## QUALIFICATION FILE-Standalone NOS

# Essentials of Process Equipment Maintenance and Troubleshooting

**☐ Horizontal/Generic ☐ Vertical/Specialization**

**☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA**

**☐General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ OEM**

**NCrF/NSQF Level: 4.5**

**Submitted By:**

**National Institute of Electronics and Information Technology (NIELIT)**
**NIELIT Bhawan,**
**Plot No. 3, PSP Pocket, Sector-8,**
**Dwarka, New Delhi-110077,**
**Phone: - 91-11-2530 8300**
**e-mail: - contact@nielit.gov.in**

## Table of Contents

## Section 1: Basic Details

| | | | |
|---|---|---|---|
| **1.** | **NOS-Qualification Name** | **Essentials of Process Equipment Maintenance and Troubleshooting** | |
| **2.** | **Sector** | **Electronics** | |
| **3.** | **Type of Qualification ☒ New ☐ Revised** | **NQR Code & version of the existing /previous qualification: NA** | **Qualification Name of the existing/previous version:** NA |
| **4.** | **National Qualification Register (NQR) Code & Version** | **NG-4.5-EH-03733-2025-V1-NIELIT** | **5. NCrF/NSQF Level: 4.5** |
| **6.** | **Brief Description of the Standalone NOS** | This Standalone NOS provides foundational knowledge and practical skills in semiconductor manufacturing. It is a 90-hours program designed to build expertise in maintaining and troubleshooting semiconductor process equipment. The course covers preventive and corrective maintenance, troubleshooting methodologies, cleaning, calibration, equipment upgrades, and safety compliance. Practical sessions provide hands-on experience, preparing learners for roles in equipment maintenance and process optimization in semiconductor manufacturing. | |
| **7.** | **Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee** | **a. Entry Qualification & Relevant Experience:**<br>**b.** | |

| S. No. | Academic/Skill Qualification (with Specialization - if applicable) | Required Experience (with Specialization - if applicable) |
|---|---|---|
| 1. | 3-Years Diploma in Electronics and Communication Engineering/ Electrical Engineering/ allied branches after class 10th | NA |
| 2 | 3rd year of 3-Years Diploma in Electronics and Communication Engineering/ Electrical Engineering/ allied branches after class 10th | NA |
| 3 | 1st year of UG in Electronics Engineering/Physics/ allied fields | NA |
| 4 | 12th Pass | 1.5-year experience in ESDM Sector. |
| 5 | 10th pass plus 2-year NTC in relevant field of Electronics Sector | 1.5-year experience in ESDM Sector. |

<table>
<tr><td>8.</td><td>Credits Assigned to this NOS-Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>3 Credits</td><td>9. Common Cost Norm Category (I/II/III) (wherever applicable): Category-I</td></tr>
<tr><td>10.</td><td>Any Licensing Requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">NA</td></tr>
<tr><td>11.</td><td>Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</td><td colspan="2">☒Offline ☐Online ☐Blended
<table>
<tr><th>Training Delivery Modes</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>Total (Hours)</th></tr>
<tr><td>Classroom (offline)</td><td>27</td><td>63</td><td>90</td></tr>
</table></td></tr>
<tr><td>12.</td><td>Assessment Criteria</td><td colspan="2">
<table>
<tr><th>Theory (Marks)</th><th>Practical (Marks)</th><th>Project (Marks)</th><th>Viva (Marks)</th><th>Total (Marks)</th><th>Passing %age</th></tr>
<tr><td>100</td><td>60</td><td>20</td><td>20</td><td>200</td><td>50</td></tr>
</table>
The centralized online assessment is conducted by the Examination Wing, NIELIT Headquarters.<br>*Assessment strategy shall be as per NIELIT Norms prevailing at times.</td></tr>
<tr><td>13.</td><td>Is the NOS Amenable to Persons with Disability</td><td colspan="2">☒ Yes ☐ No<br>a. Locomotor Disability: Leprosy Cured Person, Dwarfism, Muscular Dystrophy and Acid Attack Victims<br>b. Visual Impairment: Low Vision</td></tr>
<tr><td>14.</td><td>Progression Path After Attaining the Qualification, wherever applicable (Please show Professional and Academic progression)</td><td colspan="2">MEMS Backend Fabrication Engineer -> Semiconductor Fabrication Engineer</td></tr>
<tr><td>15.</td><td>How participation of women will be encouraged?</td><td colspan="2">Participation by women can be ensured through Government Schemes. Occasionally, exclusive batches for women would be run for the proposed courses. Funding is available for women’s participation under other schemes launched by the Government from time to time.</td></tr>
<tr><td>16.</td><td>Other Indian languages in which the Qualification & Model Curriculum are being submitted</td><td colspan="2">Qualification file is available in English and Hindi languages.</td></tr>
<tr><td>17.</td><td>Is similar NOS available on NQR-if yes, justification for this qualification</td><td colspan="2">☐ Yes ☒ No</td></tr>
</table>

| | | | |
|---|---|---|---|
| **18.** | **Name and Contact Details Submitting / Awarding Body SPOC**<br>*(In case of CS or MS, provide details of both Lead AB & Supporting ABs)* | **Name:** Saket Saurabh<br>**Email:** srv.saket@nielit.gov.in<br>**Contact No.:** 011-25308300<br>**Website:** https://www.nielit.gov.in<br><br>**Name:** Ashwin Pawar<br>**Email:** ashwin.pawar@nielit.gov.in<br>**Contact No.: 9425361315**<br>**Website:** https://www.nielit.gov.in | |
| **19.** | **Final Approval Date by NSQC:18.02.2025** | **20. Validity Duration: 3 Years** | **21. Next Review Date: 18.02.2028** |

## Section 2: Training Related

| | | |
|---|---|---|
| 1. | **Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)* | B.E./B. Tech in Electronics/ Electronics & Communication/ Electrical/ Electrical and Electronics/Instrumentation/ Electronics & Instrumentation / Instrumentation & Control and allied branches with 2 years of relevant experience in the field of Semiconductor Manufacturing / Semiconductor Fabrication and Packaging/VLSI Design.<br>Or<br>M.Sc. in Physics/Electronics/Material Science and allied branches; with 2 years of relevant experience in the field of Semiconductor Manufacturing / Semiconductor Fabrication and Packaging/VLSI Design. |
| 2. | **Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)* | B.E./B. Tech in Electronics/ Electronics & Communication/ Electrical/ Electrical and Electronics/Instrumentation/ Electronics & Instrumentation / Instrumentation & Control and allied branches with 3 years of relevant experience in the field of Semiconductor Manufacturing / Semiconductor Fabrication and Packaging/VLSI Design.<br>Or<br>M.Sc. in Physics/Electronics/Material Science and allied branches; with 3 years of relevant experience in the field of Semiconductor Manufacturing / Semiconductor Fabrication and Packaging/VLSI Design. |
| 3. | **Tools and Equipment Required for Training** | ☒Yes ☐No<br>Available at Annexure-II |
| 4. | **In Case of Revised Qualification, Details of Any Upskilling Required for Trainer** | Not Applicable |

## Section 3: Assessment Related

| | | |
|---|---|---|
| 1. | **Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | B.E./B. Tech in Electronics/ Electronics & Communication/ Electrical/ Electrical and Electronics/Instrumentation/ Electronics & Instrumentation / Instrumentation & Control and allied branches with 3 years of relevant experience in the field of Semiconductor Manufacturing / Semiconductor Fabrication and Packaging/VLSI Design.<br><br>Or<br><br>M.Sc. in Physics/Electronics/Material Science and allied branches 3 years of relevant experience in the field of Semiconductor Manufacturing / Semiconductor Fabrication and Packaging/VLSI Design. |
| 2. | **Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | The assessor carries out theory online assessments through the remote proctoring methodology. Theory examination would be conducted online, and the paper comprise of MCQ. Conduct of assessment is through trained proctors. Once the test begins, remote proctors have full access to the candidate's video feeds and computer screens. Proctors authenticate the candidate based on registration details, pre-test image captured and I- card in possession of the candidate. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds. |
| 3. | **Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)* | External Examiners/ Observers (Subject matter experts) are deployed including NIELIT scientific officers who are subject experts for evaluation of Practical examination/ internal assessment / Project/Presentation/ assignment and Major Project (if applicable). Qualification is generally B.Tech. |
| 4. | **Assessment Mode** *(Specify the assessment mode)* | Centralized online examination will be conducted |
| 5. | **Tools and Equipment Required for Assessment** | Same as for training ☒Yes ☐ No |

## Section 4: Evidence of the Need for the Standalone NOS

| | |
|---|---|
| 1. | Government /Industry initiatives/ requirement (Yes/No): Yes |
| 2. | Number of Industry validation provided: The course has been developed in collaboration with TATA Electronics to support the development of skilled manpower for the upcoming semiconductor industry. |
| 3. | Estimated number of people to be trained: 500 |
| 4. | Evidence of Concurrence/Consultation with Line/State Departments (In case of regulated sectors): NIELIT is recognized as AB and AA under Government Category. NIELIT is an HRD arm of MeitY, therefore, the Line Ministry Concurrence is not required. |

## Section 5: Annexure & Supporting Documents Check List

*Specify Annexure Name / Supporting document file name*

| | | |
|---|---|---|
| 1. | **Annexure:** NCrF/NSQF level justification based on NCrF level/NSQF descriptors *(Mandatory)* | Available at Annexure-I: Evidence of Level |
| 2. | **Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)* | Available at Annexure-II: Tools and Equipment |
| 3. | **Annexure:** Industry Validation | Available at Annexure-III: Industry Validation |
| 4. | **Annexure: Training Details** | Available at Annexure-IV: Training Details |
| 5. | **Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")* | Available at Annexure-V: Blended Learning |
| 6. | **Annexure/Supporting Document:** Standalone NOS- Performance Criteria Details Annexure/Document with PC-wise detailing as per NOS format (Mandatory- Public view) | Available at Annexure-VI: Standalone NOS- Performance Criteria details |
| 7. | **Annexure:** Detailed Assessment Criteria *(Mandatory)* | Available at Annexure-VII: Assessment Criteria |
| 8. | **Annexure:** Assessment Strategy *(Mandatory)* | Available at Annexure-VIII: Assessment Strategy |
| 9. | **Annexure:** Acronym and Glossary *(Optional)* | Available at Annexure-IX: Acronym and Glossary |

| | | |
|---|---|---|
| 10. | **Supporting Document:** Model Curriculum *(Mandatory – Public view)* | Available at Annexure-A: Model Curriculum |

**Annexure I: Evidence of Level**

| NCrF/NSQF Level Descriptors | Key requirements of the job role/ outcome of the qualification | How the job role/ outcomes relate to the NCrF/NSQF level descriptor | NCrF/NSQF Level |
|---|---|---|---|
| **Professional Theoretical Knowledge/Process** | ● Understanding the fundamentals of semiconductor process equipment, including deposition, etching, and lithography systems.<br>● Knowledge of maintenance processes, troubleshooting methodologies, and safety compliance in equipment operations. | ● Provides foundational knowledge of equipment mechanisms, maintenance processes, and their critical role in manufacturing efficiency and reliability. | 4.5 |
| **Professional and Technical Skills/ Expertise/ Professional Knowledge** | ● Proficiency in preventive and corrective maintenance, troubleshooting faults, cleaning, calibration, and implementing equipment upgrades.<br>● Hands-on expertise in using diagnostic tools like multimeters, oscilloscopes, and other industry-standard tools. | ● Equips learners with the technical expertise to maintain, troubleshoot, and optimize semiconductor process equipment for consistent production quality. | 4.5 |
| **Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill** | ● Prepared for roles such as Equipment Maintenance Technician or Process Engineer; skilled in teamwork, problem-solving, and compliance.<br>● Ability to address real-world maintenance challenges and innovate for process improvements. | ● Aligns job readiness with industry standards, ensuring the ability to maintain equipment reliability and optimize performance in manufacturing settings. | 4.5 |
| **Broad Learning Outcomes/Core Skill and Responsibility** | ● Accountability for maintaining and troubleshooting process equipment, ensuring safety and compliance, and documenting maintenance activities.<br>● Prepared to handle equipment upgrades and integrate maintenance strategies into semiconductor manufacturing. | ● Prepares learners to take ownership of equipment maintenance tasks and contribute to manufacturing efficiency and process reliability. | 4.5 |

## Annexure II: Tools and Equipment (Lab Set-Up)

| Sl. No | Description | Qty. | Specifications |
|---|---|---|---|
| 1 | Classroom | 1 | 30 Sq. m |
| 2 | Student Chair | 30 | - |
| 3 | Student Table | 30 | - |
| 4 | LCD Projector | 1 | - |
| 5 | Trainer Chair & Table | 1 | - |
| 6 | Pin up Board | 1 | - |
| 7 | White Board | 1 | - |
| 8 | Desktop Computer with accessories | 30 | Processor: Intel Core i5 (sixth generation newer) or equivalent<br>Memory: 16GB RAM, Internal Storage: 500GB |
| 9 | Desk jet printer | 1 | A4 |

**List of Tools and Equipment**

Semiconductor Fabrication Equipment
- Deposition Systems (PVD, CVD, ALD)
- Etching Systems (Wet Benches, Plasma Etchers)
- Lithography Equipment (Spin Coaters, Exposure Units)

Maintenance and Troubleshooting Tools
- Multimeters
- Oscilloscopes
- Diagnostic Tools (e.g., Logic Analyzers, Signal Generators)
- Spare Parts Inventory (Replacement Components)

Cleaning and Calibration Tools
- Cleaning Kits (Lint-Free Wipes, Cleaning Brushes)
- Calibration Standards and Instruments (Calipers, Precision Voltage Sources)
- Chemical Cleaning Agents

Safety and Compliance Equipment
- Personal Protective Equipment (Gloves, Safety Goggles, Lab Coats)
- Emergency Response Tools (Spill Kits, Eye Wash Stations)
- Compliance Audit Tools (Checklists, Documentation Systems)

General Tools

- Screwdrivers, Wrenches, and Toolkits for Repairs
- Vacuum Systems for Cleanroom Equipment Maintenance
- Computers with Maintenance Software

Consumables

- Chemicals for Cleaning (Isopropyl Alcohol, Acetone)
- Test Wafers and Dummy Substrates

Laboratory and Classroom Support

- Whiteboard and Markers
- LCD Projector for Presentations
- Desktop Computers for Simulation and Documentation

## Annexure III: Industry Validations Summary

The course has been developed in collaboration with TATA Electronics to support the development of skilled manpower for the upcoming semiconductor industry.

## Annexure IV: Training & Employment Details

**Training Projections:**

| Year | Estimated Training # of Total Candidates | Estimated training # of Women | Estimated training # of People with Disability |
|---|---|---|---|
| **2025-26** | **100** | **50** | **10** |
| **2026-27** | **200** | **70** | **15** |
| **2027-28** | **200** | **70** | **15** |

***Data to be provided year-wise for next 3 years.***

## Annexure V: Blended Learning

**Blended Learning Estimated Ratio & Recommended Tools: NA**

## Annexure VI: Standalone NOS- Performance Criteria details

### 1. Description:

This is a 90-hour program (standalone NOS) designed to develop expertise in maintaining and troubleshooting semiconductor process equipment. It covers essential topics like preventive and corrective maintenance, fault diagnosis, cleaning, calibration, and equipment upgrades, with a focus on safety and compliance. The course combines theoretical knowledge with extensive hands-on training, preparing learners for roles in semiconductor manufacturing and equipment reliability management.

### 2. Scope:

- Equip learners with the knowledge and hands-on expertise to perform preventive and corrective maintenance, diagnose equipment faults, and implement cleaning, calibration, and upgrades for semiconductor process equipment.
- Prepare individuals for roles in semiconductor manufacturing by fostering skills in safety compliance, process optimization, and the integration of maintenance strategies to enhance equipment performance and reliability.

### 3. Elements and Performance Criteria:

To be competent, the user/individual on the job must be able to:

| Elements | Performance Criteria |
|---|---|
| **Introduction to Semiconductor Process Equipment** | PC1: Demonstrate understanding of semiconductor fabrication equipment, including deposition, etching, and lithography systems.<br>PC2: Identify key components of equipment and explain their functions. |
| **Equipment Maintenance Fundamentals** | PC3: Describe the principles of preventive and corrective maintenance, including scheduling and spare parts management.<br>PC4: Perform preventive maintenance checks, analyze maintenance logs, and manage spare parts inventory effectively. |
| **Troubleshooting Techniques** | PC5: Explain common equipment failures, troubleshooting methodologies, and tools used for diagnosing faults<br>PC6: Perform troubleshooting exercises using diagnostic tools such as multimeters and oscilloscopes to resolve equipment issues. |
| **Cleaning and Calibration of Equipment** | PC7: Explain the importance of cleaning and calibration in maintaining equipment reliability and accuracy<br>PC8: Conduct cleaning procedures for various equipment types and calibrate equipment using standard |

| | |
|---|---|
| | protocols |
| **Equipment Upgrades and Modifications** | PC9: Describe the process of planning and implementing equipment upgrades and modifications to improve performance.<br>PC10: Perform upgrades and modifications, evaluate their impact on equipment performance, and document changes. |
| **Safety and Compliance in Equipment Maintenance** | PC11: Demonstrate understanding of safety protocols, industry standards, and emergency response procedures.<br>PC12: Conduct safety drills, compliance audits, and handle emergency situations in equipment maintenance |
| **Case Studies and Problem-Solving** | PC13: Analyze real-world case studies of equipment failures and resolutions.<br>PC14: Participate in problem-solving workshops to develop and present maintenance solutions |
| **Final Project: Equipment Maintenance and Troubleshooting** | PC15: Develop and implement maintenance and troubleshooting plan for a specific piece of semiconductor equipment.<br>PC16: Present the project outcomes, discuss lessons learned, and suggest future improvements. |

**4. Knowledge and Understanding (KU):**

The individual on the job needs to know and understand:

**KU1**: The principles and applications of semiconductor process equipment, including deposition, etching, and lithography systems, and their critical role in manufacturing.

**KU2**: The importance of preventive and corrective maintenance, troubleshooting methodologies, and spare parts management in ensuring equipment reliability and efficiency.

**KU3**: The tools and techniques used for diagnosing equipment faults, performing maintenance tasks, cleaning, and calibrating equipment, and evaluating their performance.

**KU4**: The safety protocols, industry standards, and compliance requirements for maintaining and operating semiconductor process equipment effectively.

**KU5**: The impact of equipment upgrades, modifications, and process optimization on manufacturing quality, yield, and operational efficiency.

## 5. Generic Skills (GS):

The user/individual on the job needs to know how to:

**GS1**: Identify and troubleshoot challenges in semiconductor process equipment, applying critical thinking and problem-solving skills to resolve faults and ensure optimal performance.

**GS2**: Communicate technical findings and maintenance updates effectively, collaborate with cross-functional teams (e.g., engineers, technicians, and quality analysts), and present maintenance plans and troubleshooting outcomes clearly and concisely.

**GS3**: Leverage analytical and decision-making skills to evaluate maintenance and troubleshooting outcomes, refine procedures, and optimize equipment performance for improved reliability and manufacturing efficiency.

**GS4**: Document maintenance activities, generate reports, and ensure compliance with industry standards and safety protocols in all aspects of equipment maintenance and troubleshooting.

## Annexure VII: Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

| Elements | Assessment Criteria for Performance Criteria/Learning Outcomes | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|---|---|---|---|---|---|
| **Introduction to Semiconductor Process Equipment** | PC1: Demonstrate understanding of semiconductor fabrication equipment, including deposition, etching, and lithography systems.<br>PC2: Identify key components of equipment and explain their functions. | 12 | 6 | - | - |
| **Equipment Maintenance Fundamentals** | PC3: Describe the principles of preventive and corrective maintenance, including scheduling and spare parts management.<br>PC4: Perform preventive maintenance checks, analyze maintenance logs, and manage spare parts inventory effectively. | 15 | 8 | - | - |
| **Troubleshooting Techniques** | PC5: Explain common equipment failures, troubleshooting methodologies, and tools used for diagnosing faults<br>PC6: Perform troubleshooting exercises using diagnostic tools such as multimeters and oscilloscopes to resolve equipment issues. | 15 | 12 | - | - |
| **Cleaning and Calibration of** | PC7: Explain the importance of cleaning and calibration in maintaining equipment reliability and accuracy | 15 | 8 | - | - |

| | | | | | |
|---|---|---|---|---|---|
| **Equipment** | PC8: Conduct cleaning procedures for various equipment types and calibrate equipment using standard protocols | | | | |
| **Equipment Upgrades and Modifications** | PC9: Describe the process of planning and implementing equipment upgrades and modifications to improve performance.<br>PC10: Perform upgrades and modifications, evaluate their impact on equipment performance, and document changes. | 15 | 8 | - | - |
| **Safety and Compliance in Equipment Maintenance** | PC11: Demonstrate understanding of safety protocols, industry standards, and emergency response procedures.<br>PC12: Conduct safety drills, compliance audits, and handle emergency situations in equipment maintenance | 14 | 7 | - | - |
| **Case Studies and Problem-Solving** | PC13: Analyze real-world case studies of equipment failures and resolutions.<br>PC14: Participate in problem-solving workshops to develop and present maintenance solutions | 14 | 11 | - | - |
| **Final Project: Equipment Maintenance and Troubleshooting** | PC15: Develop and implement maintenance and troubleshooting plan for a specific piece of semiconductor equipment.<br>PC16: Present the project outcomes, discuss lessons learned, and suggest future improvements. | - | - | 20 | - |
| **Viva** | Including all Elements | - | - | - | 20 |
| **Grand total** | | **100** | **60** | **20** | **20** |

s

## Annexure VIII: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Assessment of the qualification evaluates candidates to ascertain that they can integrate knowledge, skills and values for carrying out relevant tasks as per the defined learning outcomes and assessment criteria.

The underlying principle of assessment is fairness and transparency. The evidence of the outcomes and assessment criteria. competence acquired by the candidate can be obtained by conducting Theory (Online) examination.

**About Examination Pattern:**

1. The question papers for the theory exams are set by the Examination wing (assessor) of NIELIT HQS.

2. The assessor assigns roll number.

3. The assessor carries out theory online assessments. Theory examination would be conducted online and the paper comprise of MCQ

4. Pass percentage would be 50% marks.

5. The examination will be conducted in English language only.

Quality assurance activities: A pool of questions is created by a subject matter expert and moderated by other SME. Test rules are set beforehand. Random set of questions which are according to syllabus appears which may differ from candidate to candidate. Confidentiality and impartiality are maintained during all the examination and evaluation processes.

## Annexure-IX: Acronym and Glossary

Acronym

| Acronym | Description |
|---|---|
| **AA** | Assessment Agency |
| **AB** | Awarding Body |
| **NCrF** | National Credit Framework |
| **NOS** | National Occupational Standard(s) |
| **NQR** | National Qualification Register |
| **NSQF** | National Skills Qualifications Framework |

Glossary

| Term | Description |
|---|---|
| **National Occupational Standards (NOS)** | NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do. |
| **Qualification** | A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards |
| **Qualification File** | A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification. |
| **Sector** | A grouping of professional activities on the basis of their main economic function, product, service or technology. |