Model Curriculum

QP Name: Helper Facade Installer

QP Code: CON/Q1102

QP Version: 2.0

NSQF Level: 2

Model Curriculum Version: 1.0

Construction Skill Development Council of India|| Construction Skill Development Council of India (CSDCCI), CPB – 103 & 104, Block-4B, DLF corporate Park, Phase – III, MG Road Gurugram – 122002
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Training Parameters

Sector	Construction Skill Development Council of India
Sub-Sector	Real Estate and Infrastructure Construction
Occupation	Interior & Exterior Finishes
Country	India
NSQF Level	2
Aligned to NCO/ISCO/ISIC Code	NCO-2004/9313.90
Minimum Educational Qualification and Experience	5th Standard Pass
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	24/07/2019
Next Review Date	24/07/2023
NSQC Approval Date	22/08/2019
QP Version	Version number 2.0
Model Curriculum Creation Date	19/06/2020
Model Curriculum Valid Up to Date	24/07/2023
Model Curriculum Version	Version number 1.0
Minimum Duration of the Course	300 hrs.
Maximum Duration of the Course	300 hrs.

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

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

- Identify different materials, tools and equipment used for facade installation works.
- Shift and stack various materials and tools used in façade installation works.
- Identify different components of scaffold.
- Erect a temporary scaffold up to 3.6 metres height.
- Dismantle and stack a temporary scaffold up to 3.6 metres height.
- Identify different type of waste generated at a construction site.
- Identify various hazards at construction site.
- Use PPE's for facade installation task.
- Perform safe waste disposal at construction site as per organisational norms.

Compulsory Modules

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

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	6:00 hrs	00:00	--	--	**6:00 hrs**
CON/N1103 *Identify, handle, shift and store basic materials, tools and tackles for façade installation work at construction site* **NOS Version No. 1.0** **NSQF Level 2**	**20:00 hrs**	**84:00 hrs**	**--**	**--**	**104:00 hrs**
Shift and stack materials, tools and equipment relevant to façade installation work	20:00 hrs	84:00 hrs	--	--	104:00 hrs
CON/N1104 *Carry out cleaning of panels and joints and application of primer on joints in façade installation works* **NOS Version No. 1.0** **NSQF Level 2**	**16:00 hrs**	**78:00 hrs**	**--**	**--**	**94:00 hrs**
Apply primer on joint and clean panels for façade installation works	16:00 hrs	78:00 hrs	--	--	94:00 hrs
CON/N0101 *Erect and dismantle temporary scaffold of up to 3.6-meter height* **NOS Version No.1.2** **NSQF Level 2**	**12:00 hrs**	**36:00 hrs**	**--**	**--**	**48:00 hrs**

Perform erection and dismantle of temporary scaffold up to 3.6 m height	12:00 hrs	36:00 hrs	--	--	48:00 hrs
CON/N9001 *Work according to personal health, safety and environment protocol at construction site* **NOS Version No.1.3** **NSQF Level 2**	**12:00 hrs**	**36:00 hrs**	**--**	**--**	**48:00 hrs**
Follow safety norms as defined by organization, adopt healthy and safe work practices	12:00 hrs	36:00 hrs	--	--	48:00 hrs
Total Duration	**66:00 hrs**	**234:00 hrs**	**--**		**300:00 hrs**

Module Details

Module 1: Bridge Module: Introduction to the job role of Helper Facade installer

Terminal Outcomes:

- Explain the role and responsibilities of Helper façade installer.
- Identify the career progression options for a Helper facade installer.

Duration: *06:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the role and responsibilities of a helper façade installer. • Recall the basic terms used in facade installation works. • Explain the career progression options of a helper facade installer.	
Classroom Aids:	
Computer, printer, projector, white board/ flip chart, marker and duster	
Tools, Equipment and Other Requirements	
N/A	

Module 2: Shift and stack materials, tools & equipment relevant to façade installation work at construction site

Mapped to CON/N1103

Terminal Outcomes:

- Identify different materials, tools and equipment used for facade installation works.
- Shift and stack various materials and tools used in façade installation works.

Duration: *20:00*	**Duration**: *84:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the different tools and tackles used for facade installation works. • List different types of frame members relevant to façade installation works. • Classify different type of façade materials. • Identify storage requirements as per manufacturer instructions, statutory regulations and workplace procedures. • Recall the indent procedure for materials, tools and equipment relevant to facade installation work. • Describe the procedure followed at site to return surplus materials after completion of work. • Recall safety rules and regulations for handling and storing of facade installation materials such as glass panels, boards, frame members etc. • Describe process of numbering and labelling of materials for storage and identification. • Explain the need for the cooperative approaches for material shifting and storing. • Recall the height up to which each material should be stacked based on its nature, size and shape and the space available. • Explain the importance of signage and barricades on the workplace.	• Select the basic tools and tackles used for façade installation works. • Perform checks to confirm serviceability and safety of relevant tools. • Demonstrate tagging, bagging and labelling of materials relevant to façade installation works. • Demonstrate safe stacking and storing of hand tools, portable power tools and ancillary equipment relevant to facade installation works. • Demonstrate sequential loading, unloading, shifting and stacking of facade installation material on the construction site. • Demonstrate manual handling procedures for lifting, lowering and carrying, pushing, pulling and mechanical handling of equipment in case of mechanical lifting and shifting. • Demonstrate the process followed for the return of surplus material to store. • Demonstrate erection of signage and barricades. • Demonstrate marking of glazing units for identification.
Classroom Aids:	
Computer, printer, projector, white board/ flip chart, marker and duster	
Tools, Equipment and Other Requirements	
Measuring tape, Scale, Right angle, Framing square, Chalk line, pencil, Line dori, Plumb bob Spirit level, Pliers, Punch pliers, Hammers, Taping knife, Sanding tool, Hand circular saw, Hack saw, Jig saw, Rake angle, Screw driver set, Screw gun, Hammer Drill machine, Rivet gun, Metal cutter, Silicon gun/caulk gun, Stapler, Clutch angle, Utility knife	

Module 3: Apply primer on joint and clean panels for façade installation works

Mapped to CON/N1104

Terminal Outcome:

- Perform cleaning of panels and joints before and after completion of facade installation works as per instructions.
- Demonstrate application of primer on joints in facade installation works.

Duration: *16:00*	**Duration**: *78:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the standard procedure for waste removal and disposal. • Explain the process of removal of grease and dirt from joints of facades using dry brush, compressed air, abrasive pads and other appropriate methods. • List the precautions applied while using chemicals and abrasives for cleaning process. • Describe the standard procedure for application of primer on joints in façade installation works. • List different types of primers for non – porous and porous surfaces. • Explain the precautions and care employed to avoid contamination of primer. • Recall the procedure for waste disposal as per environmental and organizational norms.	• Identify tools and equipment required for cleaning of surfaces after façade installation works. • Demonstrate the process of cleaning of joints and panels using dry brush, compressed air, abrasive pads, chemicals solvents and other appropriate methods following proper precautions. • Demonstrate the standard procedure for application of primer on joints. • Demonstrate standard waste removal procedure followed for waste and debris generated during façade installation works. • Demonstrate safe waste disposal as per environmental and organisation norms.
Classroom Aids:	
Computer, printer, projector, white board/ flip chart, marker and duster	
Tools, Equipment and Other Requirements	
Measuring tape, Scale, Right angle, Framing square, Chalk line, pencil, Line dori, Plumb bob Spirit level, Pliers, Punch pliers, Hammers, Taping knife, Sanding tool, Hand circular saw, Hack saw, Jig saw, Rake angle, Screw driver set, Screw gun, Hammer Drill machine, Rivet gun, Metal cutter, Silicon gun/caulk gun, Stapler, Clutch angle, Utility knife	

Module 4: Erect and dismantle temporary scaffold up to 3.6-meter height

Mapped to CON/N0101

Terminal Outcomes:

- Identify different components of scaffold.
- List tools, materials components required for erection of 3.6 meter scaffold.
- Erect a temporary scaffold up to 3.6 metres height.
- Dismantle and stack a temporary scaffold up to 3.6 metres height.

Duration: *12:00*	**Duration**: *36:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain scaffolding and its purpose. • List the common materials and tools used for erection of scaffolding (pipe, cup lock (vertical and ledgers), H- frames, bamboo and balli. • List the functions of different hand tools like hammer, spanner, pulleys, hooks, ropes, etc., used for erection/ dismantling of scaffolds. • List the visual checks to be carried out on the scaffolding components to ascertain their usability. • Explain the functions of materials, components and accessories used in scaffolding. • Explain the methods adopted during the erection of the scaffold to ensure its safety. • Explain various checks to be done on completion of erection of scaffolds, such as verticality check, stability check and so on. • Explain the sequence and standard procedure to, dismantle the whole scaffold and stack their components.	• Select different components used in temporary scaffolding such as base, toe board, guard rails, platform, walkways and ladder. • Demonstrate preparation of scaffolding base for a scaffold up to 3.6 m height. • Demonstrate erection of a scaffold (up to 3.6 m height) using pipes and couplers/ cup lock system/ H frame using appropriate hand tools. • Demonstrate the process of conducting verticality check, stability check and rigidity check. • Demonstrate the dismantling and stacking of scaffold.
Classroom Aids:	
Computer, printer, projector, white board/ flip chart, marker and duster	
Tools, Equipment and Other Requirements	
Hammer, Spanner (set), Wrench, Pulley, Rope, Nuts and bolts, Measuring tape, Spirit level, Plumb-bob , Mason's line , Cup-lock scaffolding components (set), 40 NB pipes, Swivel coupler, Fixed clamp, Steel walers, Steel walkways, Aluminum/ GI ladder, Safety net, Helmet , Safety shoes , Safety belt, Cotton hand gloves, Goggles, Reflective jackets, Safety message boards	

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

Mapped to CON/N9001

Terminal Outcome:

- Identify various hazards at construction site and specially hazards relevant to façade installation work.
- Use PPE's for façade installation work.
- Perform safe waste disposal at construction site.

Duration: *12:00*	**Duration**: *36:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the types of hazards at the construction sites and Identify the hazards specific to the facade installation work. • 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.	• Demonstrate the operating procedure of the fire extinguishers. • Demonstrate different methods involved in providing First aid to the affected person. • Use PPEs as per work requirements during masonry job. • Demonstrate vertigo test. • Demonstrate safe waste disposal practices followed at construction site. • Demonstrate safe housekeeping practices.
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	
Safety Helmets, Face shield, Overalls, Knee pads, Safety shoes, Safety belts, Safety harness, Safety Gloves, Safety goggles, Particle masks, Ear Plugs, Reflective jackets, Fire Extinguisher, Fire prevention kit, First Aid box, Safety tags, Safety Notice board	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Post-Graduation/Graduation in Engineering	M. Tech in Civil/B. Tech in civil	Half Year	Civil Engineering	0	Civil Engineering	As a pre-requisite for new entrant, no prior experience in training /assessment is mandatory. However if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience
Diploma	Diploma in Civil	One year	Civil Engineering	0	Civil Engineering	
Graduation/ Ex. Army /ITI /12th pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12th pas	Two years	Working as shuttering carpenter/Shuttering carpentry domain /supervisory work of Shuttering carpentry domain	0	Working as shuttering carpenter/Shuttering carpentry domain /supervisory work of Shuttering carpentry domain	

Trainer Certification	
Domain Certification	**Platform Certification**
Trainer- 70 % in each NOS of Qualification Pack "CON/Q1102 v 2.0" & 80% overall.	Trainers - 70% in each NOS of Qualification Pack "MEP/Q2601"and 80% overall.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
Post-Graduation/Graduation in Engineering	M. Tech in Civil/B. Tech in civil	One year	Civil Engineering	0	Civil Engineering	As a pre-requisite for new entrant, no prior experience in training /assessment is mandatory. However if someone with prior experience in requisite domain joins, experience will be measured in terms of relevant industry experience
Diploma	Diploma in Civil	Two years	Civil Engineering	0	Civil Engineering	
Graduation/ Ex. Army /ITI /12th pass	General B.A./B.Sc./ Graduation certificate from Army/ITI certificate in relevant trade/12th pas	Three years	Working as shuttering carpenter/Shuttering carpentry domain /supervisory work of Shuttering carpentry domain	0	Working as shuttering carpenter/Shuttering carpentry domain /supervisory work of Shuttering carpentry domain	

Assessor Certification	
Domain Certification	**Platform Certification**
Assessor- 70% in each NOS of Qualification Pack "CON/Q1102 v 2.0" & 80% overall.	Assessor-80% in each NOS of Qualification Pack "MEP/Q2701", and overall 80%.

Assessment strategy

Assessment system Overview

Assessment is done through CSDCI affiliated Assessment Body. Assessors are trained & certified by CSDCI after a 10-day 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 20:80 ratio for Helper facade installer.

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 Assessment agency/ Assessor will ensure adequate tools and materials are available to conduct the practical test.

The theory and practical assessments will be carried out on same day. If number of candidates are more than 20, more assessors will be organized on same day to complete the assessment

The assessment has to comprise of two components, namely:
1. Knowledge assessment (theory/viva assessment)
2. Skill assessment (practical/hands-on skill assessment)

Mode of assessment

1. Demonstration/Practical for Performance /Skill Assessment
2. Synoptic multiple choice question test } For Knowledge Assessment
3. Viva

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 Helper facade installer is summarized below:

Assessment Type	**Formative or Summative**	**Strategies**	**Weightage**	**Duration (hours)**
Knowledge	Summative	MCQ/Viva	20	1.0
skill	Summative	Structured practical task	80	5.0

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 criteria under knowledge and skill. This criteria ensures 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. The assessments may also be carried out on line.

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 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
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
CSDCI	Construction Skill development Council of India
MCQ	Multiple Choice Question