QUALIFICATION FILE

Draughtsman Mechanical

☒ 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: 4

Submitted By:

Capital Goods and Strategic Skill Council
39, 1st Floor, Samyak Tower, Pusa Road, New Delhi-110005

Table of Contents

Section 1: Basic Details

<table>
<tr><td></td><td>Qualification Name</td><td colspan="2">Draughtsman Mechanical</td></tr>
<tr><td></td><td>Sector/s</td><td colspan="2">Capital Goods and Manufacturing</td></tr>
<tr><td></td><td>Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options
☐OEM</td><td>NQR Code & version of existing/previous qualification: (change to previous, once approved) 2022/CCM/CGSC/06608 V3.0</td><td>Qualification Name of existing/previous version:
Draughtsman Mechanical</td></tr>
<tr><td></td><td>a. OEM Name
b. Qualification Name
(Wherever applicable)</td><td colspan="2"></td></tr>
<tr><td></td><td>National Qualification Register (NQR) Code &Version
(Will be issued after NSQC approval)</td><td>QG-04-CG-03930-2025-V2-CGSSC
V4.0</td><td>6. NCrF/NSQF Level: 4</td></tr>
<tr><td></td><td>Award (Certificate/Diploma/Advance Diploma/ Any Other
(Wherever applicable specify multiple entry/exits also & provide details in annexure)</td><td colspan="2">Certificate</td></tr>
<tr><td></td><td>Brief Description of the Qualification</td><td colspan="2">A Draughtsman Mechanical is responsible for developing 2D drawings of design specifications for mechanical equipment and components.</td></tr>
<tr><td></td><td>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</td><td colspan="2">a. Entry Qualification & Relevant Experience:
<table>
<tr><th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr>
<tr><td>1</td><td>12th grade pass or equivalent</td><td>No Experience required.</td></tr>
<tr><td>2</td><td>Completed 2nd year of 3-year diploma (after 10th) or equivalent</td><td>No Experience required.</td></tr>
<tr><td>3</td><td>10th grade pass with two years of any combination of NTC/NAC/CITS or equivalent.</td><td>No Experience required.</td></tr>
<tr><td>4</td><td>10th Grade Pass</td><td>3-year relevant experience</td></tr>
</table></td></tr>
</table>

		5 | Previous relevant Qualification of NSQF Level 3.5 | 1.5-year relevant experience 6 | Previous relevant Qualification of NSQF Level 3.0 | 3-year relevant experience **b. Age:** <NA>
	Credits Assigned to this Qualification, Subject to Assessment *(as per National Credit Framework (NCrF))*	15 **11. Common Cost Norm Category (I/II/III)** *(wherever applicable)*: **I**
	Any Licensing requirements for Undertaking Training on This Qualification *(wherever applicable)*	
	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** **Training Delivery Modes** | **Theory (Hours)** | **Practical (Hours)** | **OJT Mandatory (Hours)** | **Viva (Hours)** | **Total (Hours)** **Classroom (offline)** | 132 | 258 | 60 | - | 450 **Online** | | | | | *(Refer Blended Learning Annexure for details)*
	Aligned to NCO/ISCO Code/s *(if no code is available mention the same)*	NCO-2015/3118.0402
	Progression path after attaining the qualification *(Please show Professional and Academic progression)*	• Jr. Designer- (Mechanical) - 5, • Computer aided tool and die design engineer -6
	Other Indian languages in which the Qualification & Model Curriculum are being submitted	**Hindi**
	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	**☐ Yes ☒ No URLs of similar Qualifications:**
	Is the Job Role Amenable to Persons with Disability	**☐ Yes ☒ No** **If "Yes", specify applicable type of Disability:**
	How Participation of Women will be Encouraged	**Yes, via Industry or College Engagement**
	Are Greening/ Environment Sustainability Aspects Covered *(Specify the NOS/Module which covers it)*	**☐ Yes ☒ No To be incorporated later**

	Is Qualification Suitable to be Offered in Schools/Colleges	**Schools ☐ Yes ☐ No Colleges ☒ Yes ☐ No**	
	Name and Contact Details of Submitting / Awarding Body SPOC *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name: Hitesh** **Email: technicaladvisors@cgssc.org** **Website: www.cgssc.org**	**Contact No.: +91-8882907092**
	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.	Follow the health and safety practices at the work.	CSC/N1335 NOS Version- 2.0	Non-Core	4	2	20	40	-	-	60	30	70	-	-	100	20
2.	Coordinate with co-workers to achieve work efficiency.	CSC/N1336: Version No. – 2.0	Non-Core	4	1	10	20	-	-	30	30	70	-	-	100	15
3.	Create and modify 3D mechanical engineering	CSC/N0402: Version No. – 3.0	Core	4	11	90	180	60		330	30	70	-	-	100	35

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)*
	drawings using the CAD / CAM Software.															
4.	Employability Skills (30 hours)	DGT/VSQ/N0101-Version No. – 1.0	Non-Core	4	1	12	18	-	-	30	20	30	-	-	50	30
Duration (in Hours) / Total Marks					**15**	**132**	**258**	**60**		**450**	**110**	**240**	**-**	**-**	**350**	**100**

Elective NOS/s:

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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.																
Duration (in Hours) / Total Marks			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Optional NOS/s:

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.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.																
Duration (in Hours) / Total Marks			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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)*	B. Tech in Mechanical/ Electronics/ Mechatronics with 3 years of relevant experience. OR M. Tech in Mechanical/ Electronics/ Mechatronics with 2 years of relevant experience.

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

1	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	B. Tech in Mechanical/ Electronics/ Mechatronics with 3 years of relevant experience. OR M. Tech in Mechanical/ Electronics/ Mechatronics with 2 years of relevant experience.
2	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	B. Tech in Mechanical/ Electronics/ Mechatronics with 3 years of relevant experience. OR M. Tech in Mechanical/ Electronics/ Mechatronics with 2 years of relevant experience.
3	**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.
4	**Assessment Mode** *(Specify the assessment mode)*	**Formative, Summative & Skill Assessment**
5	**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:** 18623
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)*	*Yes Provided*
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	*Yes Provided*

9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	*Yes Provided*
10.	**Supporting Document:** Occupational Map *(Mandatory)*	*Yes Provided*
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	*Yes Provided*
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 determining the work requirements • Process of preparing for creating 2D mechanical engineering drawings. • Process of creating and modifying 2D mechanical engineering drawings. • Process of setting up the computer, its peripherals and other relevant equipment for use. • Process of creating drawings using first angle orthographic projections, isometric/oblique projections, third angle orthographic projections, sectional elevations, etc.	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 setting up and using a CAD system to produce drawings for engineering activities	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	• Knowledge of applicable documentation requirements in the job role. • Understand the need and process of developing macros, customizing menus and system defaults. • Know the benefit of including auxiliary views in drawings • Know the basic principles of engineering manufacturing operations.	As indicated by the knowledge and understanding requirements mentioned in the adjacent cell, the job holder needs to have a wide range of information for setting up and using a CAD system to produce drawings for engineering activities.	4

	• Understand the importance of selecting the appropriate materials for mechanical engineering drawing. • Knowledge of maintaining the appropriate operating environment, quality, aesthetics, interfaces, physical space, ergonomics, tolerances, etc.		
Employment Readiness & Entrepreneurship **Skills & Mind-set/Professional Skill**	• Setting up the computer, its peripherals and other relevant equipment for use, such as light pen, digitizer, scanner, printer, plotter, etc. • Set the appropriate drawing parameters, such as layers, lines, colour, text style, according to the drawing requirements. • incorporate the specifications of mechanical engineering systems and equipment in the drawing. • set the drawing datum at a convenient point along with drawing parameters such as layers, line types, colour, text styles according to the drawing to be produced	As indicated by the performance criteria in the adjacent cell, the job holder needs to have wide-ranging practical skills for setting up and using a CAD system to produce drawings for engineering activities	4
Broad Learning Outcomes/Core Skill	**Logical and mathematical skills** • Follow the technical specification and appropriate procedures. • Perform work-related calculations **Collecting and organizing information** • Use the standard templates and tools for documenting work • Collect the relevant information concerning the 2D mechanical drawing and carry out the appropriate documentation	The job holder requires logical and relevant mathematical skills for creating 2D mechanical drawings. 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.	4

Responsibility	• Responsible for determining the work requirements • Responsible for preparing for creating and modifying 2D mechanical drawings • Responsible for creating and modifying 2D mechanical drawings. • Responsible for coordinating with the relevant personnel for the rectification of any incorrect and inconsistent information. • Responsible to select the appropriate drawing method.	A Draughtsman Mechanical is responsible for developing 2D 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.	4

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	As per Standard	25
2	Computer with internet	As per Standard	25
3	LCD projector with screen	As per Standard	1
4	Trainer chair and Table	As per Standard	1
5	Demonstration table pin up boards	As per Standard	1
6	White board with marker	As per Standard	1

7	CAD/CAM Software	Auto CAD, PRO-E, CATIA, NX, SOLIDWORKS, INVENTOR	1
8	Measuring Tools	As per Standard	1 Set
9	GD& T Symbols	As per Standard	1 Set
10	Drawing Tools	As per Standard	1 set
11	Sample Drawings	As per Standard	1 Set
12	Fire Extinguisher	As per Standard	1
13	Safety Gloves (Rubber)	As per Standard	25
14	Ear Plugs	As per Standard	25
15	Safety Shoes & Helmet	As per Standard	25
16	Goggles	As per Standard	25
17	First-Aid Kit	As per 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, Gurugram, Haryana-122001	9212154114	industryhay@gmail.com	
4	AG Enterprises	Durgesh Gupta	Manager -HR	Room No. 1,2nd Floor, Plot No. 345, Sector-08, IMT, Manesar, Gurugram Haryana -122051	8750279555	bd@agenterpriseshr.com	
5	Hans Enterprises	OP Yadav	Sr. OP Manager	Cyberwalk, Plot No. CP 9, Tower E, GF, Cabin No4, Sec-5, IMT, Manesar, Gurugram Haryana	8750801333	Enterpriseshans@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@jbmgroup.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	18623	13036	1526	563	153	56
2026-2027	18623	15626	1526	563	153	56
2027-2028	18623	16808	1846	681	185	68

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
	2022-2023	696	696	601	420	70	70	60	42	7	7	6	4
	2023-2024	1448	1448	1318	922	145	145	132	92	14	14	13	9
	2024-2025	13871	8025	7307	5115	1387	802	731	511	139	80	73	51

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: Hindi

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
Maintain personal health and safety	**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	-	-
Assist in hazard management	**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	-	-
Check the first aid box, firefighting and safety equipment	**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	-	-
Assist in waste management	**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	-	-
Follow the fire safety guidelines	**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	-	-
Follow the emergency and first-aid procedures	**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	-	-
Carry out relevant documentation and review	**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

Work effectively with co-workers	**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	-	-
Communicate effectively with co-workers	**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	-	-
Practice inclusion at work	**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/N0402: Create and modify 3D mechanical engineering drawings using the CAD / CAM Software.

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks

Prepare for creating 3D mechanical engineering drawings	**6**	**11**	-	-
PC1. use appropriate sources such as drawing brief to obtain the technical information relevant to the drawing to be created	1	2	-	-
PC2. identify design features appropriate to the drawing being produced	1	2	-	-
PC3. check the data and information received to ensure it is correct and complete	1	2	-	-
PC4. establish the drawing requirements from the data and information received	1	1	-	-
PC5. follow the organisational procedure to report and rectify any incorrect and inconsistent information in the job specification documents	1	2	-	-
PC6. select the relevant drawing software and drafting equipment appropriate to the selected drawing method	1	2	-	-
Perform the set-up activities	**5**	**10**	-	-
PC7. customize system variables, menus and drawing defaults to produce the drawing to the appropriate scale	1	2	-	-
PC8. develop macros as per the approved procedures	1	2	-	-
PC9. set up and check that all relevant devices are connected and operating,	1	2	-	-

PC10. check if an interface with ERP is required and available	1	2	-	-
PC11. set the drawing datum at a convenient point along with drawing parameters such as layers, line types, colour, text styles according to the drawing to be produced	1	2	-	-
Create or modify 3D mechanical engineering drawings	**17**	**45**	-	-
PC12. analyse and produce mechanical drawings, using first angle orthographic projections, isometric/oblique projections, third angle orthographic projections, sectional views	1	2	-	-
PC13. create separate assembly view or isometric view	1	1	-	-
PC14. follow the drafting principles to produce various types of drawings that are consistent with applicable standards and procedures for use in various engineering activities	-	1	-	-
PC15. perform assembly and motion analysis for the moving parts of the assembly	-	1	-	-
PC16. create a drawing template using the appropriate drawing tool according to the required standards, including all the necessary details	-	2	-	-
PC17. use the relevant Industry 4.0 manufacturing technologies to ensure interconnectivity, automation, machine learning, and real-time data collection and analysis	-	2	-	-

PC18. ensure to mention the desired qualities required in the finished components such as hardness, grinding, blackening, chrome plating, paint colour, etc.	1	2	-	-
PC19. use the relevant terminologies in the drawings	-	2	-	-
PC20. use the recommended techniques to create drawings in the required formats, ensuring the drawings are detailed	1	2	-	-
PC21. use various menus available in the CAD system along with relevant codes and references	1	2	-	-
PC22. draw temporary fasteners and rivets, components details, assembly drawings, piping layouts, gears and machine foundation, jigs and fixtures, nailed drawings of dies, moulds and press tools dimensions	1	2	-	-
PC23. create all required views such as section and detailed views to avoid any issues during machining	1	2	-	-
PC24. label the drawings as per approved procedures	1	2	-	-
PC25. create detailed views using various scales to as per the requirement	1	2	-	-
PC26. ensure to provide geometrical accuracies, such as run out surface finishing circularity, cylindricity, perpendicularity, on the desired portion of the component	1	2	-	-

PC27. coordinate with the relevant person to get the drawings checked and approved	1	2	-	-
PC28. edit the drawings as per the feedback, ensuring any changes are made as per the organisational procedures	1	2	-	-
PC29. follow the standard sizes of raw materials available in the market, while designing to avoid wastage of resources, such as raw material	1	2	-	-
PC30. check the drawings are correctly titled and referenced	-	2	-	-
PC31. check for the intersection of components with each other in the assembly mode	-	2	-	-
PC32. load testing and simulation before finalising the drawing	1	2	-	-
PC33. save the drawing to an appropriate storage medium such as a hard drive or USB pen drive, while creating a backup to protect against accidental loss	1	2	-	-
PC34. prepare the bill of materials as per organisational guidelines after determining the required component, material specifications, and appropriate quantities	1	2	-	-
PC35. use the CAD system appropriately as per the user manual	1	2	-	-
Use resources optimally	**2**	**4**	-	-

PC36. optimise the usage of electricity and other resources in various tasks and processes	1	2	-	-
PC37. connect the electrical tools and equipment safely, and turn them off when not in use	1	2	-	-
NOS Total	**30**	**70**	-	-

DGT/VSQ/N0101: Employability Skills (30 Hours)

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Employability Skills	**1**	**1**	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
Constitutional values – Citizenship	**1**	**1**	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
Becoming a Professional in the 21st Century	**1**	**3**	-	-

PC3. explain 21st Century Skills such as Self- Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
Basic English Skills	**2**	**3**	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
Communication Skills	**1**	**1**	-	-
PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
Diversity & Inclusion	**1**	**1**	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
Financial and Legal Literacy	**3**	**4**	-	-
PC9. use various financial products and services safely and securely	-	-	-	-
PC10. calculate income, expenses, savings etc.	-	-	-	-

PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
Essential Digital Skills	**4**	**6**	**-**	**-**
PC12. operate digital devices and use its features and applications securely and safely	-	-	-	-
PC13. use internet and social media platforms securely and safely	-	-	-	-
Entrepreneurship	**3**	**5**	**-**	**-**
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
Customer Service	**2**	**2**	**-**	**-**
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	**1**	**3**	**-**	**-**
PC19. create a basic biodata	-	-	-	-
PC20. search for suitable jobs and apply	-	-	-	-

PC21. identify and register apprenticeship opportunities as per requirement	-	-	-	-
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 **Draughtsman Mechanical**) 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

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