security and surveillances

Applicable National Occupational Standards (NOS)

1. ELE/N3182: Site Survey and Requirement Analysis
2. ELE/N3183: Deploying of monitoring system
3. ELE/N3184: Setting up a surveillance system
4. ELE/N3185: Policies related to Data privacy and security
5. DGT/VSQ/N0101: Employability Skills (30 Hours)



Electronics Manufacturing System Qualifications

50

Job Role: Assembly Line Operator (Electronics Modules) , ELE/Q4301	Occupation: Manufacturing/Production
NQR Code: QG-03-EH-044872025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for assembling the different modules in the IT hardware to complete the product. The individual receives different electronic and electromechanical modules, fits and assembles them together. The operator may assemble multiple modules and/or products by following operating procedures for different models.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade with 3 year relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

1. ELE/N4301: Perform Kitting of modules for assembling
2. ELE/N4302: Assemble modules to complete equipment
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



51

Job Role: Assembly Operator -RAC*Refrigerator and Air Conditioning , ELE/Q3501	Occupation: Assembly-EMS
NQR Code: QG-04-EH-044882025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for assembling and wiring various components, modules, or sub assemblies to build complete refrigeration and air conditioning systems as per technical specifications

Minimum Education Qualification

1. 12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

1. ELE/N3506: Assemble Refrigerator
2. ELE/N3507: Assemble air Conditioner
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



52

Job Role: Assembly Operator –TV , ELE/Q3502	Occupation: Manufacturing/Production
NQR Code: QG-04-EH-044892025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for assembling various modules of modern televisions including LED, QLED, and Smart TVs into the main frame using appropriate screws, connectors, and tools at different stages of the assembly line. The individual must ensure precision and minimal errors, as the assembly process operates in a continuous flow.

Minimum Education Qualification

1. 12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

1. ELE/N5105: TV Assembly Work Requirements & Techniques
2. ELE/N3509: Reporting, Productivity, Quality, and Safety Standards in TV Assembly
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



53

Job Role: Electronics Manufacturing Services (EMS) Technician, ELE/Q5315	Occupation: Manufacturing/Production
NQR Code : QG-04-EH-044942025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

PCB Assembly Technician is responsible for manually placing different types of components on the PCB as per the design requirements and then soldering them.

Minimum Education Qualification

8th Class (+ ITI (2 years after 8th) with 2 years of relevant experience) OR 10th Class with 2 Years of experience relevant OR Certificate-NSQF (Level-3 in Wiring Harness assembly operator) with 2 Years of experience relevant OR 12th Class with 6 Months of experience relevant.

Applicable National Occupational Standards (NOS)

1. ELE/N5106: PCB Assembly Preparation
2. ELE/N5107: PCB Assembly, Quality Check, and Delivery
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Pick and Place Assembly Operator , ELE/Q5102	Occupation: Manufacturing/Production
NQR Code: QG-04-EH-044812025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

A Pick and Place Assembly Operator at work programs, operates and maintains the automated pick-and place machine for placing different types of components on the surface of PCBs for soldering

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

- 1.. ELE/N5103: Assemble Printed Circuit Board (PCB) & Components
2. ELE/N5102: Operate Pick-and-Place Machine
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Through Hole Assembly Operator, ELE/Q5101	Occupation: Manufacturing/Production
NQR Code: QG-04-EH-044822025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

A Through Hole Assembly Operator is responsible for manually/automatic fixing components using hand tools, operating and maintaining the automated insertion machine used for placing different types of components on the through-hole PCBs.

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics Manufacturing Services

Applicable National Occupational Standards (NOS)

1. ELE/N5113: Perform Through-Hole Assembly on PCB Components
2. ELE/N5114: Operate the Through-Hole Machine for Automated Assembling
3. ELE/N5115: Maintain and Troubleshoot Through-Hole Assembly Equipment
4. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Wiring Harness Assembly Operator , ELE/Q6306	Occupation: Assembly & Soldering
NQR Code: QG-03-EH-02834-2023-V1.1-ESSC	NSQF Level: 4
Reviewed on: 27-01-2027	Validity: 3 years

Brief Job Description

The individual makes a wire harness assembly by cutting, stripping and crimping wires and then soldering, connecting, taping and labeling them on a laying board as per the design specifications. This is followed by testing the components of the assembly.

Minimum Education Qualification

1. 10th Grade Pass
2. 8th Grade Pass + NTC (2 year after 8th)
3. 8th Grade Pass + 2 year relevant experience

Applicable National Occupational Standards (NOS)

- 1.ELE/N6306: Perform pre-assembly operations
2. ELE/N6307: Assemble the components of wire harness
3. ELE/N9972: Communicate and coordinate effectively with others
4. ELE/N1003: Work effectively, sustainably and safely
5. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Basic Electro-Pneumatics Technician

Occupation: Manufacturing

NQR Code: XXXXXXXX

NSQF Level: 4.5

Reviewed on: 8-07-2029

Validity: 3 years

Brief Job Description

The Basic Electro-Pneumatics Operator/Technician is responsible for working with electro-pneumatic systems, including the application of basic electrical theory, operating electro-pneumatic components, designing and reading schematics, and following safety protocols. The role emphasizes troubleshooting, ensuring system efficiency, and maintaining safety standards.

Minimum Education Qualification

1. Diploma after 10th in Electronics/Electrical domain with 6 months of experience
2. 12th in Science or Equivalent in Science with 1.5 years of experience
3. 10th or equivalent with 4.5 years of relevant experience
4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience

*Relevant Experience in Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. Understanding Economical and Technical Aspects of Electro-Pneumatic Systems
2. Knowledge of Basic Electrical Theory
3. Electro-Pneumatic Components
4. Use of Sensors, Timers, and Counters
5. Understanding Compressed Air Basics
6. Designing and Reading Electro-Pneumatic Circuits
7. Following Safety Standards in Electro-Pneumatic Systems

Solar & LED Qualifications

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Job Role: LED Assembly and Testing Technician , ELE/Q5803	Occupation: Manufacturing/Production
NQR Code: QG-04-EH-044782025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for fitting together different electronic, electrical, and mechanical parts and connect them to make the final LED luminary as per the product design, as well as testing the LED luminaries using different testing equipment.

Minimum Education Qualification

1. 12th grade or equivalent
 2. 10th grade or equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Solar & LED

Applicable National Occupational Standards (NOS)

1. ELE/N5803: Assemble various parts of LED luminary according to standard practices
2. ELE/N5804: Test the LED luminary using various equipment
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



59

Job Role: LED Light Repair Technician , ELE/Q9302	Occupation: Installation
NQR Code: QG-04-EH-04473-2025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

A LED Light Repair Technician is responsible for checking the non- functional LED light in a systematic manner to find out the fault, dismantles it repairs the fault and reassemble the light to make it functional.

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Solar & LED

Applicable National Occupational Standards (NOS)

1. 1. ELE/N9302: Diagnose and Repair Faults in LED Lights
2. ELE/N7502: Identify and Replace Faulty LED Strips and Ensure Product Quality
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



60

Job Role: Solar LED Technician, ELE/Q5903	Occupation: Installation
NQR Code: QG-04-EH-02821-2025-V4-ESSC	NSQF Level: 4
Reviewed on: 24/02/2022	Validity: 3 years

Brief Job Description

The individual is capable of installing various types of solar home based LED lighting, outdoor and street lighting as per given instructions. The person should be able to identify faults in a solar PV system and carry out repair at preliminary level in line with given performance parameters. The individual must adhere to all the relevant environmental, safety and regulatory requirements while carrying out his/her job duties.

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) + 2 Year NAC/relevant Experience)
2. 10th Grade pass or equivalent + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in Maintenance Technician) with 2 Years of relevant Experience
4. 12th Class

Applicable National Occupational Standards (NOS)

1. ELE/N5911: Carry out the installation of the Solar PV System
2. ELE/N5912: Carry out maintenance and repairs on the Solar PV System
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



61

Job Role: Solar Panel Installation Technician , ELE/Q5901	Occupation: Installation
NQR Code: 2022/EHW/ESSC/06676	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

Solar Panel Installation Technician in this job checks the installation site, understands the layout requirement as per design, assesses precautionary measures to be taken, installs the solar panel as per customer's requirements and ensures effective functioning of the system post installation

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Solar & LED

Applicable National Occupational Standards (NOS)

1. ELE/N5901: Check site conditions, collect tools and raw materials
2. ELE/N5902: Install the Solar Panel
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: ARC* Technician-Solar Cell**NQR Code:** XXXX**Reviewed on:** 8-07-2029**Occupation:** Manufacturing**NSQF Level:** 4.5**Validity:** 3 years**Brief Job Description**

The ARC Technician is responsible for the application of anti-reflective coatings on optical components, including lenses and substrates, using specialized coating equipment. This involves preparation, quality inspection, maintenance, troubleshooting, and compliance with safety standards.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 1.5 year of relevant experience
Electronics/Electrical domain with 6 months of experience
2. 12th in Science or Equivalent in Science with 1.5 years of experience
3. 10th or equivalent with 4.5 years of relevant experience
4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience

*Relevant Experience in the Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. ARC Fundamentals and Equipment Preparation
2. Perform ARC Application Process
3. Quality Control and Testing of ARC Layers
4. Maintenance and Troubleshooting of ARC Equipment
5. Professional Skills and Safety Compliance

Job Role: Fundamentals of Wet Process Operations in Solar Cell Manufacturing**NQR Code:** XXXX**Reviewed on:** 8-07-2029**Occupation:** Manufacturing**NSQF Level:** 4.5**Validity:** 3 years**Brief Job Description:**

This qualification equips learners with the foundational skills to perform wet process operations in solar cell manufacturing environments, focusing on chemical preparation, wafer texturization, process control, equipment operation and maintenance, and adherence to safety protocols to ensure wafers meet defined efficiency, quality, and production standards.

Minimum Education Qualification

1. Diploma after 10th in Electronics/Electrical domain with 6 months of experience
2. 12th in Science or Equivalent in Science with 1.5 years of experience
3. 10th or equivalent with 4.5 years of relevant experience
4. Previous NSQF qualifications of Level 4 with 1.5 years of relevant experience

*Relevant Experience in the Semiconductor Domain

Applicable National Occupational Standards (NOS)

1. Understand and perform chemical preparation, handling, and management activities used in wet process operations.
2. Carry out wafer cleaning and texturization processes as per defined parameters and quality requirements.
3. Operate and maintain wet process equipment, including associated pneumatic components, to ensure reliable operation.
4. Monitor and control wet process parameters such as temperature, concentration, time, and flow to maintain process consistency.
5. Apply safety practices and ensure environmental compliance during chemical handling and wet process operations.

Industrial Automation Qualifications

64

Job Role: Assembly and Wiring Operator- Standard Control Panel , ELE/Q7306	Occupation: Manufacturing/Production
NQR Code: QG-03-EH-044912025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work mounts and installs and connects internal electronic modules devices and components on the control panel.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade with 3 year relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation

Applicable National Occupational Standards (NOS)

1. ELE/N3193: Control Panel Assembly - Preparation & Component Installation
2. ELE/N3194: Control Panel Wiring, Testing & Compliance
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Assistant Robotics Technician (Introduction) , ELE/Q7203	Occupation: After Sales Service-I&A
NQR Code: QG-03-EH-01992-2024-V1-ESSC	NSQF Level: 3
Reviewed on: 31-01-2027	Validity: 3 years

Brief Job Description

Assistant Robotics Technician carries out the setup for Testing of small-scale robotics systems followed by its Inspection for desired and rated functionality, while ensuring adherence to standard working practices.

Minimum Education Qualification

1. 10th grade pass
2. 9th grade pass with 1 Year of experience relevant Experience

Applicable National Occupational Standards (NOS)

1. ELE/N9972: Communicate and coordinate effectively with others
2. DGT/VSQ/N0102: Employability Skills (60 Hours)
3. ELE/N3174: Carry out the setup of small-scale robotics system
4. ELE/N3175: Testing of small-scale robotics system



66

Job Role: Building Management System Project Manager , ELE/Q7102	Occupation: Assembly-I&A
NQR Code: QG-06-EH-03973-2025-V3-ESSCI	NSQF Level: 3
Reviewed on: 30-04-2028	Validity: 3 years

Brief Job Description

A Building Management System (BMS) Project Manager is responsible for the successful delivery of Building Management System (BMS) installation projects. The responsibilities include coordinating with the client to understand their requirements and then working with various teams within the organisation for the successful installation, testing, commissioning, and handover of BMS to the client.

Minimum Education Qualification

1. 3 or 4 year UG Degree in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 3 year of relevant experience
 2. 3 Year Diploma (Electronics/Electrical/Mechanical) after 10th with 4.5 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (5.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation.

Applicable National Occupational Standards (NOS)

1. ELE/N6103: Manage the BMS tendering, designing and procurement processes
2. ELE/N6104: Manage the BMS installation, testing, commissioning and handover processes
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: Building Management System Service Engineer , ELE/Q7104	Occupation: After sales Service
NQR Code: QG-05-EH-03979-2025-V3-ESSCI	NSQF Level: 4
Reviewed on: 30-4-2028	Validity: 3 years

Brief Job Description

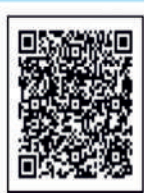
A Building Management System (BMS) Service Engineer is responsible for installing the Building Management System (BMS) at the client premises. The person is also responsible for monitoring the BMS for the correct functioning and carrying out its regular repair and maintenance.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Computer Science) with 1.5 year of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/ Computer Science) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation.

Applicable National Occupational Standards (NOS)

1. ELE/N7205: Prepare for installing the BMS
2. ELE/N7206: Carry out the installation of BMS
3. ELE/N7208: Carry out commissioning and testing of BMS
4. ELE/N7207: Carry out repair and maintenance of BMS
5. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Electrician – Smart Energy and IoT-enabled Systems , ELE/Q5804	Occupation: Equipment Maintenance
NQR Code: QG-04-EH-04688-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 18-11-2028	Validity: 3 years

Brief Job Description

The individual at work Planning, Design & Installation modules and sub parts together that form the electrical & electronic system of the product.

Minimum Education Qualification

- 1.12th grade or equivalent
 2. 10th grade or equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Electronics & Electrical domain

Applicable National Occupational Standards (NOS)

1. ELE/N5806: Planning, Design & Installation of Electrical and Electronic Sub System
2. ELE/N5805: Testing, Commissioning, Maintenance, Fault Finding & Repair
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Electronic Hardware Design Engineer, ELE/Q6102	Occupation: Designing
NQR Code: QG-05-EH-03980-2025-V4-ESSCI	NSQF Level: 5
Reviewed on: 30-4-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for undertaking research on new products, work with R&D on developing the schematics, converting them to PCB layout using CAD and other software and generating the Gerber file to pass on to PCB manufacturers.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Computer Science) with 1.5 year of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/ Computer Science) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation.

Applicable National Occupational Standards (NOS)

1. ELE/N8707: Development and testing of PCB prototype
2. ELE/N8708: Ensuring Product Excellence and Collaboration
3. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Field Technician - UPS And Inverter , ELE/Q7201	Occupation: After-sales Service
NQR Code: QG-04-EH-044972025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10 -2028	Validity: 3 years

Brief Job Description

The individual at work installs the newly purchased UPS or inverter and interacts with customers to diagnose problems in them, assess possible causes, rectify faults or replace faulty modules or recommends factory repairs for bigger faults

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Industrial Automation

Applicable National Occupational Standards (NOS)

1. ELE/N0061: Understand requirement of customer
2. ELE/N7201: Install the UPS/Inverter
3. ELE/N7202: Repair dysfunctional UPS/inverter
4. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Fundamentals of AIOT (Artificial Intelligence of Things) , ELE/N7122	Occupation: Engineering-I&A
NQR Code: NG-2.5-EH-02976-2024-V1-ESSC	NSQF Level: 2.5
Reviewed on: 27-08-2027	Validity: 3 years

Brief Job Description

Fundamentals of AIOT (Artificial Intelligence of Things) Entry Level Course aims to improve human-machine interactions, increase data management and analytics, and make IoT operations more efficient. In order to ensure the sustainable development of the country, this module aims to introduce concepts of cognitive science, Internet of Things, and Artificial Intelligence (AI) to those with little to no prior knowledge. It will also help instill a reasoned thinking approach and solve societal problems using technological skills. In order to promote a meaningful and productive learning experience, the module covers the fundamentals of AIOT as well as the most recent tools and approaches in a hands-on, interactive workbook-style format.

Minimum Education Qualification

Diploma (after 10th (Electrical or Electronics or Mechanical Engineering) with 3 Years of Relevant experience) OR (Diploma after 12th (Electrical or Electronics or Mechanical Engineering) with 1 Year of Relevant experience) OR B.E./B.Tech (Degree in Electrical or Electronics or Mechanical Engineering)OR Certificate-NSQF (Level-4 in Site Engineer Control Panel) with 2 Years of experience in the relevant field.

Applicable National Occupational Standards (NOS)

1. Module 1: Gaining an understanding of fundamental IoT concepts through applications
2. Module 2: Gaining an understanding of Data, Database, Dataset, Data Visualization, Data Science and Big Data
3. Module 3: Carry out troubleshooting for IoT devices
4. Module 4: Describe the machine learning process



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Job Role: Fundamentals of Robotronics , ELE/N7123	Occupation: Engineering-I&A
NQR Code: NG-2.5-EH-02975-2024-V1-ESSC	NSQF Level: 2.5
Reviewed on: 27-08-2027	Validity: 3 years

Brief Job Description

A Fundamentals of Robotronics carries out the basic understanding of the robotics systems followed by its assembly & Inspection for desired and rated functionality, while ensuring adherence to standard working practices. The role of the individual likely to be responsible for assisting with the setup, maintenance, and troubleshooting of various robotics systems with no prior knowledge. Tasks might include assembling robotic components, calibrating sensors and actuators, programming controllers, conducting experiments, and documenting results.

Minimum Education Qualification

1. 9th OR 8th (Continuous education)

Applicable National Occupational Standards (NOS)

1. Module 1: Knowing the parts and fundamentals of a robotics system's operation
2. Module 2: Understanding the fundamental functions and applications of a robotics system
3. Module 3: Testing and Maintenance of Robotics Systems
4. Module 4: Reporting and Documentation



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Job Role: Jr. Technician -Electrical and Electronics Sub-System , ELE/Q6301	Occupation: Equipment Maintenance
NQR Code: QG-03-EH-044922025-V2-ESSCI	NSQF Level: 3
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work integrates together modules and sub parts that form the electronic system of the product.

Minimum Education Qualification

1. 10th Grade or equivalent
 2. 8th Grade with 3 year relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation

Applicable National Occupational Standards (NOS)

1. ELE/N6320: Electrical Sub-System Assembly - Preparation & Electronics Component Integration
2. ELE/N6319: Electrical Sub-System Wiring, Testing & Compliance
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Mechanical Engineering and Plumbing General Manager (Electronics) , ELE/Q7103	Occupation: Others
NQR Code: QG-06-EH-00420-2023-V1.1-ESSC	NSQF Level: 6
Reviewed on: 23- 04-2028	Validity: 3 years

Brief Job Description

An Mechanical Engineering and Plumbing (MEP) General Manager (Electronics) is responsible for planning, managing, monitoring and execution of Mechanical Engineering and Plumbing (MEP) projects at the client premises. The individual is also responsible for preparing the tender proposal and making presentations to secure MEP contracts, identifying the training needs of company personnel and arranging training, recruitments, risk assessment, Profit & Loss (P&L) management, etc.

Minimum Education Qualification

1. 3 or 4 year UG Degree in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 2 year of relevant experience
 2. 3 Year Diploma (Electronics/Electrical/Mechanical) after 10th with 4.5 Years of relevant experience
 3. .Previous relevant Qualification of NSQF Level (5.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation.

Applicable National Occupational Standards (NOS)

1. ELE/N7106: Manage the tendering, sub-contracting and planning processes for MEP projects
2. ELE/N7107: Manage the MEP project execution, commissioning, testing and handover processes
3. ELE/N7108: Carry out internal organizational - level responsibilities
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: Mechanical Fitter (Electronics) , ELE/Q6302	Occupation: Manufacturing/Production
NQR Code: QG-04-EH-04475-2025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

The individual at work undertakes periodical preventive maintenance of machines as per the set schedule for the electrical and mechanical systems installed in the factory. The individual is also responsible for attending to any breakdown and repairs to restore temporary or permanent functioning or call expert for significant down time problems

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Industrial Automation

Applicable National Occupational Standards (NOS)

1. ELE/N7309: Mechanical and Electrical Sub-System Preparation
2. ELE/N7310: Integration, Quality Control, and Productivity Standards
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Mechatronics Maintenance Specialist , ELE/Q7105**Occupation:** Others**NQR Code:** QG-05-EH-03974-2025-V3-ESSCI**NSQF Level:** 5**Reviewed on:** 30-04-2028**Validity:** 3 years**Brief Job Description**

A Mechatronics Maintenance Specialist is responsible for installing, testing, and using sensors, actuators, and microcontrollers in the mechatronics system. The individual is also responsible for carrying out the repair and maintenance of the mechatronics system.

Minimum Education Qualification

1. UG Diploma in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 1.5 year of relevant experience
 2. 3 Years Diploma after 10th (Electronics/Electrical/Mechanical) with 3 Years of relevant experience
 3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Industrial Automation.

Applicable National Occupational Standards (NOS)

1. ELE/N7109: Set up circuits and electrical components in the mechatronics system
2. ELE/N7110: Install, test and use the sensors and actuators in the mechatronics system
3. ELE/N7111: Install, test and use microcontroller in the mechatronics system
4. DGT/VSQ/N0102: Employability Skills (60 Hours)

**Job Role:** Wireman - Control Panel Electronics , ELE/Q7302**Occupation:** Manufacturing/Process**NQR Code:** QG-03-EH-04474-2025-V2-ESSCI**NSQF Level:** 3**Reviewed on:** 7-10-2028**Validity:** 3 years**Brief Job Description**

The individual at work is responsible for wiring all components present within the panel as per specifications provided by the design engineering team

Minimum Education Qualification

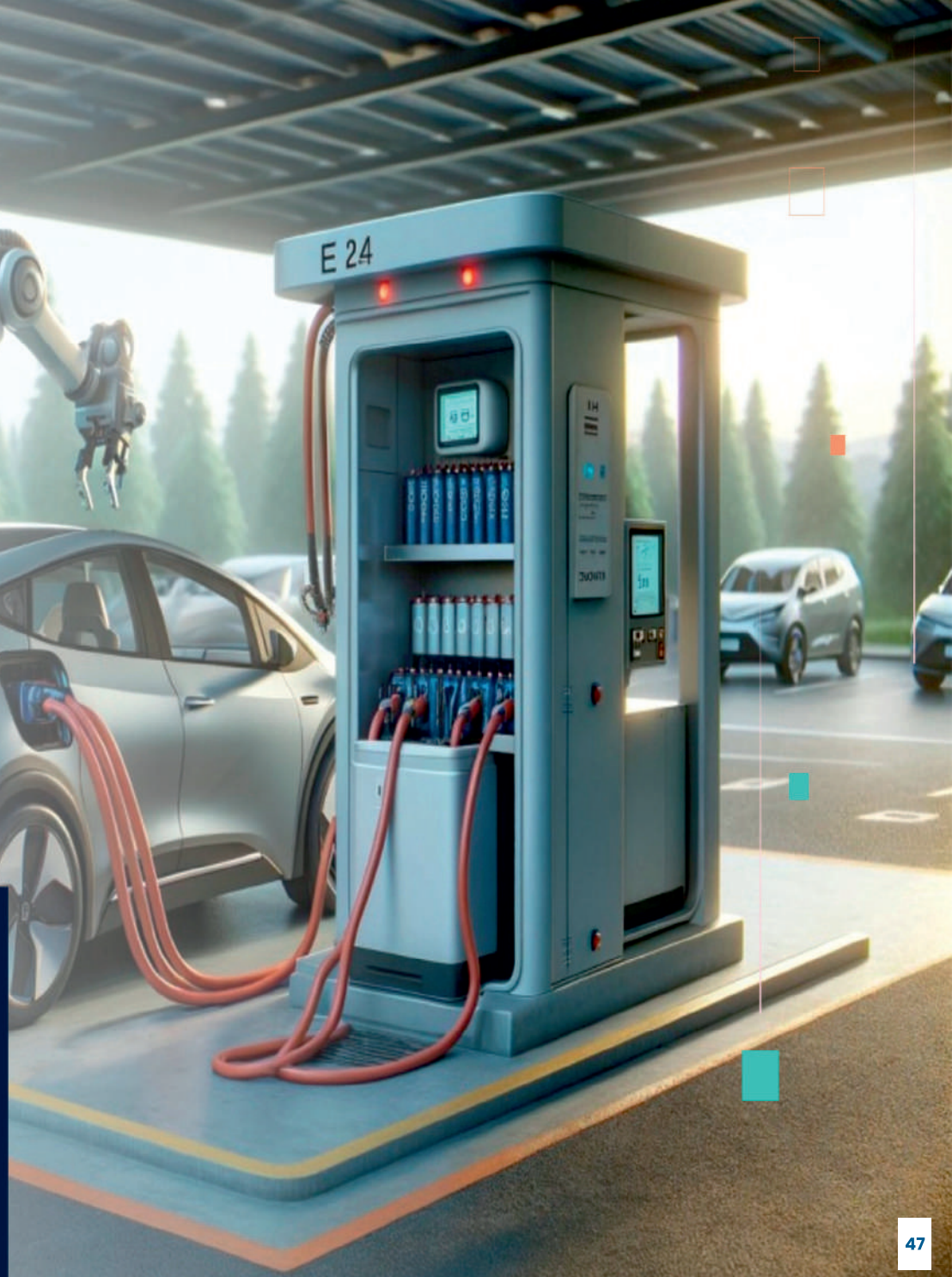
1. 10th Grade or equivalent
 2. 8th Grade with 3 year relevant experience
 3. Previous relevant Qualification of NSQF Level (2.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Electrical & Electronics

Applicable National Occupational Standards (NOS)

1. ELE/N6321: Planning and Preparation for Control Panel Wiring
2. ELE/N6322: Execution and Completion of Control Panel Wiring
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



E-mobility & Battery Qualifications



Job Role: Assistant Drone Technician , ELE/Q7004	Occupation: Manufacturing/After Sales
NQR Code: QG-03-EH-00575-2023-V1-ESSC	NSQF Level: 4
Reviewed on: under renewal	Validity: 3 years

Brief Job Description

An Assistant Drone Technician conducts routine Maintenance, Troubleshoots, Bench Testing and Flying while ensuring adherence to standard working practices. The individuals in this job maintain, troubleshoots, test and fly drones of varying sizes that are used for various applications such as aerial photography & videography, transporting goods, firefighting, survey and mapping, powerline Inspection, Industrial Inspection, Emergency Operations etc.

Minimum Education Qualification

1. 10th grade pass with NA of experience
2. 8th Class with 2 Years of experience Relevant Experience
3. 8th grade pass with 2 years of NTC with NA of experience
4. 9th grade pass with 1 Year of experience relevant experience

Applicable National Occupational Standards (NOS)

- 1..ELE/N7008: Theoretical Concept of Drone Technology
2. ELE/N7007: Practical Aspect of Drones and Simulation Techniques
3. ELE/N7009: Drone Testing and Maintenance
4. ELE/N9972: Communicate and coordinate effectively with others
5. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Battery System Design Engineer , ELE/Q6701	Occupation: Product Design
NQR Code: 2021/EHW/ESSC/04787	NSQF Level: 5
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

The Battery System Design Engineer is responsible for the design and implementation of the control system that ensures battery longevity, efficiency, and safety of the battery in an Electric Vehicle. The job covers activities like designing the battery system, thorough testing, and validation of the design.

Minimum Education Qualification

1. B.E./ B.Tech (Degree in Electrical or Electronics Engineering)
2. Diploma after 10th (Electrical or Electronics Engineering) with 02 years of relevant Experience
3. Course of NSQF Level-4 in the domain of EV / Electrical / Mechanical /Automobile (Battery System Assembly Operator) with 3 year of Experience

Applicable National Occupational Standards (NOS)

1. ELE/N6701: Design the Battery system
2. ELE/N6702: Inspect, test and implement the Battery system
3. ELE/N9905: Work effectively at the workplace
4. ELE/N1002: Apply health and safety practices at the workplace
5. DGT/VSQ/N0103: Employability Skills (90 Hours)



Job Role: Battery System Repair Technician ELE/Q7001	Occupation: After-sales Service
NQR Code: 2021/EHW/ESSC/04789	NSQF Level: 4
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

The Battery system repair technician is responsible for servicing and repairing of the battery system in an Electric Vehicle. Along with that, s/he tests the battery system after servicing and takes corrective actions against any malfunction detected.

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) +2 Year NAC/relevant Experience)
2. 10th Grade pass + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in EV/Electrical/Mechanical relevant Domain) with 2 Years of relevant Experience
4. 12th Grade

Applicable National Occupational Standards (NOS)

1. ELE/N7006: Identify service related issues of the customer
2. ELE/N7002: Repair faulty parts in the Battery System
3. ELE/N7001: Test the Battery System after service and repair
4. ELE/N9905: Work effectively at the workplace
5. ELE/N1002: Apply health and safety practices at the workplace
6. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Drone Manufacturing and Assembly Technician, ELE/Q7307	Occupation: Manufacturing/Production
NQR Code: QG-03-EH-04687-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 27-10-2028	Validity: 3 years

Brief Job Description

A Drone Manufacturing and Assembly Technician simulates, assembles, tests and debugs drones as part of a Drone manufacturing line, whilst ensuring adherence to standard working practices. The individuals in this job assemble and manufacture drones of varying sizes that are used in various applications such as taking aerial photos/videos, transporting goods, firefighting and emergency operations, power line inspections, clandestine inspections, etc.

Minimum Education Qualification

10th class + 2 years of experience OR 12th class + 6 months experience OR 2 years ITI (after 10th) OR 3 years Eng. Diploma after 10th (Electrical/ Electronics/Instrumentation Engineering) OR Course of NSQF Level-3 in the domain of Electrical/ Electronics/ Instrumentation/ Mechanical with 2 years of experience.

Applicable National Occupational Standards (NOS)

1. ELE/N7308: Manufacturing and Assembly of a drone
2. ELE/N9905: Work effectively at the workplace
3. ELE/N1002: Apply health and safety practices at the workplace
4. DGT/VSQ/N0102: Employability Skills



Job Role: Drone Service Technician , ELE/Q7003	Occupation: After-Sale Service
NQR Code: QG-04-EH-03422-2024-V3-ESSC	NSQF Level: 4
Reviewed on: 17-12-2027	Validity: 3 years

Brief Job Description

A Drone Service Technician conducts routine maintenance, troubleshoots and repairs malfunctioning or defective Drone while ensuring adherence to standard working practices. The individuals in this job maintain and repair drones of varying sizes that are used in various applications such as taking aerial photos or videos, transporting goods, firefighting and emergency operations, power line inspections, clandestine inspections, etc.

Minimum Education Qualification

1. 10th Class + 2 year of NAC/NTC
2. 10th Class pass with 3 years relevant experience
3. 11th Pursuing with 1.5 years of relevant experience
4. 12th Pass or Equivalent
5. Certificate NSQF Level 3 (Two Wheeler/Four Wheeler Service Assistant) with 3 Years of experience of relevant experience

Applicable National Occupational Standards (NOS)**1. Compulsory NOS:**

1. ASC/N9801: Organize work and resources (Service)
 2. DGT/VSQ/N0102: Employability Skills (60 Hours)
 3. ASC/N1449: Carry out routine service or minor repairs on electric vehicle and assist in diagnosis
- Electives (mandatory to select at least one):

Elective 1: Four Wheeler Electric Vehicle Service technician

1. ASC/N1450: Carry out routine service or minor repairs on four wheeler electric/ hybrid vehicle and assist in diagnosis

Elective 2: Two/Three wheeler Electric Vehicle Service technician

1. ASC/N1451: Carry out routine service or minor repairs on 2/3 wheeler electric vehicle and assist in diagnosis

Elective 3: Electric Truck/Bus Service technician

1. ASC/N1452: Carry out routine service or minor repairs on heavy commercial electric vehicle and assist in diagnosis



Job Role: Junior Engineer Drone (R & D) , ELE/Q6703	Occupation: Product Design & Development-EM&B
NQR Code: QG-5.5-EH-01991-2024-V1-ESSC	NSQF Level: 5.5
Reviewed on: 31-01-2027	Validity: 3 years

Brief Job Description

Junior Engineer Drone (R & D) conducts research related to all the new technologies in the field of drones & its components & also designs a prototype for the manufacturing of a drone

Minimum Education Qualification

1. 12th grade Pass with 2 Years of experience
2. 12th grade pass with 1 year NTC/ NAC with 1 Year of experience
3. Completed 3 year diploma after 10th (Electronics/Electrical/Mechanical) with 1 Year of experience
4. Certificate-NSQF (level 4) with 3 Years of experience
5. Pursuing 3rd year of UG (and 4th B.sc./B.tech/B.E in the relevant Field)

Applicable National Occupational Standards (NOS)

1. ELE/N6705: R & D in the field of Drones & its components
2. ELE/N6706: Development of Prototype for Manufacturing
3. ELE/N7007: Practical Aspect of Drones and Simulation Techniques
4. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Electronic Hardware Assembly Operator , ELE/Q6605	Occupation: Manufacturing/Production
NQR Code: 2021/EHW/ESSC/04786	NSQF Level: 4
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

An Electronic Hardware Assembly Operator is responsible for installing electronic components inside various devices of an Electric Vehicle. Along with that, s/he reviews blueprints and specification sheets, inspects components, performs quality assurance tests, identifies defects in the assembly process and takes corrective actions against any malfunction detected.

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) + 2 Year NAC/relevant Experience)
2. 10th Grade pass + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in Maintenance Technician) with 2 Years of relevant Experience
4. 12th Class

Applicable National Occupational Standards (NOS)

1. ELE/N6607: Assemble Electronic Hardware in an EV
2. ELE/N6606: Test the Electronic Hardware assembly in an EV
3. ELE/N9905: Work effectively at the workplace
4. ELE/N1002: Apply health and safety practices at the workplace
5. DGT/VSQ/N0102: Employability Skills (60 Hours)



Job Role: Motor & Controller Repairing Technician , ELE/Q7002	Occupation: Others
NQR Code: QG-04-EH-02801-2023-V1.1-ESSC	NSQF Level: 4
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

The EV motor and controller service technician is responsible for servicing and repairing of the motor and controller in an Electric Vehicle, Along with that, s/he tests the motor and the controller after servicing and takes corrective action against any malfunction detected.

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) + 2 Year NAC/relevant Experience)
2. 10th Grade pass + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in Maintenance Technician) with 2 Years of relevant Experience
4. 12th Class

Applicable National Occupational Standards (NOS)

1. ELE/N7006: Identify service-related issues of the customer
2. ELE/N7004: Repair faulty parts in the Motor and Controller System
3. ELE/N7003: Test the Motor and Controller after service and repair
4. ELE/N9905: Work effectively at the workplace
5. ELE/N1002: Apply health and safety practices at the workplace
6. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: Motor and Controller Design Engineer, ELE/Q6702	Occupation: Product Design
NQR Code: QG-5-EH-02802-2023-V1.1-ESSC	NSQF Level: 5
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

The Motor and Controller Design Engineer is responsible for designing motor, controller and power transmission control system for electric vehicles. The job covers activities like designing the control system, thorough testing and validation of the design.

Minimum Education Qualification

1. B.E./ B.Tech (Degree in Electrical or Electronics Engineering)
2. Diploma after 10th (Electrical or Electronics Engineering) with 02 years of relevant Experience
3. Course of NSQF Level-4 in the domain of EV / Electrical / Mechanical / Automobile (Battery System Assembly Operator) with 3 year of Experience

Applicable National Occupational Standards (NOS)

1. ELE/N6703: Design the Motor and Transmission Control system
2. ELE/N6704: Inspect, test and implement the Motor and Transmission Control system
3. ELE/N9905: Work effectively at the workplace
4. ELE/N1002: Apply health and safety practices at the workplace
5. DGT/VSQ/N0103: Employability Skills (90 Hours)



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Job Role: Battery System Assembly Operator , ELE/Q6604	Occupation: Manufacturing/Production
NQR Code: QG-5-EH-02802-2023-V1.1-ESSC	NSQF Level: 4
Reviewed on: 30-12-2026	Validity: 3 years

Brief Job Description

The Battery system assembly operator is responsible for assembling the battery pack for an Electric Vehicle. Along with that, s/he tests the engine management system, climate controls, communications and safety systems and takes corrective actions against any malfunction detected.

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) +2 Year NAC/relevant Experience)
2. 10th Grade pass + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF (Level-3 in the domain of EV / Electrical / Mechanical / Automobile) with 2 Years of relevant Experience
4. 12th Grade Operator) with 3 years of Experience

Applicable National Occupational Standards (NOS)

1. ELE/N6604: Assemble the Battery system
2. ELE/N6605: Test the Battery system assembly
3. ELE/N9905: Work effectively at the workplace
4. ELE/N1002: Apply health and safety practices at the workplace
5. DGT/VSQ/N0102: Employability Skills (60 Hours)



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Job Role: Unmanned Aerial Systems - Operation and Maintenance Supervisor	Occupation: Manufacturing
NQR Code: XXXXXXXXXX	NSQF Level: 4.5
Reviewed on: 8-07-2029	Validity: 3 years

Brief Job Description

The Unmanned Aerial Systems (UAS) – Maintenance Supervisor training program focuses on developing expertise in the inspection, servicing, and repair of UAS platforms. It equips learners to supervise preventive and corrective maintenance, diagnose faults in electronic and electromechanical systems, and ensure proper functioning of sensors, payloads, and flight components. The program emphasizes system reliability, airworthiness, and compliance through structured maintenance practices, diagnostics, and safety protocols, preparing professionals to manage efficient and safe UAS maintenance operations.

Minimum Education Qualification

1. Completed 2nd year of UG (UG Diploma) (Physics/ Electronics/Electrical/Mechanical and Others)
2. Completed 3-year diploma (after 10th) (Electronics /Electrical/Mechanical and Others) with 1.5 Years of Relevant experience in Drone technology
3. Previous relevant Qualification of NSQF Level (4.5) with 1.5 years of experience in Drone technology

Applicable National Occupational Standards (NOS)

1. UAS Assembly, Repair, and Maintenance
2. Drone System Integration and Troubleshooting
3. Autonomous Flight Programming and Operations
4. Advanced UAS Piloting and Safety Management
5. Sensor Integration and Embedded Vision Applications

Job Role: Electric Vehicle Service Technician , ELE/ASC/Q1429**Occupation:** Manufacturing**NQR Code:** QG-04-AU-03586-2025-V2-ESSCI**NSQF Level:** 4.5**Reviewed on:** 18-8-2028**Validity:** 3 years**Brief Job Description**

An Electric Vehicle Service Technician is responsible for the repair, routine servicing and maintenance (including electrical and mechanical aggregates) of Electric and Hybrid vehicles and assist the lead technician in identifying the faults

Minimum Education Qualification

1. 10th Class + 2 year of NAC/NTC
2. 10th Class pass with 3 years relevant experience
3. 11th Pursuing with 1.5 years of relevant experience
4. 12th Pass or Equivalent
5. Certificate NSQF Level 3 (Two Wheeler/Four Wheeler Service Assistant) with 3 Years of experience of relevant experience

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. ASC/N9801: Organize work and resources (Service)
2. DGT/VSQ/N0102: Employability Skills (60 Hours)
3. ASC/N1449: Carry out routine service or minor repairs on electric vehicle and assist in diagnosis

Electives(mandatory to select at least one):

Elective 1: Four Wheeler Electric Vehicle Service Technician

1. ASC/N1450: Carry out routine service or minor repairs on four wheeler electric/ hybrid vehicle and assist in diagnosis

Elective 2: Two/Three wheeler Electric Vehicle Service technician

1. ASC/N1451: Carry out routine service or minor repairs on 2/3 wheeler electric vehicle and assist in diagnosis

Elective 3: Electric Truck/Bus Service technician

1. ASC/N1452: Carry out routine service or minor repairs on heavy commercial electric vehicle and assist in diagnosis



Communication & Broadcasting Qualifications

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Job Role: Digital Cable Technician – Access , ELE/Q8106	Occupation: After sales Service
NQR Code: 2022/EHW/ESSC/05138	NSQF Level: 4
Reviewed on: 27-01-2027	Validity: 3 years

Brief Job Description

The person is responsible for installation, maintenance and repair of cable television and set-top box at premises. The technicians work on the trunk line and sub-trunk line, and inspect cable lines, lay cables under or on top of the building and repair cable faults

Minimum Education Qualification

1. 8th Grade Pass + NTC (2 years after 8th) + 2 Year NAC/relevant Experience
2. 10th Grade pass + 2 Year NTC/NAC/ relevant experience
3. Certificate-NSQF Level-3 in (Electronics/Electrical/Mechanical)relevant Domain with 2 Years of relevant Experience
4. 12th Grade and 18 Years

Applicable National Occupational Standards (NOS)

1. ELE/N8116: Lay truck or sub truck cables install and connect as per the designed route
2. ELE/N8117: Carry out installation of power inserter & balancing and commissioning of amplifier
3. ELE/N8118: Install Set Top Box at the customer's premises
4. ELE/N8119: Cater to customer complaints for troubleshooting and maintenance of set top box
5. ELE/N9905: Work effectively at the workplace
6. ELE/N1002: Apply health and safety practices at the workplace
7. DGT/VSQ/N0102: Employability Skills (60 Hours)
8. ELE/N8120: Lay, install and carry out commissioning for multi-play network



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Job Role: Direct Attached Storage(DAS) Set Top Box Installation & Service Technician ELE/Q8102	Occupation: After Sales Service
NQR Code: QG-04-EH-03978-2025-V4-ESSCI	NSQF Level: 4
Reviewed on: 30 -04 - 2028	Validity: 3 years

Brief Job Description

The individual in this job role installs the set-top box at customers premises, addresses the field serviceable complaints and coordinates with the technical team for activation of new connections.

Minimum Education Qualification

1. Diploma after 10th (Electronics/Electrical/Mechanical)
 2. 12th grade or equivalent
 3. 10th with 2 Year NTC/NAC or 3 year relevant experience
 4. Certificate-NSQF (Level-3.5 in relevant domain) with 1.5 Years of relevant Experience
- # Relevant Experience in communication and broadcasting..

Applicable National Occupational Standards (NOS)

1. ELE/N3189: Customer Requirement Analysis
2. ELE/N3188: DAS Set-Top Box Service Specialist
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: DTH Set Top Box Installation & Service Technician , ELE/Q8101	Occupation: After Sales Service
NQR Code: QG-04-EH-044902025-V2-ESSCI	NSQF Level: 4
Reviewed on: 7-10-2028	Validity: 3 years

Brief Job Description

A DTH Set-Top Box Installation & Service Technician is responsible for installing set-top boxes at customer locations, using tools such as CRM applications, GPS, and mobile service platforms to plan installations, align antennas, configure signal frequencies, and provide real-time service updates. The technician ensures accurate installation, prompt issue resolution, and tech-enabled customer support through digital feedback systems and coordination with the backend technical team.

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Communication & Broadcasting

Applicable National Occupational Standards (NOS)

1. ELE/N8102: Engaging with Customer for service
2. ELE/N8105: Installing and repairing DTH set top box
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



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Job Role: Mobile Phone Hardware Repair Technician, ELE/Q8104	Occupation: After Sales Service
NQR Code: QG-04-EH-04686-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 7-09-2028	Validity: 3 years

Brief Job Description

The individual at work is responsible for rectifying faults in the mobile phone brought in by the customer. The individual receives the faulty mobile phone, diagnoses the problems, performs front end or hardware level repair as required, resolves software issues and ensures effective functioning before delivering back to customer.

Minimum Education Qualification

- 1.12th grade or equivalent
 2. 10th grade or equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in the Electronics domain

Applicable National Occupational Standards (NOS)

1. ELE/N8107: Repair and rectify the faults in mobile Phone
2. ELE/N8104: Interact with customer and perform front end repair
3. ELE/N8121: Maintain Workplace Safety Reporting and Coordination
4. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Mobile Phone Hardware Repair Technician , ELE/Q8104	Occupation: After Sales Service
NQR Code: QG-04-EH-04686-2025-V2-ESSC	NSQF Level: 4
Reviewed on: 9- 01-2028	Validity: 3 years

Brief Job Description

The person is responsible for installation, maintenance and repair of cable television and set-top box at premises. The technicians work on the trunk line and sub-trunk line, and inspect cable lines, lay cables under or on top of the building and repair cable faults.

Minimum Education Qualification

8th Class with 2 Years of experience relevant OR I.T.I (2 years after 8th) with 2 Years of experience relevant OR 10th Class with 2 Years of experience relevant OR 12th Class OR I.T.I (after 10th) OR Certificate-NSQF with 2 Years of experience relevant Level-3 in the domain of (Electronics / Electrical / Mechanical).

Applicable National Occupational Standards (NOS)

- 1.ELE/N8116 – Lay truck or sub truck cables install, and connectorize as per the designed route
- 2.ELE/N8117 – Carry out installation of power inserter & balancing and commissioning of amplifier
- 3.ELE/N8118 – Install Set Top Box at customers premise
- 4.ELE/N8119 – Cater to customer complaints for troubleshooting and maintenance of set top box
- 5.ELE/N8120 – Lay, install and carry out commissioning for multi-play network
- 6.ELE/N9905 – Work effectively at the workplace
- 7.ELE/N1002 – Apply health and safety practices at the workplace
- 8.DGT/VSQ/N0102: Employability Skills



Job Role: Smartphone Assembly Technician , ELE/Q3901
NQR Code: QG-04-EH-044762025-V2-ESSCI
Reviewed on: 7-10-2028

Occupation: Manufacturing/Production
NSQF Level: 4
Validity: 3 years

Brief Job Description

A Smartphone assembly technician is responsible for interpreting assembly instructions, blueprint specifications, etc. to assemble or fix smartphone parts/components in correct position and alignment using approved techniques and equipment in a production unit.

Minimum Education Qualification

- 1.12th Grade or Equivalent
 2. 10th Grade or Equivalent with 3 year relevant experience
 3. Certificate-NSQF (Level-3 in relevant domain) with 3 Years of relevant Experience
- # Relevant Experience in Communication & Broadcasting

Applicable National Occupational Standards (NOS)

1. ELE/N3902: Smartphone Pre-Assembly & Setup
2. ELE/N3903: Smartphone Component Integration and Commissioning
3. DGT/VSQ/N0101: Employability Skills (30 Hours)



Job Role: Quality Manager – Electronics, ELE/Q7902	Occupation: Quality Maintenance
NQR Code: QG-06-EH-03975-2025-V3-ESSCI	NSQF Level: 6
Reviewed on: 30-04-2028	Validity: 3 years

Brief Job Description

A Quality Manager - Electronics is responsible for managing quality in all organisational operations. It starts from ensuring the quality of components received from the supplier to the quality of final output, including the quality of the production process. The individual also recruits, trains, and manages a team of quality inspectors and supervisors, apart from driving quality initiatives in the organization to ensure it remains competitive in the market.

Minimum Education Qualification

1. 3 or 4 year UG Degree in the relevant field (Physics/ Electronics/ Electrical/ Mechanical) with 3 year of relevant experience
 2. 3 Year Diploma (Electronics/Electrical/Mechanical) after 10th with 4.5 Years of relevant experience
 3. .Previous relevant Qualification of NSQF Level (5.5) with 1.5 Years of relevant experience.
- # Relevant Experience in Electronics.

Applicable National Occupational Standards (NOS)

1. ELE/N7906: Manage quality in the product design process
2. ELE/N7907: Manage the supplier relationship and receipt inspection process
3. ELE/N7908: Manage quality in the production process and final output
4. ELE/N7909: Manage recruitment, training and drive quality initiatives for projects
5. DGT/VSQ/N0102: Employability Skills (60 Hours)



OUR STRATEGIC PRIORITIES

BUILDING A FUTURE-READY ESDM ECOSYSTEM

01

Setting up Advanced Semiconductor Packaging & Cleanroom Simulation Labs

to Strengthen the Semiconductor Packaging, Cleanroom & ESDM Ecosystem.



02

Digital E-Content Delivery Platform

for standardized and technology-enabled learning.



03

Unified Labour Market Information System (LMIS) for ESDM

with an integrated real-time dashboard for workforce demand, supply, and analytics.



Real-time Data Analytics Insights Decision Support



04

Industry Partnerships for Establishing Centres of Excellence (CoEs)

to drive innovation, advanced skilling, and workforce development.



STRONGER
ECOSYSTEM



FUTURE-READY
WORKFORCE



INNOVATION
& GROWTH



ATMANIRBHAR
BHARAT



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