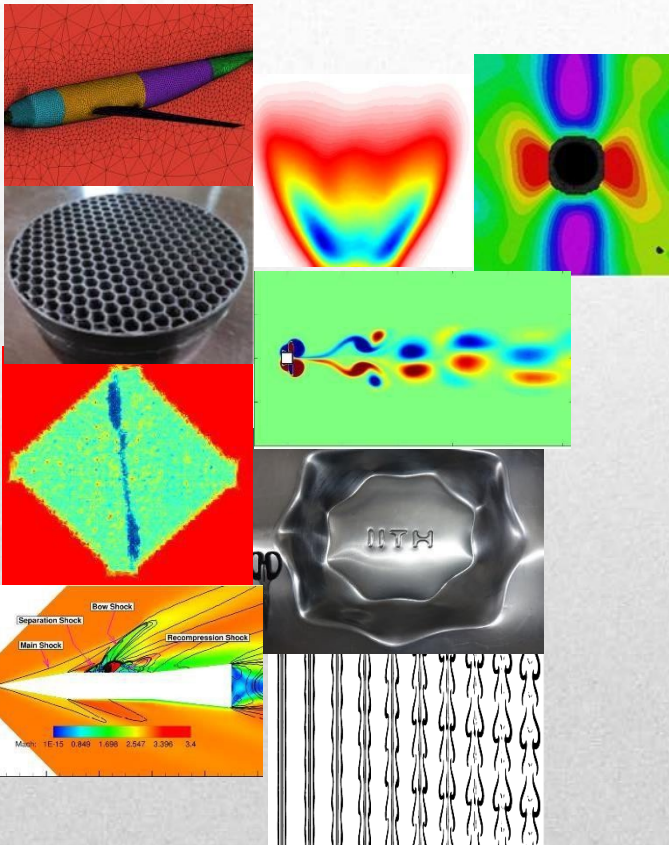




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भारतीय प्रौद्योगिकी संस्थान हैदराबाद  
Indian Institute of Technology Hyderabad



# PhD Admissions Mechanical & Aerospace Engineering Department, Indian Institute of Technology Hyderabad

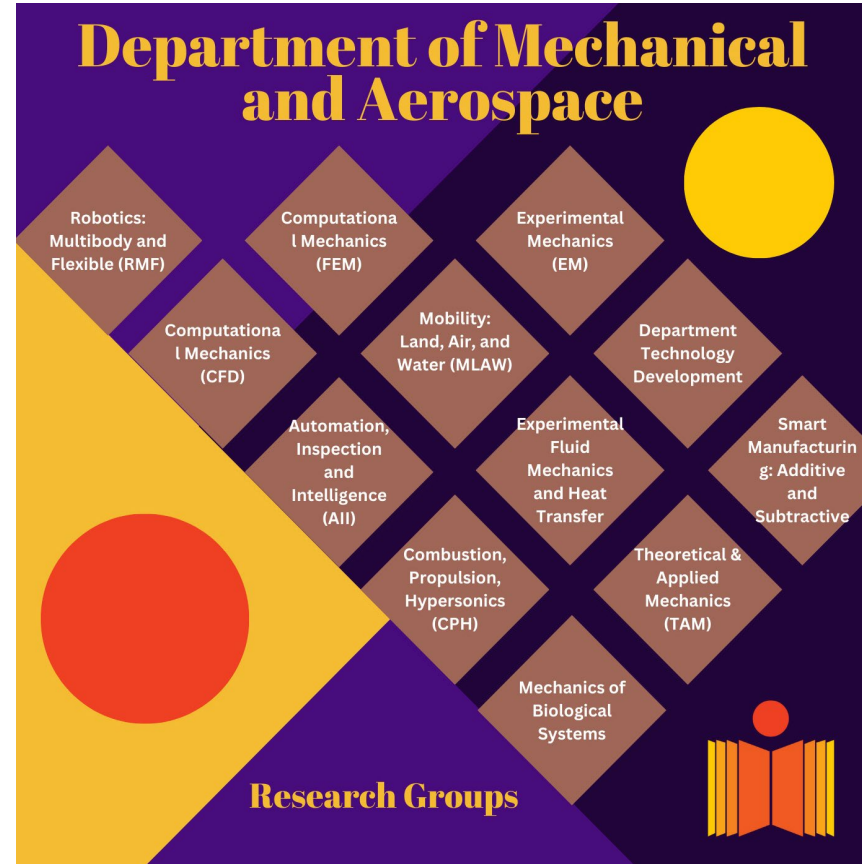
# The Department

- The Department of Mechanical Engineering aims at pushing the frontiers of modern science and engineering through quality teaching and cutting-edge research. In order to make the nation self-sufficient, it is highly motivated to invest in state-of-the-art manufacturing technology and address the issue of energy in the context of global energy environment.
- Right from its inception in 2008, it has attracted a rich and diverse set of talented individuals, currently nurturing 120 undergraduates and 70 postgraduates, who are trained in the nuances of the field by highly qualified faculty
- The department presently offers MTech in (a) Mechanics and Design (b) Integrated Design and Manufacturing (c) Thermofluids Engineering (d) Aerospace Engineering in addition to BTech in Mechanical and a Ph.D. program.



The faculties are well experienced and very enthusiastic about research and practical learning. All of them are at the foremost in their field of research. Major areas of faculty expertise includes CFD, Acoustics and Vibration, Dynamics and controls, Mechatronics, Thermodynamics, Multiphase flows, Process Modeling and Optimization, Manufacturing, Linear and Nonlinear Vibrations, FEM, Fracture Mechanics, Rapid Prototyping, MEMS, NEMS, Composites, Impact Mechanics and CNC Machining. The faculty has been actively involved with industry and research organizations with work experience in DRDO, DST, BHEL, NRB, GM etc.

# The Department



# Facilities

The Department boasts of following state-of-the-art laboratories for undergraduate, graduate and doctoral students:

- ❖ Acoustics and Vibration lab
- ❖ Robotics and Automation lab
- ❖ Applied Micro & Nano Mechanics Lab
- ❖ Computer Aided Engineering Lab
- ❖ Dynamics of Machinery Lab
- ❖ Engineering optics lab
- ❖ Fluid Mechanics Lab
- ❖ Heat Transfer
- ❖ IC Engine
- ❖ Combustion and Flow Diagnostics
- ❖ Machining & Metrology Lab
- ❖ Manufacturing Lab
- ❖ Mechatronics Lab
- ❖ Rapid Prototyping and Manufacturing lab
- ❖ Solid Mechanics Lab
- ❖ Composite Fabrication Lab
- ❖ Impact Mechanics Lab
- ❖ Micro-Mechanics Lab
- ❖ MEMS & NEMS Lab
- ❖ Aerospace Propulsion Lab



- ❖ Vehicle Dynamics Lab
- ❖ NDT & E Lab

## Computing Facilities:

- ❖ High end workstations equipped with extensive scientific and engineering softwares such as Rapid Prototyping & Manufacturing Lab ANSYS, MATLAB, FLUENT, MAPLE, Solid Edge, Unigraphics, Hyperworks, ADAMS, LMS Virtual Lab, VA One etc.
- ❖ A state-of-the-art High Performance Computing cluster is also available to perform computationally intensive research



# Structure of the PhD Program

## Course work

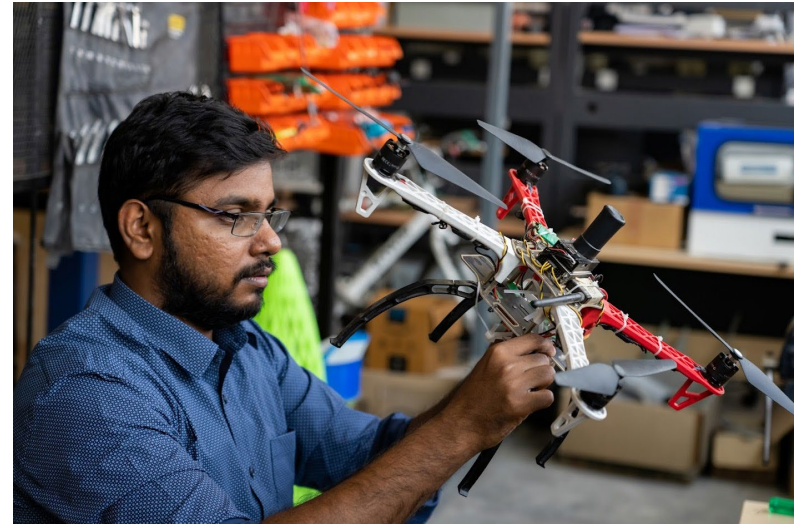
The Ph.D. candidate is required to undergo course work during the first two semesters. The minimum course requirement in the department is 12 credits with good academic performance (CGPA  $\geq 7$ ). Candidates, in consultation with their supervisor, may also choose to take relevant courses from other departments.

## Choosing the Ph.D. Supervisor

It may be noted that some faculties may not have vacancies for taking PhD students in a certain year. PhD students joining the department are mandatorily required to submit their order of preference for their supervisor by the end of the first semester after meeting all the eligible faculty members in their stream who have vacancies for PhD positions in that particular year. Subsequently, allocation of supervisors is done based on preferences received from all Ph.D. candidates.

## Thesis Proposal & Research Progress

All Ph.D. candidates are required to take comprehensive exam within 12 months of joining. If student fails in the first attempt for comprehensive exam, he/she can take it after minimum of 1 month and within maximum of 3 months. Candidate has to defend a thesis proposal within 18 months of the date of joining the department. Subsequently, Ph.D. scholars are required to regularly apprise the doctoral committee of progress made in solving the research problem. Continued involvement in the Ph.D. program is subject to satisfactory progress, as deemed by the doctoral committee.



## Financial Support

Students admitted to the Ph.D. program under the regular scheme (full-time) are eligible for financial assistance according to the Ministry of Education (MoE) norms. Students receive an enhanced monthly emolument after successful conversion from Junior Research Fellow (JRF) to Senior Research Fellow (SRF) after 2 years. Renewal of assistantship every semester will be contingent on enrolment, satisfactory progress in research work in addition to assistance in teaching or research, as assigned by the Department, to the extent of 8 hours of work per week. Some additional positions may be funded by external projects subject to availability at the time of selection.

# Admission Process

## Who can apply? (Eligibility Criteria)

- Candidates with a MTech/ME degree in Mechanical, Aerospace or related disciplines are eligible to apply. A valid GATE score is not a pre-requisite for such candidates. Refer to the table on the right.
- Candidates without a Master's degree, but a valid GATE score and a BTech/BE in Mechanical, Aeronautical/Aerospace, Automobile Manufacturing, Machine Tool, Production, Production & Industrial Engineering, and related disciplines are also eligible to apply for the Ph.D. program.
- External Ph.D. candidates employed in reputed research organizations must identify a faculty member willing to supervise them and are required to submit a research proposal prior to the initiation of the selection process (written test and interview).
- Direct PhD candidates from IITs/IISC with 9 CGPA receive a stipend of 80,000 as per the institute norms.
- Relaxation on the selection cut off is provided for SC/ST/OBC candidates (10% for OBC candidates and 15% for SC/ST candidates). Not applicable for Direct & External PhD.

Type of PhD program	Entry Qualification	CGPA Requirement	Entry Exam	Work experience
Regular PhD	ME/MTech/ MS (2 or more-years by Research)	First class	NA	NA
Direct PhD	BE/BTech from CFTIs	8 CGPA	NA	NA
	BE/BTech	First class	GATE/ NET	NA
Direct PhD(special fellowship)	BE/BTech/4-year BS from IITs/ IISc	9 CGPA	NA	NA
External PhD	ME/MTech	First Class	NA	Minimum 2 years

## How to apply?

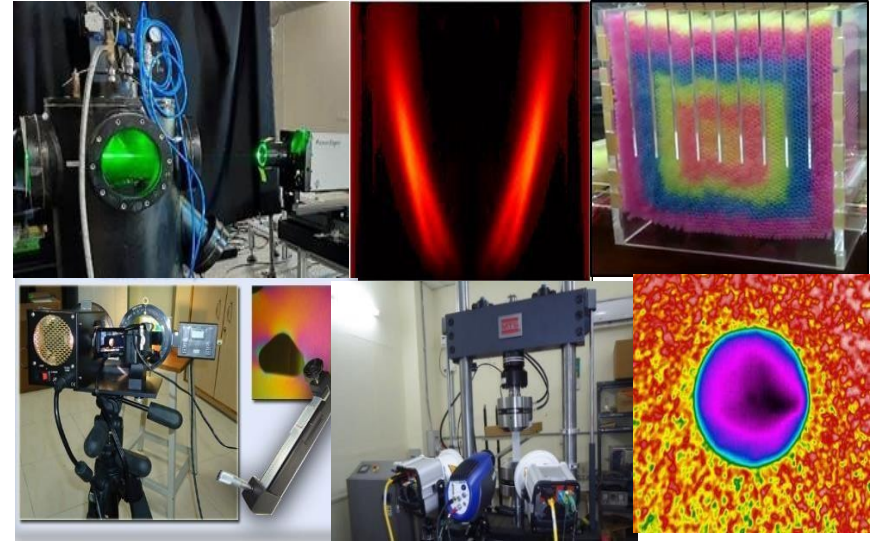
Interested candidates can apply for Ph.D. through the online portal of IITH:

<https://iith.ac.in/academics/phd/>

# Selection Process

Candidates are advised to regularly keep track of emails and department website for admissions related announcements.

- The shortlisted candidates from the applications will be invited for a two-stage selection process (either in-person or online). It may be noted that the shortlisting/screening criteria may be higher than the eligibility criteria (e.g., if significant number of applications are received then applicants' valid GATE score could be considered for screening of the applications).
- The process involves written test and/or interview . The purpose of this test is to gauge the fundamental knowledge of the candidate in Mechanical/Aerospace or related disciplines and General Aptitude. No TA-DA is given for appearing in-person test.



It may be noted that candidates applying under reserved categories need to have central government format certificate for the category they are applying, and no other format issued by any state government would be considered valid.

## **Additional Links**

**Department Webpage**

**<https://mae.iith.ac.in/phd-admissions.html>**

**For research areas and faculty interests visit:**

**<https://mae.iith.ac.in/faculty-directory.html>**

**For Queries Regarding Admission to Ph.D. program in MAE Department:**

**<https://tinyurl.com/mjbk6634>**

**Contact Details:**

PhD Admissions

Department of Mechanical and Aerospace  
Engineering

Indian Institute of Technology Hyderabad,  
Kandi Sangareddy -

502285

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