

Model Curriculum

Plumber (After Sales Service)

Plumber (After Sales Service)

SECTOR: **PLUMBING INDUSTRY**
SUB-SECTOR: **MANUFACTURER**
OCCUPATION: **PLUMBING**
REFERENCE ID: **PSC/Q0303, Version 1.0**
NSQF LEVEL: **3**



Table of Content:

Curriculum.....	3
Annexure1: Assessment Criteria.....	8
Annexure2: Trainer Prerequisites.....	11
Annexure3: Compliance Certificate.....	12



PLUMBER (After Sales Service)

CURRICULUM / SYLLABUS

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

Program Name	Plumber (After Sales Service)		
Qualification Pack Name & Reference ID.	PSC/Q0303,		
Version No.	1.0	Version Update Date	01-12-2015
Pre-requisites to Training	Pass 8th Class/Standard. In lieu of minimum qualification the candidate has worked for minimum two years in the same job role.		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Maintain and service the company’s products used in plumbing systems of housing, commercial and institutional set ups. • Diagnose problems and or failures in a plumbing fixture. • Undertake activities necessary to maintain the system to full serviceability level. • Interact with seniors to <ul style="list-style-type: none"> ○ Receive work instructions, discuss task status and receive feedback. ○ Interact with colleagues within and outside the team. • Communicate and discuss work flow, problems faced, possible solutions and pass on the learning within and outside the team. • Report to seniors about process flow improvements that can reduce anticipated or repetitive hazards with regards to • Maintain healthy, safe and secure working environment. • Undertake work independently on assignment given to him, exhibit problem solving skills through creative and innovative thinking, be a good team player, be a competent listener for taking instructions and should be result oriented. 		

This course encompasses three out of three National Occupational Standards (NOS) of “Plumber (After Sales Service)” 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	Installation	32hrs	72hrs	• Introduction of basic	PSC/ N 0303	Pipe wrench,



			<p>plumber work</p> <ul style="list-style-type: none"> • Knowledge of existing plumbing system and site management • Perform operations/procedures on types of pipes • Knowledge of basic building construction • Perform operations/procedures on wall and ceiling • Preparation of mortar • Perform installations of fixtures • Perform operations/procedures on bath-wares and tap-wares • Perform various plumbing related operations/procedures • Understand and perform Testing using various methods • Clear the work area at site and waste disposal • Follow guidelines for quality in work, control of wastage and damage • Understand various types of safety controls • Work flow and procedures at site • Handover/takeover of site and equipment and work area • Work practices for plumbers • Understand significance of the individual's role in a work flow • Visit to actual work site • Information related to various pipes and fittings & fixtures • Understand units and perform measurements 		<p>parrot pliers, slide wrench, hacksaw, Screw drivers set, Double Ended spanner set, Allen Key set, Drill bit set, measuring tape, Spirit Level, Hydraulic Testing Machine, Smoke Generator for testing of pipes and joints, balloon sets, weighing machine, pressure gauge, Clamps and Hangers, pipes, fittings and accessories as required.</p>
--	--	--	--	--	--



				<ul style="list-style-type: none"> • Perform estimation and costing • Prepare and Interpret drawings • Understand the role in a team • Repair of fixtures and fittings • Learn use of power tools and machines at site • Knowledge of material storing, stacking and specifications • Repairing of various types of fitting and fixtures <ul style="list-style-type: none"> • Identify the cause/fault • Establish a sequence of repair activities • Decommission • Locate the component to be replaced/repared, • Cut defective structures, • Measure correctly, • Replace • Test • Commissioning 		
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 • Report structure and workflow management • Work process communication and reporting of disruptions • Understand the role in team 	PSC/ N 0211	



Sr. No.	Module	Theory Duration (hh:mm)	Practical Duration (hh:mm)	Key Learning Outcomes	Corresponding NOS Code	Equipment Required
3	Environment, health and safety	22hrs	34hrs	<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 • Reporting in the team • Company policies on safety • Evacuation and emergency procedures • Learn from past hazards 	PSC/ N 0212	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.



	Total Duration:	<u>70hrs</u>	<u>130hrs</u>	Unique Equipment Required: Pipe wrench, parrot pliers, slide wrench, hacksaw, Screw drivers set, Double Ended spanner set, Allen Key set, Drill bit set, Drilling Machine, Hammers, measuring tape, pressure gauge, Clamps and Hangers, pipes, fittings and accessories as required.

Grand Total Course Duration: **200 Hours:00 Minutes**

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



Annexure1: Assessment Criteria

Assessment Criteria for Plumber (After Sales Service)	
Job Role	Plumber (After Sales Service)
Qualification Pack	PSC/Q0303, VERSION 1.0
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 zero.
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 of actual work.
6	Post Learning Assessment Examination- Learner shall be required to undertake a post-assessment to determine his learning’s of concepts, theories, use of tools and equipment, and practical applications of procedures, workflow.
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 0303 Maintenance and servicing of the company's product	PC1. understand the products and their specifications	100	20	6	14
	PC2. diagnose problems and/or failures in products for the purpose of identifying activities necessary to maintain the system		20	6	14
	PC3. Decide whether the product requires on site repairing or needs to be taken to factory shop based on complexity of problems		10	3	7
	PC4. Establish a sequence of repair/servicing		10	3	7



	PC5. Disassemble components for the repair /service work as per correct procedure		10	3	7
	PC6. Carry out the overhaul to the agreed level using the correct tools and techniques and with out damaging other components.		20	6	14
	PC7. Repsond to emergency situations for the purpoe of resolving immediate safety concerns.		10	3	7
		Total	100	30	70
2. PSC/N0211 Work effectively with colleagues	PC1. receive work instructions and discuss the project / design with seniors	100	10	3	7
	PC2. communicate to reporting senior about task status, repairs and maintenance of tools and equipment as required		10	3	7
	PC3. communicate any potential hazards and expected process disruptions		10	3	7
	PC4. Get the work reviewed and handover completed task to reporting seniors.		10	3	7
	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. put team over individual		10	3	7



	goals				
	PC11. resolve conflicts		5	1	
			100	30	
			70		
3. PSC/N0212 Maintain a healthy, safe and secure working environment	PC1. Comply with organisation’s current health, safety and security policies and procedures	100	15	4	11
	PC2. Report any identified breaches in health, safety and security policies and procedures to the designated person		15	5	10
	PC3. Identify and remove any hazards that can be dealt safely, competently and within limits of individual’s authority		15	5	10
	PC4. Report hazards to the relevant person in line with the organizational procedures and warn other people who may be affected		15	4	11
	PC5. Follow organisation’s emergency procedures promptly, calmly and efficiently		15	4	11
	PC6. Identify and recommend opportunities for improving health, safety and security to the designated person		10	3	7
	PC7. Complete any health and safety records legibly and accurately		15	5	10
			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 (After Sales Service)” mapped to Qualification Pack: “PSC/Q0303, VERSION 1.0”

Sr. No.	Area	Details
1	Job Description	To impart training on Plumber (After Sales Service). 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 plumbing system(s) of a company 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	Passed 10 th Class or Standard of Central or State Board of Education or equivalent as notified by Ministry of Human Resource Development, Govt. of India.
4a	Domain Certification	<p>“IPSC Certification in Plumber (General)-II NSQF level 4 QP Ref Id : PSC/0110, Version 1.0 or equivalent QP with a minimum score of 70 percent”</p> <p style="text-align: center;">OR</p> <p>“ITI Certificate in plumbing trade with IPSC Certification in Plumber (General)-II NSQF Level 4 QP Ref Id : PSC/0110, Version 1.0 with a minimum score of 70 percent”</p> <p style="text-align: center;">OR</p> <p>“Diploma or Degree in Civil or Mechanical Engineering from a recognised institute or university or equivalent qualification as notified by Ministry of Human Resources, Govt. of India with an IPSC Certification in Plumber (General)-II NSQF Level 4 QP Ref Id : PSC/0110, Version 1.0 with a minimum score of 70 percent”</p>
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack QP Ref Id : SSC/Q1402, Version 1.0 approved by NSDC/NSDA with a minimum accepted score of 60 percent in aggregate.
5	Experience	<p>IPSC Certificate - 3 years.</p> <p>ITI in plumbing trade - 4 years.</p> <p>Diploma or Degree holders or equivalent in engineering - NIL.</p>



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 (After Sales Service)' QP No. 'PSC/Q 0303, Ver. 1.0 NSQF Level 3'

Date of Issuance: January 29th, 2016

Valid up to: January 29th, 2017

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

Prof. (Dr.) Vinod Kumar Paul
(Indian Plumbing Skills Council)



Indian Plumbing Skills Council
B-168/169, Ground Floor,
Okhla Indl. Area Phase 1,
DDA Sheds, New Delhi-110020.
T: +91 11 41513580, 41400556