

**Advertisement No. PER/02/2011/CAT**

**Indian Institute of Tropical Meteorology, Pune, India**

**(under the Ministry of Earth Sciences, Government of India)**

**CENTRE FOR ADVANCED TRAINING IN EARTH SYSTEM SCIENCES AND  
CLIMATE**

**OPPORTUNITIES FOR BTech/BE/MTech/ME/MSc/MS  
GRADUATES FOR RESEARCH CAREER IN EARTH  
SYSTEM SCIENCE AND CLIMATE**

The Centre for Advanced Training in Earth System Sciences and Climate (CAT-ESSC) of Ministry of Earth Sciences (MoES) hosted at the Indian Institute of Tropical Meteorology (IITM) is looking for scientist trainees with outstanding academic background. The training program is extremely challenging in view of the predicted climate change scenario and its implications on the economy and environment. The main objective of the Centre is to create a large pool of trained and dedicated earth and earth system scientists with in-depth understanding and hands-on expertise on individual physical processes of the land, ocean, atmosphere, biosphere and cryosphere with special emphasis on climate modeling. The aim is to go beyond the conventional training on individual systems and address weather and climate as processes arising from interactions between the above component systems. Hence for the motivated candidates, the training will offer considerable scope to realize their full potential in this highly challenging field. Meritorious candidates with Master in Science or Bachelor/Master in Engineering degree with high score in the CSIR-NET or IIT-GATE examinations will be recruited. They will be provided this induction training extending to 18 months and subsequently placed in IITM or any other institutes of the Ministry of Earth Sciences. There will be an option for the recruitees to pursue M.Tech or/and Ph.D before or after placement. The program will be carried out at IITM, Pune and a new campus with self contained facilities for training and research is being established in Pune.

IITM is committed to develop world class research expertise for understanding and exploring unresolved scientific issues in climate science. It is engaged in basic research in all aspects of tropical ocean-atmosphere systems as applicable to weather and climate forecasts. A Centre for Climate Change Research (CCCR) has been established at IITM to address all science issues related to climate change and Indian monsoon. To cater to the modeling needs, a High Performance Computer (HPC) has been set up with peak performance of 70 TF. The Institute has excellent infra-structure facilities and also has the state of the art equipments for field observations. The IITM's activities include training to

post graduates and to motivate them to take up research career in atmospheric and ocean sciences required to improve the skill for weather and climate prediction modeling. It has MoU with University of Pune for carrying out studies leading to the award of M.Tech and Ph.D. The institute has linkages with many other leading Universities for its Ph.D program. The other institutions under the Ministry – India Meteorological Department (IMD) with an all India network, National Centre for Medium Range Weather Forecasting (NCMRWF) at Noida, Indian National Centre for Ocean Information Services (INCOIS) at Hyderabad, National Institute of Ocean Technology (NIOT) at Chennai, National Centre of Antarctic and Ocean Research (NCAOR) at Goa, Centre for Marine Living Resource and Ecology (CMLRE) at Kochi and Integrated Coastal and Marine Area Management (ICMAM) at Chennai - have similar advanced facilities in their respective areas.

Applications are invited from eligible candidates of Indian origin for the Advanced Training in Earth System Sciences and Climate and subsequent placement. The details of the program and requirements are given below.

### **Academic qualifications**

The candidate should possess M.Sc/MS/M.Tech degree or equivalent in Meteorology, Atmospheric Sciences, Chemistry, Ocean Sciences, Physics, Applied Mathematics, Statistics, Applied Physics, any area of Earth Sciences or equivalent disciplines, with Physics and Mathematics at the graduate level. **OR**

B.Tech/B.E/M.Tech/M.E in Mechanical, Civil, Chemical, Electrical or Electronics Engineering (detailed list of eligible subjects are indicated in the attached table).

The candidates should have secured 60% or more marks at both the graduate and postgraduate level.

Those who are appearing for the final exams may also apply subject to the condition that they produce the final certificates if and when called for the interview.

### **Eligibility is through CSIR-NET or IIT-GATE Examination**

The candidates applying for the training should have passed the CSIR National Eligibility Test (NET) or the IIT-Graduate Admission Test in Engineering (GATE). **In the case of those who are appearing for the current NET/GATE examinations, the results of which are expected in April/July 2011, the outcome be communicated to the undersigned as soon as it is announced. *The candidates who have appeared for the current NET/GATE and their results are awaited shall give their admission no. in the Application pro-forma in the appropriate column.***

**Age limit**

The upper age limit is fixed as 28 years and 30 years for those who have already completed MTech as on 31 March 2011. It is relaxable by 5 years for candidates belonging to SC/ST, 3 years for candidates belonging to the Other Backward Communities and as per institute rules for ex-servicemen and physically handicapped persons.

**Interview**

The applications received will be screened and the candidates to be called for interview will be shortlisted based on their merit, ranking in the NET/GATE and any other criteria prescribed by the Institute. The shortlisted names will be displayed on the IITM's website and candidates will be suitably informed about the interview dates. The interviews will be held in Pune in July 2011 in two stages on two/three consecutive days. The first phase is to examine the candidate with respect to his/her grasp in the subject of specialization, general intelligence, reasoning skills and motivation to make a career in the field of earth and earth system science and climate. The candidates will be ranked based on their score in this first phase of the interview at the end of the first / second day. A limited no. of highest scorers from the first stage will be called for the second phase of the interviews on the second / third day. This will be mainly to examine the analytical and cross-disciplinary capabilities, interest in the subject of training, research aptitude, etc. The rank list of the candidates based on the performance in this stage will be published in the website. The candidates selected will be intimated appropriately and required to join the Institute within two weeks of announcement of the selection.

**Travel assistance**

Candidates called for interview will be paid sleeper class to and fro train fare after their interview by the shortest route on production of original tickets.

**No. of positions**

The maximum number of trainees in the first batch is tentatively fixed as **twenty**.

**Starting date of the training**

The training programme for the selected candidates is scheduled to start by the first or second week of August 2011.

## **Remuneration**

The selected candidates will be inducted in the training program and will be paid a consolidated remuneration of Rs.25,000/- per month with an annual increment of Rs.1,000/.

## **The Training Program**

The training is modular / integrated in nature. The trainees will be provided an induction training consisting of 3 semesters (total of 18 months). Two semesters will be for the core advanced courses and the last for a project in any one of the MoES institutions. On satisfactory completion the trainees will be posted in any one of the MoES institutions in the grade of Scientist-B (BTechs & MSc) or Scientist-C (MTechs). The trainees will have the option to pursue M.Tech or/and Ph.D before or after placement and the grades will be in accordance with the basic qualification and the level of training. While in the job on satisfactory completion of MTech or/and PhD there is opportunity to be placed in the higher grades based on performance. The Ph.D program will be in different aspects of earth system sciences, monsoon variability, predictability, air-sea interaction and other topics relevant to MoES under the supervision of either IITM / CAT or jointly with faculty of other MoES institutions. Those with technical background will be provided topics suitable to their expertise as optional in the induction training and the PhD topics will also be selected accordingly, with appropriate additional supervision from the scientists / engineers of the institutions of the Ministry / elsewhere. Excellent national and international faculty will also be available to handle different aspects of the training program. The Ph.D trainees will have opportunities to visit and get exposure in the international institutions. The institutions have well-maintained laboratories and well-stocked libraries that provide an excellent opportunity for professional development.

## **Accommodation**

Hostel facilities will be available to the trainees. Once they are placed staff quarters will be provided as per availability and eligibility.

## **Placement**

On successful completion of the induction training program or/and M.Tech or/and Ph.D will be placed in any one of the institutions of the Ministry of Earth Sciences as Scientists in suitable grades (Scientist-B/C/D) based on their qualifications and performance in the training program. As on date, approximate annual salary in the post of Scientist-B is Rs.5 lakh, Scientist-C is Rs.6 lakh and Scientist-D is Rs.6.5 lakh. Career improvement through the Flexible Complementing Promotion Scheme is available. Pension benefits, medical facilities for self and dependants during service and after retirement, transport

allowance, canteen facilities and leave travel concession and such other facilities will be available. Interested candidates may submit their applications in the prescribed pro-forma with detailed CV and other relevant documents by **31 March 2011 *online***

URL : <http://www.tropmet.res.in>

*Note: Incomplete applications will be rejected*

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## SCHEDULE OF ELIGIBLE DISCIPLINES

<b>Discipline</b>	<b>Sub Discipline</b>	<b>Exam.</b>	
Mathematical Sciences	Mathematics Applied Mathematics Statistics	NET/GATE	
Physical sciences	Physics Applied Physics	NET/GATE	
Earth Sciences	Atmospheric sciences Oceanography Space sciences Planetary sciences Geology Geophysics	NET/GATE	
Chemical sciences	Chemistry Applied Chemistry	NET/GATE	
Electronics	Electronics Applied Electronics	GATE	
Mechanical Engg.		GATE	
Civil Engg.		GATE	
Electrical Engg.		GATE	
Chemical Engg.		GATE	
Electronics Engg.	Electronics Engg.	GATE	