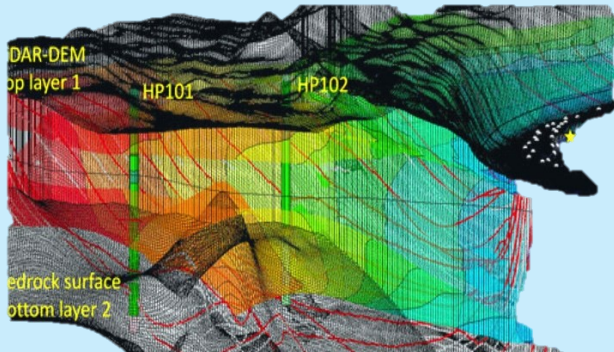


## TRAINING COURSE

on

### Advanced Groundwater FLOW Modeling

(September 02 to 06, 2024)



Organized by



**NATIONAL INSTITUTE OF HYDROLOGY**  
**JAL VIGYAN BHAWAN,**  
**ROORKEE -247 667,**  
**UTTARAKHAND, INDIA**

## INTRODUCTION

Groundwater modeling has emerged as an indispensable tool in the decision-making process, providing groundwater professional and policymakers with the ability to simulate and predict the behaviour of aquifers and resource availability across various scenarios. By leveraging detailed and sophisticated models, they can visualize and assess the potential impacts of different policies ranging from stringent conservation measures to the expansion of agricultural practices, industrial activities, and mining operations on groundwater levels and quality over time. This advanced foresight is instrumental in crafting strategies that harmonize economic development with sustainable water management, ensuring that the pursuit of progress does not lead to the depletion of vital water resources. The insights gained from groundwater modeling allows the formulation of evidence-based policies that not only address immediate needs but also safeguard the water supply for future generations. In doing so, groundwater professionals and policymakers may demonstrate how the integration of scientific modeling with policy-making can effectively address and manage one of humanity's most critical and finite resources.

## COURSE CONTENT

The training course will feature lectures from experts at the National Institute of Hydrology (NIH), Roorkee, and other reputed institutions, focusing on advanced tools and techniques for groundwater modeling across various applications. Participants will engage with both theoretical and practical aspects of groundwater modeling, including case studies, tutorials, and hands-on sessions using computers. *The course will cover a range of topics*

*such as conceptualisation of the aquifer, groundwater budgeting, model calibration and validation, case studies on assessing the impact of mining and industrial groundwater pumping on water levels and use the model for future predictions, as well as well capture zone analysis.* Participants will receive comprehensive hands-on training with recent version of Visual MODFLOW Flex for modeling exercises. Additionally, the course will demonstrate the use of electrical resistivity methods in the conceptualization of groundwater flow models, with practical sessions provided to enhance understanding and application. The training program provides more hands-on exercises rather than lectures. *All participants should bring their own laptops.*

## WHO CAN PARTICIPATE?

The course is designed for professionals, including engineers, scientists, and academicians, from government agencies, private organizations, and institutions involved in groundwater management and water resources planning. It is particularly relevant for those engaged in groundwater budgeting and resource management. Additionally, master's students and research scholars are encouraged to participate, as the course offers valuable insights and practical experience in advanced groundwater modeling techniques.

## REGISTRATION

The registration fee per participant (in INR) is as follows:

- Govt. Employee/NGO/PSUs = ₹ 12,000/-
- PG Student/Research Scholar = ₹ 8,000/-

The fee includes the registration, course material, working lunch on all working days, tea during sessions, and one course dinner. The stay arrangements on sharing basis will be made in NIH guest house on payment basis as per Institute rates. The participants will have to arrange for TA/DA from their own organization. A certificate will be given to all participants.

Registration is limited to 30 participants, accepted on a first-come, first-served basis after payment of the registration fee. Interested individuals should complete the registration form by clicking the link below no later than **August 25, 2024**. Selected participants will need to provide proof of online payment of the registration fee and upload their Institute/University identity card when submitting the application. For details on payment methods and further information, please contact the course coordinators.

## REGISTER HERE:

<https://forms.gle/v7utbWQ1HsdDxJey7>

## VENUE

The training course is proposed to be held at the National Institute of Hydrology, Roorkee.

**All correspondence related to the course should be made with the course coordinator**

## ABOUT NIH

National Institute of Hydrology (NIH) is a premier Research and Development organization under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India. It was established as an autonomous society in 1978 with its headquarters at Roorkee, Uttarakhand. The main objectives of NIH are to undertake, aid, promote and coordinate systematic and scientific work in all aspects of hydrology and water resources management. The Institute was declared a Science and Technology (S&T) organization in 1987.

The Institute is an ISO 9001:2015 certified organization. Over the years, the Institute has grown as a centre of excellence for pursuing research activities in hydrology and water resources with emphasis on technology transfer and demand driven, user-defined, strategic research. The research in the Institute is carried out under six Scientific Divisions at the headquarters at Roorkee, seven Regional Centres located at Belagavi, Bhopal, Jammu, Kakinada, Guwahati, Patna and Jodhpur. The institute has well equipped laboratories like Soil and Water Laboratory, Nuclear Hydrology Laboratory, Hydrological Instrumentation Laboratory, Remote Sensing Laboratory and Water Quality Laboratory with state-of-the-art equipment. The institute pursues capacity development by way of organizing specialized training courses. For more information about NIH, please visit [www.nihroorkee.gov.in](http://www.nihroorkee.gov.in).

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