



# Model Curriculum

## 1. Chargehand Façade Installer

**SECTOR: Construction**

**SUB-SECTOR: Real Estate and Infrastructure Construction**

**OCCUPATION: Interior and Exterior Finishes**

**REF ID: CON/Q1108, V1.0**

**NSQF LEVEL: 4**





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# Chargehand – Façade Installer

## CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Chargehand – Façade Installer”, in the “Construction” Sector/Industry and aims at building the following key competencies amongst the learner

<b>Program Name</b>	<b>Chargehand – Facade Installer</b>		
<b>Qualification Pack Name &amp; Reference ID. ID</b>	CON/Q1108, v1.0		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	23-08-2017
<b>Pre-requisites to Training</b>	Preferably 8 <sup>th</sup> standard with 9 Years site experience in same occupation for Non-trained worker/ 3 years site experience as a certified Facade Installer for trained worker.		
<b>Training Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• <b>Gain insight in to job role of Chargehand façade installer:</b> Introduction to the roles and responsibilities of the job role, its career progression and expected outcomes.</li> <li>• <b>Read and interpret drawing specifications and carry out layout marking for façade installation works:</b> - Read and interpret drawing and specification related to façade installation works .Use tools to carry out layout marking for façade installation works.</li> <li>• <b>Install unitized curtain walls:</b> - Select tools and equipment and carry out installation of unitized curtain wall.</li> <li>• <b>Fix Façade Installation for Sloped /Curved Glazing:-</b> Select tools and equipment and carry out installation of sloped/curved glazing facade</li> <li>• <b>Work effectively in a team to deliver desired results at the workplace :-</b> Introduction to team working and effective communication procedures to be followed at construction sites</li> <li>• <b>Plan and organize work to meet expected outcomes :-</b> Prioritizing activities and organising resources to meet desired outcome</li> <li>• <b>Work according to personal health, safety and environment protocol at construction site:</b> - Importance of health &amp; safety aspect and measures to be followed at work site.</li> </ul>		

This course encompasses 6 out of 6 National Occupational Standards (NOS) of “Chargehand Façade Installer” Qualification Pack issued by “Construction Skill Development Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p><b>Introduction</b></p> <p><b>Theory Duration</b> (hh:mm) 8:00</p> <p><b>Practical Duration</b> (hh:mm) 00:00</p>	<ul style="list-style-type: none"> <li>• Overview of construction sector and its importance</li> <li>• Basic terms used and types of façade works.</li> <li>• Basic knowledge of Unit &amp; measurement &amp; arithmetic calculation</li> <li>• Job opportunities for Chargehand Façade Installer in construction sector</li> <li>• training session and training delivery plan</li> <li>• Roles and responsibilities of Chargehand Façade Installer</li> </ul>	<p><u>Classroom Requirement</u></p> <ol style="list-style-type: none"> <li>1. Classroom having seating requirement for 30 people.</li> <li>2. Projector</li> <li>3. Toilet/Urinals (Separate for gents and Ladies)</li> <li>4. Blackboard</li> <li>5. Trade specific charts and other teaching aids</li> </ol>
2	<p><b>Read and interpret drawing specifications and carry out layout marking for façade installation works</b></p> <p><b>Theory Duration</b> (hh:mm) 40:00</p> <p><b>Practical Duration</b> (hh:mm) 96:00</p> <p><b>Corresponding NOS Code</b> CON/N1124</p>	<p><b>Theory: -</b></p> <ul style="list-style-type: none"> <li>• schematic drawings and sketches for façade installation</li> <li>• different architectural drawing for façade installation</li> <li>• scope of work for façade installation works</li> <li>• manufacturer’s instructions for façade installation including that for elements of frame and panels</li> <li>• method statement for façade installation works</li> <li>• shop drawing for façade installation works</li> <li>• tools and tackles used for carrying out field measurements</li> <li>• process of calculating corner panel width</li> <li>• how to check for alignment, straightness and plumb</li> <li>• significance in laying panels vertically or horizontally as per requirements of specific structure</li> <li>• how to carry out markings of grid layout and panel cut length to guide activities of subordinates</li> <li>• Process of estimating type, shape and quantity of panels required for façade works.</li> <li>• different type of glass used for panels</li> <li>• Different type of frame materials like timber, steel, aluminium, PVCu, composites etc.</li> <li>• different type of curtain walls such as panelized curtain wall, unitised curtain wall, stick system curtain wall, rain screens etc</li> <li>• Different types of panelling material (aluminum composite panel, glass, glass fiber reinforced concrete, stone, ceramic) and their respective properties and applications</li> <li>• Different fastening methods used (clips &amp; screws, backside attachment, etc.)</li> <li>• allowable tolerance limits for panel positioning</li> </ul>	<ol style="list-style-type: none"> <li>1. Measuring tape</li> <li>2. Scale</li> <li>3. Right angle</li> <li>4. Framing square</li> <li>5. Chalk line</li> <li>6. pencil</li> <li>7. Line dori</li> <li>8. Plumb bob</li> <li>9. Spirit level</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• how to keep the panels flat &amp; straight with appropriate no. of screws per sheet</li> <li>• principles of water and air tightness and concept of drained facades, ventilated facades and pressure equalized facades</li> </ul> <p><b>Demonstration/ Practical: -</b></p> <ul style="list-style-type: none"> <li>• Carry out reading of drawing for façade works</li> <li>• Interpret required details like place of fixing, dimensions and type of façade for façade installation works from relevant drawings</li> <li>• Interpret details of information from scope of work including type of façade, brackets, equalization, smoking and fire barrier, secondary framing elements, operable vents etc.</li> <li>• Interpret details of information from manufacturer's specification regarding the elements of frame and panel and their installation</li> <li>• Read and interpret method statement for façade installation works</li> <li>• Carry out checks prior to installation of façade to ensure compliance and adequacy of structure for accommodating wall panels.</li> <li>• Report to superior in case there is any diversion from the design requirement</li> <li>• Carry out field measurement on exterior surface</li> <li>• Provide information on alignment and placing of panels as per the drawing</li> <li>• Measure and mark grid layout for façade installation</li> <li>• Check and ensure provision of door and window in appropriately included in façade works</li> <li>• Carry out calculation of corner panel width</li> <li>• Estimate type, shape and quantity of panels required for façade works.</li> </ul>	
3	<p><b>Install unitized curtain walls</b></p> <p><b>Theory Duration</b> (hh:mm) 44:00</p> <p><b>Practical Duration</b> (hh:mm) 112:00</p> <p><b>Corresponding NOS Code</b> CON/N1118</p>	<p><b>Theory: -</b></p> <ul style="list-style-type: none"> <li>• schematic drawings and sketches for façade installation</li> <li>• scope of work for façade installation works</li> <li>• manufacturer's instructions for façade installation including that for elements of frame and panels</li> <li>• method statement for façade installation works</li> <li>• Different type of windows like fixed, side hung, projecting side, top hung, tilt turn, vertical</li> </ul>	<ol style="list-style-type: none"> <li>1. Measuring tape</li> <li>2. Scale</li> <li>3. Right angle</li> <li>4. Framing square</li> <li>5. Chalk line</li> <li>6. pencil</li> <li>7. Line dori</li> <li>8. Plumb bob</li> <li>9. Spirit level</li> <li>10. Pliers</li> <li>11. Punch pliers</li> <li>12. Hammers</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>slider, horizontal slider, vertical pivot, horizontal pivot etc.</p> <ul style="list-style-type: none"> <li>• different type of glass used for panels</li> <li>• Different type of frame materials like timber, steel, aluminium, PVCu, composites etc.</li> <li>• different type of curtain walls such as panelised curtain wall, unitised curtain wall, stick system curtain wall, rain screens etc</li> <li>• Different types of panelling material (aluminium composite panel, glass, glass fiber reinforced concrete, stone, ceramic) and their respective properties and applications</li> <li>• Different type of curtain walls such as panelized curtain wall, unitised curtain wall, stick system curtain wall, rain screens etc.</li> <li>• Application and uses of different type of curtain wall systems</li> <li>• Components of the unitised system curtain wall.</li> <li>• Various hardware components for unitised wall curtain system including anchors, aluminium connectors, setting blocks, corner blocks, pressure plates, caps, gaskets and sealants</li> <li>• Different fastening methods used (clips &amp; screws, backside attachment, etc.)</li> <li>• allowable tolerance limits for panel positioning</li> <li>• different type of joints in façade works</li> <li>• allowable tolerance limits for uniformity of joints</li> <li>• how to keep the panels flat &amp; straight with appropriate no. of screws per sheet</li> <li>• principles of water and air tightness and concept of drained facades, ventilated facades and pressure equalized facades</li> <li>• different sealants and gaskets used</li> <li>• process of weatherproofing and drainage system</li> </ul> <p><b><u>Demonstration/ Practical: -</u></b></p> <ul style="list-style-type: none"> <li>• Carry out identification of components for the unitized curtain wall system</li> <li>• Carry out checks to verify adequacy and size of wall members as per installation requirement</li> <li>• Carry out assembling of glass and aluminium curtain wall</li> <li>• Identify and arrange appropriate lifting device as per requirement</li> <li>• Carry out installation of prefabricated and assembled panels as per specification</li> <li>• Carry out fastening of panels using fasteners as per specifications</li> </ul>	<ul style="list-style-type: none"> <li>13.Taping knife</li> <li>14.Sanding tool</li> <li>15.Hand circular saw</li> <li>16.Hack saw</li> <li>17.Jig saw</li> <li>18.Rake angle</li> <li>19.Screw driver set</li> <li>20.Screw gun</li> <li>21.Hammer Drill machine</li> <li>22.Rivet gun</li> <li>23.Metal cutter</li> <li>24.Silicon gun/caulk gun</li> <li>25.Stapler</li> <li>26.Clutch angle</li> <li>27.Utility knife</li> </ul>



Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• Check and ensure uniformity of joints and application of joint sealant as per specification</li> <li>• Carry out installation of unitized curtain wall system as per specification</li> <li>• Check and ensure provision for window and door openings</li> <li>• Carry out attachment of pressure plates and covers as per applicability</li> <li>• Check the drainage track and clear out debris from drainage track</li> </ul>	
4	<p><b>Fix Façade Installation for Sloped / Curved Glazing</b></p> <p><b>Theory Duration</b> (hh:mm) 44:00</p> <p><b>Practical Duration</b> (hh:mm) 112:00</p> <p><b>Corresponding NOS Code</b> CON/N1125</p>	<p><b>Theory: -</b></p> <ul style="list-style-type: none"> <li>• schematic drawings and sketches for façade installation</li> <li>• scope of work for façade installation works</li> <li>• manufacturer's instructions for façade installation including that for elements of frame and panels</li> <li>• method statement for façade installation works</li> <li>• how to check for alignment, straightness and plumb</li> <li>• Different fastening methods used (clips &amp; screws, backside attachment, etc.)</li> <li>• Impact of temperature and vapours on façades</li> <li>• allowable tolerance limits for panel positioning</li> <li>• different type of joints in façade works</li> <li>• allowable tolerance limits for uniformity of joints</li> <li>• different flashing and interface and their construction as per drawings and specifications</li> <li>• transom drained curtain wall and mullion drained curtain wall</li> <li>• components of different type of curtain wall</li> <li>• use of glazing gaskets</li> <li>• use of different type of tools for cutting and drilling in panels</li> <li>• how to keep the panels flat &amp; straight with appropriate no. of screws per sheet</li> <li>• principles of water and air tightness and concept of drained facades, ventilated facades and pressure equalized facades</li> <li>• different sealants and gaskets used</li> <li>• process of weatherproofing and drainage system</li> <li>• Unique requirements of overhead sloped glazing in terms of stress, deflection of wind load, etc.</li> <li>• Applications of overhead glazing (walkways, atria, etc.)</li> </ul>	<ol style="list-style-type: none"> <li>1. Measuring tape</li> <li>2. Scale</li> <li>3. Right angle</li> <li>4. Framing square</li> <li>5. Chalk line</li> <li>6. pencil</li> <li>7. Line dori</li> <li>8. Plumb bob</li> <li>9. Spirit level</li> <li>10. Pliers</li> <li>11. Punch pliers</li> <li>12. Hammers</li> <li>13. Taping knife</li> <li>14. Sanding tool</li> <li>15. Hand circular saw</li> <li>16. Hack saw</li> <li>17. Jig saw</li> <li>18. Rake angle</li> <li>19. Screw driver set</li> <li>20. Screw gun</li> <li>21. Hammer Drill machine</li> <li>22. Rivet gun</li> <li>23. Metal cutter</li> <li>24. Silicon gun/caulk gun</li> <li>25. Stapler</li> <li>26. Clutch angle</li> <li>27. Utility knife</li> </ol>



Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• specific drainage requirements for overhead sloped glazing</li> <li>• Different type of windows like fixed, side hung, projecting side, top hung, tilt turn, vertical slider, horizontal slider, vertical pivot, horizontal pivot etc.</li> <li>• different type of glass used for panels</li> <li>• Different type of frame materials like timber, steel, aluminium, PVCu, composites etc.</li> <li>• different type of curtain walls such as panelised curtain wall, unitised curtain wall, stick system curtain wall, rain screens etc</li> <li>• Different types of panelling material (aluminium composite panel, glass, glass fiber reinforced concrete, stone, ceramic) and their respective properties and applications</li> <li>• Different type of curtain walls such as panelized curtain wall, unitised curtain wall, stick system curtain wall, rain screens etc.</li> <li>• Application and uses of different type of curtain wall systems</li> <li>• Components of the curtain wall system.</li> <li>• Weep system and its application</li> </ul> <p><b><u>Demonstration/ Practical (D/P): -</u></b></p> <ul style="list-style-type: none"> <li>• Interpret details from drawing and method statement for façade installation</li> <li>• Check and ensure compliance of panel materials and its size as per specifications</li> <li>• Carry out checks for panel damage and replace any damaged panel.</li> <li>• For sloped/curved glazing, mark profile points as per specification</li> <li>• Carry out checks to verify functioning of weep system</li> <li>• Carry out checks to verify that openings for glazing are correctly sized and within tolerance</li> <li>• Carry out installation of glass panels, sealants gaskets etc. as per manufacturers recommendation</li> <li>• Check and verify the compatibility of insulating glass (IG) unit secondary seal with glazing sealants</li> <li>• Carry out installation of setting blocks in rabbit as per requirement</li> <li>• provide bite on glass, minimum edge and face clearances and glazing material tolerances as per requirements</li> <li>• Install weep system as per specification</li> <li>• Set glass lights as per specifications</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>Carry out checks to ensure weight of the glass unit is distributed along the edge rather than at the corner</li> </ul>	
32	<p><b>Work effectively in a team to deliver desired results at the workplace</b></p> <p><b>Theory Duration</b> (hh:mm) 16:00</p> <p><b>Practical Duration</b> (hh:mm) 32:00</p> <p><b>Corresponding NOS Code</b> CON/N8001</p>	<p><b>Theory: -</b></p> <ul style="list-style-type: none"> <li>Method of oral and written communication skills with co-workers, trade seniors while handling and carrying out visual checks on materials, , tools and equipment</li> <li>How to interpret scope of façade works, material/ tools handling by adhering to instructions or consulting with seniors</li> <li>Method of providing instruction to subordinates or reporting to seniors clearly and promptly</li> <li>Seek necessary support and complete assigned tasks within stipulated time duration</li> <li>Keep good relation and maintain well behaviour with co-workers</li> </ul> <p><b>Demonstration/ Practical (D/P) :-</b> The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition</p> <ul style="list-style-type: none"> <li>Selection of materials, tools or devices for defined purpose under façade installation works and providing instructions to subordinates for the same.</li> <li>Handling of tools, equipment and materials for various types of façade installation works including efficiently communicating with co-workers for desired requirement as per specification</li> <li>Carrying out installation of curved/sloped façade installation works while working as a team to ensure optimum utilization of material and resources</li> <li>Carrying out façade installation works utilizing the effort of co-workers.</li> <li>Undertaking visual checks to assess the quality of material and check line, level and alignments of work, check weep systems etc.</li> <li>Provide information to sub ordinates and seniors in case of change because of inadequacy of deisgn</li> </ul>	<ol style="list-style-type: none"> <li>Classroom having seating requirement for 30 people.</li> <li>Projector</li> <li>Toilet/Urinals (Separate for gents and Ladies)</li> <li>Blackboard</li> <li>Trade specific charts and other teaching aids</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
6	<p><b>Plan and organize work to meet expected outcomes</b></p> <p><b>Theory Duration</b> (hh:mm) 16:00</p> <p><b>Practical Duration</b> (hh:mm) 32:00</p> <p><b>Corresponding NOS Code</b> <b>CON/N8002</b></p>	<p><b>Theory: -</b></p> <ul style="list-style-type: none"> <li>To plan façade installation activities within defined scope of work</li> <li>Basic concept of productivity, sequence of working and implementation of safety and organizational norms while working</li> <li>Upkeep, storing and stacking methods of tools, glazing materials used for façade installation</li> <li>Requisition of resources, reporting for requirement of resources orally and in written to concerned authority - (T/P)</li> </ul> <p><b>Demonstration/ Practical (D/P) :-</b> The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition</p> <ul style="list-style-type: none"> <li>Selection of materials, tools or devices for defined purpose in an optimum manner</li> <li>Handling/organizing various tools, material, fixtures and device for installation of unitized system curtain wall and curved/sloped glazing type of façade installation works.</li> <li>Prioritize all works/ activities</li> <li>Planning installation of unitized system curtain wall and curved/sloped glazing type of façade installation works as per scope and schedule.</li> <li>Carrying out installation of façade works by optimum utilization of material and resources</li> <li>Optimum use of resources while performing task</li> <li>Adherence to stipulated timelines for completion of facade installation activities</li> </ul>	<ol style="list-style-type: none"> <li>Classroom having seating requirement for 30 people.</li> <li>Projector</li> <li>Toilet/Urinals (Separate for gents and Ladies)</li> <li>Blackboard</li> <li>Trade specific charts and other teaching aids</li> </ol>
7	<p><b>Work according to personal health, safety and environment protocol at construction site</b></p> <p><b>Theory Duration</b> (hh:mm) 16:00</p> <p><b>Practical Duration</b></p>	<p><b>Theory: -</b></p> <ul style="list-style-type: none"> <li>Types of hazards involved in construction sites</li> <li>Types of hazards involved in façade installation works</li> <li>Reporting procedures in case of hazards and accidents</li> <li>Emergency response system and evacuation procedures</li> </ul>	<ol style="list-style-type: none"> <li>Safety Helmets</li> <li>Face shield</li> <li>Overalls</li> <li>Knee pads</li> <li>Safety shoes</li> <li>Safety belts</li> <li>Safety harness</li> <li>Safety Gloves</li> <li>Safety goggles</li> <li>Particle masks</li> <li>Ear Plugs</li> <li>Reflective jackets</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	(hh:mm) 32:00  <b>Corresponding NOS Code</b> CON/N9001	<ul style="list-style-type: none"> <li>• Safe working practices in case of façade installation work as per EHS guidelines</li> <li>• Concept of: -               <ol style="list-style-type: none"> <li>1. First Aid process</li> <li>2. Use of fire extinguisher</li> <li>3. Classification of fires and fire extinguisher</li> <li>4. Safety drills</li> <li>5. Types and use of PPEs as per safety norms</li> </ol> </li> <li>• Basic ergonomic principles</li> <li>• Safe Disposal of waste ,harmful and hazardous materials</li> <li>• Safety awareness programs like tool box talks, mock drills</li> <li>• Handling of construction materials, tools and tackles</li> <li>• Statutory compliance requirement related to working at height</li> </ul> <p><b><u>Demonstration/ Practical: -</u></b>            The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition.</p> <ul style="list-style-type: none"> <li>• Selection of PPEs and use them appropriately as per working need of façade installation operations, handling, storing, stacking and shifting of tools and equipment for façade installation work</li> <li>• Analysis of hazards involved in façade installation work and taking necessary steps or informing to seniors.</li> <li>• Identify hazards, risks, safety violations at construction sites and in façade installation work</li> <li>• Demonstrate emergency and evacuation response procedures</li> <li>• Demonstrate safe work practices while performing façade installation works</li> <li>• Identification of locations, situations/ circumstances, malpractices which can be hazardous for general or façade installation work</li> <li>• Selection of fire extinguisher based on classification of fire, standard practice of storing &amp; stacking firefighting equipment/ materials at work locations</li> <li>• Disposal of waste materials as per their nature and effects on weather</li> </ul>	13.Fire Extinguisher 14.Fire prevention kit 15.First Aid box 16.Safety tags 17.Safety Notice board



Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Total Duration</b> <b>600:00</b>  <b>Theory Duration</b> <b>192:00</b>  <b>Practical Duration</b> <b>416:00</b>	<b><u>Unique Equipment Required:</u></b> <b><u>Classroom Requirement</u></b> Classroom of 30 students capacity, Black/White board, Projector/LED Monitor, Computer, Trade specific charts and other teaching aids  <b><u>Tools</u></b> 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  <b><u>Safety instruments</u></b> Safety Helmet, Safety goggles , Safety shoes , Safety belt, Cotton gloves, Ear plugs , Reflective jackets, Dust mask, Fire Prevention kit, Barricade tape, Safety Tags	

Grand Total Course Duration: **600 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by [Construction Skill Development Council of India](#))

## Trainer Prerequisites for Job role: “Chargehand – Facade Installer” mapped to Qualification Pack: “CON/Q1108, v1.0”

Sr. No.	Area	Details
1	<b>Description</b>	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “CON/Q1108”.
2	<b>Personal Attributes</b>	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field
3	<b>Minimum Educational Qualifications</b>	ITI/12th
4a	<b>Domain Certification</b>	Trainer/Assessor-80% in each NOS of Qualification Pack “MEP/Q0102” or “MEP/Q0104” and Lead trainer/Lead Assessors- 90% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103”
4b	<b>Platform Certification</b>	Trainer/Assessor-50% in each NOS of Qualification Pack “MEP/Q0102” or “MEP/Q0104”& 80% overall, Lead trainer/ Lead Assessors- 50% in each NOS of Qualification Pack “MEP/Q0101” or “MEP/Q0103”and overall 90%
5	<b>Experience</b>	i. Technical Degree holder with minimum three years of Field experience and preferably two years of teaching experience or, ii. In case of a Diploma Holder five years of field experience and preferably two years of teaching experience or, iii. In case of ITI/12 <sup>th</sup> pass minimum eight years of field experience and preferably two years of teaching Experience.



## **CRITERIA FOR ASSESSMENT OF TRAINEES**

<b><u>Job Role</u></b>	Chargehand Façade Installer
<b><u>Qualification Pack</u></b>	CON/Q1108
<b><u>Sector Skill Council</u></b>	Construction

### **Guidelines for Assessment**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.
7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity.
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.



Assessment outcomes	Assessment Criteria for outcomes	Total Mark	Marks Allocation		
			Out Of	Theory	Skills Practical
CON/N1124: Read and interpret drawing specifications and carry out layout marking for façade installation works	PC1. read and interpret the details from architectural drawings relevant to façade installations	100	9	2.7	6.3
	PC2. read and understand the scope of work including type of façade, brackets, anchors, insulations, vapour barrier, pressure equalization, smoking and fire barrier, secondary framing elements, operable vents etc		9	2.7	6.3
	PC3. read and understand manufacturer's specification regarding the elements of frame and panel and their installation		9	2.7	6.3
	PC4. read and understand method statement and shop drawings for installation		9	2.7	6.3
	PC5. check that structure is designed to accommodate wall panels and report any discrepancies to the superiors		9	2.7	6.3
	PC6. carry out field measurements for wall framing members on exterior surface of structure		9	2.7	6.3
	PC7. calculate corner panel width as per appropriate methodology		10	3	7
	PC8. identify whether panels should be laid vertically or horizontally as per drawing requirements		9	2.7	6.3
	PC9. prepare and mark a grid layout for installing the façade		9	2.7	6.3
	PC10. provide markings for cutouts in panels		9	2.7	6.3
	PC11. maintain appropriate provisions for doors, windows, etc. as applicable to the facade		9	2.7	6.3
	PC12. estimate type, shape and quantity of panels required to install the facade		9	2.7	6.3
	<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>	
CON/N1118: Install unitized curtain walls	PC1. identify various components of unitized curtain wall system including hardware components for installation		8	1.6	6.4
	PC2. check and ensure wall members are cut to appropriate length prior to installation		8	1.6	6.4
	PC3. carry out assembling of glass and aluminum curtain wall as per applicability as yard		8	1.6	6.4
	PC4. identify appropriate lifting device as per applicability		8	1.6	6.4
	PC5. ensure appropriate lifting devices for lifting glass panels to various floors		8	1.6	6.4
	PC6. install the prefabricated and assembled panels in shingle fashion, starting from the bottom of the building and going around each floor and up the building		10	2	8
	PC7. fasten the panel using fasteners as per specifications		8	1.6	6.4
	PC8. apply joint sealant as per specification		8	1.6	6.4

	PC9. install different type of unitized curtain wall system as per applicability		10	2	8
	PC10. ensure window and door openings are provided as per specification		8	1.6	6.4
	PC11. attach pressure plates and cover as per applicability		9	1.8	7.2
	PC12. ensure drainage track is free from debris		8	1.6	6.4
		<b>Total</b>	<b>100</b>	<b>20</b>	<b>80</b>
CON/N1125: Fix Façade Installation for Sloped / Curved Glazing	PC1. read and interpret schematic drawings for façade installation	<b>100</b>	7	2.1	4.9
	PC2. read and understand method statement and scope of work for façade installation		7	2.1	4.9
	PC3. check that panels are of correct material and type, as per specifications, to handle moisture, sunlight and other elements		7	2.1	4.9
	PC4. check that panels are not damaged, and replace panels which are not fit for installation		7	2.1	4.9
	PC5. mark points as per the profile of the sloped /curved glazing for fixing façade on sloped/curved surfaces		7	2.1	4.9
	PC6. verify that a functioning weep system is present		7	2.1	4.9
	PC7. verify that openings for glazing are correctly sized and within tolerance		7	2.1	4.9
	PC8. install glass, sealants, gaskets and other glazing materials using the recommendations of manufacturers		8	2.4	5.6
	PC9. verify that insulating glass (IG) unit secondary seal is compatible with glazing sealants		7	2.1	4.9
	PC10. install setting blocks in rabbets as per requirements		7	2.1	4.9
	PC11. provide bite on glass, minimum edge and face clearances and glazing material tolerances as per requirements		7	2.1	4.9
	PC12. provide weep system as per drawing/requirements in the façade system		8	2.4	5.6
	PC13. set glass lights in each series with uniform pattern, draw, bow and similar characteristics		7	2.1	4.9
	PC14. check that the weight of the glass unit is distributed along the edge rather than at the corner		7	2.1	4.9
	<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>	
CON/N8001: Work effectively in a team to deliver desired results at the workplace	PC1. pass on work related information/ requirement clearly to the team members	<b>100</b>	7	2	5
	PC2. inform co-workers and superiors about any kind of deviations from work		7	2	5
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		10	3	7
	PC4. receive instructions clearly from superiors and respond effectively on same		7	2	5

	PC5. communicate to team members/subordinates for appropriate work technique and method		10	3	7
	PC6. seek clarification and advice as per requirement and applicability		7	2	5
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		27	8	19
	PC8. work together with co-workers in a synchronized manner		27	8	19
	<b>Total</b>		<b>100</b>	<b>30</b>	<b>70</b>
CON/N8002: Plan and organize work to meet expected outcomes	PC1. understand clearly the targets and timelines set by superiors	<b>100</b>	7	2	5
	PC2. plan activities as per schedule and sequence		7	2	5
	PC3. provide guidance to the subordinates to obtain desired outcome		10	3	7
	PC4. plan housekeeping activities prior to and post completion of work		7	2	5
	PC5. list and arrange required resources prior to commencement of work		10	3	7
	PC6. select and employ correct tools, tackles and equipment for completion of desired work		10	3	7
	PC7. complete the work with allocated resources		10	3	7
	PC8. engage allocated manpower in an appropriate manner		10	3	7
	PC9. use resources in an optimum manner to avoid any unnecessary wastage		10	3	7
	PC10. employ tools, tackles and equipment with care to avoid damage to the same		7	2	5
	PC11. organize work output, materials used, tools and tackles deployed,		7	2	5
	PC12. processes adopted to be in line with the specified standards and instructions		7	2	5
<b>Total</b>		<b>100</b>	<b>30</b>	<b>70</b>	
CON/N9001: Work according to personal health, safety and environment protocol at construction site	PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority	<b>100</b>	7	2	5
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		7	2	5
	PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable		10	3	7
	PC4. participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site		7	2	5
	PC5. identify near miss , unsafe condition and unsafe act		7	2	5

PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including:			
• Head Protection (Helmets)			
• Ear protection			
• Fall Protection			
• Foot Protection			
• Face and Eye Protection			
• Hand and Body Protection			
• Respiratory Protection (if required)			
PC7. handle all required tools, tackles , materials & equipment safely	10	3	7
PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	7	2	5
PC9. install and apply properly all safety equipment as instructed	7	2	5
PC10. follow safety protocol and practices as laid down by site EHS department	13	4	9
PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes	13	4	9
PC12. apply ergonomic principles wherever required	7	2	5
	7	2	5
<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>