



National Institute of Technology Rourkela



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

03rd July – 07th 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 **20th June 2025**

**Confirmation to
Participants by E-mail** **25th June 2025**

Commencement of Course **3rd 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 TECHNOLOGY

ROURKELA



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.