

Admission Procedure

Admission in to 2-year M.Tech (under MHRD) is through GATE (Subject: AG/BT/CE/CH/CY/CS/EC/EE/EY/ME/PH) COAP → Eligible for MHRD fellowship

IIT B.Tech graduates: Do not need a GATE score but must have a CGPA of 8.00

The selected applicants will have to provide research/teaching assistance of up to 20 h. per week

Reservation of seats will be as per Government of India norms

Course Curriculum

Total credit requirement for the award of M.Tech. in CC → 50

Semester—1

Core courses	2	6 credits
Elective courses	2	6 credits
Seminar	1	1 credit

Semester—2

Core courses	2	6 credits
Elective courses	2	6 credits
English commn.	1	1 credit

Masters Thesis	1	2 credits
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Semester—3

Masters Thesis	1	10 credits
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Semester—2

Masters Thesis	1	12 credits
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The students are free to choose from a basket of elective courses offered in the department as well as in other departments

How to apply

Interested candidates should fill in the application form online at <https://iith.ac.in/mtechadmissions> on or before the deadline.

Results

List of selected candidates will be released from time to time

Selected applicants will be communicated through emails

The list will also be made available in departmental webpage

The applicants should ensure the accuracy of the email address provided and check their email regularly for updates

Offers will be made as per COAP guidelines

Teaching and Research Laboratories

Computational Laboratory with workstations for students

Research Thrust

Climate Change Modeling and Measurement

Climate Change Mitigation

Climate Change Policies

Projects

Cool Infrastructures Life with Heat in the Off-Grid City, funded by Economic and Social Research Council, UK. This is a collaborative project with Dr. Jamie Cross, University of Edinburgh. [Dr. Aalok Khandekar, IIT Hyderabad]

Assessment of the Actual and Potential Contributions of Smart City Projects to Climate Resilience in Selected Asia-Pacific Cities, funded by Asia Pacific Network (APN) for Global Research Change (2019-2020). This is a collaborative project with Ayyoob Sharifi et al, Hiroshima University, Japan. [Dr. Aalok Khandekar, IIT Hyderabad]

Pathways in Air Pollution Governance in Indian Cities: From Education to Science to Governance, funded by Azim Premji Foundation, India (2016-2019). This is a collaborative project with Kim Fortun, University of California, Irvine, USA. [Dr. Aalok Khandekar, IIT Hyderabad]

[Understanding space-time variability of climate extremes for societal resiliency in Indonesia and India](#), funded by Asia-Pacific Network (APN) for Global Change Research (2019 -2020). This is a collaborative project with Dr. Mas Yanto, Jenderal Soedirman University, Purwokerto, Indonesia, and Prof. Balaji Rajagopalan, University of Colorado at Boulder, USA. [Dr. Satish Regonda, IITH].

Smart Cities Development for Emerging Countries by Multimodal Transport System Based on Sensing, Network and Big Data Analysis of Regional Transportation, funded by the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA), (01 April 2017 to 31 March 2022), This is a collaborative project. [Dr Digvijay S Pawar, IITH]

Department of Climate Change
Indian Institute of Technology Hyderabad

M.Tech. Program in
Climate Change (CC)

Information Brochure



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About the Program

M.Tech in Climate Change (CC) is being offered from academic year 2021-22 in the Department of Climate Change. The intake per year under 2-year M.Tech program is 15 seats (10 MHRD + 5 self financed).

About the Department

The Department of Climate Change at the IIT Hyderabad attempts to explore climate change integrating academic knowledge with practical knowledge bringing scientists, engineers, practitioners and students together. The key is an understanding of the strong association between the basic climate sciences, the technology & engineering solutions, and the policy. We, at IITH, plan to be a leading institute in the synergy among these three key areas. This clearly highlights the need for multi-disciplinary courses. We plan to achieve this with a unique curriculum taking the help of IITH fractal academics programme. The curriculum involves core courses, elective courses, seminar series by the experts of various disciplines, focus group discussions, field visits, and research thesis.

About the Institute

IIT Hyderabad is one among the 2nd generation of IITs started by the Govt. of India in 2008. As of date, IITH offers 10 B.Tech programs, 21 M.Tech programs, 3 M.Sc programs, 5 M.Phil programs, 1 M.Des program and Ph.D. programs in all branches of engineering, science, liberal arts and design. The very foundation of IIT Hyderabad is based on research and innovation. The vibrant research culture is evident from the number of patents and publications that IITH is generating. The institute has about 220 faculty and 2,500 students

CC Faculty

Dr. Satish Regonda, Head and Assistant Professor
Dr. Aalok Khandekar, Assistant Professor
Dr. Abhinav Kumar, Associate Professor
Dr. Asif Qureshi, Associate Professor
Dr. BRamakrishna, Assistant Professor
Dr. Chandra S Sharma, Associate Professor
Dr. Chandrshekharam, Visiting Professor
Dr. Debraj Bhattacharya, Associate Professor
Dr. Digvijay S Pawar, Assistant Professor
Dr. Harish NDixit, Assistant Professor
Dr. KBMPhanindra, Associate Professor
Dr. Kaushik Nayak, Assistant Professor
Dr. Kishalay Mitra, Associate Professor
Dr. Melepurath Deepa, Professor
Dr. Pritha Chatterjee, Assistant Professor
Dr. Raja Banerjee, Associate Professor
Dr. Sai Santosh Ravi Kumar, Associate Professor
Dr. Sathya Perri, Associate Professor
Dr. Sayak Banerjee, Assistant Professor
Dr. Shantanu Desai, Associate Professor
Dr. Shashidhar, Associate Professor
Dr Shiva Ji, Assistant Professor
Dr. Subrahmanhyam, Professor
Dr. Sumohana Channappayya, Professor
Dr. Vineeth NB, Associate Professor

Climate Change

Increasing temperatures, rising sea levels, changing frequencies of rainfall events, extreme weather events, declining sea ice in the Arctic and ascending greenhouse gas concentrations in the atmosphere are a few well-known indicators of climate change. A large amount of scientific evidence detailing climate change and its consequences across the world is well documented. The evidence may be local or regional, whereas the consequences are observed on a much bigger scale; thanks to our increasingly interconnected world and our integrated global economy. While there are still questions that hover around whether the climate change that has been observed is primarily anthropogenically driven or because of the climate's natural variability or a combination of both, significant consensus exists among many including scientists, engineers, farmers, policy-makers and the informed public that we must reduce the man-made contribution to climate change.

Climate change is one of the few subjects that cuts through many research disciplines as well as many sectors of society. The whole process raises more and new questions, which requires a better understanding of the climate change process and its wide horizon and connections among interdisciplinary sciences. Answers to the questions may take different forms as in products, solutions or in increased awareness, which may be developed as a specific skill set. The scientific understanding of climate change is complex, its consequences and issues are of a wide variety, and importantly, they are time and region specific. While identifying key areas/disciplines is difficult, the following have a good fit given its strong association with society and economy, i.e., agriculture, carbon budget, computer sciences, data sciences, energy, environment, infrastructure, mobility, and water resources. Of course, there is much more, and all of it leads to enhanced knowledge, technological innovations, and business opportunities.

