



QUALIFICATION FILE

Capital Goods Manufacturing Engineer

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

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

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

NCrF/NSQF Level: 5

Submitted By:

Capital Goods and Strategic Skill Council

39, 1st Floor, Samyak Tower, Pusa Road, New Delhi-110005

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Section 1: Basic Details

1.	Qualification Name	Capital Goods Manufacturing Engineer																	
2.	Sector/s	Capital Goods and Manufacturing																	
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved) 2022/CCM/CGSC/06610 , v3.0		Qualification Name of existing/previous version: Production Engineer															
4.	a. OEM Name b. Qualification Name (Wherever applicable)																		
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-05-CG-03943-2025-V2-CGSSC	6. NCrf/NSQF Level: 5																
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																	
8.	Brief Description of the Qualification	A Capital Goods Manufacturing Engineer is responsible for supervising production processes such as machining, fabrication, welding, surface finishing, assembly, etc.																	
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Completed UG Diploma or equivalent</td> <td>No Experience Required</td> </tr> <tr> <td>2</td> <td>12th pass with 2 year of any combination of NTC/NAC/CITS or equivalent</td> <td>No Experience Required</td> </tr> <tr> <td>3</td> <td>12th Grade pass</td> <td>3 year relevant experience</td> </tr> <tr> <td>4</td> <td>10th Grade Pass</td> <td>6 year relevant experience</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed UG Diploma or equivalent	No Experience Required	2	12th pass with 2 year of any combination of NTC/NAC/CITS or equivalent	No Experience Required	3	12th Grade pass	3 year relevant experience	4	10th Grade Pass	6 year relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																	
1	Completed UG Diploma or equivalent	No Experience Required																	
2	12th pass with 2 year of any combination of NTC/NAC/CITS or equivalent	No Experience Required																	
3	12th Grade pass	3 year relevant experience																	
4	10th Grade Pass	6 year relevant experience																	

		5	Completed UG certificate or equivalent	Relevant experience																			
		6	Previous relevant Qualification of NSQF Level 4.5	1.5 year relevant experience																			
		7	Previous relevant Qualification of NSQF Level 4	3 years relevant experience																			
		b. Age: NA																					
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																				
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)																						
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☒ Offline ☐ Online ☐ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT Mandatory (Hours)</th><th>Viva (Hours)</th><th>Total (Hours)</th></tr> </thead> <tbody> <tr> <td>Classroom (offline)</td><td>179</td><td>271</td><td>60</td><td>-</td><td>510</td></tr> <tr> <td>Online</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> (Refer Blended Learning Annexure for details)				Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Viva (Hours)	Total (Hours)	Classroom (offline)	179	271	60	-	510	Online					
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Classroom (offline)	179	271	60	-	510																		
Online																							
14.	Aligned to NCO/ISCO Codes (if no code is available mention the same)	NCO-2015/2144.0401																					
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	- Digital Factory Automation engineer - 5.5, - Additive Process Engineer - 6																					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	No																					
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																					
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No If "Yes", specify applicable type of Disability:																					
19.	How Participation of Women will be Encouraged	Yes via Industry or College Engagement																					
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☐ Yes ☒ No																					
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☐ No Colleges ☒ Yes ☐ No																					

22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Ridhima Email : technicaladvisors@cgssc.org Website: www.cgssc.org Contact No.: +91-8882907092			
23.	Final Approval Date by NSQC: 30th April 2025	24. Validity Duration: 3 Years		25. Next Review Date: 30th April 2028	

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project **Vi**-Viva

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Bridge Module & Follow the health and safety practices at work	CSC/N1335 NOS Version- 2.0	Non-Core	5	2	25	35	-	-	60	30	70	-	-	100	20
2.	Coordinate with co-workers to achieve work efficiency.	CSC/N1336 : Version No. – 2.0	Non-Core	5	1	10	20	-	-	30	30	70	-	-	100	20
3.	Plan and manage the Capital Good production process.	CSC/N1201 : Version No. – 3.0	Core	5	12	120	180	60	-	360	30	70	-	-	100	35
4.	Employability Skills (60 hours)	DGT/VSQ/N 0102- Version No. – 1.0	Non-Core	5	2	24	36	-	-	60	20	30	-	-	50	25

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
Duration (in Hours) / Total Marks					17	179	271	60		510	110	240	-	-	350	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: 70 % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Diploma in Mechanical with 2 years of relevant industry experience with specialization as Production Engineer (Practical skills & knowledge required in the relevant field) or B. Tech in Mechanical with 1 year of relevant industry experience with specialization as Production Engineer (Practical skills & knowledge required in the relevant field).
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B. Tech in Mechanical/ Electronics/ Mechatronics with 6 years of relevant experience. Or M. Tech in Mechanical/ Electronics/ Mechatronics with 4 years of relevant experience.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in Mechanical with 2 years of relevant industry experience with specialization as Production Engineer (Practical skills & knowledge required in the relevant field) or B. Tech in Mechanical with 1 year of relevant industry experience with specialization as Production Engineer (Practical skills & knowledge required in the relevant field).
Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in Mechanical with 2 years of relevant industry experience with specialization as Production Engineer (Practical skills & knowledge required in the relevant field) or B. Tech in Mechanical with 1 year of relevant industry experience with specialization as Production Engineer (Practical skills & knowledge required in the relevant field).
Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B. Tech in Mechanical/ Electronics/ Mechatronics with 6 years of relevant experience. Or M. Tech in Mechanical/ Electronics/ Mechatronics with 4 years of relevant experience.
Assessment Mode (Specify the assessment mode)	Formative, Summative & Skill Assessment
Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): No
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): No (Industry driven)
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 11
5.	Estimated nos. of persons to be trained and employed: 1072
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: 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)	Q File
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Q File
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Q File
4.	Annexure: Assessment Strategy (Mandatory)	Q File
5.	Annexure: Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	Yes Provided
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	Yes Provided
7.	Annexure: Acronym and Glossary (Optional)	Available
8.	Supporting Document: Model Curriculum (Mandatory – Public view)	Attached
9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	Attached
11.	Supporting Document: Assessment SOP (Mandatory)	Available in the Qualification Pack
12.	Any other document you wish to submit:	NA

Annexure: 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	Wide-ranging specialized theoretical learning requirements - Process of planning and preparing for production - Process of managing the production process - Process of carrying out documentation and data review	The job involves a range of theoretical understanding and practical skills as can be seen from the job requirements given in the adjacent cell. The skills include planning and managing the production	5

	Process of assisting in improving production and productivity	process to ensure production as per the agreed quality parameters while ensuring compliance with the applicable regulations and organisational policies.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	- Knowledge of applicable documentation requirements in the job role. - Know how to estimate the production costs and prepare the budget - Understand the process of preparing the relevant raw materials, machinery, tools and equipment for safe operations - Knowledge of getting approval for the job cards and production schedules - Know how to identify and address all the existing and potential hazards at the production facility - Understand the importance of maintaining cleanliness and hygiene in the work area	As indicated by the knowledge and understanding requirements mentioned in the adjacent cell, the job holder needs to have a knowledge of planning and managing the production process to ensure production as per the agreed quality parameters while ensuring compliance with the applicable regulations and organisational policies.	5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	- plan and prepare the production schedule - select and arrange the resources required for production - monitor the production processes and adjust the schedules - identify problems in the production line and ensure their quick resolution - ensure optimum usage of various resources	As indicated by the performance criteria in the adjacent cell, the job holder needs to have wide-ranging knowledge of planning and managing the production process to ensure production as per the agreed quality parameters while ensuring compliance with the applicable regulations and organisational policies.	5

	• monitor the quality of product/output • ensure the applicable productivity targets are met • ensure the work area is maintained in a clean and hygienic condition • collect the appropriate data, and prepare the relevant reports		
Broad Learning Outcomes/Core Skill	Logical and mathematical skills • Follow the technical specification and appropriate procedures. • Perform work-related calculations Collecting and organising information • Use the standard templates and tools for documenting work • Collect the relevant information concerning the planning and managing the production process and carry out the appropriate documentation	The job holder requires logical and relevant mathematical skills for planning and managing the production process As indicated by the performance criteria in the adjacent cell, the job involves collecting the relevant information and preparation of appropriate documents, as required in the job role.	5
Responsibility	• Responsible for supervising production processes • Responsible for supervises the whole production cycle from planning, resource management, production to review of the production processes • Responsible supervises and assist various personnel involved in the production activities for ensuring smooth operations • Responsible for achieving the productions	A Production Engineer is responsible for supervising production processes such as machining, fabrication, welding, surface finishing, assembly, etc.	5

	targets		
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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 20-25 Nos

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Chairs/Tables	Standard	25
2	Computer with internet	Standard	25
3	LCD projector with screen	Standard	1
4	Trainer chair and Table	Standard	1
5	Demonstration table pin up boards	Standard	1
6	White board with marker	Standard	1
7	Measuring Instruments	Linear Measuring Instruments, Speed Measuring Devices, Multimeter, Continuity Tester, Pressure Testing Devices, Flow Testing Devices	1 Each
8	Mechanical Tools	Spanners, Wrenches, Crow Bars, Torque Wrenches, Engineer's Level, Alignment Telescope	1 Each
9	Machine Vice	Standard	1
10	Angle Plate	Standard	1
11	Indexing Head/Device	Standard	1
12	Fire Extinguisher	Standard	1
13	Safety Gloves (Rubber)	Standard	25
14	Ear Plugs	Standard	25
15	Safety Shoes & Helmet	Standard	25

16	Goggles	Standard	25
17	First-Aid Kit	Standard	2

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Computer / Laptop
2. Whiteboard and marker
3. Projector

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	Wangfeng Aluminium Wheel (India) Pvt. Ltd.	Sanjeev Chaudhary	HR Head	Plot No. 15 to 18, Sec-8, Industrial Model TWP, Bawal, Haryana - 123501	8750231400		
2	Palak Plastic Pvt.Ltd.	Hem Chander Yadav	Director	Plot No. 25, Sec-3, Phase 1, IMT, Bawal, Rewari, Haryana - 123501	0124-4019506	palakplastic@gmail.com	
3	Hay Industry	Harshit Yadav	HR Head	504/4, Gali No. 4, Near Rajendra Hospital, Om Nagar,	9212154114	industryhay@gmail.com	

				Gurugram,Haryana-122001			
4	AG Enterprises	Durgesh Gupta	Manager -HR	Room No. 1,2 nd Floor,Plot No. 345, Sector-08,IMT, Manesar, Gurugram Haryana -122051	8750279555	bd@agenterpriseshr.com	
5	Hans Enterprises	OP Yadav	Sr. Manager	Cyberwalk, Plot No.CP 9,Tower E,GF,Cabin No4, Sec-5,IMT,Manesar, Gurugram Haryana	8750801333	Enterprisesghans@gmail.com	
6	Palak Plastic Pvt.Ltd.	Sunil Kumar	Director	Plot No.345, Sec-8, IMT, Manesar, Gurugram Haryana-122051	9810075433	sunilyadav7143@gmail.com	
7	Revent	Krishnakant Shukla	DGM-Training	Forging Division, unit 2nd, Begumpur, Khataula, Post Office-Khandsa,,Gurugram , Haryana-122004	9262708933	Krishnakant.shukla@reventengineering.com	
8	Sudhir Foundation	Ravi Prakash	DGM-Training	Plot No.93, Sector-8,IMT,Manesar,Gurugram , Haryana-122051	7988101508	965sudhirfoundation@gmail.com	
9	JBM Group	Rajeev Kumar Sharma	VP-Head Skill Development – JBM Group	JBM Auto Limited,Skill Development Centre, Plot No.16, sector-20B,Faridabad, (Haryana)- 121007	8860281177	Rajeev.sharma@jbmggroup.com	
10	Subros	Pawan Yadav	HR Head	Plot No. 395-396, Sec-8, Phase-3, IMT Manesar, Gurugram, - 122050	9818148609	p.yadav@subros.com	
11	Texmaco	Rajeev Gupta	Chief Business Officer	Belgharia,24 Parganas(North), Kolkata-700056	7042644994	Rajeev.gupta@texmaco.in	

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025- 2026	1072	292	963	29	96	3
2026- 2027	1072	321	1060	32	106	3
2027- 2028	1072	353	1166	35	117	4

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
	FY2022- 2023	0	0	0	0	0	0	0	0	0	0	0	0
	FY2023- 2024	19	19	19	13	2	2	2	1	0	0	0	0
	FY2024- 2025	8757	506	379	265	876	51	38	27	88	5	4	3

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1. PMKVY 4.0 CSM STT
2. Non PMKVY
3. TNSDC

4. Fee Based
5. NABARD
6. MSSDS
7. GSDM
8. SDIS Orissa State Skilling Scheme
9. NULM
10. SDIS DDU GKY

Content availability for previous versions of qualifications: PH, FG

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available: No

NSQC Approved

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

Annexure: Detailed Assessment Criteria

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

CSC/N1335: Follow the health and safety practices at the work

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain personal health and safety</i>	7	12	-	-
PC1. follow the recommended practices to ensure protection from infections and transmission to others, such as the use of hand sanitiser and face mask	2	3	-	-
PC2. check the work conditions, assess the potential health and safety risks, and take appropriate measures to mitigate them	1	2	-	-
PC3. select and use the appropriate Personal Protective Equipment (PPE) relevant to the task and work conditions	1	2	-	-
PC4. follow the recommended techniques while lifting and moving heavy objects to avoid injury	1	3	-	-

PC5. follow the manufacturer's instructions and workplace safety guidelines while working on heavy machinery, tools and equipment	2	2	-	-
<i>Assist in hazard management</i>	4	10	-	-
PC6. identify existing and potential hazards at work	1	1	-	-
PC7. assess the potential risks and injuries associated with the identified hazards	1	3	-	-
PC8. coordinate with the supervisor or other relevant personnel to prevent or minimise the identified hazards	1	3	-	-
PC9. handle hazardous materials safely and store them in the designated storage	1	3	-	-
<i>Check the first aid box, firefighting and safety equipment</i>	3	7	-	-
PC10. check the first aid box to ensure it is updated with the relevant first aid supplies	1	2	-	-
PC11. check and test the firefighting and various safety equipment to ensure they are in usable condition	1	3	-	-
PC12. coordinate with the supervisor for the repair and replacement of firefighting and safety equipment	1	2	-	-
<i>Assist in waste management</i>	3	8	-	-
PC13. segregate waste into appropriate categories	1	3	-	-
PC14. recycle the recyclable waste appropriately	1	3	-	-
PC15. dispose of the non-recyclable waste in an environment-friendly manner, complying with the applicable regulations	1	2	-	-
<i>Follow the fire safety guidelines</i>	3	12	-	-

PC16. use the appropriate type of fire extinguisher to extinguish different types of fires safely	1	4	-	-
PC17. follow the recommended practices for a safe rescue during a fire emergency	1	4	-	-
PC18. coordinate with the fire department to request assistance to extinguish a serious fire	1	4	-	-
<i>Follow the emergency and first-aid procedures</i>	7	12	-	-
PC19. follow the organisational health and safety guidelines during workplace emergencies to ensure own and co-workers' safety	1	2	-	-
PC20. follow the recommended practices to minimise loss to organisational property during an emergency	1	3	-	-
PC21. follow the recommended procedure to free a person from electrocution	1	2	-	-
PC22. administer appropriate first aid to the injured personnel	1	2	-	-
PC23. perform Cardiopulmonary Resuscitation (CPR) on a potential victim of cardiac arrest	1	2	-	-
PC24. coordinate with the emergency services to request medical assistance for seriously injured/ ill personnel requiring professional medical attention or hospitalisation	2	1	-	-
<i>Carry out relevant documentation and review</i>	3	9	-	-
PC25. carry out appropriate documentation following a health and safety incident at work, including all the required information	1	3	-	-
PC26. coordinate with the relevant personnel to review health and safety conditions at work regularly or following an incident	1	3	-	-

PC27. assist in implementing appropriate changes to improve the health and safety conditions at work	1	3	-	-
NOS Total	30	70	-	-

CSC/N1336: Coordinate with co-workers to achieve work efficiency

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Work effectively with co-workers</i>	20	43	-	-
PC1. plan daily tasks at work to ensure their timely completion and efficient use of time	2	4	-	-
PC2. carry out work responsibilities adhering to the limits of authority	2	4	-	-
PC3. follow the supervisor's instructions to ensure adherence to the applicable quality standards and timescales	2	4	-	-

PC4. coordinate with the co-workers to achieve the work objectives efficiently	2	4	-	-
PC5. prepare the relevant documents and reports as per the supervisor's instructions, providing appropriate information clearly and systematically	2	4	-	-
PC6. coordinate with the supervisor or relevant personnel to deal with out of authority tasks and concerns	2	4	-	-
PC7. mentor and assist subordinates in the execution of their work responsibilities	2	4	-	-
PC8. identify possible disruptions to work through coordination with the relevant stakeholders and take appropriate preventive measures	2	4	-	-
PC9. use various resources efficiently to ensure maximum utilisation and minimum wastage	2	4	-	-
PC10. follow the recommended practices to avoid and resolve conflicts at work	1	4	-	-

PC11. follow the relevant organisational policies to ensure disciplined behaviour with maximum productivity at work	1	3	-	-
<i>Communicate effectively with co-workers</i>	6	15	-	-
PC12. follow the organisational policy for the efficient and timely dissemination of information to the authorised personnel	2	5	-	-
PC13. communicate clearly and politely to ensure effective communication with co-workers	2	5	-	-
PC14. follow the appropriate techniques for active listening during interactions	2	5	-	-
<i>Practice inclusion at work</i>	4	12	-	-
PC15. empathise with Persons with Disabilities (PwD)	2	6	-	-
PC16. adopt gender-neutral behaviour at work	2	6	-	-
NOS Total	30	70	-	-

CSC/N1201: Plan and manage the Capital Good production process.

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan and prepare for production</i>	5	17	-	-
PC1. determine the production requirements through coordination with the relevant stakeholders	1	1	-	-
PC2. review the critical production requirements and quality criteria for each production and assembly activity	1	1	-	-
PC3. arrange for appropriate changes to be made to suit the operational requirements through coordination with the relevant stakeholders	-	1	-	-
PC4. estimate the production costs and prepare the budget for cost-effective production	-	1	-	-
PC5. negotiate with the client and other stakeholders to agree on the budgets	-	1	-	-
PC6. select the appropriate production methods, ensuring compliance with the applicable regulations and guidelines	-	1	-	-

PC7. select and arrange the resources required for production, such as raw materials, machinery, tools and equipment, ensuring the stock level of inputs is maintained according to the demand throughout the production process	1	1	-	-
PC8. plan and prepare the production schedule, sequencing various production processes to be completed as per the agreed timescales	1	1	-	-
PC9. select the production team personnel/ workers in the required number for efficient and timely production	-	1	-	-
PC10. supervise the process of preparation of the relevant raw materials, machinery, tools and equipment for safe operation	-	1	-	-
PC11. arrange for the repair/ replacement of the faulty/ damaged raw material, machinery, tools and equipment	-	1	-	-
PC12. prepare the job cards, allocating tasks with clear instructions to the production personnel/ workers according to their skills	-	1	-	-
PC13. assist the production personnel with any doubts they may have regarding the production processes and their responsibilities	-	1	-	-
PC14. coordinate with the relevant personnel to get approval for the job cards and production schedules	-	1	-	-

PC15. allocate resources and consumables for various production processes	-	1	-	-
PC16. supervise the process of preparation of production facility for production, ensuring all the existing and potential hazards are identified and addressed appropriately	-	1	-	-
PC17. maintain appropriate records with respect to production planning and preparation	1	1	-	-
<i>Manage the production process</i>	17	34	-	-
PC18. implement the approved production processes, ensuring compliance with the client's requirements along with applicable regulations, standards and organisational guidelines	1	2	-	-
PC19. adopt automation in production processes for enhanced production and quality of output	1	2	-	-
PC20. supervise the workers and arrange appropriate assistance to enable them to perform their duties effectively	1	2	-	-
PC21. monitor the production processes and adjust the schedules, as required	1	2	-	-
PC22. ensure that all support and control systems such as material supply, logistics, quality assurance systems operate effectively	1	2	-	-
PC23. liaise with the suppliers, managers and clients to ensure smooth production	1	2	-	-

PC24. identify problems in the production line and ensure their quick resolution with minimum impact on production, such as repair or replacement of the faulty/ damaged machinery, tools and equipment	1	2	-	-
PC25. ensure optimum usage of various resources to maintain the productions costs within budget	1	2	-	-
PC26. instruct the production personnel/ workers to connect the electrical tools and equipment safely, and turn them off when they are not in use	1	2	-	-
PC27. ensure orders are completed on time and as per the set budget, ensuring the applicable quality standards are met	1	2	-	-
PC28. ensure compliance with the environmental, health, safety guidelines and organisational policies through coordination with the relevant stakeholders	1	2	-	-
PC29. monitor production to ensure quality and adherence to the applicable budget and timescales	1	2	-	-
PC30. identify potential production problems and deviations and take appropriate action to prevent and rectify them as per the organisational policies	1	2	-	-
PC31. arrange for regular repair and maintenance of the machinery, tools and equipment to ensure their optimum performance without any breakdowns	1	2	-	-

PC32. monitor the quality of product/output to ensure adherence to the applicable quality standards, and implement the appropriate quality control programs, as required	1	2	-	-
PC33. ensure the applicable productivity targets are met	1	2	-	-
PC34. ensure the work area is maintained in a clean and hygienic condition	1	2	-	-
<i>Carry out documentation and data review</i>	1	5	-	-
PC35. collect the appropriate data, and prepare the relevant reports with respect to the production and productivity of the personnel involved	1	2	-	-
PC36. analyse and review the data through coordination with the relevant stakeholders to assess production	-	1	-	-
PC37. evaluate the effectiveness of the production processes to identify the scope of improvement/ streamlining, and provide relevant recommendations to the stakeholders	-	1	-	-
PC38. review the performance of production personnel/ workers against the relevant performance indicators	-	1	-	-
<i>Assist in improving production and productivity</i>	5	10	-	-

PC39. liaise with the relevant stakeholders to develop plans to improve production, reduce costs and labour requirements	1	2	-	-
PC40. use the relevant Industry 4.0 manufacturing technologies to ensure interconnectivity, automation, machine learning, and real-time data collection and analysis	1	2	-	-
PC41. coordinate with the relevant stakeholders for the implementation of agreed improvements	1	2	-	-
PC42. arrange appropriate training for the production personnel/ workers, as required	1	2	-	-
PC43. assist in developing health and safety procedures and protocols for ensuring the well-being of workers, and reducing the organisation's carbon footprint	1	2	-	-
<i>Use resources optimally</i>	2	4	-	-
PC44. optimise the usage of electricity and other resources in various tasks and processes	1	2	-	-
PC45. connect the electrical tools and equipment safely, and turn them off when not in use	1	2	-	-
NOS Total	30	70	-	-

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

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-

<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-

PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
Entrepreneurship	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-

PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-

PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	20	30	-	-

Assessment Parameters:

Assessment Plan:

1. Components of Assessment:

- Each subject will be assessed in three components: Theory (40% weightage), Practical (40% weightage), and On-job Training (OJT, 20% weightage).

2. Passing Parameters:

- To pass the semester, students must meet both the assessment parameters given below.

Parameter 1 - Weighted Semester Score:

- Students must achieve a minimum of 60% in the weighted average score across all three components (Theory, Practical, and OJT) for each subject.

Parameter 2 - Individual Component Score:

- Students need to score at least 40% in each individual component (Theory, Practical, and OJT) of every subject.

Annexure: 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.

Mention the detailed assessment strategy in the provided template.

<1. Assessment System Overview:

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

2. Testing Environment:

- Check the Assessment location, date and time
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

5. Method of verification or validation:

- Surprise visit to the assessment location

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored

On the Job:

1. Each module (which covers the job profile of Capital Goods Manufacturing Engineer) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT

-
- 4. Assessment of each Module will ensure that the candidate is able to:
 - Effective engagement with the customers
 - Understand the working of various tools and equipment
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Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

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.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf