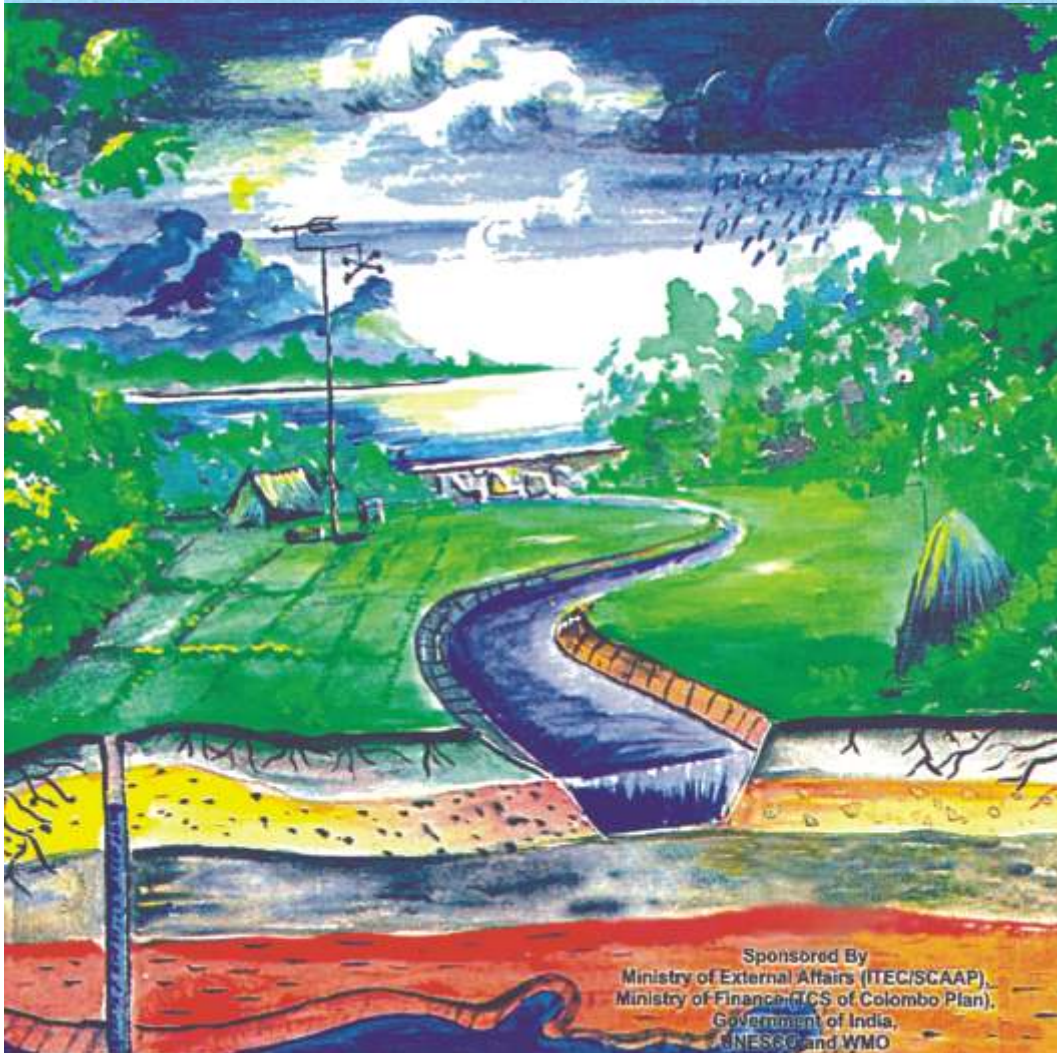


# Admission Brochure

43<sup>rd</sup> International Course (2014 - 2015)

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

Beginning July 20, 2014



DEPARTMENT OF HYDROLOGY  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE  
ROORKEE - 247 667, INDIA

Director	:	Dr. Pradipta Banerji
Head of the Department	:	Dr. M. Perumal

## FACULTY

Dr. D.C.Singhal	Emeritus Fellow	Hydrogeology
Dr. N.K. Goel	Professor	Stochastic Hydrology
Dr. Himanshu Joshi	Professor	Environmental Hydrology
Dr. M. Perumal	Professor	Surface Water Hydrology
Dr. D.S. Arya	Associate Professor	Hydroinformatics
Dr. M.K. Jain	Associate Professor	Watershed Management
Dr. B.K. Yadav	Assistant Professor	Groundwater Hydrology
Dr. Sumit Sen	Assistant Professor	Watershed Modeling

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

## ADMINISTRATIVE PERSONNEL

Dr. S. P. Gupta	Deputy Director
Dr. P.K. Ghosh	Dean Finance and Planning
Dr. U.P. Singh	Dean Administration
Dr. Ashwani Kumar	Dean Academic
Dr. Pradeep Bhargava	Dean Sponsored Research and Industrial Consultancy
Dr. Vinod Kumar	Dean of Faculty Affairs
Dr. Ravi Bhushan	Dean of Students Welfare
Lt. Col. (Retd.) A.K.Srivastava	Registrar
Dr. T. K. Mandal	Warden, Khosla International House



## FOREWORD

Water is one of the most essential natural resources required for the survival of human beings. Uneven distribution of rain influenced by anthropogenic changes, including the climate change have led to a frequent scenario of extreme floods and droughts simultaneously in different parts of the same geographical region. Without effective capacity building in the water sector, it is very difficult to solve such water related problems. It is likely that, for the foreseeable future, major problems involving the interaction of man with the hydrological environment on the global scale, such as the climate change, will increasingly require the attention of teams of scientists from many disciplines, including that of the scientifically trained hydrologist. Therefore, the hydrological education should be one of the important aspects 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 came into existence with the inception of the International Post-graduate Course in Hydrology in 1972 at Roorkee (India). The courses offered by the Department of Hydrology are presently being sponsored by the Government of India and international organizations like WMO. The courses aim at training of engineers/scientists from Asia, Africa and other developing countries.

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

I invite all the prospective applicants working in various organizations related to the water sector in India and abroad to participate in the training programmes offered by this Department.

A handwritten signature in black ink, appearing to read 'Pradipta Banerji'.

Prof. Pradipta Banerji  
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 soon 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 12 undergraduate courses in engineering and architecture, 6 dual degree programmes in engineering and over 50 postgraduate courses in engineering, architecture, sciences, computer applications and business administration besides research programmes at doctoral level.

The IIT Roorkee has a highly qualified and motivated faculty of about 394 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. The institute has about 4481 undergraduate students, 2166 postgraduates and 1445 research scholars.

There are a number of academic and research centres engaged in interdisciplinary research, and many collaborative programmes exist with institutions in India and abroad. Several central facilities exist such as Central Library having more than 4,00,000 volumes of books and periodicals, Information Superhighway Centre with internet connectivity, an Audio Visual Research Centre with full-fledged television studio, a modern Computer Centre and Institute Instrumentation Centre with highly sophisticated analytical instruments.

The IIT Roorkee is fully residential, having well-designed hostels (Bhawans) both for boys and girls, and family accommodation for married students, sprawling sports ground, a modern swimming pool, boat club and a host of students clubs with facilities for different games including tennis, squash and billiards. Societies and Associations along with activities like NCC, rangering and roving, mountaineering and trekking provide excellent opportunities for self-development. The campus also has a modern school for children education.



## 1. DEPARTMENT OF HYDROLOGY

The period of 1965 to 1974 saw the establishment of a number of International Post Graduate Courses in Hydrology under the United Nations Educational Scientific and Cultural Organisation's (UNESCO's) International Hydrology Decade launched in 1965. The training and education in Hydrology was one of the main components of this programme. The Department of Hydrology (DOH) came into existence with the inception of the International Post-Graduate Course in Hydrology in 1972. The courses offered by the Department of Hydrology are presently sponsored by the Government of India and WMO. So far, a total of **849** participants including **310** foreign participants from **38** countries have participated in the Post-Graduate Programme (ANNEXURE1). Since 2003, **GATE** qualified fresh engineering and science graduates from India are directly admitted in this programme.

### FACULTY

Dr. M. Perumal	Professor & Head	Surface Water Hydrology
Dr. D.C. Singhal	Emeritus Fellow	Ground Water Hydrology & Geophysics
Dr. N.K. Goel	Professor	Stochastic Hydrology
Dr. Himanshu Joshi	Professor	Environmental Hydrology
Dr. D.S. Arya	Assoc. Professor	Hydroinformatics, DSS, GIS &RS
Dr. M.K. Jain	Assoc. Professor	Watershed management, GIS &RS
Dr. B. K. Yadav	Asstt. Professor	Groundwater Hydrology; Bioremediation
Dr. Sumit Sen	Asstt. Professor	Watershed Management & Modeling

## 2. PROGRAMMES OFFERED

The Department offers the following academic programmes:

- **M.Tech. (Hydrology):** It is a 24-month academic programme. Delivery of lectures, tutorials and practicals are included in the first year. In the second year, students deliver a seminar on a research topic and continue to work on it leading to the dissertation.
- **P.G. Diploma (Hydrology):** It is a 12-month academic programme. It consists of all academic curriculum requirements of the first year of M.Tech. (Hydrology) programme.
- **Ph.D. in Hydrology:**  
The department is actively engaged in various research areas of hydrology. So far, sixty eight scholars of the Department have been awarded Ph.D. degrees. Currently, fifteen scholars are registered

with the Department for pursuing their research leading to Ph.D. Degree.

**Note:** *The candidate has to clearly indicate in the beginning of registration about his/her choice for attending either one-year P.G. Diploma or two-year M. Tech. Academic Programme.*

### **3. LANGUAGE OF INSTRUCTION: ENGLISH**

### **4. INTAKE FOR M.TECH. (HYDROLOGY) AND P.G. DIPLOMA**

The sanctioned intake for M.Tech. and P.G. Diploma programme is thirty five (35). Out of this strength, twenty (20) candidates will be selected from different government/semi-government organizations from India and abroad whose candidature will be officially sponsored. Fifteen (15) M.Tech. seats will be filled through GATE qualified fresh candidates. Selection of GATE qualified candidates will be made along with the admission of other M.Tech. candidates of different disciplines who will be admitted through a separate procedure announcement of I.I.T. Roorkee. Specializations for these candidates will be decided by the Department in accordance with their merit in GATE score and their basic degree.

### **5. SPECIALIZATIONS IN M.Tech./P.G. Diploma**

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

- Surface Water Hydrology
- Ground Water Hydrology
- Watershed Management

The courses offered under these specializations consist of compulsory courses in Mathematics, Computer applications along with a Departmental core course on Hydrologic Elements and Analysis. The major specialization courses are as follows:

<b>Surface Water</b>	<b>Ground Water</b>	<b>Watershed Management</b>
<ul style="list-style-type: none"> <li>• Hydrological Data Collection, Processing and Analysis</li> <li>• Parametric Hydrology</li> <li>• Systems Analysis and Surface Water Planning</li> <li>• Stochastic Hydrology</li> <li>• Water Resources Planning and Management</li> <li>• Water Resources Economics</li> </ul>	<ul style="list-style-type: none"> <li>• Geophysical Investigations</li> <li>• Ground Water Hydrology</li> <li>• Hydrogeology</li> <li>• Remote Sensing and GIS Applications in Hydrology</li> <li>• System Analysis and Groundwater Systems</li> <li>• Water Quality and Environment</li> </ul>	<ul style="list-style-type: none"> <li>• Channel and Fluvial Hydraulics</li> <li>• Hydrometeorology</li> <li>• Planning and Management of Watersheds</li> <li>• Remote Sensing and GIS Applications in Hydrology</li> <li>• System Ecology and Environmental Planning</li> <li>• Watershed Behaviour and Conservation Practices</li> </ul>

Apart from the major courses of specialization, candidate has to opt courses on minor specializations offered by the department or other departments/Centres of IIT Roorkee. The students are free to select the courses from the ones offered to strengthen their base depending upon their inclination towards other disciplines.

Working on a project and preparation of its report constitutes an important aspect of the academic programme. The students are required to complete the hydrological analysis needed for a comprehensive project related to their fields of specialization.

## **6. ELIGIBILITY FOR ADMISSION**

Candidates with any of the following academic qualifications are eligible to apply for admission to M.Tech/P.G. Diploma programme in Hydrology:

### **(A). Academic Qualifications :**

- (i) Bachelor's degree in Civil/Mechanical/Agricultural Engineering/Hydrology or its equivalent qualification, **OR** 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, **OR** M.Sc. (Master's) Degree in Statistics with Physics or Mathematics at B.Sc. (Bachelor's) level, **OR** M.Sc. (Master's) Degree in Mathematics with Physics in B.Sc. (Bachelor's) level, or its equivalent **OR**
- (ii) A.M.I.E. candidates with B.Sc. or Engineering Diploma qualifications, who have completed Sections A and B Examinations of the Institution of Engineers (India) and have been elected as A.M.I.E. (Civil or Mechanical) and have at least 3 years research or teaching or other professional experience in responsible capacities after qualifying examination may also be admitted after such applicants have passed a prescribed written/oral test.
- (iii) For admission to the Watershed Management option of the P.G. Diploma, candidates with M.Sc. (Master's) Degree in Soil Science or Two Years Diploma in Forestry after B.Sc. (Bachelor's) with Physics and Mathematics in the B.Sc. (Bachelor's) course are also eligible.

**(b) For full time sponsored/nominated candidates only:**

- (i) Candidates seeking admission to M.Tech./P.G. Diploma 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 the Indian candidates belonging to SC/ST category, the qualifying percentage is **55% aggregate or 5.5 CGPA on a 10 point scale**). The SC/ST category candidates must submit the requisite certificate along with the application or at the time of counseling (for GATE qualified/fresh candidates) from a competent authority. Part-time sponsored candidates can be admitted in accordance with the prevailing ordinances/regulations of I.I.T. Roorkee.*
- (ii) The full time sponsored candidates must have a minimum of two years of full time work experience till 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 shall either be a public sector undertaking or a public limited undertaking or a private agency whose annual turn-over during the last two years exceeds Rs. 5 crores. The educational institutions should be recognized by AICTE.
- (iii) Candidates must submit the sponsorship certificate duly signed by the Head of the Institution/Organization on the prescribed Proforma at the time of counseling. A few Indian candidates may also be admitted under QIP, Early Faculty Induction Programme (EFIP) of AICTE and Defence Research & Development Organization (DRDO) Schemes, for which separate admission procedure is followed and for further details, Deputy Registrar (Academic), Indian Institute of Technology, Roorkee 247 667 may be contacted.

*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 2014-2015 will be as per the new ordinances/regulations in force.*



## 7. EXAMINATION AND AWARD OF DEGREE / DIPLOMA

A student has to attain certain minimum academic requirements to pass the prescribed examination(s). Appropriate regulation in this regard is reproduced below:

*“A student may be allowed to register for the next semester if he/she has cleared not less than 75% of course credits registered in that semester, and has secured a SGPA of not less than 5.0 at the end of the first semester, and a CGPA of not less than 5.5 at the end of the subsequent semester. However, if a student gets SGPA of 5.0 or more but less than 5.5 in the first semester he/she shall be allowed to register in the second semester but shall be on probation. However, in the second semester his/her SGPA should be at least 5.0 and CGPA 5.5. The registration of a student will be terminated and he/she will be asked to leave the programme in case he/she is unable to fulfill the above requirements.”*

Upon successful completion of the programme, the candidates are awarded either an M.Tech. Degree or a Post Graduate Diploma in Hydrology as per the option under which they were registered.

## 8. FELLOWSHIPS

### **[A] For Foreign Candidates**

The courses are sponsored by the Government of India through Ministry of External Affairs under ITEC and SCAAP programmes; Ministry of Finance (Department of Economic Affairs) under the TCS of Colombo Plan and WMO.

Foreign candidates may apply through proper channel for the following fellowships. An advance copy should be sent to the Department of Hydrology at its correspondence address.

#### **(i) The Government of India (GOI) Fellowships:**

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

- a. Indian Technical Economic Cooperation (ITEC)
- b. Technical Cooperation Scheme of Colombo Plan (TCS-Colombo Plan) implemented through Ministry of Finance, Department of Economic Affairs in 15 countries
- c. Special Commonwealth African Assistance Plan (SCAAP)

For GOI fellowships, applications should be sent through the Indian Embassy/Legation in that country for onward transmission to Roorkee.

For details of GOI fellowships, the candidates may visit the website of the respective schemes: ITEC and SCAAP schemes: <http://itec.mea.gov.in/>

The application forms for TCS Colombo plan may be downloaded from the website: [http://finmin.nic.in/the\\_ministry/dept\\_eco\\_affairs/iasec/TCSColPlan09.pdf](http://finmin.nic.in/the_ministry/dept_eco_affairs/iasec/TCSColPlan09.pdf)

**(ii) WMO Fellowships:**

A few fellowships may be available with the financial support of World Meteorological Organization (WMO). For WMO sponsored fellowships, the candidate should apply on WMO Fellowship Form available either from the permanent representative of their country to WMO or directly from **WMO Fellowship Division, Education and Training Department, World Meteorological Organization, 7 bis, Avenue de la Paix, Case Postale 2300, CH-1211, Geneva 2, Switzerland [Tel: 004122-7308292, FAX: 004122-7308041]**. These applications along with all academic transcripts should be forwarded to WMO, Geneva, Switzerland for onward transmission to IIT Roorkee. However, an advance copy of the application should be sent to the DOH at its correspondence address.

**[B] For Indian Candidates**

- (i) **For Sponsored Candidates:** No fellowship or financial assistance of any sort will be provided by the Department of Hydrology or I.I.T. Roorkee.
- (ii) **For GATE qualified fresh graduates:** Fifteen seats shall be filled through GATE qualified fresh graduates. These candidates may be considered for assistantship in accordance with ordinances/regulations of I.I.T. Roorkee.

**9. NOMINATED CANDIDATES**

Eligible candidates officially nominated through various government agencies (not covered under the Fellowship clause) 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 in that Country to **Professor and Head, Department of Hydrology, IIT Roorkee-247667, Uttarakhand, India**. The IIT Roorkee will communicate the amount of advance payment to be made to this effect.

## 10. ESTIMATE OF ANNUAL EXPENSES

At present, nominal fee is being charged from the Indians participants sponsored by state and central Govt. Departments as per Institute norms. The students, have to bear their own boarding, lodging and other expenses. Approximate annual expenses under different heads are indicated in the following Table:

*Institute fee, Institute caution deposit, Library deposit and one time payment mentioned in part 'A' of the following Table be remitted through Bank Draft drawn in favour of the Registrar I.I.T. Roorkee, payable at Roorkee and be enclosed alongwith the Deputation Order/ Financial Sanction.*

Expenditure	P.G. Diploma (1 year) (in Rs.)	M.Tech. Programme (2 years) (in Rs.)
<b>[A].</b> (i) Institute Fee	59,200	1,18,400
(ii) Institute caution deposit (refundable)	1,000	1,000
(iii) Library deposit (refundable)	2,000	2,000
(iv) One time payments	3,400	3,400
(v) Mess admission fee (one time)	2,000	2,000
<b>[B].</b> Other Expenses		
(i) Boarding and lodging	30,000	60,000
(ii) Field Trips	5,000	5,000
(iii) Books, stationery, lecture notes, examination fee etc.	10,000	20,000
(iv) Outfit and medical expenses	5,000	10,000

(Note: 1 USD = ` 64/- approx..)

Foreign nationals sponsored by various agencies have to pay the Institute fee at the following rates.

- (i) Candidates from SAARC countries US\$ 2000 per annu
- (ii) Candidates from other countries US \$ 4000 per annum.

It may be noted that the other expenses mentioned in part 'B' of the Table will be borne by the students and may be sanctioned/reimbursed by the funding agencies directly to the candidates as per the prevailing rules of the sponsoring agency.

## **11. APPLICATION**

Eligible candidates are advised to apply through proper channel on an application to be submitted on prescribed format given in Annexure2 along with the following enclosures:

- i. Two recent passport size photographs with name written at their back.
- 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. Candidate should submit on a separate sheet the work experience record in chronological order.
- v. SC/ST Certificate (applicable to Indian candidates only).

## **12. OTHER ACADEMIC ACTIVITIES AND INFORMATION**

The Department of Hydrology has organized many National/International Symposia/Conferences since its inception. Apart from this, a number of special Short-term courses (more than 80) and Workshops have also been organized in the past. Most of these events were specially designed to cater to the needs of stakeholder organizations. Also, the department has handled many research and consultancy projects (more than 100) in different fields of hydrology.

The following laboratories are functioning in the department at present:

- (i) Hydrometeorological Lab.
- (ii) Computer Lab.
- (iii) Hydrological Information Systems Lab.,
- (iv) Environmental Hydrology Lab.
- (v) Surface Water Lab.
- (vi) Ground Water Lab.
- (vii) Geophysical Investigations Lab.

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

Besides above, central facilities of the Institute viz., Library, Information Superhighway Centre providing internet and e-mail services, Computer Centre, Institute Instrumentation Centre are also available. The institute has a big Sports Complex, Hobbies Club and other facilities.

### 13. INSTRUCTIONS

- (i) Limited family accommodation is available. However, the students 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. for working on M.Tech. dissertation.
- (iii) As per the prevalent regulations, all the foreign students arriving in India are required to get themselves checked for AIDS before they depart from their countries. Irrespective of the fact stated above they may again be asked for AIDS check up before joining the course.
- (iv) Each foreign student is required to register at the District Headquarter (Haridwar) **within 15 days of his/her arrival in India.**
- (v) AUTHORITIES WHO MAY ISSUE SCHEDULE CASTE / SCHEDULE TRIBE (SC/ST) CERTIFICATE (Applicable to Indian Candidates only): A competent authority as recognized by IIT Roorkee. It can be also checked from the IIT Roorkee website: [www.iitr.ernet.in](http://www.iitr.ernet.in)

### 14. 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 M.Tech/P.G. Diploma 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) Notwithstanding 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.

### 15. ABOUT ROORKEE

Roorkee, a quiet town of moderate size in the district of Hardwar (Uttaranchal), is located on the banks of the Upper Ganga Canal, which takes off at Hardwar. 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-Hardwar National Highway (NH 58), and on the Roorkee Panch Kula



Highway (NH 73). The Roorkee town (Latitude 29° 52' N and Longitude 77° 53.52" E) is 268 m above mean sea level. The temperature ranges from 3° C to 20° C in winter (October to March) and from 25° C to 40° C in summer (April to September). The average annual rainfall is 1100 mm and bulk of it occurs from middle of June to September.

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

The Institute campus is 2.5 km from the Roorkee Railway Station and is only 200 m from the Roadways Bus Station.

## 16. NEAREST AIRPORTS

1. Indira Gandhi International Airport, New Delhi (approx. 225 km).
2. Jolly Grant Airport, Dehradun (approx. 60 km).

## ANNEXURE 1

### **PARTICIPATION IN INTERNATIONAL POST GRADUATE HYDROLOGY PROGRAMME DURING 1972-2013**

#### **(A) COUNTRYWISE PARTICIPATION**

<b>S. No.</b>	<b>Country</b>	<b>Trainees</b>	<b>S. No.</b>	<b>Country</b>	<b>Trainees</b>
1.	Afghanistan	17	20	Myanmar	14
2.	Bangladesh	25	21	Nepal	48
3.	China	4	22	Nigeria	6
4.	D.P.R. Yemen	4	23	Pakistan	1
5.	D.R. Congo	2	24	Palestine	1
6.	Egypt	3	25	Panama	1
7.	Eritrea	1	26.	Paraguay	1
8.	Ethiopia	13	27.	P.D.R. Laos	9
9.	Ghana	3	28.	Philippines	16
10	Guyana	1	29.	Sierra Leon	2
11	India	539	30.	Somalia	1
12	Indonesia	32	31.	Sri Lanka	13
13	Iran	14	32.	Sudan	22
14	Iraq	5	33.	Syria	6
15	Jordan	1	34.	Tanzania	7
16	Kazakhstan	2	35.	Thailand	4
17	Malaysia	2	36.	Uganda	2
18	Mongolia	7	37.	Uzbekistan	1
19	Morocco	1	38.	Vietnam	18
				<b>TOTAL</b>	<b>849</b>

**(B) STATEWISE INDIAN PARTICIPATION**

<b>S. No.</b>	<b>Indian State / Organization</b>	<b>Trainees</b>	<b>S. No.</b>	<b>Indian State / Organization</b>	<b>Trainees</b>
1.	Assam	53	19.	Maharashtra	20
2.	Andhra Pradesh	15	20.	Manipur	1
3.	Arunachal Pradesh	6	21.	Meghalaya	1
4.	Bihar	22	22.	Ministry of Agriculture	1
5.	CSWCRTI	2	23.	Mizoram	2
6.	Central Water Commission	25	24.	Municipal Corpn. of Delhi	1
7.	Central Ground Water Board	12	25.	N.I.H., Roorkee	9
8.	CWPRS	11	26.	NWDA	3
9.	Damodar Valley Corporation	6	27.	Orissa	77
10.	Gate qualified (Unsponsored)	103	28.	Punjab	1
11.	Goa	4	29.	Rajasthan	1
12.	Gujarat	20	30.	Tamil Nadu	2
13.	Haryana	4	31.	THDC	3
14.	Himachal Pradesh	4	32.	Tripura	2
15.	Jammu & Kashmir	11	33.	Uttar Pradesh	23
16.	Karnataka	24	34.	Uttarakhand	1
17.	Kerala	6	35.	West Bengal	37
18.	Madhya Pradesh	26		<b>TOTAL</b>	<b>539</b>

ANNEXURE2

**FORMAT OF APPLICATION FORM  
INTERNATIONAL POST GRADUATE AND MASTER'S  
COURSE IN HYDROLOGY**

Department of Hydrology, Indian Institute of Technology Roorkee,  
Roorkee

<http://www.iitr.ernet.in/departments/HY/pages/index.html>

43<sup>rd</sup> Course : July 16, 2014 to July15, 2015 (P.G. Diploma)  
July 16, 2014 to July15, 2016 (M.Tech.)

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

An advance copy of the completed application along with academic transcripts (in English) be directly sent before **June 15, 2014. (May 31, 2014 for ITEC/ SCAAP and WMO sponsored candidates)** to the Professor and Head, Department of Hydrology, Indian Institute of Technology Roorkee, Roorkee- 247 667 (India).

E-mail id: [hydro@iitr.ac.in](mailto:hydro@iitr.ac.in) and [hydrology.iitr@gmail.com](mailto:hydrology.iitr@gmail.com)

1. Full Name : .....  
In block letters (underline surname)
2. Nationality : .....  
(any change in nationality may be indicated with period)
3. Date and Place of birth : .....
4. Parentage (your country of origin) : .....
5. Present address (correspondence address).....  
.....  
.....
6. Permanent address (with fax, e-mail & mobile no.) : .....  
.....  
.....
7. Passport number, date and place of issue and validity : .....  
(for foreign candidates only) .....
8. Dates and place of previous stay in India (for foreign candidates only) : .....  
.....
9. Occupation : .....

Photograph

10. Expected duration of stay: .....
11. Places to be visited : .....
12. The name of Indian Mission abroad where visa will be applied : .....  
(for foreign candidates only) .....
13. Source of funding and terms and conditions of funding. : .....
14. Whether accompanied by spouse/ dependent. If so give particulars.  
.....  
.....
15. Qualifications (starting from the highest degree): Attach photo copies of  
Certificates

College/Institute Name & address	Degree or Examination passed	Year of Passing	Division with % of marks/Grade Point Av.	Position/ Distinction	Main Subjects

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

Name of Department	Position held	Period		Details of work done
		From	To	

17. Preference of specialization desired: (Surface water/Ground water/  
Watershed management).....
18. Knowledge of English language (read/write/speak): .....  
(Certificate for level of proficiency attained by submitted)
19. Appeared in GRE or equivalent examination (if yes, give details): .....
20. Official address with Fax number.: .....  
.....  
.....
21. Emergency address: .....  
.....  
.....

Signature of Applicant

## IIT Roorkee at a Glance





## Department at a Glance



### CORRESPONDENCE

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Completed applications in prescribed format to reach Roorkee before June 15, 2014  
(May, 31, 2014 for ITEC/SCAPP WMO and UNESCO Sponsored Candidates)

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# List of ITEC/SCAAP and TCS of Colombo Plan Countries

## ITEC Countries

- 
- |                                 |                     |                              |
|---------------------------------|---------------------|------------------------------|
| 1 Afghanistan                   | 48 Eritrea          | 95 Niger                     |
| 2 Albania                       | 49 Estonia          | 96 Oman                      |
| 3 Algeria                       | 50 Ethiopia         | 97 Palau                     |
| 4 Angola                        | 51 Fiji             | 98 Palestine                 |
| 5 Anguilla                      | 52 Gabon            | 99 Panama                    |
| 6 Antigua and Barbuda           | 53 Georgia          | 100 Papua New Guinea         |
| 7 Argentina                     | 54 Grenada          | 101 Paraguay                 |
| 8 Armenia                       | 55 Guatemala        | 102 Peru                     |
| 9 Azerbaijan                    | 56 Guinea           | 103 Philippines              |
| 10 Bahamas                      | 57 Guinea Bissau    | 104 Poland                   |
| 11 Bahrain                      | 58 Guyana           | 105 Qatar                    |
| 12 Bangladesh                   | 59 Haiti            | 106 Republic of Sao Tome     |
| 13 Barbados                     | 60 Honduras         | 107 Romania                  |
| 14 Belarus                      | 61 Hungary          | 108 Russia                   |
| 15 Belize                       | 62 Indonesia        | 109 Rwanda                   |
| 16 Benin                        | 63 Iran             | 110 Samoa                    |
| 17 Bhutan                       | 64 Iraq             | 111 Senegal                  |
| 18 Bolivia                      | 65 Jamaica          | 112 Serbia                   |
| 19 Bosnia - Herzegovina         | 66 Jordan           | 113 Singapore                |
| 20 Brazil                       | 67 Kazakhstan       | 114 Slovak Republic          |
| 21 Brunei Darussalam            | 68 Kiribati         | 115 Solomon Island           |
| 22 Bulgaria                     | 69 Korea(DPRK)      | 116 Somalia                  |
| 23 Burkina Faso                 | 70 Kyrgyzstan       | 117 Sri Lanka                |
| 24 Burundi                      | 71 Laos             | 118 St. Kitts & Nevis        |
| 25 Cambodia                     | 72 Latvia           | 119 St. Lucia                |
| 26 Cape Verde Island            | 73 Lebanon          | 120 St. Vincent & Grenadines |
| 27 Cayman Island                | 74 Liberia          | 121 Sudan                    |
| 28 Central African Republic     | 75 Libya            | 122 South Sudan              |
| 29 Chad                         | 76 Lithuania        | 123 Suriname                 |
| 30 Chile                        | 77 Macedonia        | 124 Syria                    |
| 31 Colombia                     | 78 Madagascar       | 125 Tajikistan               |
| 32 Commonwealth of Dominica     | 79 Malaysia         | 126 Thailand                 |
| 33 Comoros                      | 80 Maldives         | 127 Timor Leste              |
| 34 Congo (Republic of)          | 81 Mali             | 128 Togo                     |
| 35 Cooks Island                 | 82 Marshall Islands | 129 Tonga                    |
| 36 Costa Rica                   | 83 Mauritania       | 130 Trinidad & Tabago        |
| 37 Cote D' Ivoire               | 84 Mexico           | 131 Tunisia                  |
| 38 Croatia                      | 85 Micronesia       | 132 Turkey                   |
| 39 Cuba                         | 86 Moldova          | 133 Turkmenistan             |
| 40 Czech Republic               | 87 Mongolia         | 134 Turks & Caicos Island    |
| 41 Democratic Republic of Congo | 88 Montenegro       | 135 Tuvalu                   |
| 42 Djibouti                     | 89 Montserrat       | 136 Ukraine                  |
| 43 Dominican Republic           | 90 Morocco          | 137 Uruguay                  |
| 44 Ecuador                      | 91 Myanmar          | 138 Uzbekistan               |
| 45 Egypt                        | 92 Nauru            | 139 Vanuatu                  |
| 46 El-Salvador                  | 93 Nepal            | 140 Venezuela                |
| 47 Equatorial Guinea            | 94 Nicaragua        | 141 Vietnam                  |
|                                 |                     | 142 Yemen                    |



## SCAAP Countries

- 1 Botswana
- 2 Cameroon
- 3 Gambia
- 4 Ghana
- 5 Kenya
- 6 Lesotho
- 7 Malawi
- 8 Mauritius
- 9 Mozambique
- 10 Namibia
- 11 Nigeria
- 12 Seychelles
- 13 Sierra Leone
- 14 South Africa
- 15 Swaziland
- 16 Tanzania
- 17 Uganda
- 18 Zambia
- 19 Zimbabwe

## TCS of Colombo Plan Countries

- 1 Afghanistan
- 2 Bangladesh
- 3 Bhutan
- 4 Fiji
- 5 Indonesia
- 6 Iran
- 7 Korea(ROK)
- 8 Laos
- 9 Malaysia
- 10 Maldives
- 11 Mongolia
- 13 Myanmar
- 13 Nepal
- 14 Papua New Guinea
- 15 Phillipines
- 16 Sri Lanka
- 17 Thailand
- 18 Vietnam

