



# Model Curriculum

## 1. Doors and Windows Fixer

**SECTOR: Construction**

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

**OCCUPATION: Interior & Exterior Finishes**

**REF ID: CON/Q1105, V1.0**

**NSQF LEVEL: 3**





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# Doors and Windows Fixer

## CURRICULUM / SYLLABUS

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

<b>Program Name</b>	<b>Doors and Windows Fixer</b>		
<b>Qualification Pack Name &amp; Reference ID. ID</b>	CON/Q1105, v1.0		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	23-08-2017
<b>Pre-requisites to Training</b>	Preferably 5 <sup>th</sup> standard and 18 months site experience in same occupation for Non 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 into Doors and Windows Fixer job role and its career progression:-</b>Introduction to Doors and Windows Fixer job role, its roles and responsibilities and its career progression.</li> <li>• <b>Carry out preparatory works and fix frames and sub-frames for fixing doors and window:-</b>Select tools and equipment and carry out checks and measures as pre-preparatory steps for fixing of frames and sub-frames for the work of fixing doors and windows.</li> <li>• <b>Install wooden /PVC doors /windows as per instructions:-</b>Select tools and equipment and carry out installation of wooden/PVC Doors/Windows</li> <li>• <b>Install pre-fabricated sliding doors and windows :-</b> Select tools and equipment and carry out installation of pre-fabricated sliding doors and Windows</li> <li>• <b>Install aluminium doors and windows with glass glazing :-</b> Select tools and equipment and carry out installation of aluminium doors and windows with glass glazing</li> <li>• <b>Install hardware and accessories on doors and windows:-</b>Select tools and equipment and carry out installation of hardware and accessories on doors and windows</li> <li>• <b>Work effectively in a team to deliver results at a construction site: -</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 8 out of 8 National Occupational Standards (NOS) of “Doors and Windows Fixer” Qualification Pack issued by “Construction Sector Skill Council of India”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p><b>Introduction</b></p> <p><b>Theory Duration</b> (hh:mm) 08:00</p> <p><b>Practical Duration</b> (hh:mm) 00:00</p>	<ul style="list-style-type: none"> <li>• General Discipline in the class room.</li> <li>• Basic knowledge of Unit &amp; measurement &amp; arithmetic calculation.</li> <li>• Basic terms used for types of hardware in door and windows fixing.</li> <li>• Role of doors and windows fixer in construction industry</li> </ul>	<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> </ol>
40	<p><b>Carry out preparatory works and fix frames and sub-frames for fixing doors and windows</b></p> <p><b>Theory Duration</b> (hh:mm) 16:00</p> <p><b>Practical Duration</b> (hh:mm) 40:00</p> <p><b>Corresponding NOS Code</b> CON/N1111</p>	<p><b>Theory:-</b></p> <ul style="list-style-type: none"> <li>• standard practices for doors and windows fixing</li> <li>• Various drawings and specifications related to door and windows fixing</li> <li>• Knowledge of setting out lines, datum lines and level pegs</li> <li>• Application of setting out lines, datum lines and level pegs</li> <li>• Process of measuring the dimensions of doors and windows frames</li> <li>• Various tools and equipment such as air compressors and hoses, marking equipment, measuring tapes and rules, nail bags, nail guns, power saws, protractors, saw stools, scaffolding, spirit levels, squares (combination/tri), string lines, etc. used for fixing doors and Windows.</li> <li>• various manufacturer’s instructions for fixing various type of doors and Windows</li> <li>• Different type of joints used in frames such as mitre joints etc.</li> <li>• Method of fastening of frames in position</li> <li>• Method of application of grout between wall and door/window frames to fill the gap</li> <li>• Process of assembling the pre-cut main frame using correct tools</li> <li>• methods of checking the horizontal and vertical alignment of main frame</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> <li>28. Air compressor</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• selection and use of correct door/window panel</li> <li>• Process of application of anti-splitting agent on frames and sub frames.</li> <li>• Various anti-splitting agents.</li> <li>• Process of fitting flashings on windows</li> </ul> <p><b><u>Demonstration/ Practical :-</u></b></p> <ul style="list-style-type: none"> <li>• Read and interpret sketches for door and window fixing</li> <li>• Carry out selection of required tools and equipment</li> <li>• Carry out measurement of the door/window frame to check and its compliance to required size</li> <li>• Measure to check appropriateness of door and window spaces and verify its compliance to drawing/specification</li> <li>• Carry out chiselling and chipping of masonry for fitting of door and window frame</li> <li>• Carry out selection of required door/window panel as per approved drawings</li> <li>• Carry out fitting of flashing to windows as per applicability</li> <li>• Carry out marking of line on the underside of wall or roof above outline of the floor</li> <li>• Carry out aligning of the door/window frame against the setting out lines, datum lines and level pegs</li> <li>• Carry out securing of the frame using timber wedges and adjustment of the position of wedges to obtain required vertical and horizontal alignment</li> <li>• Carry out application of the anti-splitting agent on the frames and sub frame prior to installation</li> <li>• Carry out fastening of the frames using appropriate plugs'</li> <li>• Check and verify the compliance of the sub frame openings</li> <li>• Carry out application of appropriate bonding agent over the sub frame and main frame</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• Carry out installation of main frame over the sub frame as per applicability</li> <li>• Carry out checks to ensure frame is in line and alignment</li> <li>• Carry out fixing of main frame over sub frame using nails/screws as per requirement.</li> </ul>	
3	<p><b>Install wooden /PVC doors /windows as per instructions</b></p> <p><b>Theory Duration</b> (hh:mm) 18:00</p> <p><b>Practical Duration</b> (hh:mm) 46:00</p> <p><b>Corresponding NOS Code</b> CON/N1112</p>	<p><b>Theory:-</b></p> <ul style="list-style-type: none"> <li>• standard practices for doors and windows fixing</li> <li>• Various drawings and specifications related to door and windows fixing</li> <li>• Knowledge of setting out lines, datum lines and level pegs</li> <li>• Application of setting out lines, datum lines and level pegs</li> <li>• Process of measuring the dimensions of doors and windows frames</li> <li>• Various tools and equipment such as air compressors and hoses, marking equipment, measuring tapes and rules, nail bags, nail guns, power saws, protractors, saw stools, scaffolding, spirit levels, squares (combination/tri), string lines, etc. used for fixing doors and Windows.</li> <li>• various manufacturer's instructions for fixing various type of doors and Windows</li> <li>• Different type of joints used in frames such as mitre joints etc.</li> <li>• Method of fastening of frames in position</li> <li>• Method of application of grout between wall and door/window frames to fill the gap</li> <li>• Process of assembling the pre-cut main frame using correct tools</li> <li>• methods of checking the horizontal and vertical alignment of main frame</li> <li>• selection and use of correct door/window panel</li> <li>• Types of bonding agent used for installing decorative mouldings</li> <li>• process of applying bonding agent to install decorative mouldings</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>• Types of decorative mouldings</li> <li>• Process of using correct insulation technique around the door/window frames</li> <li>• Process of caulking of joints</li> <li>• Process of installing interior trims</li> <li>• Process of installing weather strips</li> <li>• Type of interior trims and weather strips</li> </ul> <p><b><u>Demonstration/ Practical :-</u></b></p> <ul style="list-style-type: none"> <li>• Read and interpret sketches for door and window fixing</li> <li>• Carry out selection of required tools and equipment</li> <li>• Carry out installation of the door/window panel as per specification</li> <li>• Carry out checks to ensure proper alignment and verify the under-cut dimensions prior to fastening the hinges</li> <li>• Check and ensure a consistent gap between door/window panel and door/window frame</li> <li>• Confirm that the decorative moulding is as per requirement</li> <li>• Carry out application of bonding agent on the underside of decorative mouldings</li> <li>• Carry out installation of decorative mouldings around the door/window frame as per specification</li> <li>• Check and ensure the miter joints are flat and square at corners for seamless finish</li> <li>• Check and ensure proper swinging of doors after hinging</li> <li>• Check that an even contact has been created between the door/window face</li> <li>• Check and ensure that the weather stripping is attached to the frame</li> <li>• Install insulation around the door/window frame using fiberglass</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>insulation or low expansion foam as per applicability</p> <ul style="list-style-type: none"> <li>• Carry out installation of interior trims</li> <li>• Carry out checks to ensure caulking of all joints of the trim and brick mould</li> <li>• Carry out installation of weather strips at base of door and windows as per specification</li> </ul>	
4	<p><b>Install pre-fabricated sliding doors and windows</b></p> <p><b>Theory Duration</b> (hh:mm) 18:00</p> <p><b>Practical Duration</b> (hh:mm) 46:00</p> <p><b>Corresponding NOS Code</b> <b>CON/N1113</b></p>	<p><b>Theory:-</b></p> <ul style="list-style-type: none"> <li>• standard practices for fixing sliding doors and windows</li> <li>• Various drawings and specifications related to sliding door and windows fixing</li> <li>• Knowledge of setting out lines, datum lines and level pegs</li> <li>• Application of setting out lines, datum lines and level pegs</li> <li>• Process of measuring the dimensions of doors and windows frames</li> <li>• Various tools and equipment such as marking equipment, measuring tapes and rules, marking equipment, measuring tapes and rules, stair clips and tables, nail bags, nail guns, power saws, protractors, saw stools, scaffolding, spirit levels, squares (combination/tri), string lines, etc. used for fixing doors and Windows.</li> <li>• various manufacturer's instructions for fixing various type of doors and Windows</li> <li>• Different type of joints used in frames such as mitre joints etc.</li> <li>• Method of fastening of frames in position</li> <li>• Method of application of grout between wall and door/window frames to fill the gap</li> <li>• Process of assembling the pre-cut main frame using correct tools</li> <li>• methods of checking the horizontal and vertical alignment of main frame</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>• components of pocket wall frame systems</li> <li>• components of sliding doors and window frame assembly</li> <li>• Process of using correct insulation technique around the door/window frames</li> <li>• Bonding agents used of assembling vertical parts</li> <li>• Process of caulking the siding and the frame (or brick moulding)</li> <li>• Process of installing weather strips at base of door/windows</li> </ul> <p><b><u>Demonstration/ Practical :-</u></b></p> <ul style="list-style-type: none"> <li>• Read and interpret sketches for door and window fixing</li> <li>• Carry out selection of required tools and equipment</li> <li>• Carry out installation of the door/window panel as per specification</li> <li>• Install flexible waterproof flashing to the sides of bare wall surfaces along the frames as per applicability</li> <li>• Check to ensure that frame is in plumb and straight between openings</li> <li>• install sliding door frame or pocket wall frame as per specification for sliding doors/windows fixing</li> <li>• Carry out visual check for surface damage</li> <li>• Check and ensure frame alignment</li> <li>• Verify the under-cut dimensions prior to installing doors/window panels</li> <li>• fit the sliding door into the frame and check and ensure that it glides well and is parallel to the frame sides</li> <li>• Carry out adjustment of the rollers under the sliding panel if necessary</li> <li>• Carry out assembling of main frame at site as per size requirement</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• Carry out installation of vertical parts of main frame using appropriate bonding agent</li> <li>• Carry out fastening of horizontal parts of frame after fixing and drying of vertical parts</li> <li>• Carry out caulking between the siding and the frame (or brick moulding )</li> <li>• Carry out installation of the decorative moulding around the door/window frame as per specification</li> <li>• Carry out checks to ensure the miter joints are flat and square at corners</li> <li>• Carry out checks to ensure that an even contact has been created between the door/window face and the weather stripping attached to the frame</li> <li>• Carry out caulking between the siding and the frame (or brick moulding) as per requirement</li> <li>• Carry out insulation around the door/window</li> <li>• Carry out installation of the interior trim as per specification</li> <li>• Carry out checks to ensure caulking of all joints of the trim and brick mould</li> <li>• Carry out installation I the weather strip at the base of the door/window as per instructions</li> </ul>	
	<p><b>Install aluminum doors and windows with glass glazing</b></p> <p><b>Theory Duration</b> (hh:mm) 18:00</p> <p><b>Practical Duration</b> (hh:mm) 46:00</p> <p><b>Corresponding NOS Code</b></p>	<p><b>Theory:-</b></p> <ul style="list-style-type: none"> <li>• standard practices for aluminum doors and windows with glass glazing</li> <li>• Various drawings/sketches and specifications related to aluminum doors and windows with glass glazing</li> <li>• Knowledge of setting out lines, datum lines and level pegs</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> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	CON/N1114	<ul style="list-style-type: none"> <li>• Application of setting out lines, datum lines and level pegs</li> <li>• Process of measuring the dimensions of doors and windows frames</li> <li>• Various tools and equipment such as marking equipment, measuring tapes and rules, marking equipment, measuring tapes and rules, stair clips and tables, , spirit levels, squares (combination/tri), string lines, etc. used for fixing aluminium doors and windows with glass glazing</li> <li>• various manufacturer’s instructions for fixing various type of doors and Windows</li> <li>• Different type of joints used in frames such as mitre joints etc.</li> <li>• Method of fixing aluminium doors and windows</li> <li>• Method of fastening glass panels to doors and windows</li> <li>• Process of holding glass panels in place using spacer hooks</li> <li>• Process of estimating the length of the gasket required</li> <li>• different sealants used for fixing beading</li> <li>• different gasket and their fixing procedure</li> <li>• Method of application of grout between wall and door/window frames to fill the gap</li> <li>• methods of checking the horizontal and vertical alignment of main frame</li> <li>• components of pocket wall frame systems</li> <li>• Process of using correct insulation technique around the door/window frames</li> <li>• Process of installing weather strips at base of door/windows</li> </ul>	<ul style="list-style-type: none"> <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
		<p><b><u>Demonstration/ Practical :-</u></b></p> <ul style="list-style-type: none"> <li>• Read and interpret sketches for installation of aluminium doors and windows, glass door/window panels and decorative molding door and window fixing</li> <li>• Carry out selection of required tools and equipment</li> <li>• Carry out installation of flexible waterproof flashing to the sides of bare wall surfaces along the frames as per applicability</li> <li>• Check to ensure that frame is in plumb and straight between openings</li> <li>• Check to ensure that inner frame and associated hardware is free from defects</li> <li>• Carry out checks to ensure that weep holes in the inner frames should be cleared of blockage to allow discharge of incidental water prior to installation</li> <li>• check and confirm the sequence of panel installation</li> <li>• Carry out checks to ensure that labels on the glass panels against the panel fixing plan and schedule</li> <li>• standardize the orientation of the glass panels so that the positioning of logos/trademarks is consistent</li> <li>• Carry out checks to ensure that gasket is free from any physical damages</li> <li>• Carry out checks to ensure that gasket is free from dust and</li> <li>• Carry out checks to ensure that profile of the gaskets is compatible with that of the beads used to secure the glass panels</li> <li>• insert glass panel into the frame for doors and windows as per specification</li> <li>• Use spacer hooks to hold glass panels in place</li> <li>• Cut/splice gasket to fit around corners of the glass panes</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>Carry out fixing and securing of the gasket in place using appropriate tools</li> <li>Carry out sealing of the gap between the gasket and beading using appropriate sealant</li> <li>Apply masking tape to protect glass during sealant application</li> <li>Carry out installation of the decorative moulding around the door/window frame as per specification</li> <li>Carry out checks to ensure the miter joints are flat and square at corners</li> <li>Carry out checks to ensure that an even contact has been created between the door/window face and the weather stripping attached to the frame</li> <li>Carry out installation of the weather strip at the base of the door/window as per instructions</li> </ul>	
	<p><b>Install hardware and accessories on doors and windows</b></p> <p><b>Theory Duration</b> (hh:mm) 16:00</p> <p><b>Practical Duration</b> (hh:mm) 40:00</p> <p><b>Corresponding NOS Code</b> <b>CON/N1115</b></p>	<p><b>Theory:-</b></p> <ul style="list-style-type: none"> <li>Standard practices for installation of hardware for doors and windows</li> <li>Various drawings/sketches and specifications related to installation of hardware for doors and windows</li> <li>Process of measurement</li> <li>Various tools and equipment such as marking equipment, measuring tapes and rules, marking equipment, measuring tapes and rules, stair clips and tables, spirit levels, squares (combination/tri), string lines, screwdriver, drilling machines, screws, fasteners, screw driver etc. used for installation of hardware for doors and windows</li> <li>Various manufacturer's instructions for installation of hardware for doors and windows</li> </ul>	<ol style="list-style-type: none"> <li>Measuring tape</li> <li>Scale</li> <li>Right angle</li> <li>Framing square</li> <li>Chalk line</li> <li>pencil</li> <li>Line dori</li> <li>Plumb bob</li> <li>Spirit level</li> <li>Pliers</li> <li>Punch pliers</li> <li>Hammers</li> <li>Taping knife</li> <li>Sanding tool</li> <li>Hand circular saw</li> <li>Hack saw</li> <li>Jig saw</li> <li>Rake angle</li> <li>Screw driver set</li> <li>Screw gun</li> <li>Hammer Drill machine</li> <li>Rivet gun</li> <li>Metal cutter</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• Various component of handle and lock set including interior/exterior handles ,lock body , face plate ,cylinder locks ,lock keeper ,key and assembly screws, hinges, rollers for sliding door, door closers</li> <li>• Methods of fastening the hardware in position using correct tools and equipment</li> <li>• Methods of installing correct lockset and architraves for the windows</li> <li>• Method of installing latch assembly</li> <li>• Method of installing handles and cylinder lock</li> <li>• method of fastening face plates and keepers</li> <li>• Method of check line and level and adjusting alignment of hardware to suit requirement</li> </ul> <p><b><u>Demonstration/ Practical :-</u></b></p> <ul style="list-style-type: none"> <li>• Check and identify the type of door and window hardware from the job specifications</li> <li>• Check ,identify ,select and handle required tools and tackles for installing hardware on doors and windows</li> <li>• Carry out marking of levels and points for fixing doors and windows hardware</li> <li>• drill holes or cut through doors/windows to accommodate for hardware fixing</li> <li>• Carry out installation of latch assembly as per the job and manufacturer specifications</li> <li>• Carry out installation of handles and cylinder locks as per specifications</li> <li>• Carry out fastening of face plates and keepers in place as per specification</li> </ul>	<p>24.Silicon gun/caulk gun 25.Stapler 26.Clutch angle 27.Utility knife</p>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>adjust hardware to suit the alignment and level to match with job specification</li> <li>Carry out fixing of other hardware such as stoppers, door closers etc as per specifications</li> </ul>	
5	<p><b>Work effectively in a team to deliver results at a construction site</b></p> <p><b>Theory Duration</b> (hh:mm) 04:00</p> <p><b>Practical Duration</b> (hh:mm) 20:00</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 door and window fixing 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 :-</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 doors and windows installation works and providing instructions to subordinates for the same.</li> <li>Handling of tools, equipment and materials for various types of doors and windows installation works including efficiently communicating with co-workers for desired requirement as per specification</li> <li>Carrying out installation of sliding type and aluminium doors and windows installation works while working as a team to ensure</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>optimum utilization of material and resources</p> <ul style="list-style-type: none"> <li>Carrying out doors and windows 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</li> <li>Selection and handing over of desired/ appropriate tools/ materials while assisting trade senior</li> </ul>	
6	<p><b>Plan and organize work to meet expected outcomes</b></p> <p><b>Theory Duration</b> (hh:mm) 08:00</p> <p><b>Practical Duration</b> (hh:mm) 08:00</p> <p><b>Corresponding NOS Code</b> CON/N8002</p>	<p><b>Theory:-</b></p> <ul style="list-style-type: none"> <li>To plan doors and windows 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, materials used for domain specific works</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 :-</b></p> <ul style="list-style-type: none"> <li>The skills will be developed and practiced while carrying out following trade related activities in a predictable and familiar working condition</li> <li>Selection of materials, tools or devices for defined purpose in an optimum manner</li> <li>Handling/organizing masonry tools, material, fixtures and device for installation of sliding type and aluminium door/window with glass glazing installation works.</li> <li>Prioritize all works/ activities</li> <li>Planning installation of wooden/PVC doors and windows</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>installation works as per scope and schedule.</p> <ul style="list-style-type: none"> <li>Carrying out installation of doors and windows 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>	
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> (hh:mm) 32:00</p> <p><b>Corresponding NOS Code</b> CON/N9001</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 doors and windows installation works.</li> <li>Emergency safety control measures and actions to be taken under emergency situation</li> <li>Concept of: -               <ol style="list-style-type: none"> <li>First Aid process</li> <li>Use of fire extinguisher</li> <li>Classification of fires and fire extinguisher</li> <li>Safety drills</li> <li>Types and use of PPEs as per safety norms</li> </ol> </li> <li>Reporting procedure to the concerned authority in emergency situations</li> <li>Standard procedure of handling, storing and stacking material.</li> <li>What is safe disposal of waste, type of waste and their disposal</li> <li>Importance of handling tools, equipment and materials as per applicable.</li> <li>Safety relevant to tools, tackles, &amp; requirement as per applicability.</li> <li>basic ergonomic principles as per applicability</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>	<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> <li>Fire Extinguisher</li> <li>Fire prevention kit</li> <li>First Aid box</li> <li>Safety tags</li> <li>Safety Notice board</li> </ol>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• Selection of PPEs and use them appropriately as per working need of doors and windows installation operations, handling, storing, stacking and shifting of tools and equipment for doors and windows installation work</li> <li>• Selection of PPEs and use them appropriately as per doors and windows installation work need.</li> <li>• Analysis of hazards involved in doors and windows installation work and taking necessary steps or informing to seniors.</li> <li>• Identification of locations, situations/ circumstances, malpractices which can be hazardous for general or doors and windows 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>	
	<p><b>Total Duration</b></p> <p><b>Theory Duration</b> <b>122:00</b></p> <p><b>Practical Duration</b> <b>278:00</b></p>	<p><b>Unique Equipment Required:</b> Classroom having seating requirement for 30 people, Toilet/Urinals (Separate for gents and Ladies), Projector, Blackboard, Work shop for practical assessment, 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, Screw driver set, Screw gun, Hammer Drill machine, Rivet gun, Metal cutter, Silicon gun/caulk gun, Stapler, Clutch angle, Utility knife, 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</p>	

Grand Total Course Duration: 400 Hours, 0 Minutes

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

## Trainer Prerequisites for Job role: “Doors and Windows Fixer” mapped to Qualification Pack: “CON/Q1105, 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/Q1105”.
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- 50% in each NOS of Qualification Pack “CON/Q1105” & 80% overall , Lead trainer/Lead Assessors- 50% in each NOS of Qualification Pack “CON/Q1105” & 90% overall
4b	<b>Platform Certification</b>	Trainer/Assessor-80% in each NOS of Qualification Pack “MEP/Q0102” or “MEP/Q0104”, Lead trainer/ Lead Assessors- 90% 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.



## Annexure: Assessment Criteria

<b>Assessment Criteria</b>	
<b>Job Role</b>	<b>Door &amp; Windows Fixer</b>
<b>Qualification Pack</b>	<b>CON/Q1105, v1.0</b>
<b>Sector Skill Council</b>	<b>Construction</b>

<b>Sr. No.</b>	<b>Guidelines for Assessment</b>
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 centre based on assessment criteria.
5	The passing percentage for each QP will be 50%. To pass the Qualification Pack, every trainee should score a minimum of 50% 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/N1111: Carry out preparatory works and fix frames and sub-frames for fixing doors and Windows	PC1. select and organize required tools and equipments for fixing doors and windows	<b>100</b>	5	1.5	3.5
	PC2. measure the dimensions of the door/Windows frame to ensure correct size of frame		5	1.5	3.5
	PC3. measure out space for the Windows in the walls or roof as per drawings/specifications		5	1.5	3.5
	PC4. verify dimensions of the opening are as per the size of the frame		5	1.5	3.5
	PC5. carry out chipping ,chiseling of masonry structure to provide gaps for fitting frame		10	3	7
	PC6. select the correct door/Windows panel as per approved drawings		5	1.5	3.5
	PC7. visually check any surface damage before installation		5	1.5	3.5
	PC8. fit flashing to Windows surround as per applicability		5	1.5	3.5
	PC9. mark the underside of the wall or roof directly above the outline on the floor using a line		5	1.5	3.5
	PC10. align the door/Windows frame against the setting out lines, datum lines and level pegs		5	1.5	3.5
	PC11. secure the frame using timber wedges and adjust the position of wedges to obtain required vertical and horizontal alignment		5	1.5	3.5
	PC12. ensure proper alignment and verify the undercut dimensions before fastening the hinges		5	1.5	3.5
	PC13. coat the surface of frame and sub frame with anti-splitting agent prior to installation.		5	1.5	3.5
	PC14. fasten the frame in position using appropriate wall plugs or galvanized straps		5	1.5	3.5
	PC15. verify the dimensions of sub frame opening as per applicability		5	1.5	3.5
	PC16. apply appropriate bonding agent over the sub frame and main frame		5	1.5	3.5
	PC17. install the main frame over the sub frame and check the alignment of main frame and sub frame as per applicability		10	3	7
	PC18. secure the main frame over sub frame using nails/screws as per specification		5	1.5	3.5
	<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>	
CON/N1112:	PC1. Install the door/Windows frame and sub-frame as per specification	<b>100</b>	5	1.5	3.5

Install wooden /PVC doors /windows as per instructions	PC2. Install the door/Windows panel as per specification		5	1.5	3.5
	PC3. Ensure proper alignment and verify the under-cut dimensions before fastening the hinges		10	3	7
	PC4. Ensure a consistent gap between door/Windows panel and door/Windows frame		5	1.5	3.5
	PC5. Check and ensure the right type of decorative moulding is used for installation		10	3	7
	PC6. Apply bonding agent to the underside of the architrave(decorative moulding) as per instructions		5	1.5	3.5
	PC7. Install the decorative moulding around the door/Windows frame as per specification.		10	3	7
	PC8. Ensure the miter joints are flat and square at corners for seamless finish		5	1.5	3.5
	PC9. Ensure proper swinging of doors after hinging		5	1.5	3.5
	PC10. Check that an even contact has been created between the door/Windows face and the weather stripping attached to the frame		10	3	7
	PC11. Insulate around the door/Windows frame using fiberglass insulation or low expansion foam as per applicability		10	3	7
	PC12. Install the interior trim as per specifications		10	3	7
	PC13. Ensure caulking of all joints of the trim and brick mold		5	1.5	3.5
	PC14. Install the weather strip at the base of the door/Windows as per instructions		5	1.5	3.5
		<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>
CON/N 1113: Install pre fabricated sliding doors and windows	PC1. apply flexible waterproof flashing to the sides of bare wall surfaces along the frames as per applicability	<b>100</b>	5	1.5	3.5
	PC2. ensure that frame should be plumb, square and not twisted between the openings		5	1.5	3.5
	PC3. install sliding door frame or pocket wall frame as per specification for sliding doors/Windows fixing		10	3	7
	PC4. visually check any surface damage before installation		5	1.5	3.5
	PC5. ensure proper alignment and verify the under-cut dimensions prior to installing doors/Windows panels		5	1.5	3.5
	PC6. fit the sliding door into the frame and check that it glides well and is parallel to the frame sides		5	1.5	3.5
	PC7. adjust the rollers under the sliding panel if necessary		5	1.5	3.5
	PC8. assemble main frame at site as per size requirement		5	1.5	3.5
	PC9. install vertical parts of main frame using appropriate bonding agent.		5	1.5	3.5

	PC10. fasten horizontal parts of frame after fixing and drying of vertical parts		5	1.5	3.5
	PC11. caulk between the siding and the frame (or brick moulding) as per applicability		5	1.5	3.5
	PC12. install the decorative moulding around the door/Windows frame as per specification		5	1.5	3.5
	PC13. ensure the miter joints are flat and square at corners		5	1.5	3.5
	PC14. check that an even contact has been created between the door/Windows face and the weather stripping attached to the frame		5	1.5	3.5
	PC15. caulk between the siding and the frame (or brick moulding) as per applicability		5	1.5	3.5
	<u>PC16. insulate around the door/Windows frame using fiberglass insulation or low expansion foam as per applicability</u>		5	1.5	3.5
	<u>PC17. install the interior trim as per specification</u>		5	1.5	3.5
	PC18. ensure caulking of all joints of the trim and brick mold		5	1.5	3.5
	PC19. install the weather strip at the base of the door/Windows as per instructions		5	1.5	3.5
	<b>Total</b>		<b>100</b>	<b>30</b>	<b>70</b>
CON/N 1114: Install aluminum doors and Windows with glass glazing	PC1. Apply flexible waterproof flashing to the sides of bare wall surfaces along the frames as per applicability	<b>100</b>	5	1.5	3.5
	PC2. Ensure that frame should be plumb, square and not twisted between the openings		5	1.5	3.5
	PC3. Check inner frame and associated hardware for defects.		5	1.5	3.5
	PC4. Weep holes in the inner frames should be cleared of blockage to allow discharge of incidental water prior to installation		5	1.5	3.5
	PC5. Check and confirm the sequence of panel installation		5	1.5	3.5
	PC6. Check labels on the glass panels against the panel fixing plan and schedule		5	1.5	3.5
	PC7. Standardize the orientation of the glass panels so that the positioning of logos/trademarks is consistent		5	1.5	3.5
	PC8. Check the gasket for any physical damages		5	1.5	3.5
	PC9. Ensure gasket is free from dust and dirt to ensure good grip onto the frame and beadings		5	1.5	3.5
	PC10. Check to confirm that profile of the gaskets is compatible with that of the beads used to secure the glass panels.		5	1.5	3.5
	PC11. Insert glass panel into the frame for doors and Windows as per specification		5	1.5	3.5
	PC12. Hold glass panels in place using spacer hooks		5	1.5	3.5

	Pc13. Splice gasket to fit around corners of the glass panes		5	1.5	3.5
	Pc14. Fix the gasket in place using appropriate tools		5	1.5	3.5
	PC15. Secure then gasket in place with a appropriate tools and beading		5	1.5	3.5
	PC16. Seal the gap between the gasket and beading using appropriate sealant		5	1.5	3.5
	PC17. Use suitable masking tape to protect glass during sealant application		5	1.5	3.5
	PC18. Install the decorative moulding around the door/Windows frame as per specification		5	1.5	3.5
	PC19. Ensure the miter joints are flat and square at corners		5	1.5	3.5
	PC20. Check that an even contact has been created between the door/Windows face and the weather stripping attached to the frame		5	1.5	3.5
	PC21. Carry out insulation around doors/windows as per specification		5	1.5	3.5
		<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>
CON/N 1115: Install hardware and accessories on doors and windows	PC1. Identify the type of door and Windows hardware from the job specifications.	<b>100</b>	10	3	7
	PC2. Identify and use required tools and tackles for installing hardware on doors and windows		10	3	7
	PC3. Mark level and point for fixing doors and windows hardware		10	3	7
	PC4. Drill holes or cut through doors/windows to accommodate for hardware fixing.		10	3	7
	PC5. Install latch assembly in accordance with the job and manufacturer specifications.		15	4.5	10.5
	PC6. Install handles and cylinder locks as per specifications		10	3	7
	PC7. Fasten face plates and keepers in place as per specification		10	3	7
	PC8. Adjust hardware to suit the alignment and level to match with job specification.		15	4.5	10.5
	PC9. Fix other hardware such as stoppers, door closers etc as per specifications		10	3	7
		<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>	10	3	7
	PC2. inform co-workers and superiors about any kind of deviations from work		5	1.5	3.5
	PC3. address the problems effectively and report if required to immediate supervisor appropriately		5	1.5	3.5
	PC4. receive instructions clearly from superiors and respond effectively on same		5	1.5	3.5

	PC5. communicate to team members/subordinates for appropriate work technique and method		5	1.5	3.5
	PC6. seek clarification and advice as per requirement and applicability		10	3	7
	PC7. hand over the required material, tools tackles, equipment and work fronts timely to interfacing teams		30	9	21
	PC8. work together with co-workers in a synchronized manner		30	9	21
		<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>	10	3	7
	PC2. plan activities as per schedule and sequence		10	3	7
	PC3. provide guidance to the subordinates to obtain desired outcome		10	3	7
	PC4. plan housekeeping activities prior to and post completion of work		10	3	7
	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		5	1.5	3.5
	PC10. employ tools, tackles and equipment with care to avoid damage to the same		5	1.5	3.5
	PC11. organize work output, materials used, tools and tackles deployed,		5	1.5	3.5
	PC12. processes adopted to be in line with the specified standards and instructions		5	1.5	3.5
			<b>Total</b>	<b>100</b>	<b>30</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>	5	1.5	3.5
	PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities		5	1.5	3.5
	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		5	1.5	3.5
	PC5. identify near miss , unsafe condition and unsafe act		5	1.5	3.5

PC6. use appropriate Personal Protective Equipment (PPE) as per work requirements including:			
<ul style="list-style-type: none"> <li>• Head Protection (Helmets)</li> <li>• Ear protection</li> <li>• Fall Protection</li> <li>• Foot Protection</li> <li>• Face and Eye Protection</li> <li>• Hand and Body Protection</li> <li>• Respiratory Protection (if required)</li> </ul>	10	3	7
PC7. handle all required tools, tackles , materials & equipment safely	5	1.5	3.5
PC8. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	5	1.5	3.5
PC9. install and apply properly all safety equipment as instructed	15	4.5	10.5
PC10. follow safety protocol and practices as laid down by site EHS department	15	4.5	10.5
PC11. collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes	10	3	7
PC12. apply ergonomic principles wherever required	10	3	7
<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>