

I/87753/2022

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

Subject: Sponsoring Officers for admission to M.Tech /P.G. Courses in Department of Hydrology for academic session 2022-23 at IIT, Roorkee—reg

It is proposed to nominate CWC officers (on study leave and as per DoWR, RD & GR sponsoring policy basis- copy attached) for the course mentioned under the subject, to be held at IIT Roorkee. Accordingly, it is requested that any interested/suitable officer may apply through proper channel in the prescribed application format given in the attached information brochure so as to reach this office latest by **30.04.2022** with the approval of the Concerned Member/Chief Engineer (HRM) in respect of HRM Unit/Chief Engineer (NWA) in respect of NWA through concerned Establishment Section of CWC (for verification of eligibility criteria by the concerned Establishment) for taking further necessary action so that the same can be processed and forwarded to IIT Roorkee after approval of Competent authority by 20th June, 2022 as mandated by IIT, Roorkee.

The detailed admission procedure is available at (<https://hy.iitr.ac.in>). It is mentioned that the candidate should be at least the level of AE/AEE/AD and above, having atleast 5 years of experience in CWC and not more than 45years of age as on **01.07.2022**. Those seeking nominations must also be fulfilling other eligibility conditions as mentioned in the programme brochure of IIT Roorkee.

Encl: As above

(Venkateswarlu E.)
Dy. Director (Training)

Copy to:

1. All Chief Engineers, Central Water Commission (HQ & Field Offices).
2. Director, D & RC, WP & PC, RMCD, CWC, New Delhi.
3. Secretary/Director (TC)/Director(Admn), 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.



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File No.A-33/2/2017-E-I Section

F.No.33/2/2017-E-I
Government of India

Ministry of Water Resources, River Development & Ganga Rejuvenation

...

Shram Shakti Bhawan, Rafi Marg,
New Delhi, the 9th August, 2018

To
The Chairman,
Central Water Commission
Sewa Bhawan, R.K. Puram,
New Delhi-110066

Subject:-Sponsoring of Central Water Engineering Group 'A' Service Officers for undergoing M.Tech/Ph.D from IIT, Roorkee - new policy - regarding.

Sir,

I am directed to refer to the subject mentioned above and to say that this Ministry has been sponsoring CWES(Gr-A) Officers for undergoing one year PG Diploma and two year M.Tech courses at IIT, Roorkee, for some time past. The methodology, which was being followed so far in such cases was: one year was being considered as "Training" and the next year was being considered as "Leave".

2. Keeping in view the extant instructions for undergoing academic courses by a Central Government Officer, the aforesaid policy has been reviewed by this Ministry and it has been decided, with the approval of the Hon'ble Minister-in-charge of this Ministry that, for undergoing academic courses, CWES(Gr A) Officers may be granted study-leave only, as provided in the CCS(Leave) Rules, 1972.

3. The matter relating to undergoing M.Tech and Ph.D courses by the CWES(Gr-A) Officers at IIT, Roorkee has also been considered by this Ministry in consultation with the IIT, Roorkee and the existing Memorandum of Understanding(MoU), signed between the Ministry & IIT, Roorkee in 25.08.2008 for establishment of a professional Chair at the IIT, has been revisited by the Ministry for sponsoring of CWES officers for undergoing M.Tech/Ph.D courses under the Chair contribution.

4. The Article-10 of the aforementioned MoU provides that "*The two programmes (regular or part time) will be made available for the officers of organizations under MoWR and its organizations in the specified field. Such sponsored candidates will be admitted as per the procedure of IIT/Roorkee. The tuition fee of such candidates will be charged from the unused annual interest of the endowment left after meeting all the expenses of the faculty chair.*"

5. Keeping in view the existing arrangement as per Article-10 of the aforesaid MoU, the following revised guidelines, in supersession of all existing instructions on the subject, are being issued for compliance in the matter:-

- a. Eligible CWES Officers or Officers of other organisations of the Ministry, who are willing to undergo M.Tech or Ph.D Courses being offered by the Indian Institute of Technology, Roorkee will be sponsored by the Ministry on Study-Leave basis. Study-leave will be granted for a period of two years, subject to fulfillment of conditions for granting study-leave, as provided in the CCS (Leave) Rules, 1972.
- b. All the officers sponsored under the said scheme will be entitled for only one set of

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File No.A-33/2/2017-E-I Section

Travelling Allowance while on study-leave in terms of proviso to Rule 61 of CCS (Leave) Rules, 1972.

- c. As per the arrangement with the IIT, Roorkee and in terms of proviso to Rule 62 of CCS (Leave) Rules, 1972, Academic Fees in respect of maximum 2 candidates for M Tech in a year or 1 M.Tech + 1 Ph.D in a year will be adjusted from the interest accrued to the corpus of Rs. 1.0 crore donated by this Ministry to IIT, Roorkee under the professional chair contribution.
- d. Decision regarding remittance of the academic/tuition fee, in respect of all the officers willing to undergo the Diploma Course or M.Tech or Ph.D courses more than two number of officers, will be taken by the Ministry on case to case basis.
- e. Powers to grant Study-leave for undergoing M.Tech/Ph.D Courses at IIT, Roorkee has been delegated to the Joint Secretary(Admn) of the Ministry. Application of only those officers will be considered who are eligible for grant of study leave as per the CCS (Leave) Rules, 1972.

6. This issues with the concurrence of the IFD of the Ministry vide e-Office Module and approval of the Hon'ble Minister-in-charge.

Yours faithfully,
Signature valid

Digitally signed by SHALINI JUNEJA
Date: 2018.08.07 17:27:56 IST
Reason: Approved

(Shalini Juneja)

Under Secretary to the Government of India

Tel: 23714350

Copy to:-

1. Director, Indian Institute of Technology, Roorkee, Uttarakhand-247667
2. Prof.(Dr.) S.K. Mishra, Head, Department of Water Resources Development & Management, IIT, Roorkee, Uttarakhand-247667
3. Chief Engineer(HRM), CWC, Sewa Bhawan, R.K. Puram, New Delhi
4. Director(Trg), CWC, Sewa Bhawan, R.K. Puram, New Delhi
5. Director(E-II & GWE), MoWR, RD & GR for officers of other organizations


(Shalini Juneja)

Under Secretary to the Government of India

Tel: 23714350

ADMISSION BROCHURE

(51st International Course)

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

2022-23

Indian Institute of Technology Roorkee


175
 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, 2022

Director	:	Prof. Ajit K. Chaturvedi
Head of Department	:	Prof. B.K. Yadav

FACULTY

Prof. B.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. Bhasker Jyoti Deka	Assistant Professor	Desalination & Membrane Science
Prof. Ashutosh Sharma	Assistant Professor	Hydroclimatology

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

ADMINISTRATIVE PERSONNEL

Prof. M.L. Sharma	Dean (Finance & Planning)
Prof. Ravi Kumar	Dean (Administration)
Prof. Partha Roy	Dean (Resources & Alumni Affairs)
Prof. Apurbba Kumar Sharma	Dean (Academic)
Prof. Manish Shrikhande	Dean (Sponsored Research and Industrial Consultancy)
Prof. M.R. Maurya	Dean (Faculty Affairs)
Prof. Mukesh Kumar Barua	Dean (Student's Welfare)
Prof. Arumugam	Dean (International Relations)
Mr. Prashant Garg	Registrar

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FOREWORD

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 the 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 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. A. K. Chaturvedi
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 21 academic departments/centres 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 doctoral level.

IIT Roorkee has highly qualified and motivated faculty of about 465 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.

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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 1043 participants including 371 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. B.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. 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"> • Channel and Fluvial Hydraulics • Deterministic Hydrology • Stochastic Hydrology • Surface Water Modeling and Simulation • Environmental Planning and Assessment of Projects • Hydrometeorology and Climate Change • Bigdata and Hydroinformatics 	<ul style="list-style-type: none"> • Groundwater Hydrology • Geophysical Investigations • Environmental Quality • Groundwater System Analysis • Soil and Groundwater Contamination Modelling • Multi-phase Flow through Porous Media • Vadose Zone Hydrology 	<ul style="list-style-type: none"> • Hydrologic Elements and Analysis • Watershed Behaviour and Conservation Practices • Remote Sensing and GIS Application • Watershed Modeling and Simulation • Irrigation and Drainage Engineering • Planning and Management of Watersheds • Experimental Hydrology

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.

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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 2022-2023 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). 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/>.

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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)

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[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.

Expenditure	P.G. Diploma (1 year) (in Rs.)	M.Tech. Programme (2 years) (in Rs.)
[A]. (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]. 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)

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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. 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]. 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).

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 application form may be downloaded from www.iitr.ac.in/departments/HY or 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 and should reach the department **on or before June 20, 2022**.

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 recognised 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 12 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.

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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 | |

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° 52' N and Longitude 77° 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° C to 20° C in winters (October to March) and from 25° C to 40° 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

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/>

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ANNEXURE - 1

PARTICIPATION IN INTERNATIONAL POST GRADUATE HYDROLOGY PROGRAMME DURING 1972-2022

(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	671
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

S. No.	Country	Trainees
23.	Morocco	1
24.	Myanmar	14
25.	Nepal	57
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	20
40.	Thailand	4
41.	Uganda	2
42.	Uzbekistan	1
43.	Vietnam	18
TOTAL		1042

(B) INDIAN PARTICIPATION

S. No.	Indian State / Organization	Trainees
1.	Assam	53
2.	Andhra Pradesh	15
3.	Arunachal Pradesh	6
4.	Bihar	23
5.	CSWCRTI	2
6.	Central Water Commission	25
7.	Central Ground Water Board	12
8.	CWPRS	11
9.	Damodar Valley Corporation	6
10.	GATE Qualified	218
11.	Goa	4
12.	Gujarat	20
13.	Haryana	6
14.	Himachal Pradesh	4
15.	Jammu & Kashmir	11
16.	Karnataka	24
17.	Kerala	6
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.	QJP	1
30.	Rajasthan	2
31.	Tamil Nadu	2
32.	THDC	3
33.	Tripura	2
34.	Uttar Pradesh	28
35.	Uttarakhand	2
36.	West Bengal	37
TOTAL		671

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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>51st Course: July, 2022 to July, 2023 (P.G. Diploma); July, 2022 to July, 2024 (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 and hydrology@iitr.ac.in) on or before **June 20, 2022**.

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:	Street:
City/Town:	Pin code:
State:	Country:
Mobile No:	Email:
10. Permanent/Emergency address:

House No. /Flat No:	Street:
City/Town:	Pin code:
State:	Country:
Mobile No:	Email:



Photograph

I/87753/2022

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

Name of Department/ 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

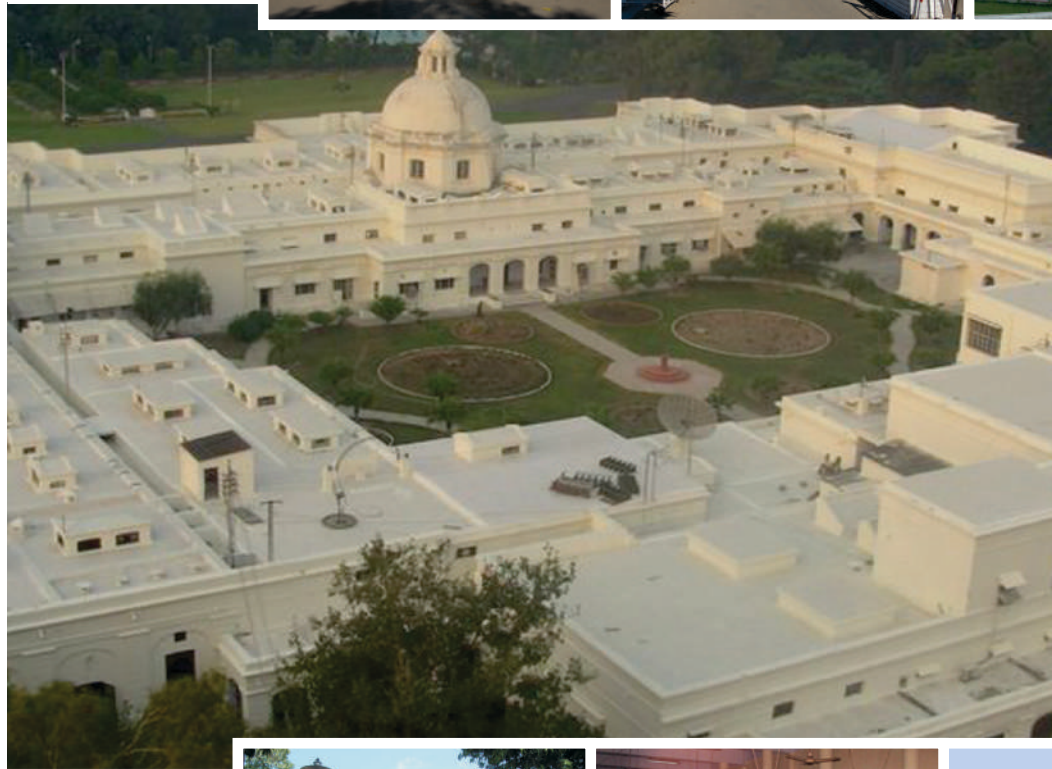
Name:

Designation:

Place:

Date:

I/87753/2022



I/87753/2022

**Correspondence:**

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

Phone : 0091-1332 -285236 / 285845 / 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, 2022.