

I/125584/2023

भारत सरकार  
जल शक्ति मंत्रालय  
जल संसाधन नदी विकास एवं गंगा संरक्षण विभाग  
केन्द्रीय जल आयोग  
प्रशिक्षण निदेशालय



Government of India  
Ministry of Jal Shakti  
Department of WR, RD&GR  
Central Water Commission  
Training Directorate

**CIRCULAR**

Application of interested officers is invited for the following Post Graduate Courses, which may be submitted to this office. The application may be forwarded latest by **13.03.2023 for IISc Bangalore** and by **30.04.2023 for IIT Roorkee**, with the approval of the Concerned Member/Chief Engineer (HRM) in respect of HRM Unit/Chief Engineer (NWA) in respect of NWA, for taking further necessary action.

The detailed admission procedure is available on IISc Bangalore & IIT Roorkee website as mentioned in table given below.

| Name of the Program   | Institute      | Last date of receipt of application through proper channel to this office                    |
|---|----------------|--|
| M. Tech in Dam Engineering (to be applied online: <a href="http://www.iisc.ac.in/admissions">http://www.iisc.ac.in/admissions</a> and <a href="http://www.iisc.ac.in/admissions/programmes">http://www.iisc.ac.in/admissions/programmes</a> )   | IISc Bangalore | <b>13.03.2023</b> (online applied form is to be download and to be submitted to this office) |
| M. Tech in Dam Safety and Rehabilitation (Brochure & Application attached)  | IIT, Roorkee   | <b>30.04.2023</b>  |
| M. Tech in Hydrology (Brochure & Application attached)  | IIT, Roorkee   |  |
| M. Tech in WRD, IWM (Brochure and application may be downloaded from website: <a href="https://iitr.ac.in/Departments/Water%20Resources%20Development%20and%20Management%20Department/Academics/Programmes.html">https://iitr.ac.in/Departments/Water%20Resources%20Development%20and%20Management%20Department/Academics/Programmes.html</a> ) |                |  |

It is to inform that the applications will be forwarded as per the CCS (Leave) Rules, 1972 and amendments made from time to time and sponsored by CWC on Study Leave basis.

Enclosure: as above

Signed by Venkateswarlu E.

Date: 24-02-2023 20:06:26

Reason: Approved (Venkateswarlu E.)  
Dy. Director (Training)

Copy to:

1. All Chief Engineers, Central Water Commission (HQ & Field Offices).
2. Director, D&RC/WP&PC/RMC Dte., CWC, New Delhi.
3. Secretary/Director (TC), CWC, New Delhi.
4. CWC Website/E-Office Notice Board.

Copy also forwarded to the following for kind information and further action from their end.

1. Chairman, GFCC, Patna.
2. Member Secretary, Upper Yamuna River Board, WB-I, New Delhi.
3. Chief Engineer (TCD), Central Electricity Authority, New Delhi.
4. Director (R&D), DoWR, RD & GR, WB-I, New Delhi.

नई लाइब्रेरी बिल्डिंग,  
राम कृष्ण पुरम, नई दिल्ली : 110066  
दूरभाष : 011-29583531,  
ईमेल:trngdte@nic.in

जल संरक्षण – सुरक्षित भविष्य



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Tel:011-29583531  
Email: trngdte@nic.in

Conserve Water - Save Life

# ADMISSION BROCHURE 2023-24

M.TECH.  
DAM SAFETY AND  
REHABILITATION



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

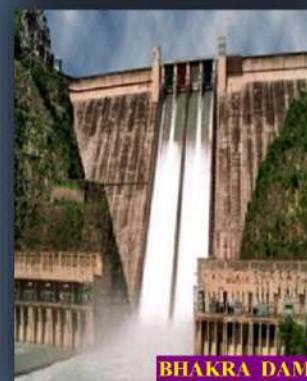
ROORKEE- 247 667 (INDIA)



## INDIA'S ICONIC DAMS



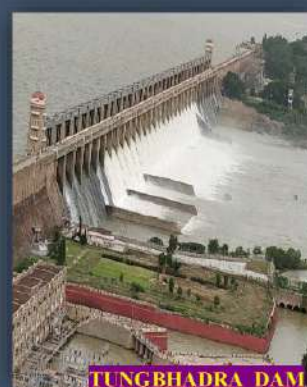
TEHRI DAM



BHAKRA DAM



HIRAKUD DAM



TUNGBHADRA DAM



SARDAR SAROVAR DAM



## Background of the Course


India has 5334 large dams in operation, and about 411 are under construction. There are more than 90,000 small and medium dams in the country, in addition to large dams. These dams have been built to ensure water safety, which is essential for food and energy security. In addition to this, there are numerous dams all over the world. IIT Roorkee has played a significant role in designing and executing these dams since its inception in 1847.

The safety of these dams is of utmost importance. Many of the existing dams are very old and need rehabilitation. Keeping these concerns in view, the Ministry of Water Resources, River Development & Ganga Rejuvenation, through the Central Water Commission, initiated the DRIP project in April 2012 with World Bank's assistance. IIT Roorkee is the academic partner in this Programme. To cover more dams in the project, phase II and phase III of the DRIP programme have been approved by the Ministry of Jal Shakti, Government of India, on October 29, 2020. The dam safety bill 2021 was enacted on December 14, 2021, and it makes it mandatory for dam owners to ensure the safety of their dams.

Considering the importance of dam safety and rehabilitation, IIT Roorkee started a new M Tech. Programme in dam safety and rehabilitation with effect from session 2021–22. The third batch of the programme will be starting with effect from July 17, 2023. The Programme is jointly run under the aegis of **International Centre of Excellence for Dams** by the faculty members drawn from Departments of Hydrology, Civil Engineering, Earthquake Engineering, Water Resources Development and Management, and Architecture and Planning.

## About the Institute

Indian Institute of Technology Roorkee has its roots in the Roorkee College, established in 1847 as the first engineering college in India. It was rechristened as Thomason College of Civil Engineering in 1854 after its mentor James Thomason. After about 100 years of distinguished services, the college was elevated to the University of Roorkee on November 25, 1949, as the first Engineering University of independent India. On September 21, 2001, the University was converted into an IIT by the Government of India. IIT Roorkee is one of the biggest technical institutions in the country having the largest number of academic units. It has 23 academic departments covering engineering, architecture and planning, humanities & social sciences, and management programmes, 1 school, 6 academic centres, 7 academic service centres and 6 supporting units. IIT Roorkee is offering various courses like 12 undergraduate courses in engineering and architecture, 3 dual degree programmes and about 48 postgraduate courses in engineering, architecture, sciences, computer



applications and business administration, besides research programmes at the doctoral level.

IIT Roorkee has a highly qualified and motivated faculty of about 500+ members engaged in research, consultancy, and teaching. The faculty members offer their expertise through consultancy services to private/public sector and government agencies. Currently, the Institute has around 8000+ students, with approximately 50% as undergraduate students, 20% as postgraduate students and 30% as research scholars.


Several academic and research centres of the Institute are engaged in interdisciplinary research, and many collaborative programmes exist with institutions in India and abroad. Central Library has more than 4,00,000 volumes of books and periodicals. Institute Computer Centre, Education Technology Cell with a full-fledged television studio, Continuing Education Centre, and Institute Instrumentation Centre with highly sophisticated instruments also serve the Institute community's needs as central facilities.

IIT Roorkee is entirely residential, with well-designed hostels (Bhawans) both for boys and girls, and family accommodation for married students, a sprawling sports ground, a swimming pool, a boat club, and a host of students' clubs with facilities for different games, including tennis, squash, and billiards etc. The Institute offers various extra-curricular activities like NCC, rowing, mountaineering, and trekking, which provide excellent opportunities for self-development. The campus also houses a CBSE-affiliated senior secondary school.

## Eligibility for Admission

The Programme is open for sponsored officers from India and abroad with two years of relevant experience in Dam safety, rehabilitation and other associated areas. GATE-qualified fresh engineering graduates with valid GATE scores are also admitted to the programme.

### Eligibility for Sponsored Candidates\*

1. Graduation/ Post Graduation degree in Civil/ Mechanical/ Earthquake/ Hydrology/ Water Resources Engineering/ equivalent,
  2. Post-graduation degree in Physics/ Mathematics/ Geology/ Geophysics; Environmental Engineering/ equivalent,
  3. Any other degree acceptable to the State Implementing agencies for regular appointment in the dam safety wings.
- 



\*The candidates applying for admission must have at least 60% aggregate marks or 6.00 CGPA on a 10–point scale at qualifying Graduation/ Post Graduation degree. For Indian candidates belonging to SC/ST category, the qualifying percentage is 55% aggregate marks or 5.5 CGPA on a 10–point scale. SC/ST category candidates must submit the requisite certificate along with the application from a competent authority.

### Eligibility for GATE Qualified Candidates

1. B.E./ B. Tech degree in Civil Engineering/ equivalent with valid GATE score.

## How to Apply

### In-Service Engineers/ Officers

1. In service engineers/ officers should send their application through their departments at the following address:  
**Prof. N.K. Goel,**  
Coordinator, M Tech. course on Dam Safety and Rehabilitation,  
IIT Roorkee, Roorkee –247667,  
[coordinator.dsr@iitr.ac.in](mailto:coordinator.dsr@iitr.ac.in); [goelhy@gmail.com](mailto:goelhy@gmail.com);  
Mobile: +91–9412393851; *(Preferably leave WhatsApp message/ SMS before calling)*  
Office: +91–1332–285814 *(Preferable number between 9 am to 8 pm on working days)*
2. The advanced applications may be sent to the [coordinator.dsr@iitr.ac.in](mailto:coordinator.dsr@iitr.ac.in) for checking the eligibility for admission. This should be done as soon as possible and latest by May 31, 2023. The sponsorship letter by the government will be required by June 26, 2023. The admission letter will be issued by June 30, 2023, for the candidates who have been duly sponsored by their Departments and selected by IIT Roorkee.
3. A copy of the application should be sent to CPMU of CWC also at [dir-drip-cwc@nic.in](mailto:dir-drip-cwc@nic.in).
4. The candidates applying for admission must have at least 60% aggregate marks or 6.00 CGPA on a 10–point scale at the qualifying degree level. For Indian candidates belonging to SC/ST category, the qualifying percentage is 55% aggregate marks or 5.5 CGPA on a 10–point scale. SC/ST category candidates must submit the requisite certificate along with the application from a competent authority.
5. The officers should not bring their families in the beginning. The family should be brought only after getting the family accommodation by IIT Roorkee. Otherwise, the officers should make their own arrangements for family accommodation outside the IIT R campus.

6. GATE-qualified fresh engineers should apply through the PG admission portal of IIT Roorkee. This form is primarily for the sponsored officers working in dam safety and rehabilitation and associated fields in India and abroad.
7. International students can apply through ITEC/ICCSR/ASEAN or other MEA portals through Indian Embassies in their respective countries. Such students can also apply through the International Relations Portal of IIT Roorkee <https://ir.iitr.ac.in/HowToApply>.

### Number of Seats: 30

22 for sponsored officers and 8 for GATE-qualified fresh graduates. 5 seats are reserved for foreign in-service engineers engaged in dam safety activities.

### Faculty

The Programme is jointly delivered by the IIT Roorkee faculty members drawn from the Departments of Hydrology, Civil Engineering, Earthquake Engineering, WRDM, Architecture and Planning, and the National and International experts under the aegis of **International Centre of Excellence for Dams**.

## Fees & Estimated Annual Expenses

### International Candidates

International candidates sponsored by various agencies/organisations must pay the Institute fee at the following rates:

1. Candidates from SAARC countries — US\$ 2000 (per annum)
2. Candidates from other countries — US\$ 4000 (per annum)
3. Admission fee – US\$ 500 (one time at the time of admission)

The International officers should ensure their funding source at their end and send the application only through the sponsoring agency.

### Indian Sponsored / Govt Sponsored International Candidates

1. The total fee to be paid to the Institute is of the order of **Rs. 200,000**. The Institute fee is paid semester-wise. The notification for the fee for the session 2022-23 is given in Annexure I. The fee for the session 2023-24 shall be notified in the month of May/June.
2. The Institute fee is required to be paid in four instalments at the beginning of each semester by the candidates who are selected and admitted to the course. Provisions may be made to either pay this amount in advance to



the officers being deputed or reimburse the amounts to them on receipt of the Institute fee receipt.

3. Other expenses like field Trips, Books, Lecture notes etc., shall be as per actuals.
4. The sponsoring organisations shall also bear the expenses related to the sponsored officers' salary, travel expenses related to the course, and dearness allowance for the days of absence from the headquarters of the sponsoring organisations as per Gol rules. Such costs will be directly payable to the candidates, and the officers shall be treated on duty during the Programme.

## List of Courses:

| Course   | Semester |
|--|----------|
| 1. Basics of Disaster Management and its Implementation Concepts | First    |
| 2. Hydrologic Safety Evaluation of dams                          | First    |
| 3. Programme Elective Course –I                                  | First    |
| 4. Programme Elective Course –II                                 | First    |
| 5. Sediment Management in Reservoirs                             | Second   |
| 6. Dam Safety Surveillance, Instrumentation and Monitoring       | Second   |
| 7. Seminar   | Second   |
| 8. Programme Elective Course –III                                | Second   |
| 9. Programme Elective Course –IV                                 | Second   |
| 10. Programme Elective Course –V                                 | Second   |
| 11. Dissertation Stage-I (to be continued next semester)         | Third    |
| Dissertation Stage-II (contd. From the third semester)           | Fourth   |

## List of Programme Electives:

1. Assessing and Managing Risks Associated with Dams
2. Seepage through Dams
3. Assessment and Management of Environmental issues in Reservoirs
4. Earthquake Geotechnical Engineering
5. Study tour/ Case studies
6. Geo-Mechanics
7. Geospatial Technology for Monitoring of Dams
8. Hydraulic and structural design of dams, spillways, and energy Dissipators
9. Ground Improvement and Geo-synthetics
10. Contract and Financial Management
11. Sustainable Tourism around Dams

12. Earth Retaining Structures and Dams (Concrete, RCC, CFRD, Arch, Earth, Rockfill dams & Barrages)
13. Seismic Safety of Embankment Dams
14. Concepts of Planning & Design of Hydro-Mechanical Components in Dams
15. Engineering Seismology and Hazard Assessment for dams





## APPLICATION FORM

**M. TECH. PROGRAMME ON DAM SAFETY AND REHABILITATION  
INTERNATIONAL CENTRE OF EXCELLENCE FOR DAMS**

**3<sup>rd</sup> Course: July 17, 2023, to July 16, 2025**

*(IMPORTANT: Applicant may please ensure that he/she satisfies the necessary eligibility criteria)*

An advance copy of the completed application and academic transcripts (in English) be directly sent to **Prof. N.K. Goel, Coordinator, M. Tech. Programme on Dam Safety and Rehabilitation, International Centre of Excellence for Dams, Department of Hydrology, Indian Institute of Technology Roorkee, Roorkee- 247667, India** (email IDs: [coordinator.dsr@iitr.ac.in](mailto:coordinator.dsr@iitr.ac.in); [goelhy@gmail.com](mailto:goelhy@gmail.com)) on or before May 31, 2023.

1. Full Name: .....  
in block letters (underline surname)
2. Father's Name .....
3. Mother's Name .....
4. Gender (Male/ Female) .....
5. Nationality: .....  
(Any change in nationality may be indicated with the period)
6. Date and Place of birth: .....
7. Parentage (your country of origin): .....
8. Passport details (for foreign candidates only)
 

|                  |                 |
|------------------|-----------------|
| Passport number: | Place of Issue: |
| Date of Issue:   | Date Validity:  |
9. Present address (correspondence address):  
House No. /Flat No and street:  
City/Town with Pin Code:  
State and Country:  
Mobile no with country code:  
Email:
10. Emergency address:  
House No. /Flat No and street:  
City/Town with Pin Code:  
State and Country:  
Mobile No with Country Code:  
Email:

Photograph

11. Official Address:  
House No. /Flat No and street:  
City/Town with Pin Code:  
State and Country:  
Mobile No with Country Code:  
Email:
12. Dates and place of the previous stay in India *(for International Applicants Only)*:  
.....
13. Occupation: .....
14. Expected duration of stay: .....
15. Places to be visited: .....
16. Name of Indian Mission where visa will be applied *(for International Applicants only)*  
Name of City and Country:  
Phone No.:  
Email:
17. Source of funding: .....
18. Whether accompanied by spouse/ dependent. If so. give particulars:  
Name:  
Passport number: Place of Issue:  
Date of Issue: Date Validity:  
(Family to be brought only after ensuring the permission and accommodation availability)
19. Qualifying Degree: .....
20. Mathematics at Graduation Level (Yes/No): .....
21. Qualifications (highest Degree first): *(Attach photocopies of mark sheets & certificates)*

| College/Institute Name & address | Degree or Examination passed | Year of Passing | Division with % of marks secured | Minimum duration of the Degree | Main Subject(s) |
|----------------------------------|------------------------------|-----------------|----------------------------------|--------------------------------|-----------------|
|                                  |                              |                 |                                  |                                |                 |
|                                  |                              |                 |                                  |                                |                 |
|                                  |                              |                 |                                  |                                |                 |

Note: 1. The percentage in the qualifying should necessarily be given.

2. Certificate of equivalence should be given if the name of the Degree is not the same as per essential Qualifications mentioned.

3. Duration of the qualifying degree after 10+2 education after preschool should be necessarily mentioned.



22. Professional/ work experience (Starting from the recent one):

| Name of Department/<br>Organisation | Position held | Period |    | Details of work done |
|-------------------------------------|---------------|--------|----|----------------------|
|                                     |               | From   | To |                      |
|                                     |               |        |    |                      |
|                                     |               |        |    |                      |
|                                     |               |        |    |                      |

23. Knowledge of the English language (read/write/speak): .....  
(Certificate for the level of proficiency attained be submitted)

24. Appeared in GRE or equivalent Examination (if yes, give details): .....

Place: .....

Date: .....

Signature of Applicant

### SPONSORED/ NO OBJECTION CERTIFICATE

The undersigned is pleased to permit Mr./Ms. .... who is working in this organization for the last.....years (from ..... to ..... ) and is presently holding the rank/position of ..... for pursuing the M. Tech. in Dam Safety and Rehabilitation at IIT Roorkee.

His/her conduct and character has been good.

The Institution/Organization would relieve her/him immediately of joining the above Programme if selected for admission. If admitted, the candidate will be permitted to be present at the Institute as required by the M Tech's academic schedule. He/ she will continue to remain in service of this organization for the duration of the course.

IIT Roorkee's Necessary fees shall be payable by the sponsoring organisation to IIT Roorkee directly or through the officer. The necessary allowances shall be directly paid to the officer as per rules.

Signature of Head of the  
Institute/Organization with seal

Place: .....

Name: .....

Date: .....

Designation: .....

## Annexure I

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**  
**FEE STRUCTURE FOR NEW M.Tech./M.Arch./M.U.R.P./M.Des STUDENTS TO BE ADMITTED AFTER 11.04.2022**  
**(FOR SESSION 2022-23)**

| Particulars  | APPLICABLE TO 2022-23 BATCH              |                 |  |                 |
|--|--|-----------------|--|-----------------|
|  | M.Tech./M.Arch./M.U.R.P./M.Des. 1st Year |                 | M.Tech./M.Arch./M.U.R.P./M.Des. 2nd Year |                 |
|  | Autumn Semester                          | Spring Semester | Autumn Semester                          | Spring Semester |
| <b>I. Semester Fees (To be paid every Semester)</b>      |  |                 |  |                 |
| <b>1. Institute Fees</b>                                 |  |                 |  |                 |
| (a) Tuition Fees – Gen/OBC and Q.I.P./IITR-Staff         | 5000                                     | 5000            | 5000                                     | 5000            |
| (b) Tuition Fees – Sponsored candidates                  | 25000                                    | 25000           | 25000                                    | 25000           |
| (c) Tuition Fees – SC/ST/PD (Not chargeable)             | 0  | 0               | 0  | 0               |
| <b>2. Semester charges</b>                               |  |                 |  |                 |
| (a) Student Establishment & Maintenance (Non refundable) | 7000                                     | 7000            | 7000                                     | 7000            |
| (b) Medical Insurance                                    | 750                                      | 750             | 750                                      | 750             |
| (c) Miscellaneous  | 2500                                     | 2500            | 2500                                     | 2500            |
| <b>Total (a+b+c)</b>                                     | <b>10250</b>                             | <b>10250</b>    | <b>10250</b>                             | <b>10250</b>    |
| <b>3. Hostel Charges (Per Semester)</b>                  |  |                 |  |                 |
| (a) Accommodation  | 6000                                     | 6000            | 6000                                     | 6000            |
| (b) Electricity*   | 3000                                     | 3000            | 3000                                     | 3000            |
| <b>Total (a+b)</b>                                       | <b>9000</b>                              | <b>9000</b>     | <b>9000</b>                              | <b>9000</b>     |
| <b>II. One time payments at the Time of Admission</b>    | <b>6000</b>                              | <b>0</b>        | <b>0</b>                                 | <b>0</b>        |
| <b>III. Deposits (Refundable)</b>                        |  |                 |  |                 |
| (a) Institute Caution Deposit                            | 1000                                     | 0               | 0  | 0               |
| (b) Library Deposit                                      | 2000                                     | 0               | 0  | 0               |
| <b>Total (a+b)</b>                                       | <b>3000</b>                              | <b>0</b>        | <b>0</b>                                 | <b>0</b>        |
| <b>IV. Mess Charges</b>                                  |  |                 |  |                 |
| (a) Mess Advance towards Food Charges**                  | 20400                                    | 20400           | 20400                                    | 20400           |
| (b) One Time Mess Admission Fee (Non refundable)         | 4000                                     | 0               | 0  | 0               |
| (c) Mess Security (Refundable)                           | 2000                                     | 0               | 0  | 0               |
| <b>Total (a+b+c)</b>                                     | <b>26400</b>                             | <b>20400</b>    | <b>20400</b>                             | <b>20400</b>    |
| <b>Grand Total for Gen/OBC and Q.I.P./IITR-Staff</b>     | <b>59650</b>                             | <b>44650</b>    | <b>44650</b>                             | <b>44650</b>    |
| <b>Grand Total for Sponsored candidates</b>              | <b>79650</b>                             | <b>64650</b>    | <b>64650</b>                             | <b>64650</b>    |
| <b>Grand Total for SC/ST/PD</b>                          | <b>54650</b>                             | <b>39650</b>    | <b>39650</b>                             | <b>39650</b>    |

**NOTE:**

- \* This is the minimum charge for Bachelor Hostel. For married accommodation charges will be as per actual.
- \*\* Mess Advance towards food charges is subject to adjustment as per actual.
- Candidates admitted under EWS have to pay fee according to their respective categories i.e. General/OBC/SC/ST/PD.

20/5/22  
 महावीर सिंह / MAHAVEER SINGH  
 सहायक कुलसचिव / Asstt. Registrar  
 छात्र कल्याण / Students Welfare  
 मा. प्रौ. सं. रायबरी / I.I.T. Roorkee

MIC Borne  
 20/5/22  
 (DOSW)  
 अतिरिक्त, छात्र कल्याण  
 Dear of Students' Welfare  
 भारतीय प्रौद्योगिकी संस्थान रायबरी  
 Indian Institute of Technology Roorkee



# ADMISSION BROCHURE

(52nd International Course)

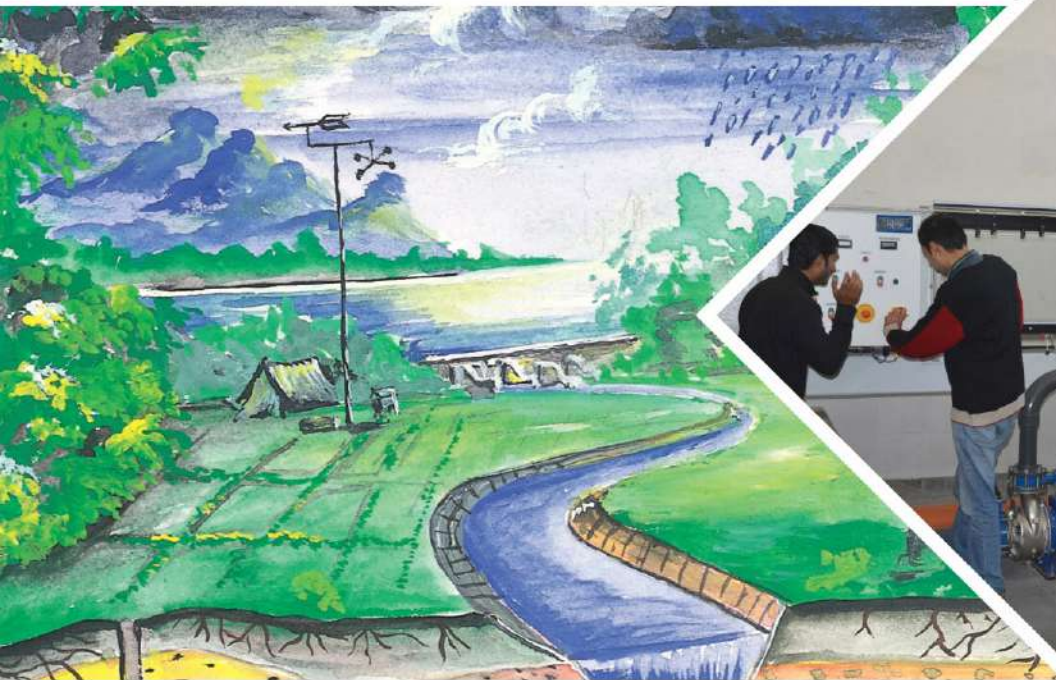
P.G. Diploma / M. Tech. (Hydrology)

## 2023-24

Indian Institute of Technology Roorkee



173 YEARS OF  
IIT ROORKEE  
ESTD. 1847



**WMO - REGIONAL TRAINING CENTRE**

(Region Association - II)

SPONSORED BY  
MINISTRY OF EXTERNAL AFFAIRS (ITEC/SCAAP)  
GOVERNMENT OF INDIA



**DEPARTMENT OF HYDROLOGY**

**Indian Institute of Technology Roorkee**

**Roorkee-247667, India**

<https://hy.iitr.ac.in>



Last date for receipt of completed application form June 20, 2023

|                    |   |                          |
|--------------------|---|--------------------------|
| Director           | : | Prof. Kamal Kishore Pant |
| Head of Department | : | Prof. Brijesh K. Yadav   |

## FACULTY

|                          |                     |                                   |
|--------------------------|---------------------|-----------------------------------|
| Prof. Brijesh K. Yadav   | Professor           | Groundwater Hydrology             |
| Prof. N. K. Goel         | Professor           | Stochastic Hydrology              |
| Prof. Himanshu Joshi     | Professor           | Environmental Hydrology           |
| Prof. D. S. Arya         | Professor           | Hydroinformatics                  |
| Prof. Manoj K. Jain      | Professor           | Watershed Modelling & Management  |
| Prof. Sumit Sen          | Associate Professor | Watershed Modeling                |
| Prof. Ankit Agarwal      | Assistant Professor | Bigdata & Hydroinformatics        |
| Prof. Bhaskar Jyoti Deka | Assistant Professor | Desalination & Membrane Science   |
| Prof. Ashutosh Sharma    | Assistant Professor | Hydroclimatology and Ecohydrology |

*Experts from other Departments/Centres are also associated to deliver lectures in their areas of specialization as per requirements.*

## ADMINISTRATIVE PERSONNEL

|                            |  |
|----------------------------|--|
| Prof. U.P. Singh           | Deputy Director                                      |
| Prof. M.L. Sharma          | Dean (Finance & Planning)                            |
| Prof. D.S. Arya            | Dean (Administration)                                |
| Prof. Partha Roy           | Dean (Resources & Alumni Affairs)                    |
| Prof. Apurbba Kumar Sharma | Dean (Academic)                                      |
| Prof. Akshay Dvivedi       | Dean (Sponsored Research and Industrial Consultancy) |
| Prof. A.K. Sharma          | Dean (Faculty Affairs)                               |
| Prof. Mukesh Kumar Barua   | Dean (Student's Welfare)                             |
| Prof. V. C. Srivastava     | Dean (International Relations)                       |
| Mr. Prashant Garg          | Registrar  |



## From Director's Desk



Water is part of a larger ecological system. It is one of the most crucial elements in developmental planning. Uneven distribution of rain, influenced by anthropogenic changes, including climatic changes have led to a frequent scenario of simultaneous floods and droughts in different parts of the same geographic region. Without adequate capacity building in the water sector, it is difficult to manage such problems. It is likely that, in the foreseeable future, major problems involving interaction of man with the hydrological environment on the global scale, such as climate change, will increasingly require the attention of experts from many disciplines, including that of scientifically trained hydrologists. Therefore, hydrological education is an important aspect of the national policy of any country for capacity building in the water sector. Realization of this viewpoint led to the establishment of a number of international post-graduate courses in hydrology under the ambit of the UNESCO's International Hydrology Decade launched in 1965.

The Department of Hydrology (DoH) at Indian Institute of Technology Roorkee came into existence in 1972 with the inception of the international Post-graduate course in Hydrology at Roorkee. The course offered by the Department of Hydrology is presently being sponsored by the Government of India and international organizations like World Meteorological Organization (WMO). Recognizing the contributions of the department in the capacity building of national and international professionals in the area of hydrology, WMO has recognized DoH as a Regional Training Centre (RTC) since 2015. Besides running regular academic programs for training engineers/ scientists from Asia, Africa and other developing countries, the department also undertakes research and consultancy projects on different hydrological aspects.

This brochure describes facilities available in the department, its academic programs, faculty, eligibility criteria for admission, fellowships available, application procedure and estimates of annual expenditure. The format of the application form is also given in the brochure.

I invite the prospective applicants working in various water-related organizations in India and abroad to participate in education and training programs offered by the department.

**Prof. Kamal Kishore Pant**  
Director, IIT Roorkee

## ABOUT THE INSTITUTE

Indian Institute of Technology Roorkee has its roots in the Roorkee College established in 1847 as the first engineering college in India, which was rechristened as Thomason College of Civil Engineering in 1854 after its mentor James Thomason. After about 100 years of distinguished services, the college was elevated to University of Roorkee on November 25, 1949 as the first Engineering University of the independent India. On September, 2001, the University was converted into an IIT by the Government of India. It has now 23 academic departments/centres offering various courses like 10 undergraduate courses in engineering and architecture, 3 dual degree programmes and about 55 postgraduate courses in engineering, architecture, sciences, computer applications and business administration besides research programmes at doctoral level.

IIT Roorkee has highly qualified and motivated faculty of about 513 members who are engaged in research and consultancy in addition to teaching. The faculty members offer their expertise through consultancy services to private/public sector agencies as well as to Government agencies. Currently the institute has 4916 undergraduate students, 1484 postgraduates and 2813 research scholars.

A number of academic and research centres are engaged in interdisciplinary research, and many collaborative programmes exist with institutions in India and abroad. Several other central facilities exist such as Central Library which has more than 4,00,000 volumes of books and periodicals, Institute Computer Centre, Education Technology Cell with full-fledged television studio, Continuing Education Centre and Institute Instrumentation Centre with highly sophisticated instruments etc.

IIT Roorkee is fully residential, with well-designed hostels (Bhawans) both for boys and girls, and family accommodation for married students, sprawling sports ground, a swimming pool, a boat club and a host of students clubs with facilities for different games including tennis, squash, billiards etc. The institute offers activities like NCC, rowing, mountaineering and trekking all of which provide excellent opportunities for self-development. The campus also houses a CBSE affiliated senior secondary school.

## 1. DEPARTMENT OF HYDROLOGY

The period from 1965 to 1974 witnessed the establishment of a number of International Post Graduate Courses in Hydrology under the UNESCO's International Hydrology Decade. The training and education in Hydrology was one of the main components of this programme. In 1972, with the inception of the International Post-Graduate Course, the Department of Hydrology (DoH) marked its beginning. The courses offered by the Department are presently sponsored by the Government of India and international agencies like UNESCO, World Meteorological Organisation (WMO) etc. Till date, a total of 1094 participants including 385 foreign participants from 43 countries have participated in the Post-Graduate Programmes (ANNEXURE-1).

Since 2003, the Department has widened its horizon by offering admissions to the GATE qualified fresh engineering and science graduates. The Department of Hydrology has been recognized as one of the WMO-Regional Training Centre in 2015.

**Vision** : To be the fountainhead of new ideas and innovations in hydrology

**Mission** : Capacity building through education and training, and conducting pioneering research to seek scientific and engineering solutions in the field of hydrology.

**Website** : <https://hy.iitr.ac.in>

### Faculty

|                          |                  |   |
|--------------------------|------------------|---|
| Prof. Brijesh K. Yadav   | Professor & Head | Groundwater Hydrology, Bioremediation                       |
| Prof. N.K. Goel          | Professor        | Stochastic Hydrology  |
| Prof. Himanshu Joshi     | Professor        | Environmental Hydrology                                     |
| Prof. D.S. Arya          | Professor        | GIS & RS, Surface Water Modelling, Climate Change           |
| Prof. M.K. Jain          | Professor        | Watershed Modelling & Management, GIS & RS                  |
| Prof. Sumit Sen          | Assoc. Professor | Watershed Modelling, Experimental Hydrology                 |
| Prof. Ankit Agarwal      | Asstt. Professor | Big Data Hydrology, Climate Science                         |
| Prof. Bhaskar Jyoti Deka | Asstt. Professor | Membrane Science, Desalination, Water/Waste Water Treatment |
| Prof. Ashutosh Sharma    | Asstt. Professor | Hydroclimatology, Ecohydrology, Machine Learning            |

## 2. PROGRAMMES OFFERED

The Department offers the following academic programmes:

- **P.G. Diploma (Hydrology):** It is a 12-months academic programme, which includes classroom lectures, tutorials and practicals and a seminar.
- **M.Tech. (Hydrology):** It is a 24-months academic programme. It includes classroom lectures, tutorials and practicals and a seminar in the first year. In the second year, the student devotes himself to a research topic and continuously works on it, leading to the completion of dissertation.



- **Ph.D. (Hydrology):** The Department also offers Ph.D programme. For more information, please refer to our website [www.iitr.ac.in](http://www.iitr.ac.in). Currently, 42 scholars are registered for pursuing their research leading to Ph.D. degree.

### 3. LANGUAGE OF INSTRUCTION : ENGLISH

### 4. INTAKE FOR P.G. DIPLOMA/ M.TECH.

The sanctioned intake for P.G. Diploma and M.Tech. programmes is forty five (45). Out of this, twenty four (24) candidates are selected from different government/semi-government organizations from India and abroad whose candidature will be officially sponsored. Twenty one (21) seats are earmarked for candidates having valid GATE score. Candidates working in National and International Government/Semi Government/PSU organizations/ International agencies are eligible to apply based on this Information Brochure. Selection of GATE qualified candidates will be made through a separate announcement of admission made by PG Admission Office of IIT Roorkee.

### 5. SPECIALIZATIONS IN P.G. DIPLOMA/ M.TECH.

A candidate can opt for pursuing P.G. Diploma/M.Tech. studies in any of the following specializations offered by the Department:

- Surface Water Hydrology
- Groundwater Hydrology
- Watershed Management

The courses offered under these specializations consist of core courses and elective courses. The core courses of different specializations are as follows:

| Surface Water Hydrology  | Groundwater Hydrology   | Watershed Management  |
|--|---|---|
| <ul style="list-style-type: none"> <li>• Channel and Fluvial Hydraulics</li> <li>• Deterministic Hydrology</li> <li>• Stochastic Hydrology</li> <li>• Surface Water Modeling and Simulation</li> <li>• Environmental Planning and Assessment of Projects</li> <li>• Hydrometeorology and Climate Change</li> <li>• Bigdata and Hydroinformatics</li> </ul> | <ul style="list-style-type: none"> <li>• Groundwater Hydrology</li> <li>• Geophysical Investigations</li> <li>• Environmental Quality</li> <li>• Groundwater System Analysis</li> <li>• Soil and Groundwater Contamination Modelling</li> <li>• Multi-phase Flow through Porous Media</li> <li>• Vadose Zone Hydrology</li> </ul> | <ul style="list-style-type: none"> <li>• Hydrologic Elements and Analysis</li> <li>• Watershed Behaviour and Conservation Practices</li> <li>• Remote Sensing and GIS Application</li> <li>• Watershed Modeling and Simulation</li> <li>• Irrigation and Drainage Engineering</li> <li>• Planning and Management of Watersheds</li> <li>• Experimental Hydrology</li> </ul> |

The students are free to choose elective courses offered by this Department as well as other departments to strengthen their base depending upon their inclination towards other disciplines. Delivering a seminar in the second semester is now an integral part of PG Diploma/M.Tech. programme.

Working on a dissertation problem is an important aspect of the M.Tech. programme. The students carry out hydrological analysis required for a comprehensive thesis in their fields of specialization.

## 6. ELIGIBILITY FOR ADMISSION

Candidates with the following academic qualifications are eligible to apply for admission to PG Diploma/ M.Tech programme in Hydrology.

### **(a) Academic Qualifications (any one of the following)**

- (i) Bachelor's degree in Civil/Agricultural Engineering/Hydrology or its equivalent qualification
- (ii) M.Sc./M.Tech. (Master's) degree in Chemistry/Geology/Geophysics/Applied Geology/Applied Geophysics/Physics/Meteorology/Geography/Atmospheric Physics/ Environmental Science, with Mathematics in B.Sc. (Bachelor's) course as one of the subjects
- (iii) M.Sc. (Master's) Degree in Statistics with Physics or Mathematics at B.Sc. (Bachelor's) level
- (iv) M.Sc. (Master's) Degree in Mathematics with Physics in B.Sc. (Bachelor's) level, or its equivalent
- (v) A.M.I.E. (Civil) with B.Sc. or Engineering Diploma qualifications with at least 3 years research/teaching/ other professional experience in responsible capacities.

### **(b) Conditions for full time sponsored/nominated candidates only:**

- (i) Candidates seeking admission to the P.G. Diploma/ M.Tech. programme in Hydrology and who possess the required qualification(s) stated above must have at least **60% aggregate marks** or **6.00 CGPA on a 10 point scale** at qualifying degree level.

For Indian candidates belonging to SC/ST category, the qualifying percentage is **55% aggregate marks** or **5.5 CGPA on a 10 point scale**. SC/ST category candidates must submit the requisite certificate from a competent authority along with the application.

- (ii) Full time sponsored candidates must have a **minimum of two years of full time work experience by the last date of submission of application form** in a responsible capacity in a registered Firm/ Company/ Industry/Educational and Research Institution/Govt. or Quasi-Govt./ Autonomous Organizations in the relevant field(s) in which admission is being sought. The Firm/Company/ Industry should either be a public sector undertaking or a public limited undertaking or a private agency whose annual turn-over during the last two years exceeded Rs. 5 Crores. Educational institutions sponsoring the candidates should be recognized by AICTE (*Indian candidates only*).

Note: The candidates working in Institute/University awarding PG degree itself are not eligible to apply under this category

- (iii) Candidates must submit the sponsorship certificate duly signed by the Head of the Institution/ Organization on the prescribed proforma (ANNEXURE-2) at the time of admission.

**Note :-**

- Candidates working in National and International Government/Semi Government/PSU organizations/International agencies are eligible to apply based on this Information Brochure. Remaining candidates can apply through the advertisement released by PG Admission Office in the month of March every year.
- Part-time sponsored candidates can be admitted in accordance with the prevailing ordinances/ regulations of IIT Roorkee.
- A few Indian candidates may also be admitted under QIP schemes. Early Faculty Induction Programme (EFIP) of AICTE and Defence Research & Development Organization (DRDO) Schemes. For further details about admission in these schemes, candidate should contact PG Admission Office, Indian Institute of Technology, Roorkee – 247 667.
- Admissions, studentship and related matters are governed by the IIT Roorkee ordinances/regulations framed/amended/ modified and in vogue from time to time. Accordingly, the admission for session 2023-2024 will be as per the prevailing ordinances/ regulations.

## **7. SPONSORSHIP/ FELLOWSHIPS**

### **[A] Fellowships for International Candidates**

International candidates may apply through proper channel for the following fellowships. An advance copy of the fellowship form should be sent to the Department of Hydrology for admission processing.

#### ***(i) Government of India (GoI) Fellowships:***

The Government of India grants fellowships to foreign nationals under the Indian Technical Economic Cooperation (ITEC), Scheme of Govt. of India.

For ITEC fellowships, applications should be sent through the Indian Embassy/Legation in that country for onward transmission to IIT Roorkee. For details of ITEC fellowships, the candidate should visit the webpages of the respective schemes ([www.itecgoi.in](http://www.itecgoi.in)). Applicants have to follow the online application process of the respective schemes.

#### ***(ii) WMO Fellowships:***

A few fellowships may be offered by World Meteorological Organization (WMO), Geneva. The candidates are advised to check the availability of such fellowships from WMO and then apply to the course directly with IIT Roorkee. Once they have received an unconditional academic admission, the candidates should fill the WMO Fellowship Form available at <https://www.wmo.int/>.



The candidate should submit the Fellowship Form through the Permanent Representative of his/her country with WMO (<https://public.wmo.int/en/about-us/members/permanent-representatives>), to WMO Fellowship Division, Education and Training Department, World Meteorological Organization, 7 bis, Avenue de la Paix, Case Potale 2300, CH-1211, Geneva 2, Switzerland (Tel: 004122-7308292, FAX: 004122-7308041, email: fel@wmo.int).

**[B] International Candidates with other Sponsorship/ Fellowship**

Eligible candidates officially nominated through various government agencies (not covered under the Fellowship section) can also be admitted provided the sponsors give an undertaking that all the expenses including the teaching fees will be borne by the sponsors for which the payment to IIT Roorkee will be remitted in advance. Such applications should come through the Indian Embassy/Legation of that country to Head, Department of Hydrology, IIT Roorkee-247667, Uttarakhand, India. IIT Roorkee will communicate the amount of advance payment to be made to this effect.

**[C] GATE Qualified International Candidates**

GATE qualified non-sponsored foreign nationals may apply through their Embassy in India or Indian Embassy/Legation in their country.

**[D] Indian Sponsored Candidates**

Candidates working in Union and State Government Departments, Semi Government/PSU Organizations are eligible to apply under this category. No fellowship or financial assistance of any sort will be provided to them by IIT Roorkee. However, these candidates may be considered for assistantship in accordance with ordinances/regulations of IIT Roorkee.

## **8. FEE/ESTIMATED ANNUAL EXPENSES**

**[A] International Candidates**

International candidates sponsored by various agencies/organisations have to pay the Institute fee at the following rates:

- (i) Candidates from SAARC countries – US\$ 2000 (per annum)
- (ii) Candidates from other countries – US\$ 4000 (per annum)
- (iii) Admission fee - US\$ 500 (one time at the time of admission)

## **[B] Indian Sponsored Candidates/(ITEC) Sponsored International Candidates**

Approximate annual expenses under different heads are indicated in the Table on next page. Institute fee, Institute caution deposit, Library deposit and one time payment mentioned in part 'A' of the Table be remitted through Bank Draft drawn in favour of the Registrar IIT Roorkee, payable at Roorkee and be enclosed along with the Deputation Order/ Financial Sanction. It may be noted that the other expenses mentioned in part 'B' of the Table will be borne by the students. The sponsoring agency may sanction/reimburse hostel fee and other expenses directly to the candidates.

| <b>Expenditure</b>                          | <b>P.G. Diploma<br/>(1 year) (in Rs.)</b> | <b>M.Tech. Programme<br/>(2 years) (in Rs.)</b> |
|---|---|---|
| <b>[A].</b> (i) Institute Fee               | 62,500                                    | 1,25,000  |
| (ii) Institute caution deposit (refundable) | 1,000                                     | 1,000   |
| (iii) Library deposit*                      | 2,000                                     | 2,000   |
| (iv) Miscellaneous one time payments        | 5,000                                     | 5,000   |
| (v) Mess admission fee (one time)           | 4,000                                     | 4,000   |
| (vi) Others                                 | 10,000                                    | 10,000  |
| <b>[B].</b> Hostel fee                      | As per actual                             | As per actual                                   |

\*To be transferred in Alumni fund on the completion of programme.

**Note:** (i) The fee structure is provisional and may be modified by the institute as and when necessary, without intimation.  
(ii) Other expenses like field Trip, Books, Lecture notes etc. shall be as per actuals.  
(iii) Fee may be transferred electronically. Candidate may contact the Department for the same.

## **9. APPLICATION SUBMISSION**

Eligible candidates are advised to apply as per procedure detailed below:

### **9.1 International Candidates**

International Candidates working in Government / Semi Government / International Agencies are eligible to apply.

International Candidates may apply through proper channel through following fellowships:

#### **(i) Government of India (GoI) Fellowships:**

The Government of India grants fellowships to foreign nationals under the following schemes:

a. Indian Technical Economic Cooperation (ITEC)

For ITEC fellowships, applications should be sent through the Indian Embassy/Legation in that country for onward transmission to IIT Roorkee. For details of Gol fellowships, the candidate should visit the webpages of the respective schemes. For online application, the candidate may visit at: [www.itecgoi.in](http://www.itecgoi.in). The application portal opens anytime during May / June every year.

**(ii) WMO Fellowships:**

A few fellowships may be offered by World Meteorological Organization (WMO), Geneva. The candidates are advised to check the availability of such fellowships from WMO and then apply to the course directly with IIT Roorkee using the copy of the application form given in Annexure-2 of this brochure.

Completed applications should be forwarded to Head, Department of Hydrology, IIT Roorkee-247667, Uttarakhand, India [[hydrology.iitr@gmail.com](mailto:hydrology.iitr@gmail.com)]. Once they have received an unconditional academic admission, the candidates should fill the WMO Fellowship Form available at <https://www.wmo.int/>.

The candidate should submit the Fellowship Form through the Permanent Representative of his/her country with WMO (<https://public.wmo.int/en/about-us/members/permanent-representatives>), to WMO Fellowship Division, Education and Training Department, World Meteorological Organization, 7 bis, Avenue de la Paix, Case Potale 2300, CH-1211, Geneva 2, Switzerland (Tel: 004122-7308292, FAX: 004122-7308041, email: [fel@wmo.int](mailto:fel@wmo.int)).

**9.2 International Candidates with other Sponsorship/ Fellowship**

Eligible candidates officially nominated through various government agencies (not covered under the Fellowship section) can also be admitted provided the sponsors give an undertaking that all the expenses including the teaching fees will be borne by the sponsors for which the payment to IIT Roorkee will be remitted in advance. Such applications should come through the Indian Embassy/Legation of that country to Head, Department of Hydrology, IIT Roorkee-247667, Uttarakhand, India. IIT Roorkee will communicate the amount of advance payment to be made to this effect.

**9.3 GATE Qualified International Candidates**

GATE qualified non-sponsored foreign nationals may apply through their Embassy in India or Indian Embassy/Legation in their country.

**9.4 GATE Qualified Indian Candidates**

The GATE qualified candidates should apply as advertised by the PG Admission Office, IIT Roorkee. Candidates should apply only after declaration of the GATE results of the current year.



### 9.5 Indian Sponsored Candidates (Only from Government Departments)

The Indian Sponsored Candidates from Govt. Departments should apply through their employer. The candidate should apply online on the institute's M Tech admission portal through <https://iitr.ac.in/Academics/Admission%20To%20M.Tech.M.Arch.M.U.R.P.%20Programmes.html>. The filled-in online application may be downloaded and a print copy of the same should be submitted to obtain NOC from the employer. The NOC obtained from the employer along with a copy of the completed application should be posted to the Head, Department of Hydrology, IIT Roorkee-247667, Uttarakhand, India and should reach the department on or before June 20, 2023.

The following enclosures should be attached with the application form:

- (i) Two recent passport size photographs with name written at the back of the photographs.
- (ii) A Certificate of Health indicating applicant's general fitness to be issued by a physician of the Federal/Govt./ Official Health Services.
- (iii) Copies of academic transcripts giving the proof of aggregate percentage of marks/CGPA obtained. Attach attested copies in English language (translated version, if the original language is different). For M.Sc. degree holders, a certificate/mark sheet must be attached indicating the subjects offered in the B.Sc. course.
- (iv) SC/ST/OBC Certificate (to know more about authorities who may issue SC/ST/OBC Certificate as recognized by IIT Roorkee, visit our website) (applicable to Indian candidates only).

## 10. INSTRUCTIONS

- (i) Due to limited family accommodation, **candidates are advised not to bring their families at the beginning of the course**. Family accommodation may be provided as and when available as per rules.
- (ii) Selected candidates should bring with them 2 photographs, **original academic transcripts, authenticated English version of transcripts**, hydrological report/data, maps, charts etc. to work on seminar/ M.Tech. thesis.
- (iii) Each international student is required to register at the District Headquarter (Haridwar) within 15 days of his/her arrival in India.

## 11. INTERPRETATION OF IIT REGULATIONS

- (i) Dispute if any, arising out of or relating to any matters whatsoever concerning the admission and/or academic programme of P.G. Diploma/M.Tech in Hydrology, shall be subject to the exclusive jurisdiction of courts at Roorkee/ Uttarakhand State.
- (ii) In case of any dispute or difference of opinion in interpretation of IIT regulations or any other matter not covered in this brochure, the decision of the Chairman, Senate shall be final and binding.

- (iii) Not with standing anything contained in the regulations, the Chairman of the Senate may, in emergent situation, take such action on behalf of the Senate, as he deems appropriate and report it to the next meeting of the Senate for its approval.

## 12. OTHER ACADEMIC ACTIVITIES AND INFORMATION

The Department of Hydrology organises National/International Symposia/Conferences and tailor-made short-term courses. In the last five years, the Department has conducted more than 55 short-term programmes including international programmes. The Department also provides consulting services in the area of hydrology and water resources and has executed more than 60 such projects. Most of these were especially designed to cater to the needs of stakeholder organizations.

Department has following state-of-the-art laboratories:

- |   |  |
|---|--|
| (i) Hydrometeorological Observatory               | (ii) Computer Laboratory                   |
| (iii) Hydrological Information Systems Laboratory | (iv) Environmental Hydrology Laboratory    |
| (v) Groundwater Laboratory                        | (vi) Geophysical Investigations Laboratory |
| (vii) Watershed Hydrology Laboratory              | (viii) Research Scholar Lab                |
| (ix) Hydro Climx Lab                              | (x) Advanced Membrane Research Lab         |

The departmental library has a collection of over 7000 books, publications, and reports etc. on different facets of hydrology.

## 13. ABOUT ROORKEE CITY

Roorkee, a quiet city of moderate size in the district of Haridwar (Uttarakhand), is located on the banks of the Upper Ganga Canal, which originates at Haridwar. The city is located at Latitude  $29^{\circ} 52' N$  and Longitude  $77^{\circ} 53' E$  above 268 m mean sea level. It is about 30 km south of the Shivalik range of the mighty Himalayas, about 170 km to the north of Delhi and is situated on Amritsar-Howrah main railway line. Roorkee is linked by rail to many important mega cities such as Delhi, Kolkata, Chennai and Mumbai. Roorkee is also well connected by road, being located on the Delhi-Haridwar National Highway (NH 58), and on the Roorkee – Panchkula National Highway (NH 73).

The temperature ranges from  $3^{\circ} C$  to  $20^{\circ} C$  in winters (October to March) and from  $25^{\circ} C$  to  $40^{\circ} C$  in summers (April to September). The average annual rainfall is 1100 mm and bulk of it occurs from mid June to September.

Apart from the Institute, which is situated in a 150 hectare campus, Roorkee town is an important centre of engineering activities. It has Central Building Research Institute, National Institute of Hydrology, Irrigation Research Institute, Irrigation Design Organization, Headquarters of Bengal Engineering Group & Centre along with an important army base.

#### **14. NEAREST BUS STATION/ RAILWAY STATION/ AIRPORTS**

The Institute is located only 200 m away from Roorkee Bus Station and 2.5 km from Roorkee Railway Station. The nearest international airport is Indira Gandhi International Airport, New Delhi (approx. 200 km) and domestic airport is Jolly Grant Airport, Dehradun (approx. 60 km).

#### **CAMPUS LIFE**

Life at an IIT is always great, but at IIT Roorkee, it's a special blend of modern life and traditional values. What really pumps through the veins of its lifestyle is enthusiasm. It is the enthusiasm that brings every single student to venture new grounds and talents, and the campus does not fall short in providing a platform anywhere. Be it high-tech hostels, sports, arts, coding or even cultural, technical, entrepreneurship events, an exciting level of exposure is received by every student. This driving zeal to be so much more than just having an academic feather in the hat is what saturates the air.

For more details on student hostels, clubs, sports, Group and other facilities visit at [https://www.iitr.ac.in/campus\\_life/pages/index.html](https://www.iitr.ac.in/campus_life/pages/index.html)

#### **EVENTS AT IIT ROORKEE**

Thomso and cognizance is the youth festival of Indian Institute of Technology Roorkee recognized as one of the greatest and the grandest youth festivals of India, encompasses in itself lavish history, splendid culture and a profoundly rich heritage of IIT Roorkee. In addition, IIT Roorkee actively celebrate Yoga day, National Social summit and various forms of student-oriented program. IIT Roorkee has active Himalayan Exploration club-the student's organization of IIT Roorkee pioneering in trekking, mountaineering and adventure sports.

For more details <https://www.iitr.ac.in/dosw/pages/gallery.html>; <https://www.iitr.ac.in/hec/>

#### **INTERNATIONAL RELATIONS OFFICE**

From the inception of this institute in 1847, its international character is quite strong. The Institute is committed to international cooperation and has been actively involved in partnering with countries to develop initiatives in the fields of engineering, applied sciences, social science, and management education. To facilitate, assist and help inbound International students and outbound national students in all their academic pursuits, the International Relations Office plays an important role.

For further information, we request you to visit <https://ir.iitr.ac.in/>



# **PARTICIPATION IN INTERNATIONAL POST GRADUATE HYDROLOGY PROGRAMME DURING 1972-2023**

## **(B) COUNTRYWISE PARTICIPATION**

| S. No. | Country      | Trainees |
|--------|--------------|----------|
| 1.     | Afghanistan  | 18       |
| 2.     | Bangladesh   | 32       |
| 3.     | Bhutan       | 4        |
| 4.     | China        | 4        |
| 5.     | D.P.R. Yemen | 4        |
| 6.     | D.R. Congo   | 4        |
| 7.     | Egypt        | 3        |
| 8.     | Eritrea      | 1        |
| 9.     | Ethiopia     | 23       |
| 10.    | Fiji         | 1        |
| 11.    | Ghana        | 3        |
| 12.    | Guyana       | 1        |
| 13.    | India        | 709      |
| 14.    | Indonesia    | 32       |
| 15.    | Iran         | 14       |
| 16.    | Iraq         | 10       |
| 17.    | Jordan       | 1        |
| 18.    | Kazakhstan   | 3        |
| 19.    | Malaysia     | 2        |
| 20.    | Mauritius    | 1        |
| 21.    | Malawi       | 1        |
| 22.    | Mongolia     | 7        |
| 23.    | Morocco      | 1        |
| 24.    | Myanmar      | 14       |

| S. No.       | Country     | Trainees    |
|--------------|-------------|-------------|
| 25.          | Nepal       | 60          |
| 26.          | Nigeria     | 6           |
| 27.          | Pakistan    | 1           |
| 28.          | Palestine   | 1           |
| 29.          | Panama      | 1           |
| 30.          | Paraguay    | 1           |
| 31.          | P.D.R. Laos | 9           |
| 32.          | Philippines | 16          |
| 33.          | Rwanda      | 1           |
| 34.          | Sierra Leon | 2           |
| 35.          | Somalia     | 1           |
| 36.          | Sri Lanka   | 14          |
| 37.          | Sudan       | 26          |
| 38.          | Syria       | 6           |
| 39.          | Tanzania    | 25          |
| 40.          | Thailand    | 4           |
| 41.          | Uganda      | 2           |
| 42.          | Uzbekistan  | 1           |
| 43.          | Vietnam     | 18          |
| 44.          | Germany     | 04          |
| 45.          | USA         | 01          |
| 46.          | Poland      | 01          |
| <b>TOTAL</b> |             | <b>1094</b> |

## **(B) INDIAN PARTICIPATION**

| S. No. | Indian State / Organization | Trainees |
|--------|-----------------------------|----------|
| 1.     | Assam                       | 54       |
| 2.     | Andhra Pradesh              | 17       |
| 3.     | Arunachal Pradesh           | 6        |
| 4.     | Bihar                       | 23       |
| 5.     | CSWCRTI                     | 2        |
| 6.     | Central Water Commission    | 27       |
| 7.     | Central Ground Water Board  | 12       |
| 8.     | CWPRS                       | 11       |
| 9.     | Damodar Valley Corporation  | 7        |
| 10.    | GATE Qualified              | 246      |
| 11.    | Goa                         | 4        |
| 12.    | Gujarat                     | 20       |
| 13.    | Haryana                     | 6        |
| 14.    | Himachal Pradesh            | 4        |
| 15.    | Jammu & Kashmir             | 11       |
| 16.    | Karnataka                   | 24       |
| 17.    | Kerala                      | 8        |
| 18.    | Madhya Pradesh              | 26       |
| 19.    | Maharashtra                 | 20       |

| S. No.       | Indian State / Organization                   | Trainees   |
|--------------|---|------------|
| 20.          | Manipur                                       | 1          |
| 21.          | Meghalaya                                     | 1          |
| 22.          | Ministry of Agriculture                       | 1          |
| 23.          | Mizoram                                       | 4          |
| 24.          | Municipal Corporation of Delhi /CWC New Delhi | 2          |
| 25.          | N.I.H., Roorkee                               | 9          |
| 26.          | NWDA  | 3          |
| 27.          | Orissa  | 79         |
| 28.          | Punjab  | 2          |
| 29.          | QIP   | 1          |
| 30.          | Rajasthan                                     | 2          |
| 31.          | Tamil Nadu                                    | 2          |
| 32.          | THDC  | 3          |
| 33.          | Tripura                                       | 2          |
| 34.          | Uttar Pradesh                                 | 28         |
| 35.          | Uttarakhand                                   | 3          |
| 36.          | West Bengal                                   | 38         |
| <b>TOTAL</b> |   | <b>709</b> |

**APPLICATION FORM****ANNEXURE-2****INTERNATIONAL POST GRADUATE DIPLOMA AND MASTER'S COURSE IN HYDROLOGY****Department of Hydrology, Indian Institute of Technology Roorkee, Roorkee****<https://hy.iitr.ac.in>****52<sup>nd</sup> Course: July, 2023 to July, 2024 (P.G. Diploma); July, 2023 to July, 2025 (M.Tech.)**

An advance copy of the completed application along with academic transcripts (in English) be directly sent to the **Professor & Head, Department of Hydrology, Indian Institute of Technology Roorkee, Roorkee - 247 667, India** (email IDs: [hydrology.iitr@gmail.com](mailto:hydrology.iitr@gmail.com) and [hydrology@iitr.ac.in](mailto:hydrology@iitr.ac.in)) on or before **June 20, 2023**.

1. **Full Name:** .....  
**in block letters (underline surname)**
2. **Father's Name:** .....
3. **Mother's Name:** .....
4. **Gender (Male/Female):** .....
5. **Nationality:** .....  
**(any change in nationality may be indicated with period)**
6. **Date and Place of birth:** .....
7. **Parentage (your country of origin):** .....
8. **Passport details (for foreign candidates only)**  
**Passport number:** ..... **Place of Issue:** ..... **Date of Issue:** ..... **Date Validity:** .....

9. **Present address (correspondence address):**

|                     |                      |           |                      |
|---------------------|----------------------|-----------|----------------------|
| House No. /Flat No: | <input type="text"/> | Street:   | <input type="text"/> |
| City/Town:          | <input type="text"/> | Pin code: | <input type="text"/> |
| State:              | <input type="text"/> | Country:  | <input type="text"/> |
| Mobile No:          | <input type="text"/> | Email:    | <input type="text"/> |

10. **Permanent/Emergency address:**

|                     |                      |           |                      |
|---------------------|----------------------|-----------|----------------------|
| House No. /Flat No: | <input type="text"/> | Street:   | <input type="text"/> |
| City/Town:          | <input type="text"/> | Pin code: | <input type="text"/> |
| State:              | <input type="text"/> | Country:  | <input type="text"/> |
| Mobile No:          | <input type="text"/> | Email:    | <input type="text"/> |

Photograph

- 11. Official Address:**

**Building No:**

\_\_\_\_\_

**Street:**

\_\_\_\_\_

City/Town:

\_\_\_\_\_

**Pin code:**

\_\_\_\_\_

**State:**

\_\_\_\_\_

Country:

\_\_\_\_\_

**Mobile No:**

|  |
|--|
|  |
|--|

**Email:**

\_\_\_\_\_

- 12. Dates and place of previous stay in India (for International Applicants only):**

---

13. Occupation : .....

14. Expected duration of stay: .....

15. **Places to be visited:** .....

- 16. Name of Indian Mission where visa will be applied** *(for International Applicants only)*

Name of Country:

\_\_\_\_\_

**Name of City:**

\_\_\_\_\_

**Phone No. :**

|  |
|--|
|  |
|--|

**E-mail :**

|  |
|--|
|  |
|--|

17. Source of funding: .....

- 18. Whether accompanied by spouse/ dependent. If so give particulars:**

Name:

|  |  |
|--|--|
|  |  |
|--|--|

**Passport number:**

|  |  |
|--|--|
|  |  |
|--|--|

**Place of Issue:**

\_\_\_\_\_

**Date of Issue:**

|  |
|--|
|  |
|--|

**Date Validity:**

\_\_\_\_\_

19. Qualifying Degree : .....

20. Maths at Graduation Level (Yes/No) : .....

- 21. Qualifications (starting from the highest degree):** *(Attach photocopies of mark sheets & certificates)*

[illegible]

**22. Professional/ work experience (Starting from the recent one):**

| Name of Department/<br>Organization | Position held | Period |    | Details of work done |
|-------------------------------------|---------------|--------|----|----------------------|
|                                     |               | From   | To |                      |
|                                     |               |        |    |                      |
|                                     |               |        |    |                      |
|                                     |               |        |    |                      |
|                                     |               |        |    |                      |

**23. Preference of specialization desired:** .....

(Surface water/Groundwater/ Watershed management)

**24. Knowledge of English language (read/write/speak):** .....

(Certificate for level of proficiency attained be submitted)

**25. Appeared in GRE or equivalent examination (if yes, give details):** .....

Place: .....

Date: .....

Signature of Applicant

---

**SPONSORED/NO OBJECTION CERTIFICATE**

The undersigned is pleased to permit Mr/Ms. .... who is working in this organization for the last ..... years (from..... to.....) and is presently holding the rank/position of ..... for pursuing the PG Diploam/ M.Tech. at the Department of Hydrology, IIT Roorkee with specialization in the following areas:

1. .... 2. .... 3. ....

His/her conduct and character has been good.

The Institution/Organization would relieve her/him immediately for joining the above course, if selected for admission. If admitted the candidate will be permitted to be present at the Institute as required by the academic schedule for a period of one year/two years and will continue to remain in service of this organization for the duration of the course.

**Signature of Head of the  
Institute/Organization with seal**

Place: .....

Date: .....

Name: .....

Designation: .....









**Correspondence:**

**Professor & Head, Department of Hydrology**  
**Indian Institute of Technology Roorkee**  
**Roorkee – 247 667, India**

**Phone** : 0091-1332 -285236 / 284755 / 285936 (Direct)  
**Fax** : 0091-1332-285236, 273560  
**E-mail** : hydrology@iitr.ac.in, hydrology.iitr@gmail.com, head@hy.iitr.ac.in  
**Website** : <https://hy.iitr.ac.in>

**Apply Online**  
<https://hy.iitr.ac.in>

Completed application in prescribed format should reach Roorkee before June 20, 2023.





# INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

## DEPARTMENT OF WATER RESOURCES DEVELOPMENT AND MANAGEMENT

### ADMISSIONS [2023-24]

FOR PG PROGRAMMES

- One-Year P.G. Diploma
  - Two-Year M.Tech. Degree
- in

Last date of receipt of Application Form is **June 30, 2023**

**1. Water Resources Development**

[For Civil, Electrical and Mechanical Engineers]

**2. Irrigation Water Management**

[For Civil, Agricultural Engineers and Agricultural Scientists]

**3. Drinking Water & Sanitation**

[For Civil/Environmental/Mechanical/Agricultural/Chemical Engineers/B. Arch and Planning]

... in the service of Afro-Asian Countries for water, food and energy securities.



Scan QR for  
more information

For more details: <https://wr.iitr.ac.in>