



# National Institute of Technology Rourkela



## Workshop on Modeling River Hydraulics: A Hands-on Approach Using FLOW-3D and HEC-RAS

**03<sup>rd</sup> July – 07<sup>th</sup> July, 2025**

**Patron**

**Prof. K. Umamaheshwar Rao**

**Chairman**

**Prof. S. P. Singh**

**Course Coordinators**

**Dr. Anurag Sharma**

**Dr. Minakshee Mahananda**

**Organized by**

**Department of Civil Engineering  
National Institute of Technology  
Rourkela Odisha, India (769008)**

### IMPORTANT DATES

Last Date of Registration	10 <sup>th</sup> June 2025
Confirmation to Participants by E-mail	20 <sup>th</sup> June 2025
Commencement of Course	3 <sup>rd</sup> July 2025

### REGISTRATION FEES

For all P.G./Ph.D. Scholars, Faculty  
Members, and Industry Professionals

Online participation fee      Rs. 2000

Offline participation fee      Rs. 8000

The registration fee includes GST

### CONTACT INFORMATION

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### REGISTRATION PROCESS

For registration, the participants need to fill the Google form with necessary details. After successful payment of registration fees, the participants need to provide the transaction details in Google form by scanning the QR code

<https://forms.gle/YAmmntM8ojFpNf67A>



Bank Account Details for Registration

Account Name	CONTINUING EDUCATION NIT ROURKELA
Account No.	10138951784
Branch	NIT Campus Rourkela
IFS Code	SBIN0002109

## **ABOUT THE TRAINING**

This hands-on training program is aimed at equipping researchers, engineers, and students with practical skills in hydraulic modeling using FLOW-3D and HEC-RAS – two widely used tools in the domain of fluvial hydraulics, river engineering, flood modeling, sediment transport, and hydraulic structure analysis. The training will combine theoretical sessions with software-based demonstrations, real-world case studies, and interactive tutorials.

## **TARGET AUDIENCE**

- ✓ M.Tech and PhD Scholars (Water Resources, Hydraulics, Environmental Engineering)
- ✓ Faculty members and researchers
- ✓ Industry professionals and consultants
- ✓ Engineers from government & private sectors involved in river basin planning and design

## **Training Highlights**

- Introduction to FLOW-3D and HEC-RAS
- Setting up simulation domains and boundary conditions
- Mesh generation and geometry handling
- Simulation of open channel and free surface flows
- River hydraulics and flood modeling
- Sediment transport and morphological changes
- Hydraulic structure modeling (dams, weirs, culverts)
- Post-processing and result interpretation
- Case studies from real-world river systems

## **Resource Persons**

1. Trainer from Industry professionals for FLOW-3D
2. Trainer from Industry professionals for HEC-RAS (1D and 2D)
3. Expert talk from industry and academician



National Institute of Rourkela is one of the premier national level institution for technical education in the country and is funded by the Government of India. NIT Rourkela has a rich legacy of more than sixty dedicated years of service to the nation and is the pride of Odisha. The main objective of the Institute is to produce quality Engineers and Scientists in Graduate and Post-Graduate levels in various branches of Engineering and Science. Excellence in teaching and high-quality research are the pillars on which the Institute is built.

## **DEPARTMENT OF CIVIL ENGINEERING**

The department of Civil Engineering has been functioning as a full-fledged department since the inception of the institute. Presently, it is not only catering education of undergraduate and post-graduate students but also for pursuing research and development activities through research scholars. The department is actively involved with several research and consultancy projects.