

QUALIFICATION FILE

Fitter - Fabrication

☒ 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: 3

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	3
Section 2: Module Summary	5
NOS/s of Qualifications	5
Mandatory NOS/s:	5
Elective NOS/s:	6
Optional NOS/s:	6
Assessment - Minimum Qualifying Percentage	7
Section 3: Training Related	7
Section 4: Assessment Related	8
Section 5: Evidence of the need for the Qualification	8
Section 6: Annexure & Supporting Documents Check List	9
Annexure: Evidence of Level	9
Annexure: Tools and Equipment (Lab Set-Up)	11
Annexure: Industry Validations Summary	13
Annexure: Training & Employment Details	15
Annexure: Blended Learning	16
Annexure: Detailed Assessment Criteria	17
Annexure: Assessment Strategy	33
Annexure: Acronym and Glossary	34

Section 1: Basic Details

1.	Qualification Name	Fitter - Fabrication														
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/06607 v3.0		Qualification Name of existing/previous version: Fitter – Fabrication												
4.	a. OEM Name b. Qualification Name (Wherever applicable)															
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-03-CG-03932-2025-V2-CGSSC V4.0	6. NCrF/NSQF Level: 3													
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	The incumbent on the job roles carrying out fitting and fabrication operations like measuring, marking out, sawing, grinding, drilling, chiseling, threading, tapping, scraping, manual lapping and inspecting of components in order to fit a component as per specifications.														
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>Grade 10 pass or equivalent</td> <td>No Experience required.</td> </tr> <tr> <td>2</td> <td>Grade 8 pass with two year of (NTC/ NAC) after 8th or equivalent</td> <td>No Experience required.</td> </tr> <tr> <td>3</td> <td>9th Grade pass</td> <td>1.5 year relevant experience</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Grade 10 pass or equivalent	No Experience required.	2	Grade 8 pass with two year of (NTC/ NAC) after 8 th or equivalent	No Experience required.	3	9th Grade pass	1.5 year relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)														
1	Grade 10 pass or equivalent	No Experience required.														
2	Grade 8 pass with two year of (NTC/ NAC) after 8 th or equivalent	No Experience required.														
3	9th Grade pass	1.5 year relevant experience														

		4	8th grade pass	3 years relevant experience																			
		5	Previous relevant Qualification of NSQF Level 2.5	1.5-years relevant experience																			
		6	Previous relevant Qualification of NSQF Level 2	3-years relevant experience																			
		b. Age: <As per Govt. Norms>																					
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	13	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>132</td><td>198</td><td>60</td><td>-</td><td>390</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)	132	198	60	-	390	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Viva (Hours)	Total (Hours)																		
Classroom (offline)	132	198	60	-	390																		
Online																							
14.	Aligned to NCO/ISCO Codels (if no code is available mention the same)	NCO-2015/7224.0102																					
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	- Senior Welder(Pipes &Plates)- 4, - Senior Tungsten Inert Gas Welder -5																					
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																					
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 To be incorporated later																					
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: 30 th April 2025	24. Validity Duration: 3 Years	25. Next Review Date: 30 th 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/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.	Bridge Module & Follow the health and safety practices at work	CSC/N1335 NOS Version- 2.0	Non-Core	3	2	25	35	-	-	60	30	70	-	-	100	15
2.	Coordinate with co-workers to achieve work efficiency.	CSC/N1336 : Version No. – 2.0	Non-Core	3	1	10	20	-	-	30	30	70	-	-	100	15
3.	Manually cut metal and metal alloys using oxy-fuel gases	CSC/N0201 : Version No. – 2.0	Core	3	3	20	40	30	-	90	30	50	-	20	100	25
4.	Perform Precision fitting operations on metal	CSC/N0303 – , v3.0	Core	3	3	65	85	30	-	180	30	50	-	20	100	30

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)
	components using Advanced Digital Technologies															
5.	Employability Skills (30 hours)	DGT/VSQ/N 0101 - Version No. – 1.0	Non-Core	2	1	12	18	-	-	30	20	30	-	-	50	15
Duration (in Hours) / Total Marks					13	132	198	60		390	140	270	-	40	450	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/Fitter with 3 years of relevant industry experience specialization in Fitting/Assembly and 1 year of training experience specialization in Fitting/Assembly. B.E/B. Tech in Mechanical with 2 year of relevant industry experience specialization in Fitting/Assembly and 1 year of training experience specialization in Fitting/Assembly. CITS Certificate in Fitter with specialization in Fitting/Assembly.
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. 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/Fitter with 3 years of relevant industry experience specialization in Fitting/Assembly and 1 year of assessment experience specialization in Fitting/Assembly BE/B. Tech in Mechanical with 2 years of relevant industry experience specialization in Fitting/ Assembly and 1 year of assessment experience specialization in Fitting/Assembly CITS certificate in Fitter specialization in Fitting/Assembly.
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. M. Tech in Mechanical/ Electronics/ Mechatronics with 4 years of relevant experience.
Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B. Tech in Mechanical/ Electronics/ Mechatronics with 8 years of relevant experience. 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: 11980

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")	NA
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	NA
7.	Annexure: Acronym and Glossary (Optional)	NA
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 QP
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 preparing the fitting and	The job involves a range of theoretical understanding and practical skills as can be seen	3

	fabrication equipment • Process of conducting fitting and fabrication • Process of carrying out fault management • Process of inspecting the workpiece for quality check • Process of segregation and storage of output	from the job requirements given in the adjacent cell. The skills include setting, adjusting and operating fitting and fabrication apparatus and carrying out fitting and fabrication activities on given work piece	
Professional and Technical Skills/ Expertise/ Professional Knowledge	• Understand the concepts of fitting and fabrication. • Knowledge of relevant tools and equipment for conducting fitting and fabrication process. • Knowledge of fitting and fabrication process. • Able to understand how to minimise risks from the hazards associated with carrying out fitting and fabrication	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 fabrication of component by fitting and fabrication process.	3
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Plan the fitting and fabrication activities and prepare the appropriate schedules • Perform the operational/function checks • Carry out relevant documentation manually and/ or electronically • Determine the fitting and fabrication parameters • Operate fitting and fabrication apparatus for welding activities	As indicated by the performance criteria in the adjacent cell, the job holder needs to have wide-ranging practical skills for fabrication of component by fitting and fabrication activities.	3
Broad Learning Outcomes/Core Skill	Logical and mathematical skills • Follow the technical specification and appropriate procedures. • Perform work-related calculations	The job holder requires logical and relevant skills for conducting fitting and fabrication activities.	3

	Collecting and organising information • Use the standard templates and tools for documenting work • Collect the relevant information concerning the fitting and fabrication activities and carry out the appropriate documentation.	As indicated by the performance criteria in the adjacent cell, the job involves conducting the fitting and fabrication on various metals as per drawing and job order requirement.	
Responsibility	• Responsible for determining the work requirements • Responsible for planning the fitting and fabrication activities • Responsible for carrying out fitting and fabrication process. • Responsible for inspecting and testing the welded workpieces. • Responsible for preparing and updating the relevant documents.	he incumbent on the job roles carrying out fitting and fabrication operations like measuring, marking out, sawing, grinding, drilling, chiseling, threading, tapping, scraping, manual lapping and inspecting of components in order to fit a component as per specifications. It also involves basic oxy-fuel gas cutting and basic manual arc welding as per given instructions and under supervision.	3

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	MMAW welding set	Standard	1 Set
8	Grinding Machine	Standard	1
9	Fabrication Tools	Hammer, Chisel set, Centre punch 9mm x 127mm, Dividers 20 cm, Wire brush 15 cm x 3.7 mm, Spark lighter, Number punch 6 mm and letter punch 6 mm, Scriber 15 cm, Tongs holding Steel rule, Screw driver set, Hacksaw frame adjustable 30 cm, Magnifying glass 15 cm, Weld measuring gauge fillet and butt, file set, Steel tape 182 cm flexible in case, Try square	1 Set
10	Measuring Instruments	Power tool cables ,Chisel, drilling tools , jigs & fixtures , ropes , manual lifts , blocks & tables , straps , bolts , clamps, Cutting tools, hacksaws; hammers; punches; screwdrivers; sockets; wrenches; spanners; scrapers , measuring tools(rules/tapes, dividers/trammels, scribes, punches, scribing blocks, squares, protractor, depth/internal/external micrometres, callipers (Vernier, inside and outside, depth), gauges (height Vernier, feeler, bore/hole, slip, radius/profile, thread, plug), stick micrometres, dial stand and comparator, vee block with u-clamp)	1 Set
11	Cuttrting Machine	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, Gurugram, Haryana-122001	9212154114	industryhay@gmail.com	
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. OP 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@jbmgroupp.com	
10	Subros	Pawan Yadav	HR Head	Plot No. 395-396, Sec-8, Phase-3, IMT	9818148609	p.yadav@subros.com	

				Manesar, Gurugram, - 122050			
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	13165	3286	1317	329	132	33
2026-2027	14482	3615	1448	362	145	36
2027-2028	15930	3977	1593	398	160	40

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

4.0	FY2022-2023	3506	3506	2707	1895	351	351	271	190	35	35	27	19
4.0	FY2023-2024	2829	2829	2444	1711	283	283	244	177	28	28	24	17
4.0	FY2024-2025	11968	11968	4267	2987	1197	1197	427	299	120	120	43	30

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

☐ 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
<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/N0201: Manually cut metal and metal alloys using oxy-fuel gas

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for cutting operations</i>	15	21	-	9
PC1. identify the cutting work to be done by interpreting the engineering drawing, Welding Procedure Specification (WPS) and job orders	1	2	-	1
PC2. identify the tools, cutting torch, machine, measuring instruments, accessories, consumables and input materials (mild carbon steel, high tensile and special steels, other materials) as per the requirements mentioned in WPS or drawing	3	2	-	2

PC3. select and arrange the right material, equipment, fixtures, accessories such as regulators, hoses and valve and consumables such as shielding gas etc. as per the SOP and job requirements	2	3	-	1
PC4. select the correct type of nozzle, consumables, gases and oxy-gas cutting equipment required for the job by following WPS and drawing	1	2	-	1
PC5. check the input material, tools, equipment and accessories for any defects, leakages and that they are as per the required quality standards	2	2	-	1
PC6. prepare the work area for cutting activities	1	2	-	-
PC7. set the oxy-gas cutting apparatus and its parameters as per the WPS and SOP	1	2	-	1
PC8. ensure that a flashback arrestor is fitted with the apparatus	1	-	-	1
PC9. use correct technique for lighting, adjusting and extinguishing the arc	1	2	-	1
PC10. adjust torch valve for the type of flame such as neutral, carburizing and oxidizing	1	2	-	-
PC11. mark the correct measurements on the workpiece by using appropriate tools and measuring instruments as specified in drawing or WPS	1	2	-	-
<i>Perform oxy-gas cutting operations</i>	9	17	-	6

PC12. follow safety precautions during cutting work as per SOP and organizational guidelines	-	1	-	-
PC13. start the gas cutting machine for cutting operations	1	2	-	1
PC14. adjust cylinder valves and regulator for operating pressure to achieve required specifications	1	2	-	1
PC15. perform oxy-gas cutting process as per SOP and produce items/cut shapes to the dimensions and profiles specified in WPS and drawing	2	4	-	1
PC16. perform various cutting operations correctly and produce thermal cuts in various forms of material (metal of 3mm and above) which meet specified quality criteria i.e. dimensional accuracy is within the tolerances specified on the drawing/specification, or within +/- 2mm; angled/radial cuts are within specification requirements; cuts are clean and smooth and free from flutes; no drags	2	4	-	2
PC17. recognize and correct burn-back and flashback	1	1	-	1
PC18. measure the final workpiece and compare with the dimensions as prescribed in the WPS and engineering drawing	1	2	-	-
PC19. shut down the cutting equipment and remove the workpiece after completion of cutting activities	1	1	-	-

<i>Perform post-cutting operations</i>	6	12	-	5
PC20. check the work pieces as per the work instructions for product quality	1	2	-	1
PC21. identify defects in the completed workpiece by using appropriate methods and equipment	2	3	-	1
PC22. separate the defective pieces which can be repaired/ reworked and pieces which are beyond repair	1	1	-	1
PC23. clean and store all the tools, machine and equipment after completion of work	1	2	-	1
PC24. check the machine operations for any malfunctions/defects in the component and immediately inform the supervisor/maintenance team for correction	1	2	-	1
PC25. dispose scrap or waste material in accordance with the company policies and environmental regulations	-	1	-	-
PC26. report to the supervisor about any problems faced or anticipated during the complete process	-	1	-	-
NOS Total	30	50	-	20

CSC/N0303: Perform Precision fitting operations on metal components using Advanced Digital Technologies

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for work</i>	11	15	-	8
PC1. identify work requirements by interpreting engineering drawings and instructions; planning documentation; quality control documents; operation sheets; process specifications etc. and instructions received from supervisor	1	1	-	1
PC2. select the appropriate fitting and fabrication operations need to perform on the basis of drawing information	3	2	-	2
PC3. prepare the work area for the fabrication and fitting operations as per SOP and work instructions	1	2	-	1
PC4. identify and arrange the material, tools, measuring instruments, equipment, parts and subassemblies required for the job	3	2	-	2
PC5. check the tools and equipment for any defects before use	1	3	-	1
PC6. check that all measuring equipment are within calibration date	1	2	-	-
PC7. set work pieces as per job requirements by using appropriate positioning and/or holding devices and support mechanisms	1	2	-	1
PC8. use appropriate Personal Protective Equipment (PPE) for safe working in workshop	-	1	-	-

<i>Perform marking on the workpieces</i>	6	10	-	4
PC9. use a range of marking out equipment and mark the dimensions on the workpiece by applying an appropriate method of marking out	1	2	-	1
PC10. mark out a range of features (Features: datum/centre lines, lines (perpendicular, parallel), circles, profiles (square/rectangular, radial, angles/angular), hole positions (radial, linear), allowances for bending, simple pattern development) on the workpiece	2	3	-	1
PC11. mark out templates for tracing/transferring the specified features on the workpieces as per job specification	2	3	-	2
PC12. trace/transfer the specified features from the templates onto the workpieces as per job specification	1	2	-	-
<i>Perform fabrication and fitting operations</i>	6	12	-	4
PC13. plan the fabrication and fitting activities before starting the work	1	2	-	1
PC14. use appropriate methods and perform fabrication and fitting operations to produce machine components by following organizational specified sequence and procedure as per job specifications	2	4	-	1

PC15. produce components with various features as per standards applicable to the process (Features of components produced: flat; square; parallel and angular faces; perpendicular plates; radii and curved profiles; drilled holes; internal and external threads; sliding or mating parts; counter bore, countersink or spot face; vessels; simple structures	2	4	-	1
PC16. check the fabricated and fitted products to ensure completeness of work	1	2	-	1
<i>Perform post-fitting operations</i>	7	13	-	4
PC17. perform necessary quality checks or tests for correct fitting, dimensional accuracy and required quality standards	2	4	-	2
PC18. use the appropriate measuring equipment for checking activities	2	4	-	1
PC19. prepare job card, progress records, incident reports etc. for the higher authorities as per organizational procedures	1	2	-	1
PC20. clean and store all the tools, machine and equipment after completion of work	1	2	-	-
PC21. dispose scrap or waste material into the disposal area in accordance with the company's policies and environmental regulations	1	1	-	-
NOS Total	30	50	-	20

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

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	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.	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC4. speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	1	1	-	-

PC5. follow good manners while communicating with others	-	-	-	-
PC6. work with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC8. report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	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	-	-	-	-
<i>Essential Digital Skills</i>	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	-	-	-	-
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business	-	-	-	-
PC15. identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers	-	-	-	-
PC17. identify customer needs and address them appropriately	-	-	-	-
PC18. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	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 Fitter - Fabrication) 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