



QUALIFICATIONS HANDBOOK

A comprehensive information handbook to
Foster Career in Manufacturing Sector

Capital Goods & Strategic Skill Council
NCVET Recognised Awarding Body

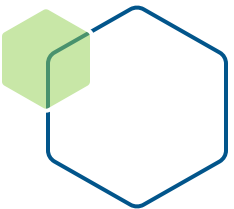




Skilling is building a better India.

If we have to move India towards development then Skill Development should be our mission.

Shri. Narendra Modi
Hon'ble Prime Minister of India





Skilling is becoming more important than ever to meet the evolving demands of the modern workforce

Shri. Jayant Chaudhary

Hon'ble Minister of State, Government of India
Minister of Skills

Minister of State for Skill Development and Entrepreneurship



Working towards creating greater synergy between education and skills as outlined in National Education Policy.

Shri. Dharmendra Pradhan

Hon'ble Minister, Government of India

Minister of Education
Minister of Education



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About Capital Goods and Strategic Skill Council

The Capital Goods & Strategic Skill Council (CGSSC) is a key Sector Skill Council under the aegis of the Ministry of Skill Development and Entrepreneurship (MSDE), Government of India. The Council is responsible for bridging the skill gap in the Capital Goods Sector, which includes industries like machinery manufacturing, heavy equipment, Port & shipping, strategic manufacturing (Defence, aerospace), and precision tools.



VISION

Make Atmanirbhar Bharat Global Manufacturing Hub



MISSION

Industry ready skilled workforce with global 'Best Practices'



KEY STAKEHOLDERS

Ministry, Industry, Academia, Trade Associations, Training Partners, Students



National Council for Vocational Education and Training (NCVT) has recognised Capital Goods and Strategic Skill Council as its Awarding Body.

Sub-Sectors

Capital Goods and Strategic Skill Council

India's Capital Goods Manufacturing Industry serves as a strong base for its engagement across sectors such as Engineering, Construction, Infrastructure and Consumer Goods, amongst others.

**\$43.2 Billion
Market Size**

Capital Goods Industry in India



**Defence Equipment
Manufacturing**



**Fire-Fighting & Safety
Equipment**



Homeland Security



**Ship Build & Ship Repair~
Marine**



Heavy Electrical Equipment
Market Size: \$24.2 Billion



Process Plant Equipment
Market Size: \$3.7 Billion



**Earth-moving & Mining
Machinery**
Market Size: \$3.3 Billion



Printing Machinery
Market Size: \$3.01 Billion



Food Processing Machinery
Market Size: \$2.4 Billion



Dies, Moulds and Press Tools
Market Size: \$2.3 Billion



Textile Machinery
Market Size: \$1.8 Billion



Machine Tools
Market Size: \$1.4 Billion



Plastic Machinery
Market Size: \$0.5 Billion



Metallurgical Machinery
Market Size: \$0.4 Billion

Promoters & Industry Bodies

Capital Goods and Strategic Skill Council



Industry Partners

Capital Goods and Strategic Skill Council



and many more...

Roles & Responsibilities

Capital Goods and Strategic Skill Council

- ✓ Develop National Occupational Standards based Qualifications
- ✓ Industry led Quality Skilling, Assessment & Certification
- ✓ Establish Structured Labor Market Information System
- ✓ Train the 'Trainers & Assessors'
- ✓ Promote Industry-Academia Interface

Skilling Initiatives

- ✓ Cluster Specific Initiatives
- ✓ Industry Partnerships & Skill implementation
- ✓ Facilitate Placement & promote Apprenticeship in various sub-sectors
- ✓ Conduct Skill competitions in alignment with IndiaSkills & WorldSkills
- ✓ Knowledge Partner in Skilling and Setting up Center of Excellence
- ✓ Upskilling & Reskilling existing workforce in various Manufacturing Domain through RPL & various Schemes



Achievements

Capital Goods and Strategic Skill Council



36 Qualifications Developed



24 Qualifications for Futuristic Job Roles



400+ Accredited Training Partners



10 Accredited Assessment Agencies



5.5 Lakh+ Trained & Certified Ready Work Force



3000+ Certified Trainers



2000+ Certified Assessors



1000+ Industry Partners



12 Centre of Excellence



Dedicated Placement Portal: <https://aajevika.org/>



WorldSkills Competition - Successfully Conducted Skill Competitions for 7 Trades under CGSSC

and growing each day...

Growth Drivers

Capital Goods Industry



Ageing Equipment Requires Auto Replacement

Opportunity for Transmission & Distribution (T&D) sector



Huge Market Potential

Target industry size of \$ 100 bn by 2022



The Potential for Closing Import-export Gap

The Capital Goods imports to India is approximately 3X the exports



Massive Power Capacity Addition in Future

Infrastructure, Power, Mining, Oil & Gas, Steel & Automotive



Nuclear Capacity Expansion

Significant business opportunity

Schemes to Promote Manufacturing

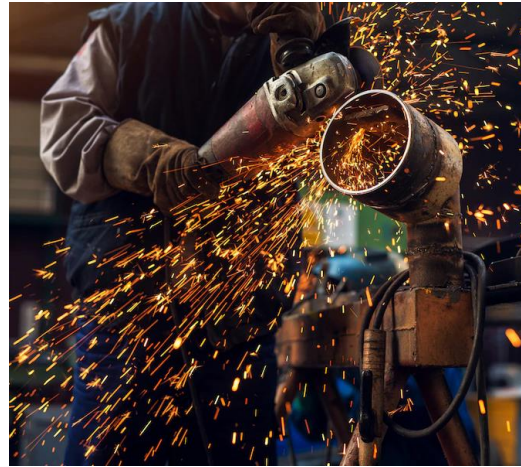
The National Capital Goods Policy (2016) envisages increasing production of capital goods from Rs. 230,000 crores in 2014-15 to Rs. 750,000 crores in 2025. It envisages increasing exports from 27% in 2014-15 to 40% in 2025 of production while increasing share of domestic production in India's demand from 60% to 80%, thus making India a net exporter of capital goods. Other schemes Make In India, aims to increase contribution of manufacturing to GDP to 25%.

Scheme II - Enhancement of Competitiveness of Capital Goods Sector



Qualifications

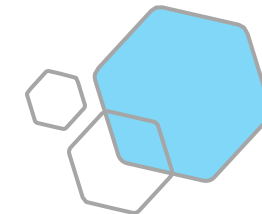
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Qualifications

Capital Goods and Strategic Skill Council

1. Assistant Manual Metal Arc Welding
 - Shielded Metal Arc Welding Welder
2. Capital Equipment - Calibration Technician
3. CNC Turning Operator
4. CNC Operator - Vertical Machining Center
5. CNC Programmer
6. Operator-Stainless steel kitchenware manufacturing (OEM Jindal Stainless Limited)
7. Jr. Designer (Mechanical)
8. Draughtsman Mechanical
9. Conventional Turning Operator
10. Conventional Milling Operator
11. Fitter – Fabrication
12. Fitter - Mechanical Assembly
13. Capital Equipment - Instrumentation Technician
14. Conventional Surface Grinding Machines - Operator
15. Manual Metal Arc Welding/Shielded Metal Arc Welding Welder
16. Metal Inert Gas/ Metal Active Gas/ Gas Metal Arc Welder (MIG/MAG/GMAW) (Optional: Flux cored Arc Welder (Semi-Automatic))
Stainless Steel Fabricator
17. Sheet Metal Worker - Hand Tools and manually operated machines
Senior Welder - Pipes & Plates
18. Over head crane operator
19. Mechanical Engineering CAD
20. Locksmith (Advance)
21. Locksmith
22. Hammer and Toolkit Maker (Advance)
23. Hammer and Tool Kit Maker
24. Armourer
25. Armourer (Advanced)
26. Blacksmith (Advance)
27. CNC Turning
28. CNC Milling
29. Capital Goods Manufacturing Engineer
30. Conventional Milling Operator
31. Electro Discharge Machine (EDM) Operator
32. Fitter - Mechanical Maintenance
33. Fitter- Electrical and Electronic Assembly
34. Blacksmith (Lohar)



QUALIFICATIONS

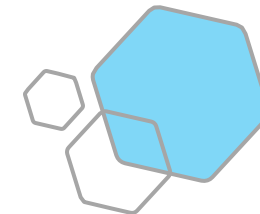
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FUTURISTIC JOB ROLES

- IIOT Data Analytics Engineer (NSQF Level 5.5)
- Robotics & Automation COBOTS Engineer (NSQF Level 5.5)
- Robotics & Automation PLC SCADA Engineer (NSQF Level 5.5)
- Industrial Automation Safety Engineer (NSQF Level 5.5)
- Predictive Maintenance Engineer (NSQF Level 5.5)
- Augmented Reality System Designer (NSQF Level 5.5)
- Digital Factory Automation Engineer (NSQF Level 5.5)
- Digital Twin Engineer (NSQF Level 5.5)
- Advance Mechatronics Engineer (NSQF Level 5.5)
- IIOT System Industrial Architecture Engineer (NSQF 5.5)
- Additive Manufacturing Design & Application Engineer (NSQF Level 5.5)
- Welding & Automation Engineer (NSQF Level 6.0)
- Robotics & Automation Engineer (NSQF Level 6.0)
- Multi Axis CNC Machine Engineer (NSQ Level 6.0)
- Computer Aided Tool & Die Design Engineer (NSQF Level 6.0)
- Advance Mechatronics- Designer and Planner (NSQF Level 6.0)
- Stainless Steel Fabricator
- Welding Technician- Oil & Gas/Shipbuilding/Railways (NSQF Level 4.0)
- Metal Fabrication Specialist (NSQF Level 5.5)
- Advance Mechatronics Simulation Specialist (NSQF Level 5.5)
- Additive Process Specialist (NSQF Level 6.0)
- Robotics and Automation PLC-SCADA Engineer (NSQF Level 5.5)
- Mechanical Automation & Maintenance Engineer (NSQF Level 6.0)
- Automated / Robotic Metal Fabrication Engineer (NSQF Level 6.0)
- Automated Metal Cutting Plasma Engineer (NSQF Level 6.0)
- Predictive Maintenance Data Acquisition Engineer (NSQF Level 6.0)

QUALIFICATIONS

Capital Goods and Strategic Skill Council



Short term courses

- **Overhead crane operator** (NSQF Level 4 & Duration 30 hrs)
- **Blacksmith** (NSQF Level 2.5 & Duration 40 hrs)
- **Locksmith** (NSQF Level 2.5 & Duration 40 hrs)
- **Hammer and Toolkit** (NSQF Level 2.5 & Duration 40 hrs)
- **Armourer** (NSQF Level 2.5 & Duration 40 hrs)
- **Blacksmith (Advanced)** (NSQF Level 3 & Duration 120 hrs)
- **Locksmith (Advanced)** (NSQF Level 3 & Duration 120 hrs)
- **Hammer and Toolkit (Advanced)** (NSQF Level 3 & Duration 120 hrs)
- **Armourer (Advanced)** (NSQF Level 3 & Duration 120 hrs)

1.	Job Role: Additive Manufacturing Design and Application Engineer	
	QP Code: CSC/Q0412	NQR Code: QG-5.5-CG-02048-2024-V1-CGSC
	Occupation: Design	NSQF Level: 5.5
	Reviewed on: 31/01/2024	Validity: 30/01/2027

Brief Job Description
The candidate will play a crucial role in advancing the additive manufacturing capabilities, with a focus on computer graphics (CG) applications. As a CG Additive Manufacturing Design & Application Engineer, He/She will be responsible for designing and optimizing 3D printed components for various applications, leveraging your expertise in both additive manufacturing and computer graphics.


Minimum Education Qualification

- 10th grade pass +3 years Diploma in relevant field + 5 year of relevant experience.
- UG Degree in relevant field + 2 years of relevant experience.
- 3 Years UG Degree in Science and Technology (B.Sc / BCA) / 4 years BE, B.Tech (Electrical, Electronics, Mechanical, Mechatronics, Instrumentation and Control).
- Previous NSQF Level 5 + 1.5 years of relevant experience.

Applicable National Occupational Standards (NOS)

- CSC/N0435 Design and produce 3D computer model for the prototype of metal parts
- CSC/N0436 Identify the Process & Select the additive material to be used
- CSC/N0437 Write Process instructions, and collate data for RCA- root cause analysis
- CSC/N0438 Developing prototypes of new products using 3D printers or other computer-controlled equipment
- CSC/N0439 Implement corrective actions for process and quality issues Perform Quality Assurance and Testing
- CSC/N0440 Interface with design engineers to ensure manufacturability of new designs
- CSC/N1339 Collaboratively coordinate with the team
- CSC/N0505 Follow health, safety and environment guidelines at workplace
- DGT/VSQ/N0102 Employability Skills

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2.	Job Role: Advanced Mechatronics - Designer and Planner	
	QP Code: CSC/Q0421	NQR Code: QG-06-IT-04204-2025-V1-CGSC
	Occupation: Design	NSQF Level: 6
	Reviewed on: 08/05/2025	Validity: 08/05/2028

Brief Job Description
Designer and Planner in Advanced Mechatronics is responsible for the conceptualization, design, planning, and execution of sophisticated mechatronic systems.

Minimum Education Qualification


- Completed 4 year UG program (Mechanical/Electrical/Automobile/Electrical/Electronics).
- Completed 2nd year diploma after 12th with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- CSC/N0474: Manage the System integration of machines with PLC and SCADA system.
- CSC/N0475: Perform the Data Analytics motion on the retrieved data from the mechatronic systems and perform control feedback process.
- CSC/N0476: System level designing of the panels using CAD tools allowing proper tolerance and dimensions for individual components.
- CSC/N0477: Design and implement process control systems, integrate feedback mechanisms, and automate existing manual operations.
- CSC/N0478: Set up advanced automation in mechatronics.
- CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace.
- DGT/VSQ/N0102: Employability Skills (60 Hours).

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3.	Job Role: Armourer	
	QP Code: CSC/N0320	NQR Code: NG-2.5-CG-00742-2023-V1-CGSC
	Occupation: Design	NSQF Level: 2.5
	Reviewed on: 28/09/2023	Validity: 14/09/2028

Brief Job Description
The incumbent in the job is responsible for performing basic sheet metal cutting, forming and assembly operations for making armours.


Minimum Education Qualification

- None

Applicable National Occupational Standards (NOS)

- Overview of PM Vishwakarma Scheme
- Upskilling on working with the listed modern Tool- kit for Armourer to perform operations using modern tools
- Digital Literacy
- Financial Literacy
- Marketing and Branding
- Self-Employment
- Interactive/ Feedback session

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4.	Job Role: Armourer (Advanced)	
	QP Code: : CSC/N0325	NQR Code: NG-03-CG-02323-2024-V1-CGSC
	Occupation: N/A	NSQF Level: 3
	Reviewed on: 15/03/2024	Validity: 15/03/2027

Brief Job Description
The incumbent in the job is responsible for performing basic sheet metal cutting, forming and assembly operations for making armours.


Minimum Education Qualification

- None

Applicable National Occupational Standards (NOS)

- Usage of any new machinery/tools/equipment
- Entrepreneurship skills, design workshops and Bureau of Indian Standards (BIS) Modules
- Advanced Digital Skills
- Advanced Financial skills
- Advanced Marketing and Outreach skills

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5.

Job Role: Assistant Manual Metal Arc Welding/Shielded Metal Arc Welding Welder

QP Code: CSC/Q0202	NQR Code: QG-02-CG-03939-2025-V2-CGSSC
Occupation: Assistant Manual Metal Arc Welding / Shielded Metal Arc Welding Welder	NSQF Level: 2
Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description

The incumbent in the job is primarily involved in all manual metal arc welding (MMAW) and gas cutting operations performed on carbon and low alloy steels. They support the welder in activities such as inspection of equipment condition, welding, testing and inspection of welded work pieces.

Minimum Education Qualification

- Previous NSQF qualification of Level 1, No Experience Equivalent
- Ability to read and write

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0202 Support MMAW welder in welding and cutting process
- DGT/VSQ/N0101 Employability Skills (30 hours)

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7.

Job Role: Blacksmith (Advance)

QP Code: CSC/N0324	NQR Code: NG-03-CG-02324-2024-V1-CGSC
Occupation: N/A	NSQF Level: 3
Reviewed on: 15/03/2024	Validity: 15/03/2027

Brief Job Description

The incumbent on the job is involved in setting up of forging machines with dies and presses and performing heat treatment and forging operations so that the material forms the shape as per the requirement.

Minimum Education Qualification

- No Formal Education

Applicable National Occupational Standards (NOS)

- Usage of any new machinery/tools/equipment
- Entrepreneurship skills, design workshops and Bureau of Indian Standards (BIS) Modules
- Advanced Digital Skills
- Advanced Financial skills
- Advanced Marketing and Outreach skills

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6.

Job Role: Augmented Reality System Designer

QP Code: CSC/Q0410	NQR Code: QG-5.5-CG-02045-2024-V1-CGSC
Occupation: Design	NSQF Level: 5.5
Reviewed on: 31/01/2024	Validity: 30/01/2027

Brief Job Description

Individuals at this job are responsible for designing, maintaining, and evaluating the implementation for AR/VR projects. They ensure the proper usage of tools and delivery and also monitor the process during the testing and deployment phase.

Minimum Education Qualification

- UG In relevant field 2 years Experience
- 3-year UG in relevant field or 4-years UG with courses related to Engg./Science No Experience
- 3 year Diploma after 10th Completed 5 years Experience
- Previous NSQF qualification of Level 5, 1.5 Years

Applicable National Occupational Standards (NOS)

- CSC/N0463 Research & Understand user needs and support the procurement of equipment and material for AR setup.
- CSC/N0462 Install and Configure AR tools and equipment to support the development of user interface.
- CSC/N0464 Monitor and Manage AR projects
- CSC/N1339 Collaboratively coordinate with the team
- CSC/N0505 Follow health, safety and environment guidelines at workplace
- DGT/VSQ/N0102 Employability Skills

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8.

Job Role: Blacksmith (Lohar)

QP Code: CSC/N1102	NQR Code: NG-2.5-CG-00743-2023-V1-CGSC
Occupation: N/A	NSQF Level: 2.5
Reviewed on: 15/09/2023	Validity: 14/09/2028

Brief Job Description

The incumbent on the job is involved in setting up of forging machines with dies and presses and performing heat treatment and forging operations so that the material forms the shape as per the requirement.

Minimum Education Qualification

- None

Applicable National Occupational Standards (NOS)

- Overview of PM Vishwakarma Scheme
- Upskilling on working with the listed modern Tool- kit for Blacksmith (Lohar) to perform operations using modern tools
- Digital Literacy

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9.

Job Role: Capital Equipment - Calibration Technician	
QP Code: CSC/Q0801	NQR Code: QG-04-CG-03925-2025-V2-CGSSC
Occupation: Calibration and Instrumentation	NSQF Level: 4
Reviewed on: 30/04/2025	Validity: 31/10/2025

Brief Job Description

This OS unit is about the setting, adjusting and validating mechanical, pneumatic, hydraulic, electrical and electronic measuring and control instruments using the appropriate reference standards and following the approved standard procedures.


Minimum Education Qualification

- 12th Passed No Experience Equivalent
- 2nd Year of 3 Year Diploma after 10th None No Experience Equivalent
- 10th Passed with 2 years of Experience, NTC/NAC/CITS
- 10th Passed with 3 years of Experience
- Previous NSQF qualification of Level 3.5, 1.5 Years Experience
- Previous NSQF qualification of Level 3, 3 years of Experience

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0801 Calibrate hydraulic, pneumatic and mechanical measuring and control equipment
- CSC/N0802 Calibrate electrical and electronic measuring and control equipment
- DGT/VSQ/N0101 Employability Skills, 30 hours.

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10.	Job Role: CNC Milling	
	QP Code: CSC/Q0417	NQR Code: QG-4.5-CG-01810-2024-V1-CGSC
	Occupation: Design	NSQF Level: 4.5
	Reviewed on: 06/02/2024	Validity: 2026-02-06

Brief Job Description

A CNC Milling Machinist is responsible for the operation and programming of computer numerical control (CNC) milling machines to produce precision components according to engineering specifications. This role involves setting up machines, selecting appropriate tools, and programming CNC software to create toolpaths for efficient material removal. CNC Milling Machinists monitor machine operations, make adjustments as necessary, and conduct regular inspections using precision measuring instruments to ensure the quality of machined parts. Troubleshooting, problem solving, and adherence to safety protocols are essential aspects of the job. Additionally, CNC Milling Machinists may be involved in routine machine maintenance, documentation of machining processes, and collaboration with other team members to optimize workflows and meet production goals. Continuous improvement and staying current with advancements in CNC technology are also key aspects of the role.


Minimum Education Qualification


- 8th Grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS
- 10th grade pass with 1 year NTC plus CITS
- 10th Grade pass with 1 year NTC plus 1 year NAC plus 1 year CITS
- 3rd Year of 3 Year Diploma after 10th Pursuing
- Pursuing 2nd Year of 2 year diploma after 12th Pursuing
- UG 1st year Pursuing
- UG 1st year Passed
- Previous NSQF qualification of Level 3.5, Experience 3 years
- Previous NSQF qualification of Level 4, 1.5 Years

Applicable National Occupational Standards (NOS)

- CSC/N0460 V1.0 Work organization and management
- CSC/N0441 V1.0 Interpret engineering drawings and follow the specification
- CSC/N0442 V1.0 Process planning
- CSC/N0443 V1.0 Programming
- CSC/N0444 V1.0 Metrology
- CSC/N0445 V1.0 Operating
- CSC/N0446 V1.0 Machining
- NA OJT

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11.	Job Role:Capital Equipment - Instrumentation Technician	
	QP Code: CSC/Q0802	NQR Code: QG-04-CG-03946-2025-V2-CGSSC
	Occupation: Calibration and Instrumentation	NSQF Level: 4
	Reviewed on:30/04/2025	Validity: 30/04/2028
<p>Brief Job Description</p> <p>A Capital Equipment Instrumentation Technician is responsible for dismantling, repairing and replacing a range of instruments and faulty components in the instrumentation system. The individual is also responsible for setting up test equipment, troubleshooting components of instruments, calibrating them and also preparing service reports, documenting the repair and replacement of parts.</p> <p>Minimum Education Qualification</p> <ul style="list-style-type: none">• 12th Passed No Experience Equivalent• 2nd Year of 3 Year Diploma after 10th Completed, No Experience Equivalent• 10th Passed with 2 years of Experience, NTC/NAC/CITS• 10th Passed with 3 years of Experience• Previous NSQF qualification of Level 3.5 with 1.5 Years of Experience• Previous NSQF qualification of Level 3 with 3 years of Experience <p>Applicable National Occupational Standards (NOS)</p> <ul style="list-style-type: none">• CSC/N1335 Follow the health and safety practices at work• CSC/N1336 Coordinate with co-workers to achieve work efficiency• CSC/N0801 Calibrate the hydraulic, pneumatic, mechanical, electrical and electronic measuring and control equipment• CSC/N0803 Carry out maintenance activities on instrumentation and control equipment• DGT/VSQ/N0101 Employability Skills (30 hours)		
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12.	Job Role: CNC Operator - Vertical Machining Centre	
	QP Code: CSC/Q0116	NQR Code:QG-04-CG-03926-2025-V2-CGSSC
	Occupation: CNC Operator - Vertical Machining Centre	NSQF Level: 4
	Reviewed on:30/04/2025	Validity:30/04/2028

Brief Job Description

A CNC Operator - Vertical Machining Centre is responsible for setting up Vertical Machining Centre (VMC),cutting tools and work holding devices for machining a variety of metal and non-metal components as per the given specifications. The individual conducts trial runs, proves the program in single block mode, and performs the necessary checks before allowing the machine to operate in full program run mode.


Minimum Education Qualification

- 12th Passed
- 2 year Diploma after 10th Completed
- 10th Passed 2 years NTC/NAC/CITS
- 10th Passed 3 years Relevant Experience
- Previous NSQF qualification of Level 3.5, 1.5 Years Relevant Experience
- Previous NSQF qualification of Level 3, 3 years Relevant Experience

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0123 Set the CNC VMC for operations
- CSC/N0116 Carry out machining using the Advanced Digital CNC VMC
- DGT/VSQ/N0101 Employability Skills (30 hours)

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13.

Job Role: CNC Programmer	
QP Code: CSC/Q0401	NQR Code: QG-05-CG-03928-2025-V2-CGSSC
Occupation: Calibration and Instrumentation	NSQF Level: 4
Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description

A CNC Programmer is responsible for programming commercial Computer Numerical Control (CNC) factory machines that turn raw materials such as plastic and metals into usable components. The individual is responsible for interpreting technical blueprints, inputting the design specifications, adjusting the machine cutting paths, and performing quality checks on the final product to ensure the desired specifications are achieved. The person is also responsible for carrying out routine machine maintenance and troubleshooting any issues encountered during the manufacturing process.


Minimum Education Qualification

- UG 2nd year In relevant field, No Experience.
- 12th Passed, No Experience, 2 year NTC, Any combination of 2 year of NTC/NAC/QTS or equivalent.
- 12th Passed, 3 years Experience.
- 10th Passed, 6 years Experience
- 3 year Diploma after 10th Completed, 1.5 Years Experience.
- 12th Passed, 1.5 Years Experience/NAC, 1 year of qualification of NTC/NAC.
- Previous NSQF qualification, of Level 4.5, 1.5 Years.
- Previous NSQF qualification of Level 4, 3 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0401 Program advanced digital manufacturing Computer Numerically Controlled (CNC) machines. NOS
- CSC/N0415 Assist in process improvements and machine maintenance
- DGT/VSQ/N0102 Employability Skills (60 hours).

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15.

Job Role: CNC Turning Operator	
QP Code:CSC/Q0115	NQR Code:QG-04-CG-03927-2025-V2-CGSSC
Occupation: Machining	NSQF Level: 4
Reviewed on: 08/05/2025	Validity: 01/05/2028

Brief Job Description

A CNC Turning Operator is responsible for setting up the Advanced CNC turning machine, work holding devices, and tooling, loading the machine operating programs, conducting trial runs and correcting faults to ensure the machined components meet the required specifications with Real Time Monitoring System and quality standards.


Minimum Education Qualification

- 10th Passed
- 8th Passed, 2 years Experience, NTC/NAC
- 8th Passed, 3 Years Experience.
- Previous NSQF qualification of Level 2.5, 1.5 Years of Experience
- Previous NSQF qualification of Level 2,3 years of Experience

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co- workers to achieve work efficiency
- CSC/N0109 Carry out grinding operations using conventional grinding machines
- DGT/VSQ/N0101 Employability Skills (30 hours)

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14.	Job Role: CNC Turning	
	QP Code: : CSC/Q0418	NQR Code: QG-4.5-CG-01809-2024-V1-CGSC
	Occupation: Design	NSQF Level: 4.5
	Reviewed on: 06/02/2024	Validity: 06/02/2026

Brief Job Description

The individual in this job is responsible for a broad variety of machining processes, such as grinding, welding, electrical discharging, milling and also turning. The CNC Turning machinist uses a computer to tell the lathe how to move the tools and cut the part to the desired shape. They must also set up the lathe with all the necessary clamping devices, support devices, and cutting tools. These tools can cut almost every material (stainless steel, plastic, soft steel, aluminium, bronze, and so on). But the machinist has to choose well to avoid temperature variations, tool wear or vibration. Those factors influence the product and it can result in poor quality. When the machine starts cutting material, the machinist makes sure that the dimensions exactly fit the customer specifications. For this, very accurate inspection tools are used. Once the machine is set up, the CNC-Turning machinist also monitors and optimizes the processes, to achieve even faster and better results for all the following parts.


Minimum Education Qualification

- UG 1st year Passed
- UG 1st year Pursuing
- 3 year Diploma after 10th Pursuing
- 2 year Diploma after 12th Pursuing
- 10th Grade pass with 1 year NTC plus 1 year NAC plus 1 year CITS
- 10th grade pass with 1 year NTC plus CITS
- 8th Grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS
- Previous NSQF qualification of Level 3.5, 3 years of Experience
- Previous NSQF qualification of Level 4, 1.5 Years Experience

Applicable National Occupational Standards (NOS)

- CSC/N0455, V1.0 Work organization and management
- CSC/N0456, V1.0 Interpret engineering drawings
- CSC/N0457, V1.0 Process planning
- CSC/N0458, V1.0 Programming
- CSC/N0461, V1.0 Performing metrology and inspection on the workpiece
- CSC/N045, V1.0 Setting and operating CNC lathes
- CSC/N0453, V1.0 Finalize and deliver work pieces
- NA OJT

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16.

Job Role: Conventional Milling Operator	
QP Code:CSC/Q0108	NQR Code: QG-03-CG-03936-2025-V2-CGSSC
Occupation: Machining	NSQF Level: 3
Reviewed on:30/04/2025	Validity:31/10/2025

Brief Job Description

A Conventional Milling Operator is responsible for milling a range of metal and non-metal components using a horizontal or vertical conventional milling machine. The individual is responsible for monitoring the machining operations and making appropriate adjustments to the milling machine to ensure the milled components conform to the given specifications.


Minimum Education Qualification

- 10th Passed
- 8th Passed,2 years Experience,NTC/NAC
- Previous NSQF qualification of Level 2, 3 years relevant experience
- 8th Passed, 3 years Experience
- Previous NSQF qualification of Level 2.5, 1.5 Years

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0108 Carry out milling operations using conventional milling machines
- DGT/VSQ/N0101 Employability Skills (30 hours)

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17.	Job Role: Conventional Surface Grinding Machines - Operator	
	QP Code: CSC/Q0109	NQR Code: QG-03-CG-03942-2025-V2-CGSSC
	Occupation: Machining	NSQF Level: 3
	Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description
A Conventional Surface Grinding Machines - Operator is responsible for carrying out surface grinding operations on a variety of component surfaces following the approved procedures, and using different types of grinding machines such as horizontal, vertical, cylindrical grinding machines.


Minimum Education Qualification

- 10th Passed
- 8th Passed, 2 years Experience, NTC/NAC
- 8th Passed, 3 Years Experience.
- Previous NSQF qualification of Level 2.5, 1.5 Years of Experience
- Previous NSQF qualification of Level 2, 3 years of Experience

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0109 Carry out grinding operations using conventional grinding machines
- DGT/VSQ/N0101 Employability Skills (30 hours)

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18.	Job Role: Conventional Turning Operator	
	QP Code: CSC/Q0110	NQR Code: QG-03-CG-03937-2025-V2-CGSSC
	Occupation: Machining	NSQF Level: 3
	Reviewed on: 30/04/2025	Validity: 31/10/2025

Brief Job Description
A Conventional Turning Operator is responsible for carrying out turning operations using a conventional turning machine. The individual carries out turning operations as per the given instructions to ensure the machined components have the required features and specifications. The person also carries out minor repair and maintenance of the turning machine.


Minimum Education Qualification

- 10th Passed.
- 8th Passed, 2 years of Experience, NTC/NAC.
- 8th Passed, 3 years of Experience.
- Previous NSQF qualification of Level 2.5, 1.5 Years of Experience.
- Previous NSQF qualification of Level 2, 3 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0110 Operate a conventional turning machine to machine a variety of components
- DGT/VSQ/N0101 Employability Skills (30 hours)

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19.	Job Role: Digital Factory Automation Engineer	
	QP Code: CSC/Q0415	NQR Code: QG-5.5-CG-02043-2024-V1-CGSC
	Occupation: Design	NSQF Level: 5.5
	Reviewed on: 31/01/2024	Validity: 30/01/2027

Brief Job Description
Industry 4.0 plays a vital role in new-age digital factories to achieve desired user-friendly agile, flexible, and cost-effective, sustainable, self-reliance enterprise integrated horizontally and vertically - as well as with vendors, suppliers and consumers. Digital factory Implements the system architecture, performs engineering tasks, reconfigurations, and upgrades. It evangelizes Industry 4.0 cultural ecosystems and helps relevant skill development thereby upskill and reskill.


Minimum Education Qualification

- 3 Years UG Degree in Science and Technology (B.Sc / BCA).
- 4 years BE, B.Tech (Electrical, Electronics, Mechanical, Mechatronics, Instrumentation and Control).
- 1.5 years of relevant experience *Subject to being offered as 6 months internship/ project.
- 10th grade pass +3 years Diploma in relevant field,, 4 year of relevant experience.

Applicable National Occupational Standards (NOS)

- CSC/N 0519 V1.0 Assist to create a Digital Factory ecosystem.
- CSC/N 0522 V1.0 Assist and perform system analysis, design and develop digital solution.
- CSC/N 0430 V1.0 Execute Process control automation to enhance desired results.
- CSC/N 0523 V1.0 Optimize sensor and other devices as per process demand.
- CSC/N 0524 V1.0 Assist in Installation, commissioning, and integration of robot system.
- CSC/N 0525 V1.0 Assist in Connecting sensors and devices.
- CSC/N 0505 (v1.0) Health, Safety and Environment at workplace
- DGT/V SQ/N0 102 (v1.0) Employability Skills.

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20.	Job Role: Digital Twin engineer	
	QP Code: CSC/Q0411	NQR Code: QG-5.5-CG-02046-2024-V1-CGSC
	Occupation: Design	NSQF Level: 5.5
	Reviewed on: 31/01/2024	Validity: 30/01/2027

Brief Job Description
A Conventional Milling Operator is responsible for milling a range of metal and non-metal components using a horizontal or vertical conventional milling machine. The individual is responsible for monitoring the machining operations and making appropriate adjustments to the milling machine to ensure the milled components conform to the given specifications.


Minimum Education Qualification

- 10th Passed
- 8th Passed, 2 years Experience, NTC/NAC
- Previous NSQF qualification of Level 2, 3 years relevant experience
- 8th Passed, 3 years Experience
- Previous NSQF qualification of Level 2.5, 1.5 Years

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0108 Carry out milling operations using conventional milling machines
- DGT/VSQ/N0101 Employability Skills (30 hours)

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21.	Job Role: Electro Discharge Machine (EDM) Operator	
	QP Code: CSC/Q0121	NQR Code: QG-04-CG-03941-2025-V2-CGSSC
	Occupation: Electro Discharge Machine (EDM) Operator	NSQF Level: 4
	Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description
A Conventional Surface Grinding Machines - Operator is responsible for carrying out surface grinding operations on a variety of component surfaces following the approved procedures, and using different types of grinding machines such as horizontal, vertical, cylindrical grinding machines.


Minimum Education Qualification

- 12th Passed,
- 2 year Diploma after 10th Completed
- 10th Passed, 2 Years of experience NTC/NAC/CITS
- 10th Passed, 3 Years of Experience or Equivalent
- 11th Passed, 1.5 Years of Experience or Equivalent
- Previous NSQF qualification of Level 3.5, 1.5 Years of Experience
- Previous NSQF qualification of Level 3, 3 Years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work
- CSC/N1336 Coordinate with co-workers to achieve work efficiency
- CSC/N0121 Set up the CNC EDM for machining components
- CSC/N0118 Operate the CNC EDM to machine components
- DGT/VSQ/N0101 Employability Skills (30 hours)

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22.	Job Role: Fitter - Electrical and Electronic Assembly	
	QP Code: CSC/Q0305	NQR Code: QG-03-CG-03931-2025-V2-CGSSC
	Occupation: Fitting and Assembly	NSQF Level: 3
	Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description
A Fitter- Electrical and electronic assembly is responsible for assembling electrical and electronic panels, equipment/systems, components, sub-assemblies, etc. The individual is responsible for ensuring compliance with the applicable health, safety and quality standards along with the applicable regulations.


Minimum Education Qualification

- 10th Passed.
- 8th Passed, 2 years of Experience, NTC/NAC after 8th.
- Previous NSQF qualification of Level 2.5, 1.5 Years relevant experience.
- Previous NSQF qualification, of Level 2, 3 years relevant experience.
- 8th Passed, 3 Years of relevant Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0305 Assemble and wire electrical components and systems to mechanical equipment.
- CSC/N0306 Assemble and wire electronic equipment and systems to mechanical equipment.
- DGT/VSQ/N0101 Employability Skills (30 hours).

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23.	Job Role: Fitter - Fabrication	
	QP Code: CSC/Q0303	NQR Code: QG-03-CG-03932-2025-V2-CGSSC
	Occupation: Fitter - Fabrication	NSQF Level: 3
	Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description
This OS unit is about following the appropriate health and safety practices at work. It covers responsibilities towards self and others to ensure a safe work environment.


Minimum Education Qualification

- 10th Passed.
- 8th Passed, 2 year NTC.
- 8th Passed, 3 years of Experience.
- Previous NSQF qualification of Level 2.5, 1.5 Years of Experience
- Previous NSQF qualification of Level 2, 3 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0201 Manually cut metal and metal alloys using oxy-fuel gases.
- CSC/N0303 Perform Precision fitting operations on metal components using Advanced Digital Technologies.
- DGT/VSQ/N0101 Employability Skills (30 hours).

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24.	Job Role: Fitter - Mechanical Assembly	
	QP Code: CSC/Q0304	NQR Code: QG-03-CG-03933-2025-V2-CGSSC
	Occupation: Fitter - Mechanical Assembly	NSQF Level: 3
	Reviewed on: 30/04/2025	Validity: 30/04/2028

Brief Job Description
The incumbent in the job is responsible for performing machining, fitting and assembly activities to produce machinery or machine components of required features and specifications.


Minimum Education Qualification

- 10th Passed No Experience.
- 8th Passed, 2 years of Experience NTC/NAC.
- Previous NSQF qualification of Level 2.5, 1.5 Years Experience.
- Previous NSQF qualification of Level 2, 3 years of Experience.
- 8th Passed Previous NSQF qualification.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0304 Perform Precision fitting and Mechanical assembly operations using Digital Technologies (using Digital tools/Digital read outs).
- DGT/VSQ/N0101 Employability Skills (30 hours).

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25.	Job Role: Fitter - Mechanical Maintenance	
	QP Code: CSC/Q0901	NQR Code: QG-04-CG-03934-2025-V2-CGSSC
	Occupation: Maintenance	NSQF Level: 4
	Reviewed on: 30/04/2025	Validity:30/04/2028

Brief Job Description

The incumbent in the job performs maintenance of faulty equipment at component or unit level on a variety of different types of mechanical assemblies and sub-assemblies.


Minimum Education Qualification

- 12th Passed.
- 2nd Year of 3 Year Diploma after 10th Completed.
- 10th Passed, 2 years of Experience NTC/NAC/CITS or equivalent.
- 10th Passed, 3 years of Experience or equivalent.
- Previous NSQF qualification of Level 3.5,1.5 Years relevant experience.
- Previous NSQF qualification of Level 3,3 years Relevant Experience.

Applicable National Occupational Standards (NOS)

- CSC/N0901 Perform Predictive Analysis & maintenance activities on mechanical equipment.
- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- DGT/VSQ/N0101 Employability Skills (30 hours).

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26.	Job Role: Hammer and Tool Kit Maker	
	QP Code: CSC/N1103	NQR Code: NG-2.5-CG-00744-2023-V1-CGSC
	Occupation: Fitting and Assembly	NSQF Level: 2.5
	Reviewed on: 15/09/2023	Validity: 14/09/2028

Brief Job Description

The incumbent at this job performs various metal forming, moulding, casting etc. operations to manufacture tools as per the work requirements.


Minimum Education Qualification

- None

Applicable National Occupational Standards (NOS)

- Overview of PM Vishwakarma Scheme. (Level 2.5)
- Upskilling on working with the listed modern Tool- kit for Hammer and Tool Kit Maker to perform operations using modern tools. (Level 2.5).
- Digital Literacy

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27.

Job Role: Hammer and Toolkit Maker	
QP Code: CSC/N0326	NQR Code: NG-03-CG-02339-2024-V1-CGSC
Occupation: Fitter – N/A	NSQF Level: 3
Reviewed on: 15/03/2024	Validity: 15/03/2027

Brief Job Description

The incumbent on the job is involved in setting up of forging machines with dies and presses and performing heat treatment and forging operations so that the material forms the shape as per the requirement.


Minimum Education Qualification

- No Formal Education
- Existing Vishwakarma's duly verified as per the Scheme

Applicable National Occupational Standards (NOS)

- Usage of any new machinery/tools/equipment (Level 3).
- Entrepreneurship skills, design workshops and Bureau of Indian Standards (BIS) Modules (Level 3).
- Advanced Digital Skills(Level 3).
- Advanced Financial skills (Level 3).
- Advanced Marketing and Outreach skills(Level 3).

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28.	Job Role: IIoT Data Analytics Engineer	
	QP Code: CSC/Q0504	NQR Code: QG-5.5-CG-02040-2024-V1-CGSC
	Occupation: Service	NSQF Level: 5.5
	Reviewed on: 31/01/2024	Validity:31/01/2027

Brief Job Description

IIoT Data Analytics Engineer facilitate in installation, configuring and connects disruptive sensors and other devices in the industrial IIoT network using LoRaWAN technology, specified optical fibre cables and connectors. He/she develop expertise in data collecting, cleaning, formatting, conditional formatting, data visualization, data consolidation, co mmissioning and troubleshooting of IIoT systems. The individual skilled engineers can assemble and test simple devices and systems through device prototypes.


Minimum Education Qualification

- UG in relevant field,3 years of Experience.
- 3-year UG in a relevant field or 4-year UG with courses related to Engg./Science.
- 3 year Diploma after 10th, completed, 4 years of Experience.
- Previous NSQF qualification of Level 5, 1.5 Years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N0510 Perform Installation and Configuring IIoT devices and Products.
- CSC/N0516 Collate and Analyze Data arising out of a manufacturing process.
- CSC/N0511 Facilitate in Commissioning and Troubleshooting of IIoT systems.
- CSC/N0512 Assemble and Test Prototype IoT devices.
- CSC/N1339 Collaboratively coordinate with the team.
- CSC/N0505 Follow Health, Safety and Environment at workplace.
- DGT/VSQ/N0102 Employability Skills

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29.	Job Role: IIoT Industrial System Architecture Engineer		
	QP Code: CSC/Q0409	NQR Code: QG-5.5-CG-02039-2024-V1-CGSC	
	Occupation: Design	NSQF Level: 5.5	
	Reviewed on: 31/01/2024	Validity: 30/01/2027	

Brief Job Description

Industry 4.0 IIOT System Architecture Engineer plays a vital role in new-age Smart e-factories to achieve desired user-friendly agile, flexible, and cost-effective, sustainable, self-reliance enterprise integrated horizontally and vertically - as well as with vendors, suppliers, and consumers. IIOT Implements the system architecture, performs engineering tasks, reconfigurations, and upgrades. It evangelizes Industry 4.0 cultural ecosystems and helps relevant skill development thereby upskill and reskill.

Minimum Education Qualification

- UG In relevant field 3 years of Experience
- 3-year UG in relevant field or 4-years UG with courses related to Engg./Science.
- 3 year Diploma after 10th Completed, 4 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N0428 Assist in creating a smart e-Factory.
- CSC/N0429 Perform system analysis and assist in design, develop and maximize productivity of machinery.
- CSC/N0430 Execute Process Control automation to achieve improved productivity.
- CSC/N0431 Customize Industrial Internet of Things (IIOT) ecosystem for optimized performance.
- CSC/N0432 Collate data through Sensors and devices, and present it in relevant format for data analysis and data management.
- CSC/N0433 Assist to achieve the desired Product Life Cycle Management.
- CSC/N505 Follow health, safety and environment guidelines at workplace.
- DGT/VSQ/N0102 Employability Skills.

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31.	Job Role: Jr. Designer (Mechanical)		
	QP Code: CSC/Q0405	NQR Code: QG-05-CG-03929-2025-V2-CGSSC	
	Occupation: Fitter – Design	NSQF Level: 5	
	Reviewed on: 30/04/2025	Validity: 30/04/2028	

Brief Job Description

Jr. Designer (Mechanical) is responsible for determining the client's requirements with respect to the mechanical devices and equipment, creating the design brief, validating the design, allocating resources for each activity, and ensuring the designing process is completed within the agreed deadlines and in compliance with the relevant regulations. The individual identifies and evaluates design options, creates detailed design and models using the appropriate 2D and 3D software and presents them to the relevant stakeholders to get their approval and oversees production.

Minimum Education Qualification

- UG Diploma.
- 12th Passed, 2 years Experience NTC/NAC/CITS.
- 12th Passed, 3 years of Experience.
- 10th Passed, 6 years of Experience.
- Previous NSQF qualification of Level 4.5, 1.5 Years of Experience.
- Previous NSQF qualification of Level 4, 3 years of Experience.
- UG Completed.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0405 Determine the client's requirement and create a design brief.
- CSC/N0402 Create and modify mechanical engineering drawings using the CAD / CAM Software.
- CSC/N0408 Create and modify 3D mechanical engineering models using the CAD /CAM Software.
- CSC/N0407 Develop prototypes using 3D Printer as per the design brief and carry out Prototype Validation and production.
- DGT/VSQ/N0102 Employability Skills (60 hours).

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30.	Job Role: Industrial automation safety engineer		
	QP Code: CSC/Q0416	NQR Code: QG-5.5-CG-02044-2024-V1-CGSC	
	Occupation: Service	NSQF Level: 2.5	
	Reviewed on: 15/09/2023	Validity: 14/09/2028	

Brief Job Description

The industrial automation is a subset of industry 4.0 disruptive technologies that facilitates the digital manufacturing leading to smart implements of product development. The availability of Industrial Internet of Things (IIoT) machine-to-machine connectivity enhances the safety of the individuals. The devices and sensors interconnected with control room and cloud-based analytics provides the complete portrait of manufacturing systems. The individual engineers need to understand the concepts, ideas and implementation of industrial automation and also the must unlearn and relearn the safety practices through capacity building programs

Minimum Education Qualification

- UG In relevant field 3 years of Experience
- 3-year UG in relevant field or 4-years UG with courses related to Engg./Science.
- 3 year Diploma after 10th Completed, 4 years of Experience.
- Previous NSQF qualification of Level 5, 1.5 Years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N0527 Identify hazards, develop safety standards and protocol.
- DGT/VSQ/N0102 Employability Skills.
- CSC/N0528 Design safety testing measures.
- CSC/N0529 Implement safety testing measures to prevent accident/injury.
- CSC/N1339 Collaboratively coordinate with the team.
- CSC/N0505 Health, Safety and Environment at workplace.
- CSC/N0526 Ensure safety of automated system.

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32.	Job Role: Locksmith		
	QP Code:	NQR Code: NG-03-CG-02341-2024-V1-CGSC	
	Occupation: N/A	NSQF Level: 3	
	Reviewed on: 15/03/2024	Validity: 15/03/2027	

Brief Job Description

The incumbent at this job performs various operations like installation, adjustment and repairing operation of locks and duplication of keys, changing of lock combination and bypassing of locks.

Minimum Education Qualification

- No Formal Education

Applicable National Occupational Standards (NOS)

- Usage of any new machinery/tools/equipment.
- Entrepreneurship skills, design workshops and Bureau of Indian Standards (BIS) Modules.
- Advanced Digital Skills.
- Advanced Marketing and Outreach skills.

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33.

Job Role: Locksmith		
QP Code: CSC/N0321	NQR Code: NG-2.5-CG-00746-2023-V1-CGSC	
Occupation: Design	NSQF Level: 2.5	
Reviewed on: 15/09/2023	Validity:15/09/2023	

Brief Job Description
The incumbent at this job performs various operations like installation, adjustment and repairing operation of locks and duplication of keys, changing of lock combination and bypassing of locks.


Minimum Education Qualification

- None

Applicable National Occupational Standards (NOS)

- Overview of PM Vishwakarma Scheme.
- Upskilling on working with the listed modern Tool- kit for Locksmith to perform operations using modern tools.
- Digital Literacy.
- Financial Literacy.
- Marketing and Branding.
- Self-Employment.
- Interactive/Feedback Session.

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34.

Job Role: Manual Metal Arc Welding/ Shielded Metal Arc Welding Welder		
QP Code: CSC/Q0204	NQR Code: QG-03-CG-03940-2025-V2-CGSSC	
Occupation: Welding and Cutting	NSQF Level: 3	
Reviewed on: 30/04/2025	Validity: 30/04/2028	

Brief Job Description
The incumbent in the job is responsible for performing manual metal arc welding (MMAW) also known as shielded metal arc welding (SMAW) for producing a fillet and groove joints on carbon and low alloy steels as per detailed instructions received.


Minimum Education Qualification

- 10th Passed.
- 8th Passed, 2 years of Experience NTC/NAC (NTC/NAC after 8th).
- 8th Passed, 3 years of Experience.
- Previous NSQF qualification of Level 2.5, 1.5 Years of Experience.
- Previous NSQF qualification of Level 2, 3 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0204 Manually weld carbon and low alloy steels by using Metal Arc Welding (MMAW)/ Shielded Metal Arc Welding (SMAW).
- CSC/N0201 Manually cut metal and metal alloys using oxy-fuel gases.
- DGT/VSQ/N0101 Employability Skills (30 hours).

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35.

Job Role: Mechanical Automation & Maintenance Engineer		
QP Code: CSC/Q0905	NQR Code: QG-06-IT-04198-2025-V1-CGSC	
Occupation: Maintenance	NSQF Level: 5	
Reviewed on: 30/04/2025	Validity: 30/04/2028	

Brief Job Description
A Mechanical Automation & Maintenance Engineer is a professional responsible for designing, installing, maintaining, and upgrading mechanical systems, equipment, and machines that are controlled by automated systems.


Minimum Education Qualification

- UG Diploma.
- 12th Passed, 2 years Experience NTC/NAC/CITS.
- 12th Passed, 3 years of Experience.
- 10th Passed, 6 years of Experience.
- Previous NSQF qualification of Level 4.5, 1.5 Years of Experience.
- Previous NSQF qualification of Level 4, 3 years of Experience.
- UG Completed.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0405 Determine the client's requirement and create a design brief.
- CSC/N0402 Create and modify mechanical engineering drawings using the CAD / CAM Software.
- CSC/N0408 Create and modify 3D mechanical engineering models using the CAD /CAM Software.
- CSC/N0407 Develop prototypes using 3D Printer as per the design brief and carry out Prototype Validation and production.
- DGT/VSQ/N0102 Employability Skills (60 hours).

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36.

Job Role: Mechanical Engineering CAD		
QP Code: CSC/Q0419	NQR Code: QG-4.5-CG-01808-2024-V1-CGSC	
Occupation: Design	NSQF Level: 4.5	
Reviewed on: 06/02/2024	Validity:06/02/2026	

Brief Job Description
Mechanical engineering computer aided design (CAD) is the use of computer systems to assist in the creation, modification, analysis, or optimization of an engineering design. CAD software is used to increase the productivity of the designer, improve the quality of design, improve communication through documentation, and create a database for manufacturing. CAD output is often in the form of electronic files for print, manufacturing documentation, or other manufacturing processes. The technical and engineering drawings and images must convey information such as materials, processes, dimensions and tolerances according to application-specific conventions. CAD may be used to design curves and figures in two-dimensional (2D) space or curves, surfaces and solids in three-dimensional (3D) space. CAD is also used to produce computer animation for the special effects used in, for example, advertising and technical manuals. CAD is an important industrial art and is the way projects come true. It is extensively used in many applications, including automotive, ship building and aerospace industries, and in industrial design. The CAD process and outputs are essential to successful solutions for engineering and manufacturing problems. CAD software helps us explore ideas, visualize concepts through photorealistic renderings and movies, and simulates how a design project will perform in the real world..


Minimum Education Qualification

- UG 1st year Passed.
- UG 1st year Pursuing.
- 3rd Year of 3 Year Diploma after 10th Pursuing.
- Pursuing 2nd Year of 2 year diploma after 12th.
- 10th Grade pass with 1 year NTC plus 1 year NAC plus 1 year CITS.
- 10th grade pass with 1 year NTC plus CITS.
- 8th Grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS.
- Previous NSQF qualification of Level 3.5, 3 years of Experience.
- Previous NSQF qualification of Level 4, 1.5 Years of Experience

Applicable National Occupational Standards (NOS)

- CSC/N0459 V1.0 Work organization and management(MCAD).
- CSC/N0447 V1.0 Materials, software, and hardware.
- CSC/N0448 V1.0 Perform 3D modelling.
- N/A OJT.
- CSC/N0451 V1.0 Technical drawing and measuring.
- CSC/N0449 V1.0 Create photo rendered images (2D) and creation of animations.
- CSC/N0450 V1.0 Reverse engineering of physical models.

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37.

Job Role: Metal Inert Gas/ Metal Active Gas/ Gas Metal Arc Welder (MIG/MAG/GMAW) (Optional: Flux cored Arc Welder (Semi-Automatic))**QP Code:**CSC/Q0209**NQR Code:** QG-04-CG-03935-2025-V2-CGSSC**Occupation:** Welding and Cutting**NSQF Level:** 4**Reviewed on:** 30/04/2025**Validity:**30/04/2028**Brief Job Description**

The incumbent in the job is responsible for performing metal inert gas/metal active gas welding (MIG/MAG) for welding joints as per welding procedure specification (WPS). The incumbent is also responsible for performing Oxy gas cutting and plasma cutting to cut metal into required specification as per welding procedure specification (WPS).

Minimum Education Qualification

- 12th Passed.
- 2nd Year of 3 Year Diploma after 10th Completed.
- 10th Passed, 2 years Experience NTC/NAC/CITS.
- 10th Passed, 3 years relevant experience.
- Previous NSQF qualification of Level 3.5, 1.5 Years Experience.
- Previous NSQF qualification of Level 3, 3 years experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N0209 Manually weld metals by using MIG/MAG welding.
- CSC/N0201 Manually cut metal and metal alloys using oxy-fuel gases.
- DGT/VSQ/N0101 Employability Skills (30 hours).
- CSC/N0205 Perform semi-automatic flux cored arc welding process to prepare joints.
- CSC/N0207 Manually cut metal materials using plasma arc.

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38.

Job Role: Overhead Crane Operator**QP Code:** CSC/N1207**NQR Code:** NG-04-CG-02168-2024-V1-CGSC.**Occupation:** Overhead Crane Operator**NSQF Level:** 4**Reviewed on:** 31/01/2024**Validity:** 31/01/2029**Brief Job Description**

Operate gantry crane equipment safely and efficiently to lift, move and position heavy materials or containers according to work orders and instructions.

Minimum Education Qualification

- 10th, 2 year NTC.
- 12th Passed.
- 10th Passed.
- Previous NSQF qualification of Level 3.5.

Applicable National Occupational Standards (NOS)

- CSC/N1207 Operate crane equipment safely and efficiently to lift, move and position heavy materials or containers according to work orders and instructions.

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39.

Job Role: Capital Goods Manufacturing Engineer**QP Code:** CSC/Q1201**NQR Code:** QG-05-CG-03943-2025-V2-CGSSC**Occupation:** Shop Floor Management**NSQF Level:** 5**Reviewed on:** 01/10/2025**Validity:** 01/10/2028**Brief Job Description**

A Capital Goods Manufacturing Engineer is responsible for supervising production processes such as machining, fabrication, welding, surface finishing, assembly, etc. The individual supervises the whole production cycle from planning, resource management, production to review of the production processes to ensure adherence to applicable standards, regulations and organisational guidelines. The person supervises and assist various personnel involved in the production activities for ensuring smooth operations at the production facility and achieving the productions targets

Minimum Education Qualification

- Completed 2nd year of UG (UG Diploma) (Electrical / Mechanical).
- Completed 2nd year diploma after 12th (or equivalent).
- 12th grade pass with 2 year NTC/ CITS/NAC (or equivalent).
- 12th Class (Pass) with 3 Years of relevant experience.
- 10th Class (Pass) with 6 Years of relevant experience.
- Completed 3 year diploma after 10th with 1.5 years of relevant experience.
- 12th grade pass with 1 year NTC/ NAC with 1.5 years of relevant experience.
- Completed 1st year of UG (UG Certificate) (or equivalent).
- Previous relevant Qualification of NSQF Level (4.5) with 1.5 years of relevant experience.
- Previous relevant Qualification of NSQF Level (4) with 4 years of experience relevant.

Applicable National Occupational Standards (NOS)

- CSC/N1335: Follow the health and safety practices at the work.
- CSC/N1336: Coordinate with co-workers to achieve work efficiency.
- CSC/N1201: Plan and manage the Capita Good production process.
- DGT/VSQ/N0102: Employability Skills (60 Hours)..

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40.

Job Role: Predictive Maintenance Engineer**QP Code:****NQR Code:** QG-5.5-CG-02042-2024-V1-CGSC**Occupation:** Maintenance**NSQF Level:** 5.5**Reviewed on:** 31/01/2024**Validity:**31/01/2027**Brief Job Description**

Predictive Maintenance (PdM) Engineer measures and monitors specific asset condition parameters (using appropriate condition monitoring techniques, tools/devices, and technologies), their trends, taking note of significant changes that could be indicative of an impending failure and regularly monitors the condition and performance of assets during their normal operation, to reduce the likelihood of failures. Performing the data analysis and diagnostics of the asset condition, the PdM specialist attempts to predict when equipment failure/component failure could occur (based on certain factors) and initiates timely maintenance (scheduled maintenance and corrective maintenance) for prevention of any functional failure.

Minimum Education Qualification

- UG In relevant field, 3 years of Experience.
- 3-year UG in relevant field or 4-years UG, with courses related to Engg./Science.
- 3 year Diploma after 10th Completed, 4 years of Experience.
- Previous NSQF qualification of Level 5, 1.5 Years of Experience

Applicable National Occupational Standards (NOS)

- CSC/N0526 Ensure safety of automated system.
- CSC/N0527 Identify hazards, develop safety standards and protocol.
- CSC/N0528 Design safety testing measures.
- CSC/N0505 Health, Safety and Environment at workplace.
- DGT/VSQ/N0102 Employability Skills.
- CSC/N0529 Implement safety testing measures to prevent accident/injury.
- CSC/N1339 Collaboratively coordinate with the team.

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41.	Job Role: Robotics & Automation PLC SCADA Engineer		
	QP Code: CSC/Q0413	NQR Code: QG-5.5-CG-02049-2024-V1-CGSC	
	Occupation: Design	NSQF Level: 5.5	
	Reviewed on: 31/01/2024	Validity: 30/01/2027	

Brief Job Description

The individual will play a crucial role in designing, implementing, and maintaining Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) systems for our cutting-edge robotics and automation projects. This role offers an exciting opportunity to contribute to the development of innovative solutions that drive efficiency and productivity in the field of robotics and automation.

Minimum Education Qualification

- UG In relevant field, 2 years of Experience.
- 3-year UG in relevant field or 4-years UG with courses related to Engg./Science.
- 3 year Diploma after 10th Completed, 5 years of Experience.
- Previous NSQF qualification of Level 5,1.5 Years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N0465 V1.0 Implement and Maintain control systems using PLC and SCADA systems.
- CSC/N0466 V1.0 Develop System logic, programming automation sequence, and troubleshoot issues.
- CSC/N0467 V1.0 Perform PLC Programming and Configuration.
- CSC/N0468 V1.0 Carry SCADA System Design and Maintenance.
- CSC/N0469 V1.0 Perform integration of Robotics and Automation Systems.
- CSC/N0470 V1.0 Conduct Training and Documentation.
- CSC/N1339 V1.0 Collaboratively coordinate with the team.
- CSC/N0505 V1.0 Follow health, safety and environment guidelines at the workplace.
- DGT/VSQ/N0102 V1.0 Employability Skills..

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43.	Job Role: Senior Welder (Pipes & Plates)		
	QP Code: CSC/Q0208	NQR Code: QG-04-CG-03944-2025-V2-CGSSC	
	Occupation: Welding and Cutting	NSQF Level: 4	
	Reviewed on: 30/04/2025	Validity: 30/04/2028	

Brief Job Description

The incumbent in the job is responsible for Senior Welder (Pipes & Plates) process to produce various joints on different materials (carbon steel, low alloy steel and austenitic stainless steel) and post- welding activities such as inspection of equipment condition, gauging, testing and inspection of welded work pieces.

Minimum Education Qualification

- 10th Passed,3 years of Experience.
- 10th Passed, 2 years of Experience of NTC/NAC/CITS.
- Previous NSQF qualification of Level 3,3 years of Experience.
- Previous NSQF qualification of Level 3.5,1.5 Years of Experience.
- 12th Passed.
- 2nd Year of 3 Year Diploma after 10th Completed.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0208 Supervise and perform Manual Metal Arc Welding (MMAW)/ Shielded Metal Arc Welding (SMAW).
- CSC/N0201 Manually cut metal and metal alloys using oxy-fuel gases.
- CSC/N0207 Manually cut metal materials using plasma arc.
- CSC/N0209 Manually weld metals by using MIG/MAG welding NOS.
- DGT/VSQ/N0101 Employability Skills (30 hours).
- CSC/N0211 Weld joints by Submerged Arc Welding process.

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42.	Job Role: Robotics and Automation COBOTS Engineer		
	QP Code: CSC/Q0505	NQR Code: QG-5.5-CG-02041-2024-V1-CGSC	
	Occupation: Design	NSQF Level: 5.5	
	Reviewed on: 31/01/2024	Validity: 30/01/2027	

Brief Job Description

Industry 4.0 disruptive technologies that includes the robotics, automation with special focus on collaborative robots in short called as COBOTS are game changer for smart digital manufacturing. COBOTS play a vital role in digital manufacturing especially in shop floor productions. COBOTS is the need of the hour. The individual is expected to develop expertise on the basics and concepts of COBOTS, architecture, anatomy, installation, commissioning and configuring and application in manufacturing. He / She develop hands-on experience in programming using ROS (Robot Operating Systems)

Minimum Education Qualification

- UG In relevant field,3 years of Experience.
- 3-year UG in relevant field or 4-years UG with courses related to Engg./Science.
- 3 year Diploma after 10th Completed, 4 years of Experience.
- Previous NSQF qualification of Level 5,1.5 Years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N0521 Assist in designing, Programming, and maintaining industrial robotic systems.
- CSC/N0513 Perform Installation, commissioning, and integration of robotic systems.
- CSC/N0514 Carry out Robot Operating Systems (ROS) programming of Robots and COBOTS.
- CSC/N0520 Configure robotic movements, troubleshoot and prevent malfunction.
- CSC/N1339 Collaboratively coordinate with the team.
- CSC/N0505 Health, Safety and Environment at workplace.
- DGT/VSQ/N0102 Employability Skills.

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44.	Job Role: Sheet Metal Worker - Hand Tools and Manually Operated Machines		
	QP Code: CSC/Q0301	NQR Code: QG-02-CG-03938-2025-V2-CGSSC	
	Occupation: Fitting and Assembly	NSQF Level: 2	
	Reviewed on: 30/04/2025	Validity: 30/04/2028	

Brief Job Description

The incumbent in the job is responsible for performing basic sheet metal cutting, forming and assembly operations.

Minimum Education Qualification

- Ability to read and write

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0301 Perform basic sheet metal cutting, forming and assembly operations.
- DGT/VSQ/N0101 Employability Skills (30 hours).
- CSC/N0302 Grind surface using hand and hand-held power tools.

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45.

Job Role: Stainless Steel Fabricator		
QP Code: CSC/Q0307	NQR Code: QG-05-CG-03945-2025-V2-CGSSC	
Occupation: Fitting and Assembly	NSQF Level: 5	
Reviewed on: 30/04/2025	Validity:30/04/2028	

Brief Job Description

A Stainless Steel Fabricator designs, cuts, forms, welds, joins, polishes and finishes the stainless steel structure/component/product as per work requirements. The individual also performs quality checks and ensures correct installation of the fabricated structure at the worksite, as per required standards.


Minimum Education Qualification

- UG Diploma, Completed.
- UG 1st year Completed, 1.5 Years of Experience.
- 12th Passed, 2 years of Experience NTC/NAC/CITS.
- 12th Passed, 3 years of Experience.
- 10th Passed, 6 years of Experience.
- Previous NSQF qualification of Level 4.5,1.5 Years of Experience.
- Previous NSQF qualification of Level 4, 3 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N0310 Plan and prepare for stainless steel fabrication.
- CSC/N0311 Perform cutting and forming tasks for stainless steel fabrication.
- CSC/N0312 Perform pre- welding operations for stainless steel fabrication.
- CSC/N0204 Manually weld carbon and low alloy steels by using Metal Arc Welding (MMAW)/ Shielded Metal Arc Welding (SMAW).
- CSC/N0212 Perform Tungsten Inert Gas (TIG) Welding on metals.
- CSC/N0209 Manually weld metals by using MIG/MAG welding.
- CSC/N0313 Perform finishing and installation of fabricated stainless steel structure.
- DGT/VSQ/N0102 Employability Skills (60 hours).

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46.

Job Role: Additive Process Specialist		
QP Code: CSC/Q1002	NQR Code: QG-5.5-CG-02048-2024-V1-CGSC	
Occupation: Material Preparation, Material Preparation	NSQF Level: 6	
Reviewed on: 01/10/2025	Validity: 01/10/2030	

Brief Job Description

An Additive Process Engineer is responsible for oversee the implementation and optimization of additive manufacturing processes within the production environment.

Minimum Education Qualification


- Diploma (Mechanical/Automobile/Electrical/Electronics) with 3 Years of experience relevant.
- 10th Class with 3 Years of experience relevant.
- B.E./B.Tech (Mechanical/Automobile/Electrical/Electronics) with 1 Year of experience relevant.
- M.Tech (Mechanical/Automobile/Electrical/Electronics).
- Certificate-NSQF (level 5.5) with 1.5 years of experience relevant.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

- CSC/N0482: Develop and implement Direct Hybrid Additive Manufacturing (DHAM) plans for Complex Prototype Development.
- CSC/N0481: Designing parts optimised for the additive Process.
- CSC/N0533: Set up and optimize additive manufacturing Processes.
- CSC/N1339: Collaboratively coordinate with the team 5. DGT/VSQ/N0102: Employability Skills (60 Hours).
- CSC/N0505: Follow health, safety and environment guidelines at workplace

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47.

Job Role:Tool and Die Maker		
QP Code: CSC/Q0306	NQR Code: QG-05-CG-03947-2025-V2-CGSSC	
Occupation: Fitting and Assembly	NSQF Level: 5	
Reviewed on: 30/04/2025	Validity: 30/04/2028	

Brief Job Description

The incumbent at this job performs various machining, fitting and assembling activities to manufacture tool and die as per the work requirements.


Minimum Education Qualification

- UG Diploma Completed.
- UG 1st year.
- 12th Passed, 2 years of Experience NTC/NAC/CITS.
- 12th Passed, 3 Years of Experience.
- 10th Passed, 6 years of Experience.
- Previous NSQF qualification of Level 4.5,1.5 Years of Experience.
- Previous NSQF qualification of Level 4, 3 years of Experience.

Applicable National Occupational Standards (NOS)

- CSC/N1335 Follow the health and safety practices at work.
- CSC/N1336 Coordinate with co-workers to achieve work efficiency.
- CSC/N0307 Prepare for the making of tools and die using Additive Manufacturing based Prototype.
- DGT/VSQ/N0102 Employability Skills (60 hours)
- CSC/N0316 Perform machining operations.
- CSC/N0308 Perform fitting operations.
- CSC/N0309 Perform assembly operations.

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48.

Job Role:Welding Technician - Oil & Gas/Shipbuilding/Railways		
QP Code: CSC/Q0214	NQR Code: QG-04-IT-04205-2025-V1-CGSC	
Occupation: Welding and Cutting	NSQF Level: 4	
Reviewed on:08/05/2025	Validity: 08/05/2028	

Brief Job Description

A Welding Technician is responsible for executing welding operations in various industries such as Oil & Gas, Shipbuilding & Railways, utilizing augmented reality (AR) technology to enhance precision, efficiency, and safety. This role involves performing high-quality welding on a variety of materials and components while adhering to industry standards and regulations.


Minimum Education Qualification

- 12th Class (or equivalent).
- Completed 2nd year of the 3-year diploma after 10 (or equivalent). 10th grade pass with 3 Years of experience relevant.
- 11th grade pass with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (3) with 3 Years of experience relevant.

Applicable National Occupational Standards (NOS)

- CSC/N1335: Follow the health and safety practices at the work.
- CSC/N1336: Coordinate with co-workers to achieve work efficiency.
- CSC/N0204: Manually weld carbon and low alloy steels by using Metal Arc Welding (MMAW)/ Shielded Metal Arc Welding (SMAW).
- CSC/N0209: Manually weld metals by using MIG/MAG welding.
- DGT/VSQ/N0101: Employability Skills (30 Hours).
- Optional(Not mandatory):
- CSC/N0215: Perform AR-guided SMAW/GMAW in Oil & Gas Industry.
- CSC/N0217: Perform AR-guided SMAW/GMAW in Shipbuilding.

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49.

Job Role: Operator-Stainless steel kitchenware manufacturing (OEM Jindal Stainless Limited)		
QP Code: CSC/Q0124	NQR Code: QG-02-CG-03939-2025-V2-CGSSC	
Occupation: Machining, Welding and Cutting, Fabrication, Fitting and Assembly, Material Preparation, Machining	NSQF Level: 5	
Reviewed on: 01/10/2025	Validity: 01/10/2028	

Brief Job Description

The incumbent in this job role carries out sheet metal cutting, forming, plate bending, resistance spot welding, heat treatment operations, polishing, spinning, brazing, beading, packaging, handling, dispatching, and machine maintenance in order to manufacture a workpiece as per specifications.

Minimum Education Qualification

- 10th Class.
- 10th grade pass and pursuing continuous schooling.
- 8th grade pass with 2 years of NTC.
- 9th grade pass with 1 Year of experience Relevant.
- 8th grade pass with 2 Years of experience RELEVANT.
- 9th grade pass with 1 Year of experience.
- 8th grade pass with 2 years of NTC.
- Previous relevant Qualification of NSQF Level (2).
- Previous relevant Qualification of NSQF Level (2.5).

Applicable National Occupational Standards (NOS)

- Compulsory NOS:
- CSC/N0301: Perform basic sheet metal operations
- CSC/N0113: Carry put polishing operation
- CSC/N1206: Carry out material handling and machine maintenance
- CSC/N0531: Follow health and safety practices at the workplace
- CSC/N1344: Coordinate with co-workers to achieve work efficiency
- DGT/VSQ/N0101: Employability Skills (30 Hours)

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50.

Job Role: Computer Aided Tool & Die Design Engineer		
QP Code: CSC/Q0422	NQR Code: QG-06-IT-04203-2025-V1-CGSC	
Occupation: Design	NSQF Level: 6	
Reviewed on: 08/05/2025	Validity: 08/05/2028	

Brief Job Description

A Computer Aided Tool & Die Design Engineer is a professional who uses computer software to design tools and molds that are used in manufacturing processes.

Minimum Education Qualification

- Completed 4 year UG program (or equivalent).
- Completed 2nd year diploma after 12th with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

Applicable National Occupational Standards (NOS)

- Compulsory NOS:
- CSC/N0471: Lead the Design Team on 3D models of tools, dies, and molds using CAD / CAM software as per Design Requirements.
- CSC/N0472: Oversee the Development of tool Designs (using FEA) and dies by generating tool paths and machining instructions.
- CSC/N0473: Manage the Team to Operate CNC machines to fabricate tooling components and perform inspection to ensure they meet design specifications and quality standards. 4. CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace.
- DGT/VSQ/N0102: Employability Skills (60 Hours).

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51.

Job Role: Automated Metal Cutting Plasma Engineer		
QP Code: CSC/Q0216	NQR Code: QG-06-IT-04200-2025-V1-CGSC	
Occupation: Welding and Cutting	NSQF Level: 6	
Reviewed on: 08/05/2025	Validity: 08/05/2028	

Brief Job Description

An Automated Metal Cutting Plasma Engineer is a professional who specializes in using advanced machines that cut metal using high-temperature plasma.

Minimum Education Qualification

- Completed 4 year UG program (or equivalent).
- Completed 2nd year diploma after 12th with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

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

- CSC/N0221: Oversee the Setup of Automated Metal Cutting Plasma.
- CSC/N0222: Select and implement automated CNC plasma cutting techniques for metal fabrication.
- CSC/N0223: Post-Cutting Quality Check and Finishing.
- CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace.
- DGT/VSQ/N0102: Employability Skills (60 Hours).

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52.

Job Role: Draughtsman Mechanical		
QP Code: CSC/Q0402	NQR Code: QG-04-CG-03930-2025-V2-CGSSC	
Occupation: Design	NSQF Level: 4	
Reviewed on: 08/05/2025	Validity: 30/04/2028	

Brief Job Description

A Draughtsman Mechanical is responsible for developing 3D drawings of design specifications for mechanical equipment and components. The individual selects and uses the appropriate Computer-Aided Design (CAD) software and equipment for the purpose, depending on the type and complexity of the drawing functions to be carried out. The person collaborates with engineers, production technicians and clients to identify design problems and develop effective solutions.

Minimum Education Qualification

- 12th Class (or equivalent).
- Completed 2nd year of the 3-year diploma after 10 (or equivalent). 10th grade pass with 3 Years of experience relevant.
- 11th grade pass with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (3) with 3 Years of experience relevant.

Applicable National Occupational Standards (NOS)

- Compulsory NOS:
- CSC/N1335: Follow the health and safety practices at the work.
- CSC/N1336: Coordinate with co-workers to achieve work efficiency.
- CSC/N0402: Create and modify 3D mechanical engineering drawings using the CAD system.
- DGT/VSQ/N0101: Employability Skills (30 Hours).

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53.	Job Role: Advance Mechatronics Specialist		
	QP Code: CSC/Q0414	NQR Code: QG-5.5-CG-02047-2024-VCGSC	
	Occupation: Design, Design	NSQF Level: 5.5	
	Reviewed on: 31/01/2024	Validity: 31/01/2027	

Brief Job Description
An Advanced Mechatronics Engineer is responsible for the install, repair, adjust, and test of equipment and components to ensure that systems function properly within the manufacturing industry.

- Minimum Education Qualification**
- UG in relevant field (UG Degree in relevant field +3 years of relevant experience.
 - 3/ 4 years UG B.Sc., BE, B.Tech (Electrical, Electronics, Mechanical, Mechatronics, Instrumentation and Control)*.
 - 10+3 years Diploma in relevant field +5 year of relevant experience.
 - Previous NSQC level 5 + 1.5 years of relevant experience.
 - *Subject to being offered as 6 months internship/ project).

- Applicable National Occupational Standards (NOS)**
Compulsory NOS:
- CSC/N0507: Configure and install electronic components in the mechatronic systems.
 - CSC/N0508: Aligning and testing of electronic sensors and actuators in the mechatronics system.
 - CSC/N0424: Configure and test the microcontroller in the mechatronics system.
 - CSC/N1339: Collaboratively coordinate with the team.
 - CSC/N0505: Follow health, safety and environment guidelines at workplace.
 - DGT/VSQ/N0102: Employability Skills (60 Hours).

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55.	Job Role: Automated/Robotic Metal Fabrication Engineer		
	QP Code: CSC/Q0309	NQR Code: QG-06-IT-04199-2025-V1-CGSC	
	Occupation: Fabrication, Fitting and Assembly	NSQF Level: 6	
	Reviewed on: 08/05/2025	Validity: 08/05/2028	

Brief Job Description
An Automated/Robotic Metal Fabrication Engineer is a professional who designs and oversees the use of machines and robots to create metal products.

- Minimum Education Qualification**
- Completed 4 year UG program (Mechanical/Automobile/Electrical/Electronics).
 - Completed 2nd year diploma after 12th with 3 Years of experience relevant.
 - Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
 - Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

- **Applicable National Occupational Standards (NOS)**
Compulsory NOS:
- CSC/N0330: Setting up robotic work cells and automated fixtures for specific fabrication processes.
 - CSC/N0331: Select and develop additive manufacturing prototypes using metal materials for fabrication processes.
 - CSC/N0332: Inspect for Dimensional Defects by Implementing process optimization strategies.
 - CSC/N1339: Collaboratively coordinate with the team.
 - CSC/N0505: Follow health, safety and environment guidelines at workplace.
 - DGT/VSQ/N0102: Employability Skills (60 Hours)

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54.	Job Role: Advance Mechatronics Simulation Engineer		
	QP Code: CSC/Q0423	NQR Code: QG-5.5-CG-02047-2024-V1-CGSC	
	Occupation: Design	NSQF Level: 5.5	
	Reviewed on: 01/10/2025	Validity: 01/10/2030	

Brief Job Description
Advanced Mechatronics Simulation Engineer is responsible for integration of mechanical, electrical, and computer systems to create advanced automation solutions

- Minimum Education Qualification**
- Pursuing Completed 4 year UG (in case of 4-year UG with honours/ honours with research) (Mechanical/Electronics/Automobile/electrical).
 - Pursuing 3rd year of UG (Mechanical/automobile/electrical/electronics) with 1.5 years of experience relevant.
 - Completed 2nd year diploma after 12th with 1.5 years of experience relevant.
 - Completed 3-year diploma (after 10th) with 3 Years of relevant experience.
 - Previous relevant Qualification of NSQF Level (5) with 1.5 years of experience relevant
 - Previous relevant Qualification of NSQF Level (4) with 3 Years of experience relevant.

- Applicable National Occupational Standards (NOS)**
- Compulsory NOS:
 - CSC/N0479: Supervise programming Simulation of Mechatronics System using CAD inputs (CAD Modelling of particular process).
 - CSC/N0480: Supervise testing, and Integration of all the sensor, actuators, control system and mechanical components of the mechatronic system.
 - CSC/N1339: Collaboratively coordinate with the team.
 - CSC/N0505: Follow health, safety and environment guidelines at workplace.
 - DGT/VSQ/N0102: Employability Skills (60 Hours).

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56.	Job Role: Welding Automation Engineer		
	QP Code: CSC/Q0215	NQR Code: QG-06-IT-04196-2025-V1-CGSC	
	Occupation: Welding and Cutting	NSQF Level: 6	
	Reviewed on: 08/05/2025	Validity: 08/05/2028	

Brief Job Description
A Welding Automation Engineer is a specialist who focuses on designing, implementing, and improving systems that automate welding processes.

- Minimum Education Qualification**
- Completed 4 year UG program(Mechanical/Automobile/Electrical/Electronics).
 - Completed 2nd year diploma after 12th with 3 Years of experience relevant.
 - Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
 - Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

- **Applicable National Occupational Standards (NOS)**
Compulsory NOS:
- CSC/N0218: Oversee Automated welding operations to ensure compliance with project specifications and requirements.
 - CSC/N0219: Set up and program the controllers in Automated welding systems(including Robotic Arm Configuration).
 - CSC/N0220: Manage issues and oversee the routine maintenance on welding automation systems to ensure optimal performance and reliability.
 - CSC/N1339: Collaboratively coordinate with the team.
 - CSC/N0505: Follow health, safety and environment guidelines at workplace
 - DGT/VSQ/N0102: Employability Skills (60 Hours)..

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57.	Job Role: Metal Fabrication Specialist	
	QP Code: CSC/Q0308	NQR Code: QG-02-CG-03939-2025-V2-CGSSC
	Occupation: Fabrication, Fitting and Assembly	NSQF Level: 5.5
	Reviewed on: 01/10/2025	Validity: 01/10/2030

Brief Job Description
A Metal Fabrication Engineer is a professional who designs and creates metal parts and structures for Capital Goods industries.


Minimum Education Qualification

- Completed 2nd year diploma after 12th with 1.5 years of experience relevant.
- Pursuing 4th year UG (in case of 4-year UG with honours/ honours with research) (Mechanical/Automobile/Electronics/electrical).
- Pursuing 3rd year of UG (Mechanical/Automobile/Electronics/Electrical) with 1.5 years of experience relevant.
- Completed 3 year diploma after 10th with 3 Years of experience relevant.
- 12th Class with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (4.5) with 3 Years of experience relevant.

Applicable National Occupational Standards (NOS)
Compulsory NOS:

- CSC/N0327: Supervise the preparation and utilization of metal fabrication tools and associated equipment.
- CSC/N0328: Develop 3D Prototype and implement suitable metal fabrication methods.
- CSC/N0329: inspect for Dimensional Defects & Document for Quality Assurance.
- CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace.
- DGT/VSQ/N0102: Employability Skills (60 Hours).

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58.	Job Role: Robotics & Automation Engineer	
	QP Code: CSC/Q0904	NQR Code: QG-06-IT-04197-2025-V1-CGSC
	Occupation: Maintenance	NSQF Level: 6
	Reviewed on: 08/05/2025	Validity: 08/05/2028

Brief Job Description
Robotics & Automation Engineer is responsible for overseeing the design, development, testing, and implementation of robotic systems and automation solutions.


Minimum Education Qualification

- Completed 4 year UG degree with Honours/ Honours with research (or equivalent).
- Completed 2nd year diploma after 12th with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

Applicable National Occupational Standards (NOS)
Compulsory NOS:

- CSC/N0914: Selection and Installation of Robotics & Automation Systems
- CSC/N0915: Integration of Robots and Automation Systems using Industrial Networking Protocols
- CSC/N0916: Testing & Maintenance of Robotics & Automation System.
- CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace
- DGT/VSQ/N0102: Employability Skills (60 Hours)

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59.	Job Role: Predictive Maintenance Data Acquisition Engineer	
	QP Code: CSC/Q0903	NQR Code: QG-06-IT-04201-2025-V1-CGSC
	Occupation: Maintenance	NSQF Level: 6
	Reviewed on: 08/05/2025	Validity: 08/05/2028

Brief Job Description
A Predictive Maintenance Data Acquisition Engineer is a professional who focuses on gathering and analyzing data related to the performance of machinery and equipment in Capital Goods industries


Minimum Education Qualification

- Completed 2nd year diploma after 12th with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.
- Completed 4 year UG program (Mechanical/Automobile/Electrical/Electronics(or Allied fields)).

Applicable National Occupational Standards (NOS)
Compulsory NOS:

- CSC/N0917: Design & Implement the Data Acquisition Systems in the Production of equipment, machinery, and other industrial goods.
- CSC/N0918: Analyze & Maintaining the Data Acquisition Systems using Data Acquisition Techniques.
- CSC/N0919: Oversee the Data Acquisition Systems & Integrate Predictive Maintenance Strategies.
- CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace.
- DGT/VSQ/N0102: Employability Skills (60 Hours)

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60.	Job Role: Welding Automation Engineer	
	QP Code: CSC/Q0215	NQR Code: QG-06-IT-04196-2025-V1-CGSC
	Occupation: Welding and Cutting	NSQF Level: 6
	Reviewed on: 08/05/2025	Validity: 08/05/2028

Brief Job Description
A Welding Automation Engineer is a specialist who focuses on designing, implementing, and improving systems that automate welding processes.


Minimum Education Qualification

- Completed 4 year UG program(Mechanical/Automobile/Electrical/Electronics).
- Completed 2nd year diploma after 12th with 3 Years of experience relevant.
- Previous relevant Qualification of NSQF Level (5.5) with 1.5 years of experience relevant.
- Previous relevant Qualification of NSQF Level (5) with 3 Years of experience relevant.

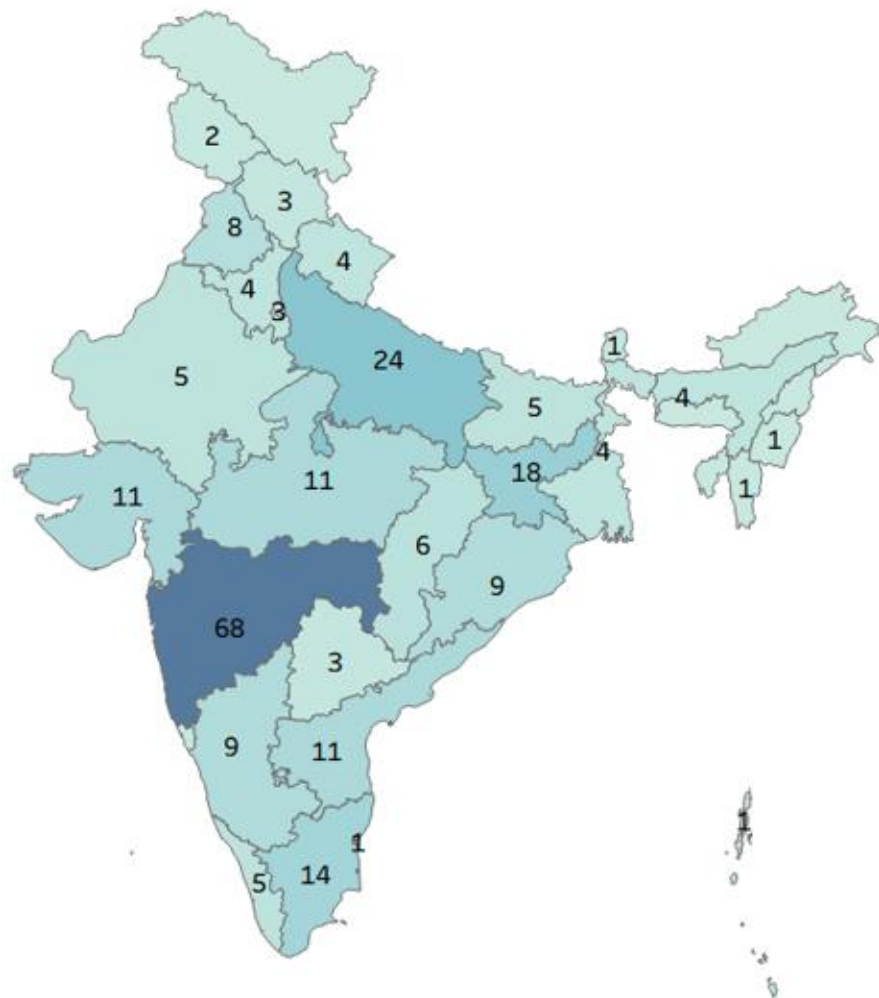
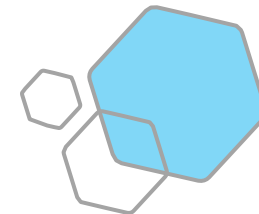
Applicable National Occupational Standards (NOS)
Compulsory NOS:

- CSC/N0218: Oversee Automated welding operations to ensure compliance with project specifications and requirements.
- CSC/N0219: Set up and program the controllers in Automated welding systems(including Robotic Arm Configuration).
- CSC/N0220: Manage issues and oversee the routine maintenance on welding automation systems to ensure optimal performance and reliability.
- CSC/N1339: Collaboratively coordinate with the team.
- CSC/N0505: Follow health, safety and environment guidelines at workplace
- DGT/VSQ/N0102: Employability Skills (60 Hours)..

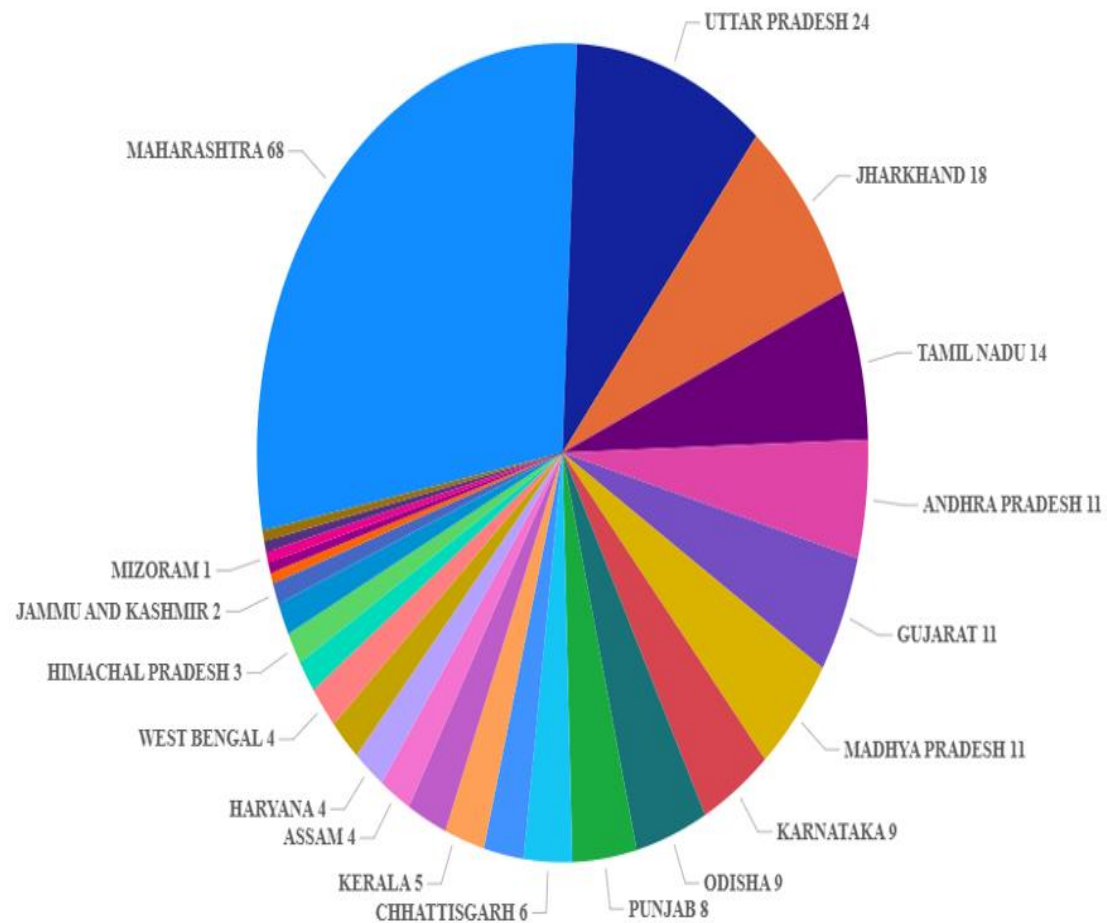
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