

Model Curriculum

Plumber (General) Helper

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SECTOR: **PLUMBING INDUSTRY**
SUB-SECTOR: **CONTRACTORS**
OCCUPATION: **PLUMBING**
REFERENCE ID: **PSC/Q0101**
NSQF LEVEL: **1**



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PLUMBER GENERAL (HELPER)

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Plumber General (Helper)”, in the “Plumbing” Sector/Industry and aims at building the following key competencies amongst the learner

| | | | |
|--|--|----------------------------|------------|
| Program Name | Plumber General (Helper) | | |
| Qualification Pack Name & Reference ID. | PSC/Q0101 | | |
| Version No. | 1.0 | Version Update Date | 01-12-2015 |
| Pre-requisites to Training | 5 th Class/Standards Pass (To be revised to 9 th Class/Standard post 31st December, 2017). In lieu of minimum qualification candidate has worked as a unskilled helper for minimum period of six months in the same role. | | |
| Training Outcomes | <p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Assistance in installation including pre-installation activities like material preparation and tool handling. • Assistance in minor repair and maintenance activities. • Communicate and discuss work flow, problems faced, possible solutions and pass on the learning within and outside the team. • Interact with seniors:- <ul style="list-style-type: none"> • Receive work instructions, discuss task status and receive feedback • Interact with colleagues within and outside the team. • Maintain healthy, safe and secure working environment. • Undertake work independently, be a good team player, be a competent listener for taking instructions | | |

This course encompasses three out of three National Occupational Standards (NOS) of “Plumber (General) Assistant” Qualification Pack issued by “[SSC: Indian Plumbing Skills Council](#)”.

| Sr. No. | Module | Theory Duration (hh:mm) | Practical Duration (hh:mm) | Key Learning Outcomes | Corresponding NOS Code | Equipment Required |
|---------|---------------------------------------|-------------------------|----------------------------|---|------------------------|--|
| 1 | Assistance in installation and repair | 42 hrs | 62 hrs | <ul style="list-style-type: none"> • Introduction of basic plumber work • Information related to various pipes and fittings & fixtures • Knowledge of basic building construction • Perform Operations/ procedure on wall and ceiling • Preparation of mortar • Perform installations of fixtures • Perform various plumbing related operations/ procedure | PSC/ N 0110 | Pipe wrench, parrot pliers, slide wrench, Tap set and Die set complete, pipe bending machine, hacksaw, pipe vice, Screw drivers set, Double Ended spanner set, |



| | | | | | | |
|---|--------------|-------|-------|---|-------------|--|
| | | | | <ul style="list-style-type: none"> • Perform testing methods • Knowledge of different power and hand tools • Understand repair of various types of fitting and fixtures • Know types of safety controls • Know Work flow and procedures at site • Clear the work area at site and waste disposal • Hand-over/take-over of site and equipment and work area • Working practices for plumbers • Understand significance of the individual's role • Industrial visit • Perform units and measurements • Perform estimation and costing • Interpret drawings • Understand the role in team • Material storing and stacking | | <p>Allen Key set, Drill bit set, Caulking tools, Hammers, Files, measuring tape, plumb, L-Square, Spirit Level, Square Trowel, trowel-mason, Power Stone Cutter, Hammer-mason, blocking chisel, Smoke Generator for testing of pipes and joints, balloon sets, weighing machine, pressure gauge, Powered pipe threading machine, Taps/faucets, shower head complete, sink, flushing tanks, urinal, urinal flush, bidet, bath tub, geyser, Clamps and Hangers, pipes, fittings and accessories as required.</p> |
| 2 | Coordination | 16hrs | 24hrs | <ul style="list-style-type: none"> • Communicate with in the team • Communicate outside the team • Plan and prepare • Comprehend Worker manual • Skills in the team members • Understand responsibility for work • Working in a team • Understand Reporting | PSC/ N 0108 | |



| | | | | | | |
|--|--|--|--|---|--|--|
| | | | | structure and workflow management <ul style="list-style-type: none"> • Understand work process communication and reporting of disruptions • Understand the role in team | | |
|--|--|--|--|---|--|--|

| Sr. No. | Module | Theory Duration (hh:mm) | Practical Duration (hh:mm) | Key Learning Outcomes | Corresponding NOS Code | Equipment Required |
|---------|-------------------------------|-------------------------|----------------------------|---|------------------------|--|
| 3 | Environment health and safety | 22 hrs | 34 hrs | <ul style="list-style-type: none"> • Identify and select hand tools • Identify problems and accuracy reporting • Signage and barricade requirements at site • Awareness of the signs of poor performance of tools and inefficiency • Pre operational study as per manual • Information regarding various first aid procedures • Hazard analysis at sites • the work environment • welfare facilities • guidance for specific types of work • Reporting structure and workflow management in a team • Prepare for emergency procedures • Clearance of all work area • Maintenance of equipment • Environmental requirements for dealing with waste • Understand the responsibilities in case of danger | PSC/ N 0109 | Face Protection; Face mask/shield , Head protection: Safety Helmet (hard hat), Eye protection (safety glasses with rigid side shields), Safety Shoes/ footwear, Hand protection: hand gloves based on exposure presented, Long pants and shirts with sleeves extending over the shoulders, High visibility vest or other outer most high visibility clothing, Welder's caps, Approved liners, Tight weave cotton, Drawstrings in clothing. Fire extinguishers Type A,B,C&D, ladder, safety harness/rope/belt, Ear Protection: ear plugs/mufflers, Stretcher, First aid kit, Fire Alarm bell etc. |



| | | | | | | |
|--|------------------------|---------------------|----------------------|--|--|--|
| | | | | <ul style="list-style-type: none"> • Reporting in the team • Company policies on safety • Evacuation and emergency procedures • Learning from past hazards | | |
| | Total Duration: | <u>80hrs</u> | <u>120hrs</u> | Unique Equipment Required: | | |

Grand Total Course Duration: **200 Hours00 Minutes**

(This syllabus/ curriculum has been approved Indian Plumbing Skills Council)



Annexure1: Assessment Criteria

| Assessment Criteria for Plumber General (Helper) | |
|--|--------------------------|
| Job Role | Plumber General (Helper) |
| Qualification Pack | PSC/Q0101 |
| Sector Skill Council | Plumbing |

| Sr. No. | Guidelines for Assessment |
|---------|--|
| 1 | Pre-Assessment Examination- Learner shall be required to undertake a pre-assessment examination to determine the minimum qualification of the candidate |
| 2 | In-course assessment- Learner shall be required to participate in in-class activities |
| 3 | Assignments- Assignments shall be given in-class and have to be completed and handed over to the instructor for evaluation. Non-submission /Late submission of assignments shall be marked as 0. |
| 4 | Training/Field Tests- Learner shall be required to participate in demonstrations during site visits. |
| 5 | Practical Training- Apprentice training to be done at the site |
| 6 | Post Learning Assessment Examination- Learner shall be required to undertake a post learning final assessment examination to determine his learning of concepts, theories, use of tools and equipment, and practical applications of procedures, workflow etc. |
| 7 | Passing Qualification Pack- Learner should score a minimum of 50% marks in aggregate with a minimum of 40% in each NOS to pass the qualification pack. Learner shall be exempted to reappear in a NOS provided he has scored minimum of 50% marks in a NOS though he has failed to score a minimum 50% marks in aggregate to pass the qualification pack. |
| 8 | In case of successfully passing one or more number of NOS(s), the trainee is eligible to take subsequent assessment on the balance NOS(s) to pass the Qualification Pack. |

| | | Marks Allocation | | | |
|--|--|------------------------|--------|--------|------------------|
| | | Total Mark (300 MARKS) | Out Of | Theory | Skills Practical |
| 1. PSC/ N 0110 Assistance in installation and repair of basic plumbing systems) | PC1. assist in assembling pipe sections, tubing and fittings | 100 | 10 | 3 | 7 |
| | PC2. assist in cutting, threading and joining pipes and sanitary fixtures | | 10 | 3 | 7 |
| | PC3. assist in cutting openings in structures | | 20 | 6 | 14 |
| | PC4. assist in assembling fittings, fixtures and tools required for the task | | 20 | 6 | 14 |
| | PC5. assist in replacing defected pipes and pipe fittings | | 20 | 6 | 14 |



| | | | | | |
|---|--|--------------|-----|----|----|
| | PC6. assist in using hand and power tools or equipment used for cutting, threading and bending | | 10 | 3 | 7 |
| | PC7. clear the work area and dispose the waste | | 10 | 3 | 7 |
| | | Total | 100 | 30 | 70 |
| 2. PSC/N0108 Coordinating with the senior and other working team | PC1. receive work instructions and raw materials from reporting senior | 100 | 5 | 2 | 3 |
| | PC2. communicate to reporting senior about task status, repairs and maintenance of tools and equipment as required | | 5 | 1 | 4 |
| | PC3. communicate any potential hazards and expected process disruptions | | 10 | 3 | 7 |
| | PC4. handover completed task to reporting senior | | 10 | 2 | 8 |
| | PC5. receive feedback from reporting senior | | 10 | 3 | 7 |
| | PC6. report any anticipated reasons for delays | | 10 | 3 | 7 |
| | PC7. work as a team with colleagues and share work as per the work load and skills | | 10 | 3 | 7 |
| | PC8. work with colleagues of other teams | | 5 | 2 | 3 |
| | PC9. communicate and discuss work flow related difficulties in order to find solution with mutual agreement | | 10 | 3 | 7 |
| | PC10. taking instructions from the reporting senior | | 10 | 3 | 7 |
| | PC11. report problem/incident etc. | | 5 | 2 | 3 |
| | PC12. put team over individual goals | | 5 | 1 | 4 |
| | PC13. resolve conflicts | | 5 | 2 | 3 |



| | | | | | |
|--|---|------------|-----------------------------------|------------|------------|
| | | | 100 | 30 | 70 |
| 3. PSC/N0109 Maintain a healthy, safe and secure working environment | PC1. to avoid accidents related to use of sharp tools and equipment | 100 | 15 | 5 | 10 |
| | PC2. attend and actively participate in the health and safety campaigns organized by the company or any other authority | | 10 | 3 | 7 |
| | PC3. use or wear safety gear (helmet, gloves, goggles, safety shoes, ear plugs, etc.) as per the rules of the company | | 10 | 3 | 7 |
| | PC4. attend fire drills or any other safety drills organized by the company or any other authority | | 15 | 4 | 11 |
| | PC5. learn first-aid procedure | | 15 | 5 | 10 |
| | PC6. use insect repellents and safe drinking water | | 10 | 3 | 7 |
| | PC7. use site toilets and follow other hygienic practices | | 15 | 4 | 11 |
| | PC8. understand the evacuation and emergency procedures | | 10 | 3 | 7 |
| | | | 100 | 30 | 70 |
| TOTAL | | | 300 | 90 | 210 |
| Percentage Weightage: | | | | 30% | 70% |
| Minimum Pass% to qualify: | | | 50% in aggregate and 40% in a NOS | | |



Annexure2: Trainer Prerequisites for Job role: “Plumber General (Helper)” mapped to Qualification Pack: “PSC/Q0101”

| Sr. No. | Area | Details |
|---------|---|--|
| 1 | Job Description | To impart training on Plumber General-II. The core responsibility includes enhancement of knowledge, refining of understanding and improvement in performance of the trainees. Train the plumbers for installation and repair of basic plumbing systems including those of advanced sanitary fixtures as per manufacturer’s specifications in housing, commercial and institutional setups. |
| 2 | Personal Attributes | A Plumber Trainer should be free from socio-economic preferences and prejudice. He/ she should be well aware of new trends, products and techniques in the market. Besides being knowledgeable, he/ she should be energetic, motivating, innovative and good at communication. The trainer should be able to establish rapport with the trainees and employ innovative methods to impart instructions. |
| 3 | Minimum Educational Qualifications | “ITI in plumbing with three years of experience in training of plumbing course and with a IPSC Level 4 Certification in Plumber (General)II or Diploma or Degree in Civil Engineering with IPSC Level 4 Certification in Plumber (General)II and 10 th Standard pass with Level 4 Certification in Plumber (General)II” with a minimum score of $\geq 70\%$. |
| 4a | Domain Certification | Certified for Job Role: “Plumber (General)” mapped to QP: “PSC/Q0104”. Minimum accepted score 90% |
| 4b | Platform Certification | Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: _____. Minimum accepted score $\geq 60\%$. |
| 5 | Experience | ITI in plumbing with four years of experience or Diploma or Degree in Civil Engineering with IPSC Level 4 Certification in Plumber (General)II II and 10 th Standard pass with Level 4 Certification in Plumber (General)II” with a minimum score of $\geq 70\%$. |



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

INDIAN PLUMBING SKILLS COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/Qualification Pack 'Plumber (General) Helper' OP No. 'PSC/Q0101 NSQF Level 1'

Date of Issuance: December 11th, 2015

Valid up to: December 10th, 2016

* Valid up to the next review date of the Qualification Pack

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