

# DRINKING WATER PURIFIER TECHNICIAN

National Council for  
Vocational Education  
and Training  
(NCVET)  
Approved Course

**NSQF Level – 3.5**



**National Institute of Open Schooling**

(An Autonomous Institution under Ministry of Education, Govt. of India)

ISO 9001 : 2015 Certified

A-24-25, Institutional Area, Sector - 62, Noida (U.P.)

Website: [www.nios.ac.in](http://www.nios.ac.in) & [www.voc.nios.ac.in](http://www.voc.nios.ac.in)

## About NIOS

The National Institute of Open Schooling (NIOS) was set up as the National Open School in 1989 by the Ministry of Human Resource Development, Government of India as an autonomous organisation.

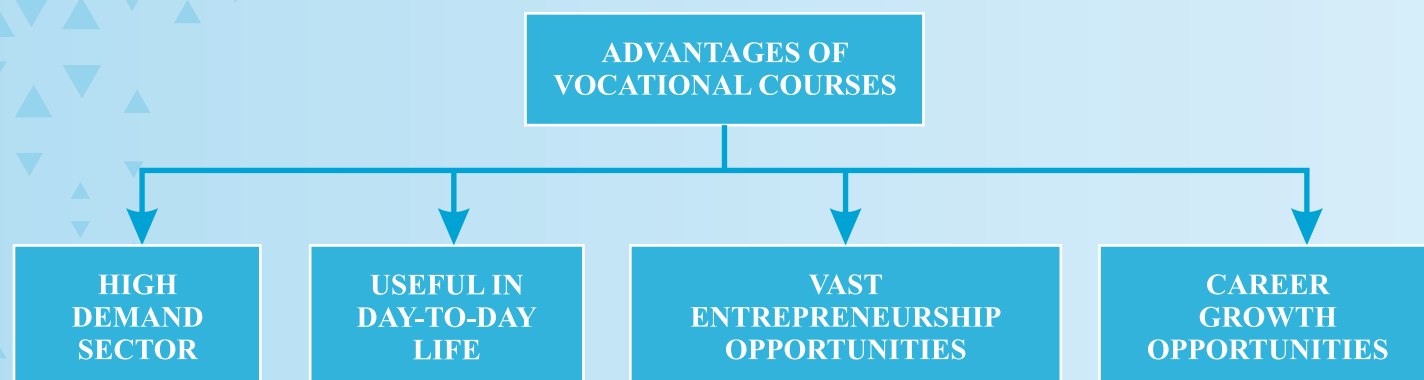
NIOS offers courses through Open and Distance Learning (ODL) Mode.

It is vested with the authority to enrol, examine and certify learners up to pre-degree level.

NIOS operates through a network of 20 Regional Centers, 3 NIOS Cells and around 10,000 Accredited Institutions (AIs) and Accredited Vocational Institutions (AVIs) also known as Study Centres. These Centres are located in India, Nepal and the Middle East.

## Vocational Education Programmes

NIOS offers vocational courses at pre degree level keeping in view the needs of the target group. Around 100 courses are on offer in the broad sectors of Agriculture & Animal Husbandry, Business & Commerce, Computer & Information Technology, Engineering & Technology, Health & Paramedical Sciences, Home Science & Hospitality, Yoga and Naturopathy and miscellaneous.



With the increasing demand for clean water globally, skilled Drinking Water Purifier Technicians are in high demand both in India and internationally. Despite high demand, there is a significant skill gap in the industry.

NIOS has developed this new course on “Drinking Water Purifier System Technician”. This course aims to bridge the gap by providing industry-relevant training and hands-on experience.

### Drinking Water Purifier Technician Course

- This course will accommodate the knowledge and skills required for assembling, installing and repairing wide variety of drinking water purifier system (Domestic and Commercial) available in the market.
- It has wide potential to provide employment.
- The job role ‘Drinking Water Purifier Technician’ comes under Plumbing Sector.

## Course Content

### Install Water Purifier System (Domestic and Commercial)

Lesson 1	Introduction to the sector and job role
Lesson 2	Pre-installation activities
Lesson 3	Site preparation
Lesson 4	Electrical connections
Lesson 5	Installing pre-filters and post-filters

### Perform Service and Maintenance of Water Purifier System (Domestic and Commercial)

Lesson 6	Routine maintenance of water purifier system and fault finding
Lesson 7	Troubleshooting of water purifier system

### Effective Resource Utilization

Lesson 8	Planning and adopting a systematic approach
Lesson 9	Use of technology for waste management

### Maintain Health and Safety at Work Place

Lesson 10	Safety of self, co-worker/water purifier unit/ workplace and safe disposal of used part
-----------	---

### Employability Skill

Lesson 11	Employability skills
-----------	----------------------

## Job Role

The Water Purifier System Technician job requires the individual to have knowledge of all parts of water purifier system, different types of water purifier systems and customer orientation. The individual must work onsite for installation and offsite for assembling.

The individual working as Water Purifier System Technician is responsible for :-

- Installing water purifier system (Domestic and Commercial)
- Performing service and maintenance of water purifier system (Domestic and Commercial)
- Diagnose the problem and perform repair accordingly
- Providing service to customer
- Effective resource utilisation
- Maintain health and safety at work place

**Course Duration - 420 hrs (6 months)**

#### Entry Level:

11<sup>th</sup> grade pass  
OR

Completed 1st year of 3-year Diploma after 10<sup>th</sup>  
OR

10<sup>th</sup> Grade pass and pursuing continuous schooling  
OR

8<sup>th</sup> Grade pass and 3-year relevant experience

Course Fee: Rs. 12,000/-  
(60% AVI Share = Rs. 7,200/-  
40% NIOS Share = Rs.4, 800/-)



Certificate of course will have  
NIOS Logo alongwith  
Skill India Logo and  
NCVET Logo



## Job Opportunities of Drinking Water Purifier Technician Course

<b>Maintenance and Repair Technician</b>	→	<ul style="list-style-type: none"><li>• Water Purification Companies that manufacture and service water purifiers, both residential and industrial</li></ul>
<b>Service Technician</b>	→	<ul style="list-style-type: none"><li>• Companies specializing in the servicing and maintenance of water purification system</li></ul>
<b>Retail and Distribution</b>	→	<ul style="list-style-type: none"><li>• Water purifier and its components</li><li>• Electronic retail stores or online market places</li></ul>
<b>Self Employment and Free Lancer</b>	→	<ul style="list-style-type: none"><li>• As Independent Service Provider</li></ul>
<b>Entrepreneur</b>	→	<ul style="list-style-type: none"><li>• Large scale water purification needs like factories and offices</li></ul>
<b>Hotels and Resorts</b>	→	<ul style="list-style-type: none"><li>• Reliable water facilities in hospitality sector</li></ul>
<b>Municipal and Government Agencies</b>	→	<ul style="list-style-type: none"><li>• Water Supply and Sewerage Boards, Municipal Water Departments.</li></ul>
<b>Educational Institutions</b>	→	<ul style="list-style-type: none"><li>• Schools, Colleges, and Universities that have water purification systems on their campuses</li></ul>
<b>Hospitals and Healthcare Facilities</b>	→	<ul style="list-style-type: none"><li>• Hospitals and clinics that require water purification systems for their operations</li></ul>

## Instruction and Training Process

- Self-Learning Material (hard and soft copy).
- Hands on training and theory classes at Accredited Vocational Institutions (AVIs).
- Assignments/Projects based activities.
- Live video lectures from subject matter expert on PM e-Vidya Channel-20.
- Mukta Vidya Vani (NIOS Web Radio).
- Flexibility in admissions and examinations.

### Target Group

**School Dropouts:** who are interested in gaining practical skills for employment.

**Unemployed Youth:** looking for a way to enter the workforce with specialized skills.

**Working Professionals:** who want to enhance their skills.

**Entrepreneurs or Small Business Owners:** who want to add drinking water purification services to their business portfolio.

**Technicians from Related Fields:** like Plumber or Electrician who are looking to diversify their expertise.

**Community Workers:** involved in community service or NGO who wish to contribute in improving public health through safe drinking water.

**Government Employees:** those working in government sectors related to health, sanitation, or public utilities who need to understand or manage water purification processes.

## Accreditation Procedure for Study Centre

**Total accreditation fee (in India) is Rs 30,000/- for 5 Trades/Courses.**

*The fee is to be paid online only.*

Interested institution may apply directly for accreditation from e- accreditation portal (<https://eaccr.nios.ac.in>)

**For existing NIOS AVIs accreditation fee is Rs. 5000/- per Trade (Course)**

Existing AVIs can use e-service to add this course from there dashboard on the vocational portal (<https://voc.nios.ac.in>) by adding additional trade.

**For further details please visit:**

Vocational Education Department

**National Institute of Open Schooling**

A-24/25, Institutional Area, Sector - 62, NOIDA-201309

**Website:** [www.nios.ac.in](http://www.nios.ac.in) | **Toll Free No.:** 1800 180 9393

**Email:** [dirvoc@nios.ac.in](mailto:dirvoc@nios.ac.in) | **Tel. No.:** 0120-4089818



## ACCREDITATION NORMS FOR TRAINING CENTRES

**Name of the qualification:** Drinking Water Purifier Technician

**Sector:** Plumbing

**NSQF Level:** 3.5

The institution having the following requisite specifications i.e. infrastructure, tools, and staff is eligible for accreditation:

### A. Trainer's Qualification criteria:

Faculty & Staff	Minimum Educational Qualification	Minimum Experience (In Years) required for the Trainer	Brief Description of the Desired Trainer Profile	No.
Coordinator	Graduate in any discipline	01	Graduate in any discipline with 1-year experience of coordinating a training center. <b>Desirable:</b> BBA or MBA Experience in water treatment Industry	1
Trainer	12 <sup>th</sup> pass	04	Diploma (Engineering in any stream) with minimum 3 years experience in water treatment <b>OR</b> Minimum 12 <sup>th</sup> Pass /ITI/NIOS plumbing certificate with 4 years of Experience in water treatment	1
Master Trainer	Diploma	03	Diploma (Engineering in any stream) with minimum 2 year of industry experience in Water Treatment and minimum 1year training experience in water treatment <b>OR</b> Graduate (Engineering in any stream) with minimum 2 year of industry experience with specialization in Water Treatment. <b>OR</b> Post-Graduate (Engineering in any stream) with minimum 1 year of industry experience with specialization in Water Treatment.	1

**B. List of Tools, Equipment and Consumables:** (for one batch of 25 Trainees)

<b>(i) LIST OF TOOLS</b>			
<b>Sl. No.</b>	<b>Tools</b>	<b>Dimension/Specification/Description</b>	<b>Minimum number of Equipment Required (per batch of 30 trainees)</b>
<b>1.</b>	Allen Key set of 12 pieces	2mm to 14mm	1
<b>2.</b>	Center Punch	10 mm. Dia. x 100 mm	1
<b>3.</b>	Electrician Screw Driver	250 mm	1
<b>4.</b>	Hammer ball peen with handle	0.5 kg	1
<b>5.</b>	Screw driver set Philips and + type	2-inchlength blade width 3 mm 6-inchlength blade size 6 mm 12 inch length blade size 8 mm	1
<b>6.</b>	Hack saw blade with frame	12 inch blade with frame	1
<b>7.</b>	Spanner set	6 – 32 mm 12 piece	1
<b>8.</b>	Plier set	Combination pliers 6 inch and 12 inch	1
<b>9.</b>	Adjustable pipe wrench	15.5x4.6x0.6 cm	1
<b>10.</b>	Pipe and wire cutter	4 inch and 11 inch	1
<b>11.</b>	Wire stripper	Overall length 163 mm , 10-22 SWG / AWG	1
<b>12.</b>	Digital multimeter	AC DC resolution 4.5 digits current measurement 2 A DC ,2 A AC resistance measurement 50 ohms to 50 Mega ohms. DC voltage 50 mV to 50 V , AC voltage 50 mV rms to 500 V rms	1
<b>13.</b>	Continuity tester	Battery powered with LED	1
<b>14.</b>	Plastic spanner for opening housing (3 In 1 Spanner Wrench Key in Food Grade Plastic Material	½ inch nipple, prefilter and membrane	1
<b>15.</b>	Steel rule	30 cm inch and metric	1
<b>16.</b>	Double Spanner Wrench Key	300A/ 60A	1
<b>17.</b>	Drill machine	Drill cum hammer, 450 Watt, 10mm, 0-2600 rpm	1
<b>(ii) LIST OF EQUIPMENT</b>			
<b>18.</b>	A range of Domestic	Filters type: MF,UV,UF and RO water	1 or more model containing each

	Water Purifier	purifier Capacity range:10 LPH to 30 LPH	type of filters
<b>19.</b>	Commercial Water Purifier *	Capacity range of 100 LPH to 500 LPH	1 or more of the given capacity range
<b>20.</b>	TDS meter	Range: 0 - 999 ppm (mg/L) Resolution: 1 ppm (0-999 ppm) Accuracy: +/- 3%	2
<b>21.</b>	pH meter Digital	Ph Range : 0 to 14.00 pH Resolution: 0.1 pH Accuracy: +/- 0.1 pH, +/- 0.2 pH Operating Temperature: 8-50°C	1
<b>22.</b>	Electrolizer	Alkaline dry cell, Operating voltage 11.5 V, Operating current 109 A, Power consumption 1250 W	1
<b>23.</b>	Water Hardness testing kit	Total hardness test kit Total no. of test -100 or more	1
<b>24.</b>	Fire Safety Equipment		2
<b>25.</b>	First Aid Box		1
<b>(iii) LIST OF CONSUMABLES</b>			
<b>26.</b>	Teflon Tape	¼ inch small spool	As required
<b>27.</b>	Electrical insulating tape	10 mm	2
<b>28.</b>	Nut washers screws plastic ties (Sundries)	2-10 mm	Lump sum 1 kg assorted

\*AVI not having its own commercial water purifier unit should coordinate with nearby commercial water purification unit (of capacity above 100 LPH)and take a undertaking from them for training the learners.

**E. Classroom and Lab Area Specifications:**

<b>Minimum batch size</b>	<b>Minimum Lab size( in Square Feet for batch of 25 students )</b>	<b>Minimum Classroom size( in Square Feet for batch of 25 students)</b>	<b>Remarks</b>
08	300	300	<ul style="list-style-type: none"><li>• Class room for 25 students should have proper ventilation and illumination</li><li>• Black/white board(4'x3') -02</li><li>• Fire extinguisher- 02</li><li>• ceiling fans- 04</li><li>• overhead projector - 01</li><li>• screen-01</li></ul>

**Note:**

- Maximum 25 students in one batch.
- An institution can run maximum 4 batches for this course.