

**DEPARTMENT OF HYDROLOGY**

**ADMISSION BROCHURE**

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

**(2007-08)**



**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

**ROORKEE -247667**

**INDIA**

**OCTOBER - 2006**

## FOREWORD

Water is one of the most essential natural resources required for survival of the human beings. It is becoming scarce in quantity and quality throughout the world. Without effective capacity building in the water sector, it is very difficult to solve water related problems. 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 view point led to the establishment of a number of International Post-graduate Courses in hydrology under the ambit of 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 sponsored by the Government of India and UNESCO. 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 relating to the water sector in India and abroad, to participate in the training programmes.

Prof. S.C. Saxena  
Director  
IIT Roorkee

## **ABOUT THE INSTITUTE**

Indian Institute of Technology Roorkee is the latest member of the IIT family and 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 as the first Engineering University of independent India on November 25, 1949. It has now 19 academic departments/centres offering 10 undergraduate courses in engineering and architecture, 3 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 342 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 industries as well as to Government agencies. The institute has about 1989 undergraduate students, 1410 postgraduates and nearly 740 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 2,75,000 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, with 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, Ranging and Rovering, 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, UNESCO and WMO. So far a total of **712** participants including **269** foreign participants from **34** countries have participated in the Post-Graduate Programme (ANNEXURE-1). Since 2003, GATE qualified fresh engineering and science graduates from India are also admitted in this programme.

## FACULTY:

Dr. N.K. Goel	Professor and Head	Stochastic Hydrology
Dr. B. Mathur	Professor	Surface Water Hydrology
Dr. D.K. Srivastava	Professor	Water Resources Systems
Dr. Ranvir Singh	Professor	Watershed Management
Dr. D.C. Singhal	Professor	Ground Water Hydrology & Geophysics
Dr. Himanshu Joshi	Associate Professor	Environmental Hydrology
Dr. M. Perumal	Associate Professor	Surface Water Hydrology
Dr. D.S. Arya	Assistant Professor	Hydroinformatics
Dr. M.D. Nautiyal	Emeritus Fellow	Hydrogeology and Artificial Recharge

## 2. PROGRAMMES OFFERED

The Department offers the following academic programmes:

- **M.Tech. (Hydrology):** It is a 24 months academic programme consisting of lectures, tutorials, practicals, and project preparation in the first year. In the second year, delivering of a seminar is followed by work on a dissertation problem.
- **P. G. Diploma (Hydrology):** It is a one year academic programme. It consists of all academic requirements of the first year M.Tech. (Hydrology).
- **Ph.D. in Hydrology:**  
The DOH is also actively engaged in various research areas of hydrology. So far thirty-seven scholars of the Department have been awarded Ph.D. degrees. Currently, thirty one scholars are registered with the Department for pursuing their research leading to Ph.D. degrees.

## 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 30. Out of this strength, 20 candidates will be selected from different government/semi-government organizations from India and abroad whose candidature will be officially sponsored. Ten M.Tech. seats will be filled through GATE qualified fresh candidates. Selection of GATE qualified candidates will be made alongwith admission of other M.Tech. candidates of different disciplines who will be admitted through a separate announcement by I.I.T. Roorkee.

## 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 DOH.

- Surface Water Hydrology
- Ground Water Hydrology
- Watershed Management

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

Surface Water	Ground Water	Watershed Management
<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 DOH/other Departments/Centres of IIT, Roorkee. The students are free to select a number of courses from a group of courses 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 first year 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).** (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 at 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 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. Hydrology and who possess the required qualification (s) stated above must have at least **60% aggregate marks or 6.75 CGPA on a 10 points scale** at qualifying degree level. *(For the Indian candidates belonging to SC/ST category, the qualifying percentage is 55% aggregate or 6.25 CGPA on a 10 points 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 regulations/rules of I.I.T. Roorkee).*

(ii) The full time sponsored candidates must have a minimum of two years of full time work experience in responsible capacity in a Registered Firm/Company/Industry/Educational and Research Institution/Govt./Quasi Govt. Autonomous Organization in the relevant field 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 concern 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 admission procedure is separate and for further details, Assistant Registrar (Academic), Indian Institute of Technology, Roorkee – 247 667 may be contacted.

**Admissions and studentship and related matters are governed by the IIT Roorkee ordinances/regulations/rules/norms framed/amended/modified and in vogue from time to time. Accordingly, the admission for session 2007-2008 will be as per new regulations in force.**

## **7. EXAMINATION AND AWARD OF DEGREE / DIPLOMA**

The students have to attain certain minimum academic requirements to pass the prescribed examination(s). The successful candidates in the examinations, as per requirements of the Institute, are awarded either an M.Tech. Degree in Hydrology or a Post Graduate Diploma in Hydrology as per the option for which they were registered.

## 8. FELLOWSHIPS

### [A] For Foreign Candidates

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

Foreign candidates may apply through proper channel for the following fellowships: An advance copy be sent to the DOH 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) in 76 countries (No. of candidates trained in past: 76 from 25 countries)
- b. Technical Cooperation Scheme of Colombo Plan (TCS-Colombo Plan) implemented through ICCR 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 & SCAAP schemes: [www.itec.nic.in](http://www.itec.nic.in)

The application forms for TCS Colombo plan may be downloaded from the website: [http://geocities.com/doh\\_iitr/](http://geocities.com/doh_iitr/)

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

A few fellowships may be available with the financial support of UNESCO and World Meteorological Organization (WMO). The candidates are advised to confirm from UNESCO and WMO the availability of such fellowships in advance.

For UNESCO sponsored fellowships, the applicants should apply to the **Director, UNESCO Regional Office (ROSTSCA), B-5/29, Safdarjung Enclave, New Delhi-110 029 (India)** through the National Commission of UNESCO in their country/region.

For World Meteorological Organization (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 need to be sent to the DOH at it 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:** 10-seats shall be filled through GATE qualified fresh graduates. These candidates may be considered for assistantship in accordance with regulations/ordinances/rules 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 cost 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 & Head, Department of Hydrology, IIT Roorkee**. The IIT Roorkee will communicate the amount of advance payment to be made to this effect.

## **10. ESTIMATE OF ANNUAL EXPENSES**

At present, very nominal fee is being charged from the participants sponsored by state and central Govt. departments of India, the Ministry of External Affairs and Deptt. of Economic Affairs. 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.*

<b>Expenditure</b>	<b>P.G. Diploma (1 year) (in Rs.)</b>	<b>M.Tech. Programme (2 years) (in Rs.)</b>
[A]. (i) Institute Fee	8,980	17,960
(ii) Institute caution deposit (refundable)	1,000	1,000
(iii) Library deposit (refundable)	2,000	2,000
(iv) One time payments	1590	1590
[B]. Other Expenses		
(i) Boarding and lodging	30,000	60,000
(ii) Field Trips	5,000	10,000
(iii) Books, stationery, lecture notes, examination fee etc.	10,000	20,000
(iv) Outfit and medical expenses	5,000	10,000

[Note: 1 US\$ = Rs. 48/- approx.]

Foreign nationals sponsored by other agencies like UNESCO, WMO etc. have to pay Institute fee at following rates.

- (i) Candidates from SAARC countries – US\$ 2000 per annum
- (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 Annexure-2.

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

The Department of Hydrology recently organized an International Conference in February 2005 on the theme "Hydrological Perspectives for Sustainable Development (HYPESD)." This was the sixth Symposium/Conference the department had organized since its inception. Apart from this, 57 special short-term courses and workshops were also organized in the past. Some of these events were specially designed to cater to the needs of user organizations. Also, the department has handled many research and consultancy projects (more than 80) in different fields of hydrology.

The Department can organize short term training courses on specified topics relating to hydrology and water resources which may be required for the engineers of State Departments and various central government organizations dealing with water sector.

The following laboratories are functioning in the department:

- (i) Hydrometeorological Lab.
- (ii) Computer Lab.
- (iii) Hydrological Information Systems Lab.
- (iv) Water Quality Lab.
- (v) Surface Water Lab.
- (vi) Ground Water Lab.
- (vii) Geophysics Lab.
- (vii) Experimental Watershed

The departmental library has an up-to-date collection of over 6500 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 versions 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/Uttaranchal 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<sup>o</sup> 52' N and Longitude 77<sup>o</sup> 53.52" E) is 268 m above mean sea level. The temperature ranges from 5<sup>o</sup> C to 20<sup>o</sup> C in winter (October to March) and from 25<sup>o</sup> C to 40<sup>o</sup> 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 INTERNATIONAL AIRPORT**

Indira Gandhi International Airport, New Delhi (approx. 200 km).

**PARTICIPATION IN INTERNATIONAL POST GRADUATE HYDROLOGY  
PROGRAMME DURING 1972-2006**

**(A) COUNTRYWISE PARTICIPATION**

S. No.	Country	Trainees	S. No.	Country	Trainees
1.	Afghanistan	17	19.	Nigeria	6
2.	Bangladesh	25	20.	Pakistan	1
3.	China	4	21.	Palestine	1
4.	D.P.R. Yemen	4	22.	Panama	1
5.	Egypt	2	23.	P.D.R. Laos	6
6.	Ethiopia	10	24.	Philippines	15
7.	Ghana	3	25.	Sierra Leon	1
8.	India	443	26.	Somalia	1
9.	Indonesia	32	27.	Sri Lanka	13
10.	Iran	14	28.	Sudan	18
11.	Iraq	3	29.	Syria	6
12.	Jordan	1	30.	Tanzania	5
13.	Kazakhstan	2	31.	Thailand	4
14.	Malaysia	2	32.	Uganda	2
15.	Mongolia	5	33.	Uzbekistan	1
16.	Morocco	1	34.	Vietnam	18
17.	Myanmar	7	35.	Zaire	1
18.	Nepal	37		<b>TOTAL</b>	<b>712</b>

**(B) STATEWISE INDIAN PARTICIPATION**

S. No.	Indian State / Organization	Trainees	S. No.	Indian State / Organization	Trainees
1.	Assam	53	16.	Kerala	6
2.	Andhra Pradesh	15	17.	Madhya Pradesh	26
3.	Arunachal Pradesh	6	18.	Maharashtra	20
4.	Bihar	21	19.	Manipur	1
5.	CSWCRTI	2	20.	Ministry of Agriculture	1
6.	Central Water Commission	25	21.	Mizoram	2
7.	Central Ground Water Board	12	22.	Municipal Corpn. of Delhi	1
8.	CWPRS	7	23.	N.I.H., Roorkee	9
9.	Damodar Valley Corporation	4	24.	NWDA	3
10.	Gate qualified	22	25.	Orissa	76
11.	Goa	4	26.	Punjab	1
12.	Gujarat	20	27.	Tamil Nadu	2
13.	Haryana	4	28.	Tripura	1
14.	Himachal Pradesh	4	29.	Uttar Pradesh	23
15.	Jammu & Kashmir	11	30.	West Bengal	37
16.	Karnataka	24		<b>TOTAL</b>	<b>443</b>

**FORMAT OF APPLICATION FORM**  
**INTERNATIONAL MASTER'S COURSE / P.G. DIPLOMA IN HYDROLOGY**

**Department of Hydrology, Indian Institute of Technology Roorkee, Roorkee**

*(Sponsored by the Govt. of India / UNESCO)*

**36<sup>th</sup> Course: July, 2007 to June, 2008/2009**

(Starting July 16, 2007 and ending on July 15, 2008 for P.G. Diploma and July 2009 for M.Tech.)

**IMPORTANT** (Applicants may please ensure that he/she possesses the necessary eligibility for which criteria are given at the end of the application).

An advance copy of the completed application along with academic transcripts (**in English**) be directly sent to Professor and Head, Department of Hydrology, Indian Institute of Technology Roorkee, Roorkee -247 667 (India) preferably before **June 15, 2007**. (May 15,2007 for WMO and UNESCO sponsored candidates)

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)
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
10. Expected duration of stay
11. Places to be visited
12. The name of Indian Mission abroad where visa will be applied (for foreigners only)
13. Source of funding and terms and conditions of funding
14. Whether accompanied by spouse/department. If so give particulars
15. Qualifications (starting from the highest degree)
  - a. Name of examination passed
  - b. Year of passing
  - c. Name of the university / institute (with address)
  - d. Division and percentage of marks / grades (in case of Cumulative Grade Point Average (CGPA) equivalent percentage must be given)
16. Professional (work) experience (starting from the recent one)
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 be submitted)
19. Appeared in GRE or equivalent examination (if yes, give details)
20. Official address with FAX number
21. Emergency address

**Photograph**

(Candidates Signature)

**OBLIGATORY 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 Official Health Services.
- iii. Copies of academic transcripts giving the proof of aggregate percentage of marks/CGPA obtained attach attested copies in (**English version**). For M.Sc. degree holder, a certificate/marksheet indicating the subjects offered in the B.Sc. course must be attached.
- iv. Candidate should submit on a separate sheet the work experience record in chronological order.
- v. SC/ST Certificate (applicable to Indian candidates only).

## ELIGIBILITY CRITERIA

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

- (a). (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 at B.Sc. (Bachelor's) or its equivalent level.
- (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 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. Hydrology and who possess the required qualification (s) stated above must have at least **60% aggregate marks or 6.75 CGPA on a 10 points scale** at the qualifying degree level. For the Indian candidates belonging to SC/ST category, the qualifying percentage is **55 percent or 6.25 CGPA on a 10-point scale**. The SC/ST category candidates must submit, the requisite certificate alongwith the application / or at the time of counseling (for GATE qualified / fresh candidates) from a competent authority as recognized by the IIT Roorkee. Part-Time sponsored candidates can also be admitted in accordance with the prevailing regulations/rules of I.I.T. Roorkee.
- (ii). The full time sponsored candidates must have a minimum of two years of work experience in responsible capacity in a Registered Firm/Company/Industry/Educational and Research Institution/Govt./Quasi Govt. Autonomous Organisation in the relevant field 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 concern whose annual turn-over during the last two years exceeds Rs. 5 crores. The educational institutions should be recognised by AICTE.
- (iii). Sponsored candidates must submit the sponsorship certificate duly signed by the Head of the Institution/Organisation 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 Organisation (DRDO) Schemes, for which admission procedure is separate and for further details, Assistant Registrar (Academic), Indian Institute of Technology, Roorkee – 247 667 may be contacted.
- (c). **Admissions, studentships and related matters are governed by the IIT Roorkee ordinances/regulations/rules/norms framed/amended/modified and in vogue from time to time. Accordingly, the admission for session 2006-07 will be as per new regulations in force at the time of admission.**
- (d). More details of the course and institute charges can be downloaded from the IIT Roorkee website (<http://www.iitr.ernet.in/acads/depts/hydrology/index.htm>)

## **CORRESPONDENCE**

**Professor and Head  
Department of Hydrology  
Indian Institute of Technology Roorkee  
Roorkee-247 667, India  
Phone: 0091-1332-285236 / 285814 (Office)  
EPABX: 0091-1332-272349-Ext. 5236 (Office)  
FAX: 0091-1332-285236, 273560  
E-mail: goelnfhy@iitr.ernet.in, goelhy@yahoo.com  
Website: <http://www.iitr.ernet.in/acads/depts/hydrology/index.htm>**

**Completed applications in prescribed format to reach Roorkee preferably  
before June 15, 2007 (May 15, 2007 for WMO and UNESCO Sponsored  
Candidates)**