जल शक्ति मंत्रालय
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION

5 DAYS

TRAINING PROGRAMME ON

ADVANCED WATER AND WASTEWATER TREATMENT SOLUTIONS

for Sustainable Water Security

JANUARY 4 – 8, 2027

VENUE: JAL VIGYAN BHAWAN
NATIONAL INSTITUTE OF HYDROLOGY
ROORKEE, UTTARAKHAND – 247667



ABOUT THE PROGRAMME

Growing urban populations, industrial activity and new contaminants are putting increasing pressure on water and wastewater treatment systems. This five-day programme builds advanced knowledge across conventional and advanced treatment, biological, physicochemical, membrane and oxidation processes, decentralized and nature-based systems, industrial ETPs, AI/ML tools, and water reuse, ZLD and resource recovery, with expert lectures and a field visit.

COURSE CONTENT

1. Water Quality and Characterization
2. Conventional Drinking Water Treatment
3. Advanced Drinking Water Treatment
4. Wastewater Characterization and Treatment
5. Advanced Biological Wastewater Treatment
6. Advanced Physicochemical Treatment Technologies
7. Membrane-Based Water and Wastewater Treatment
8. Advanced Oxidation and Disinfection Technologies
9. Decentralized and Nature-Based Treatment Systems
10. Industrial Wastewater Treatment and ETP Management
11. AI/ML and Smart Technologies for Water Management
12. Water Reuse, Recycling, Desalination, ZLD, and Resource Recovery
13. **Field Visit**

OBJECTIVES

1. To provide advanced knowledge of water and wastewater characterization, treatment technologies, and sustainable management strategies for enhancing water security.
2. To develop technical capacity in the planning, design, operation, optimization, and monitoring of water and wastewater treatment systems.
3. To familiarize participants with emerging treatment technologies, including membrane-based processes, adsorption, advanced oxidation, electrochemical treatment, DEWATS, nature-based solutions, and advanced disinfection.
4. To promote sustainable water management through wastewater reuse, water recycling, resource recovery, pollution control, and compliance with relevant water quality standards and regulatory frameworks.

WHO CAN PARTICIPATE?

- Engineers & scientists from Central/State Govt. departments
- Officials of urban local bodies & pollution control boards
- Policymakers and academicians
- Professionals from private organisations & NGOs
- M.Sc./M.Tech./Ph.D. students & research scholars

Registration: FREE • Limited seats • Physical mode

ABOUT NIH

The National Institute of Hydrology (NIH) is a premier Research and Development organisation under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India. Established as an autonomous society in 1978 with its headquarters at Roorkee, Uttarakhand, NIH undertakes, aids, promotes and coordinates systematic and scientific work in all aspects of hydrology and water resources management. The Institute was declared a Science and Technology (S&T) organisation in 1987 and is ISO 9001:2015 certified.

NIH is a centre of excellence for research in hydrology and water resources, with emphasis on technology transfer and demand-driven, user-defined, strategic research. It has six scientific divisions at Roorkee and seven Regional Centres at Jammu, Patna, Guwahati, Jodhpur, Bhopal, Belagavi and Kakinada, with state-of-the-art laboratories for Water Quality, Nuclear Hydrology, Soil & Water, Remote Sensing and Hydrological Instrumentation. The Institute also pursues capacity development through specialised training courses.

PROGRAMME HIGHLIGHTS

- **Expert Lectures**
- **Field Visit**
- **Participation Certificate**
- **Free Registration**



REGISTRATION

Participation in this training programme is **free of charge**. Accommodation can be arranged at the NIH Roorkee Guest House on a paid basis, subject to availability. Registration is limited to a selected number of participants. Interested candidates must complete the online registration form b **20 December 2026** A valid Professional/Institute/University identity card must be uploaded during the application. **Only selected candidates will be informed.**

Scan to Register

OR

Click the button below

REGISTER NOW

https://forms.gle/vChXscH44CURzVKa6

IMPORTANT DATES

20 Dec 2026	25 Dec 2026	04–08 Jan 2027
Last date to apply	Selection announced	Training dates

For course-related queries, please contact:
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ORGANISING TEAM

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