Model Curriculum

QP Name: Fabricator

QP Code: CON/Q1206

QP Version: 5.0

NSQF Level: 4

Model Curriculum Version: 5.0

Construction Skill Development Council of India | CPB – 201 and 202, Block-4B, DLF corporate Park, Near Guru Dronacharya Metro Station, Phase – III, MG Road, Gurugram, Haryana – 122002

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Training Parameters

Sector	Construction Skill Development Council of India
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Fabrication
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7213.0200
Minimum Educational Qualification and Experience	12th grade pass OR Completed 2nd year of 3-year diploma after 10th (in Civil / Mechanical Engineering) OR Pursuing 2nd year of 3-year diploma after 10th (in Civil / Mechanical Engineering) OR 10th grade pass and pursuing continuous schooling OR 11th grade pass with 1 years of relevant industry experience OR 10th grade pass with 2 years of relevant industry experience OR 8th grade pass with 4 years of relevant industry experience OR Previous relevant Qualification of NSQF Level 3.5 (Construction Fitter) with 1.5 years of relevant industry experience OR Previous relevant Qualification of NSQF Level 3 (Assistant Construction Fitter) with 3 years of relevant industry experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	30/04/2025
Next Review Date	30/04/2028
NSQC Approval Date	08/05/2025
QP Version	5.0
Model Curriculum Creation Date	30/04/2025
Model Curriculum Valid Up to Date	30/04/2028
Model Curriculum Version	5.0
Minimum Duration of the Course	450 hours
Maximum Duration of the Course	450 hours

Program Overview

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Inspect and perform preparatory work for the fabrication works
- Ensure the surface cleaning of the sections for fabricating the steel structures as per the requirement
- Conduct edge/ joint preparation activities in order to fabricate the steel structure assemblies
- Conduct the connection activities for components of steel structure assemblies using welding/ bolting
- Conduct repairing of fabricated structural assemblies.
- Perform preparatory work prior to erection.
- Erect structural assemblies as per drawings
- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.
- Demonstrate practices sensitive to disabilities (physical, mental, intellectual or sensory impairment), cultural diversity and gender neutrality.
- Identify various hazards at construction site.
- Use PPE's relevant to fabricator.
- Perform safe waste disposal at construction site.
- Demonstrate the activities to check the spread of infection as per medical/ organizational guidelines.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration (in Hours)	Practical Duration (in Hours)	On-the-Job Training Duration (Mandatory) (in Hours)	Total Duration (in Hours)
CON/N1210: Inspect the fabrication materials and conduct their surface cleaning NOS Version No.: 5.0 NSQF Level: 4	**15:00**	**35:00**	**10:00**	**60:00**
Module 1: Bridge Module	05:00	00:00	00:00	05:00
Module 2: Inspect the fabrication materials and conduct their surface cleaning	10:00	35:00	10:00	55:00

CON/N1211: **Conduct joint preparation, connection activities and repair work in fabricated assemblies** **NOS Version No.: 5.0** **NSQF Level: 4**	**30:00**	**70:00**	**20:00**	**120:00**
Module 3: Conduct joint preparation, connection activities and repair work in fabricated assemblies	30:00	70:00	20:00	120:00
CON/N0717: **Erect structural steel assemblies at construction sites** **NOS Version No.: 5.0** **NSQF Level: 4**	**30:00**	**90:00**	**30:00**	**150:00**
Module 4: Erect structural steel assemblies at construction sites	30:00	90:00	30:00	150:00
CON/N9001: **Work according to personal health, safety and environment protocol at construction site** **NOS Version No.: 3.0** **NSQF Level: 4**	**05:00**	**25:00**	**00:00**	**30:00**
Module 5: Follow safety norms as defined by organization, adopt healthy and safe work practices	10:00	25:00	00:00	30:00
CON/N8001: **Work effectively in a team to deliver desired results at the workplace** **NOS Version No.: 3.0** **NSQF Level: 4**	**05:00**	**25:00**	**00:00**	**30:00**
Module 6: Communicate effectively at workplace	05:00	25:00	00:00	30:00
CON/N8002: **Plan and organize work to meet expected outcomes** **NOS Version No.: 4.0** **NSQF Level: 4**	**05:00**	**25:00**	**00:00**	**30:00**
Module 7: Prioritize activities and organize resources	05:00	25:00	00:00	30:00
DGT/VSQ/N0101: **Employability Skills (30 Hours)** **NOS Version No.: 1.0** **NSQF Level: 2**	**30:00**	**00:00**	00:00	**30:00**
Module 8: Employability Skills	30:00	00:00	00:00	30:00
Total Duration	**120:00**	**270:00**	**60:00**	**450:00**

Module Details

Module 1: Bridge Module

Mapped to CON/N1210, v 5.0

Terminal Outcomes:

- Explain the role and responsibilities of Fabricator.
- Discuss the career progression options for Fabricator.

Duration: *05:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain role description/ functions of the job role- fabricator • Define the personal attributes required in fabrication occupation. • Explain future possible progression for role of fabricator.	
Classroom Aids:	
White board, Computer, Projector, Charts and displays regarding MIG and SMAW welding	
Tools, Equipment and Other Requirements	
N.A	

Module 2: Inspect the fabrication materials and conduct their surface cleaning

Mapped to CON/N1210, v 5.0

Terminal Outcomes:

- Inspect and perform preparatory work for the fabrication works
- Conduct surface cleaning of the sections for fabricating the steel structures as per the requirement

Duration*: 10:00*	**Duration*: 35:00***
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the nomenclature for the various components of assemblies. • Explain site layout plan and means of shifting fabrication materials. • Explain the purpose of inspection of fabrication materials prior to fabrication activities. • Explain various types of superficial damages occurring on the sections, their causes and remedies. • Explain the process of identifying distortions and that of measuring and rectifying these distortions. • Explain the various types of impurities present on the surface of the base metal • Discuss the use of different instruments in measuring the dimensions of the components, their least count, area of application and method of use. • Describe the different types of heating equipment, their accessories, range of operation and area of application. • Discuss the concept of heat number • Describe the chemicals used for cleaning, the reactions involved in chemical cleaning, their application procedures and area of application. • Describe the use of load lifting equipment in fabrication activities. • Explain segregation, stacking and stocking of the materials based upon various classification.	• Read and interpret blueprints/ working drawings/shop drawings/ specification details related to the fabrication activities for details regarding the materials and components. • Demonstrate checks on the fabrication materials for any physical damages like distortion, bending, cracks etc. • Determine the types of impurities on the surface of materials based on its inspection. • Prepare an estimate of the surface cleaning materials required for a given sample of fabrication material/section. • Demonstrate the procedures involved in surface cleaning of the fabrication materials like heating, chemical cleaning, scrubbing, water jet, etc. • Perform checks to ensure compliance of prepared clean surface with technical details.
Classroom Aids:	
White board , Computer, Projector, Charts and displays regarding MIG and SMAW welding	
Tools, Equipment and Other Requirements	
Drilling machine with bits, Electric screw gun, Power hexa saw, Welding tools and accessories, Gas cutting tools and accessories, Grinding tools and accessories, Pliers, Files, Temperature gun/ chalk, Clamps and anchors, Vices, Forklift, Slings, Wire ropes, Shackles, Spreader board, Chain, Link, Eye hook, Eye bolts, Bull dog grips, Clamp, socket, metric tape, line dori, scale, welding gauge, hammer, punch, Safety Helmet, Safety goggles, Safety shoes, Safety belt, gloves, Ear plugs, Reflective jackets, Dust mask, Fire Prevention kit, Barricade tape, Safety Tags	

Module 3: Conduct joint preparation, connection activities and repair work in fabricated assemblies

Mapped to CON/N1211, v 5.0

Terminal Outcomes:

- Conduct edge/ joint preparation activities in order to fabricate the steel structure assemblies
- Conduct the connection activities for components of steel structure assemblies using welding/ bolting
- Conduct repair of fabricated structural assemblies.

Duration: *30:00*	**Duration**: *70:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain common terminologies, drawings and symbols relevant to fabrication work • Explain welding and bolting methods and their applications. • Explain the different welding parameters and their correlations. • Describe the parts and components of welding equipment and their functions. • Explain positions and patterns of welding • Describe consumables used in welding, their selection, and storage. • Explain requirements for preparation of fabrication bed/ platform • Explain the concept of customisation of jigs and fixtures. • Discuss the procedures involved in edge/ joint preparation during fabrication of steel structure. • Explain the concept of root gaps and how to include them in measurement • Explain the concept of shrinkage of material and adjusting shrinkage into measurement • Explain the various types of defects arising in the components of various shapes and sizes, their causes and effects. • Explain the various methods for rectification of various defects along with the sequence of each activity. • Explain the use of various tools, equipment and consumables required for repair work and their basic maintenance.	• Interpret fabrication blue prints/ shop drawings and specifications for details required for edge/ joint preparation. • Demonstrate clamping and anchoring of the sections/ work piece to the platform/ bed as per the standard practices. • Prepare a sample estimate of the quantities of consumables, tools and equipment required for edge/ joint preparation. • Demonstrate the methods to measure and mark the sections for the edge preparation as per provided technical details and standard procedures. • Demonstrate the process of edge preparation of a work piece/ section as per requirement. • Demonstrate welding/ bolting method to connect two components/assemblies as per drawings and specification. • Inspect the proposed component/ assemblies for distortions, change in dimensions or other defects. • Prepare an estimate of the time, materials, tools, manpower required for repair work of a given…. • Demonstrate the application of corrective operations like grinding, welding, heating, jacking etc. to repair given defective component/ assemblies.
Classroom Aids:	
White board, Computer, Projector, Charts and displays regarding MIG and SMAW welding	
Tools, Equipment and Other Requirements	
Drilling machine with bits,Electric screw gun, Power hexa saw, Welding tools and accessories, Gas cutting tools and accessories, Grinding tools and accessories, Pliers, Files, Temperature gun/ chalk, Clamps and anchors, Vices, Forklift, Slings, Wire ropes, Shackles, Spreader board, Chain, Link, Eye hook,	

Eye bolts, Bull dog grips, Clamp, socket, metric tape, line dori, scale, welding gauge, hammer, punch, Safety Helmet, Safety goggles, Safety shoes, Safety belt, gloves, Ear plugs, Reflective jackets, Dust mask, Fire Prevention kit, Barricade tape, Safety Tags

Module 4: Erect structural steel assemblies at construction sites

Mapped to CON/N0717, v 5.0

Terminal Outcomes:

- Perform preparatory work prior to erection**.**
- Erect structural assemblies as per drawings

Duration: *30:00*	**Duration**: *90:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain basic sketches / schematic working drawing relevant to rigging works. • Explain how to interpret lifting plans and schedules. • Describe the precautions and measures required in lifting and movement of heavy components and materials. • Explain applicable tolerance to respective erection job. • Explain sequence of erection works as per proposed work method statement. • Explain checks to be carried out to ensure readiness of base for erections. • Explain checks required for alignment and positioning of the erected elements.	• Install shoring, bracing and guying materials • Demonstrate how to communicate efficiently to the signalman or operator for precise movement of assemblies. • Demonstrate how to place the steel assemblies/ components to its accurate location and adjustments as per erection requirement. • Demonstrate how to do proper alignment of the erected steel assembly/ component. • Perform installation of temporary connections using appropriate tools. • Perform tightening of bolted connections to the specified tolerance and torque using appropriate torque wrench.
Classroom Aids:	
White board , Computer, Projector, Charts and displays regarding MIG and SMAW welding	
Tools, Equipment and Other Requirements	
Stud Wrenches, Open-End Wrenches, Crescent Wrenches, Hammer, Nibbler, pliers, Drilling machine with bits, Electric screw gun, Power hexa saw, Welding tools and accessories, Gas cutting tools and accessories, Measuring tape, Plumb Bob, Spirit level, Chalks line, Try square, Water level, Tower crane, Mobile crane, Forklift, Scissor lift, Hydraulic jacks, Electric Wire Rope Hoist, Electrical winch, Electrical chain hoist, derrick, Lifting accessories, Belts, Slings, Wire ropes, Shackles, Spreader board, Chain, Link, Eye hook, Eye bolts, Bull dog grips, Clamp, socket, Safety Helmet , Safety goggles , Safety shoes, Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit, Barricade tape, Safety Tags	

Module 5: Follow safety norms as defined by organization, adopt healthy and safe work practices

Mapped to CON/N9001, v 3.0

Terminal Outcomes:

- Identify various hazards at construction site.
- Use PPE's relevant to fabricator.
- Perform safe waste disposal at construction site.
- Demonstrate the activities to check the spread of infection as per medical/ organizational guidelines.

Duration: *05:00*	**Duration**: *25:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the types of hazards at the construction sites and identify the hazards specific to the domain related works. • Recall the safety control measures and actions to be taken under emergency situation. • Explain the classes of fire and types of fire extinguishers. • Explain the importance of participation of workers in safety drills. • Explain the reporting procedure to the concerned authority in case of emergency situations. • Describe the standard procedure for handling, storing and stacking of material, tools, equipment and accessories. • Explain different types of waste at construction sites and their disposal method. • Explain the purpose and importance of vertigo test at construction site. • List out basic medical tests required for working at construction site. • Explain the types and benefits of basic ergonomic principles, which should be adopted while carrying out specific task at the construction sites. • Explain the importance of housekeeping works. • List different types of infectious disease that can spread/ originate at a construction site • Discuss the ways of transmission of the various infectious disease.	• Demonstrate the operating procedure of the fire extinguishers. • Demonstrate use of PPEs as per work requirements. • Demonstrate vertigo test. • Demonstrate safety techniques to be adopted in case of accidents. • Demonstrate safe waste disposal practices followed at construction site. • Demonstrate safe housekeeping practices. • Demonstrate the practices to maintain personal hygiene, workplace hygiene and site/ workplace sanitization. • Demonstrate the methods to clean and disinfect all materials, tools and supplies before and after use. • Demonstrate the procedure to report to the concerned authority regarding the outbreak/ hazard of any infectious disease/ pandemic.

• Explain the methods to check the spread of the infectious disease. • Describe the symptoms and cure of the various infectious disease.	
Classroom Aids:	
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids	
Tools, Equipment and Other Requirements	
Leather Hand Gloves, Jump suit, Wire brush, Hand & Leg guard leather, Safety goggles, Nose mask, Ear protection, Fire extinguishers, Sand buckets Flashback arrestors, Welding helmet, Welding glass, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board	

Module 6: Communicate effectively at workplace

Mapped to CON/N8001, v3.0

Terminal Outcomes:

- Demonstrate effective communication with co-workers, superiors and sub-ordinates across different teams
- Provide support to co-workers, superiors and sub-ordinates within the team and across interfacing teams to ensure effective execution of assigned task.
- Demonstrate practices sensitive to disabilities (physical, mental, intellectual or sensory impairment), cultural diversity and gender neutrality.

Duration: *05:00*	**Duration**: *25:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the effects and benefits of timely actions relevant to the task at hand with examples. • Explain the importance of teamwork and its effects relevant to the task at hand with examples. • Explain the importance of proper and effective communication and its adverse effects in case of failure of proper communication. • Discuss about gender and its related concept: gender equality, gender equity (group work) • Discuss different types of disabilities (physical, mental, intellectual or sensory impairment). • Discuss the activities sensitive to the cultural diversity, disabilities and gender neutrality at the workplace. • Discuss the basic rules and regulations related to gender sensitivity, disabilities, and cultural diversity, with their impact on operations of a workplace. • Discuss how to take initiative in resolving issues among co-workers in a given situation. • Discuss reporting procedure followed at the workplace.	• Apply effective communication skills while interacting with co-workers, trade seniors and others during the assigned task. • Use appropriate writing skills and verbal communication reporting as per commonly applicable organisational norms. • Demonstrate teamwork skills during assigned task. • Demonstrate acceptable interpersonal transactions with individuals having disabilities (physical, mental, intellectual or sensory impairment) or cultural diversity. • Demonstrate the process modifications required to make the workplace free from gender biases.
Classroom Aids:	
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids	
Tools, Equipment and Other Requirements	
N/A	

Module 7: Plan and organize work to meet expected outcome

Mapped to CON/N8002, v9.0

Terminal Outcomes:

- Demonstrate prioritizing of work activities to achieve the desired productivity.
- Demonstrate organizing of resources as per work plan prior to commencement of work.

Duration: *05:00*	**Duration**: *25:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain methods to upkeep, store and stack tools, materials used for domain specific works. • Explain the process of planning of the given tasks and activities relevant to the trade/job role within defined scope and duration. • Explain the procedure adopted for prioritizing an activity and sequencing of activities. • Explain the work plan and flow of activities in sequence for the assigned work. • Explain basic concept of labour productivity and work productivity. • Explain requisition of resources, reporting for requirement of resources orally and in written to concerned authority. • Explain how to minimise wastage of resources. • Explain the plan for waste collection and disposal after task.	• Identify the work target and plan activities to achieve the desired productivity. • Demonstrate requisition of resource citing an example. • Demonstrate the planning for various activities relevant to task as per the scope and schedule. • Demonstrate how to organise the required tool, manpower and material resources for the assigned task. • Select required quantity of materials, tools or devices for defined work activities. • Demonstrate how to prioritize all works/ activities to maximise output. • Demonstrate optimum use of resources while performing domain specific work activities. • Demonstrate waste collection and disposal as per organisational norms. • Demonstrate completion of work within stipulated time and plan.
Classroom Aids:	
Black/White board, marker, Projector/LED Monitor, Computer, Trade specific charts, Safety tags, Safety Notice board, registers and other teaching aids	
Tools, Equipment and Other Requirements	
N/A	

Module 8: Employability Skills (30 Hours)

Mapped to DGT/VSQ/N0101, v1.0

Duration: 30:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1 Hour

After completing this programme, participants will be able to:

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 1 Hour

After completing this programme, participants will be able to:

5. Discuss the importance of relevant 21st-century skills.
6. Exhibit 21st-century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills Duration: 5 Hours

After completing this programme, participants will be able to:

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting Duration: 1 Hour

After completing this programme, participants will be able to:

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 2.5 Hours

After completing this programme, participants will be able to:

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 1 Hour

After completing this programme, participants will be able to:

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration: 2.5 Hours

After completing this programme, participants will be able to:

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.

Essential Digital Skills Duration: 5 Hours

After completing this programme, participants will be able to:

20. Describe the role of digital technology in today's life
21. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
22. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
23. Create sample word documents, excel sheets and presentations using basic features
24. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 3.5 Hours

After completing this programme, participants will be able to:

25. Explain the types of entrepreneurship and enterprises
26. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
27. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
28. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 2.5 Hours

After completing this programme, participants will be able to:

29. Describe the significance of analyzing different types and needs of customers
30. Explain the significance of identifying customer needs and responding to them in a professional manner.
31. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 4 Hours

After completing this programme, participants will be able to:

32. Create a professional Curriculum Vitae (CV)
33. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
34. Discuss the significance of maintaining hygiene and confidence during an interview
35. Perform a mock interview
36. List the steps for searching and registering for apprenticeship opportunities
37. Discuss the legal rights, laws, and aids

On-the-Job Training

Mapped to Fabricator, v 5.0

CON/N01210, v 5.0, Mandatory Duration: *10:00*
Location: On Site
• Read and interpret blueprints/ working drawings/shop drawings/ specification details related to the fabrication activities for details regarding the materials and components. • Demonstrate checks on the fabrication materials for any physical damages like distortion, bending, cracks etc. • Determine the types of impurities on the surface of materials based on its inspection. • Prepare an estimate of the surface cleaning materials required for a given sample of fabrication material/section. • Demonstrate the procedures involved in surface cleaning of the fabrication materials like heating, chemical cleaning, scrubbing, water jet, etc. • Perform checks to ensure compliance of prepared clean surface with technical details.
CON/N01211, v 5.0, Mandatory Duration: *20:00*
Location: On Site
• Interpret fabrication blue prints/ shop drawings and specifications for details required for edge/ joint preparation. • Demonstrate clamping and anchoring of the sections/ work piece to the platform/ bed as per the standard practices. • Prepare a sample estimate of the quantities of consumables, tools and equipment required for edge/ joint preparation. • Demonstrate the methods to measure and mark the sections for the edge preparation as per provided technical details and standard procedures. • Demonstrate the process of edge preparation of a work piece/ section as per requirement. • Demonstrate welding/ bolting method to connect two components/assemblies as per drawings and specification. • Inspect the proposed component/ assemblies for distortions, change in dimensions or other defects. • Prepare an estimate of the time, materials, tools, manpower required for repair work of a given…. • Demonstrate the application of corrective operations like grinding, welding, heating, jacking etc. to repair given defective component/ assemblies.
CON/N00717, v 4.0, Mandatory Duration: *30:00*
Location: On Site
• Install shoring, bracing and guying materials • Demonstrate how to communicate efficiently to the signalman or operator for precise movement of assemblies. • Demonstrate how to place the steel assemblies/ components to its accurate location and adjustments as per erection requirement. • Demonstrate how to do proper alignment of the erected steel assembly/ component. • Perform installation of temporary connections using appropriate tools. • Perform tightening of bolted connections to the specified tolerance and torque using appropriate torque wrench.

Annexure

Trainer Requirements

Trainer Prerequisites					
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Preferable Training Experience**	
		Years	***Specialization***	***Years***	***Specialization***
B.E./B. Tech	Civil / Mechanical Engineering	2	Fabricating / Welding of Structures at Site	1	Fabrication and Welding
OR					
Diploma	Civil / Mechanical Engineering	3	Fabricating / Welding of Structures at Site)	1	Fabrication and Welding
OR					
ITI	Relevant Trade	6	Fabricating / Welding of Structures at Site)	1	Fabrication and Welding
OR					
Graduation	in any Stream	6	Fabricating / Welding of Structures at Site	1	Fabrication and Welding
OR					
Ex-Army Graduate	in any Stream	6	Fabricating / Welding of Structures at Site	1	Fabrication and Welding

Trainer Certification	
Domain Certification	**Platform Certification**
Recommended that the Trainer is certified for the Job Role: "Fabricator", mapped to the Qualification Pack: "CON/Q1206, v5.0". The minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and skills)", mapped to the Qualification Pack: "MEP/Q2601, v3.0". The minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites			
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**	
		Years	***Specialization***
B.E. / B.Tech	Civil / Mechanical Engineering	2	Fabricating / Welding of Structures at Site
OR			
Diploma	Civil / Mechanical Engineering	5	Fabricating / Welding of Structures at Site

Assessor Certification	
Domain Certification	**Platform Certification**
Recommended that the Assessors is certified for the Job Role: "Fabricator", mapped to the Qualification Pack: "CON/Q1206, v5.0". The minimum accepted score is 80%.	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and skills)", mapped to the Qualification Pack: "MEP/Q2701, v3.0". The minimum accepted score is 80%.

Assessment strategy

Assessment system Overview:
Assessment is done through CSDCI affiliated Assessment Agencies. Assessors are trained & certified by CSDCI after training of assessors program. Assessments is conducted to gauge and assess the trainee's skill and knowledge competency in the specified areas. The assessment will have both theory and practical components in 30:70 ratio for false ceiling and Dry wall installer job role.
During the practical task, trainees are assessed on their workmanship, quality of finished product and time management. They will be graded for all their assessments based on the approved assessment strategy which is signed off by CSDCI. The Assessor submits an assessment plan to CSDCI prior to assessments.

The assessment plan contains the following information:

- What will be assessed, i.e. the competency based on each NOS based on theory and practical questions
- How assessment will occur i.e. methods of assessment
- When the assessment will occur
- duration of assessment
- Where the assessment will take place i.e. context of the assessment (workplace/simulation)
- The criteria for decision making i.e. those aspects that will guide judgments and
- Where appropriate, any supplementary criteria used to make a judgment on the level of performance.

Testing Environment:

- Training partner shares the batch start date and end date, number of trainees and the job role.
- Assessment will be fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue/test center.
- The knowledge/theory assessments is conducted with proper seating arrangements with enough space between the candidates to prevent copying.
- Question set for theory and practical will be distributed to each candidate by the Assessor. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject. The skill /practical assessments will be conducted in the approved test centers. The training provider will ensure adequate tools and materials are available to conduct the practical test.
- If number of candidates are more than 30, more assessors will be organized on same day to complete the assessment.
- The assessment has to comprise of two components, namely:
- Knowledge assessment (theory/viva assessment)
- Skill assessment (practical/hands-on skill assessment)

Mode of assessment:

- Demonstration/Practical for Performance /Skill Assessment
- Synoptic multiple-choice question test
- Viva for Knowledge Assessment

Performance/skill assessment:

- The performance/skill assessment will be conducted through demonstration/practical
- For the practical test trainees are assessed through a given task, which they have to complete correctly for them to be marked as passed.
- The assessment is conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation

must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.

Knowledge Assessment:

- The knowledge assessments are conducted through written test/ viva.
- Synoptic test is used for this. It is an MCQ (Multiple Choice Question) test which are prepared externally and externally marked, meaning by agency having no link with training partners. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted to CSDCI.
- The assessment strategy, weightage and duration of assessment for false ceiling and dry wall installer is summarized below

Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ/Viva	30	1.5
skill	Summative	Structured practical task	70	5.5

Assessment Quality Assurance framework:

- CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards. The criteria framework includes weightages/marks for each criterion under knowledge and skill. The criteria ensure quality assurance as it ensures valid, consistent and fair assessments at all locations. Issued to the affiliated Assessment body. The Assessment body develop questions based on CSDCI issued assessment criteria.
- Evidences in the form of answer sheets in case of knowledge assessments are collected. For skill assessments videos and photographs are prepared as evidence. These are submitted by the assessor to the assessment agency. CSDCI does random checks of the same with the participant/ trainee's ID and ascertains authenticity and validity of assessments.
- The training partner will intimate the time of arrival of the assessor and time of leaving the venue. Random spot checks/audit is conducted by CSDCI to monitor assessment.

Methods of Validation:

- Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, ID verification is carried out. Aadhar card number is part of registering the candidate for training. This forms the basis of further verification during the assessment.
- Assessor conducts the assessment through theory and practical questions developed in accordance with the assessment criteria and guidelines issued by CSDCI. This too is verified by random audits carried out by CSDCI.
- Evidences for assessments are to be collected and submitted to CSDCI for verification as per demand.
- Assessment agency is responsible to put details in SIP. CSDCI will also validate the data and result received from the assessment agency.

Method of assessment documentation and access:

- The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by CSDCI assessment team. After upload, only CSDCI can access this data.
- CSDCI approves the results within five days after which results are uploaded on SIP by Assessment Agency.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do **upon the completion of the training**.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do **upon the completion of a module.** A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
MSDE	Ministry of Skill Development and Entrepreneurship
NCVET	National Council for Vocational Education and Training
NSDC	National Skill Development Corporation
CSDCI	Constriction Skill Development Council of India
SIDH	Skill India Digital Hub
AB	Awarding Body
SSC	Sector Skill Council
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
SANKALP	Skill Acquisition and Knowledge Awareness for Livelihood Promotion
STRIVE	Skills Strengthening for Industrial Value Enhancement
JSS	Jan Shikshan Sansthan
STT	Short Term Training
RPL	Recognition of Prior Learning
NAPS	National Apprenticeship Promotion Scheme
AA	Assessment Agency
TP	Training Provider / Training Partner
TC	Training Centre
ITI	Industrial Training Institute
NSQC	National Skill Qualification Committee
NSQF	National Skills Qualification Framework
Q-File	Qualification File
QP	Qualification Pack
MC	Model Curriculum
NOS	National Occupational Standards
PC	Performance Criteria
KU	Knowledge and Understanding
GS	Generic Skills
MCQ	Multiple Choice Question
EHS	Environment Health and Safety
PPE	Personal Protective Equipment
QA/QC	Quality Assurance / Quality Control
IS Code	Indian Standards Code
PMI	Positive Material Identification
MCB	Miniature Circuit Breaker
WPS	Welding Procedure Specification
PQR	Procedure Qualification Record
MIG	Metal Inert Gas Welding
TIG	Tungsten Inert Gas Welding
SMAW	Shielded Metal Arc Welding (Manual Arc Welding)
GMAW	Gas Metal Arc Welding (MIG Welding)
GTAW	Gas Tungsten Arc Welding

FCAW	Flux Cored Arc Welding
SAW	Submerged Arc Welding
PAW	Plasma Arc Welding
LBW	Laser Beam Welding
EBW	Electron Beam Welding
ESW	Electro Slag Welding
UT	Ultrasonic Testing (NDT Method)
RT	Radiographic Testing (X-ray Inspection)
PT	Penetrant Testing (Dye Penetrant Test)
MPT	Magnetic Particle Testing
VT	Visual Testing
FAB	Fabrication
HSS	Hollow Structural Section
CJP	Complete Joint Penetration
PJP	Partial Joint Penetration
HFW	High-Frequency Welding
ISMC	Indian Standard Medium Channel
ISMB	Indian Standard Medium Beam
ISWB	Indian Standard Wide Flange Beam