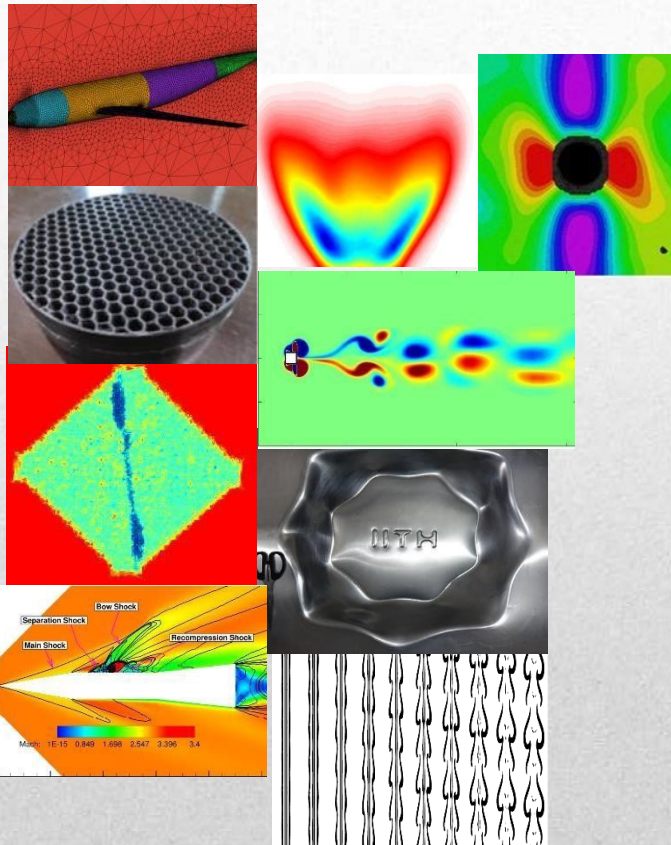




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भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad



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



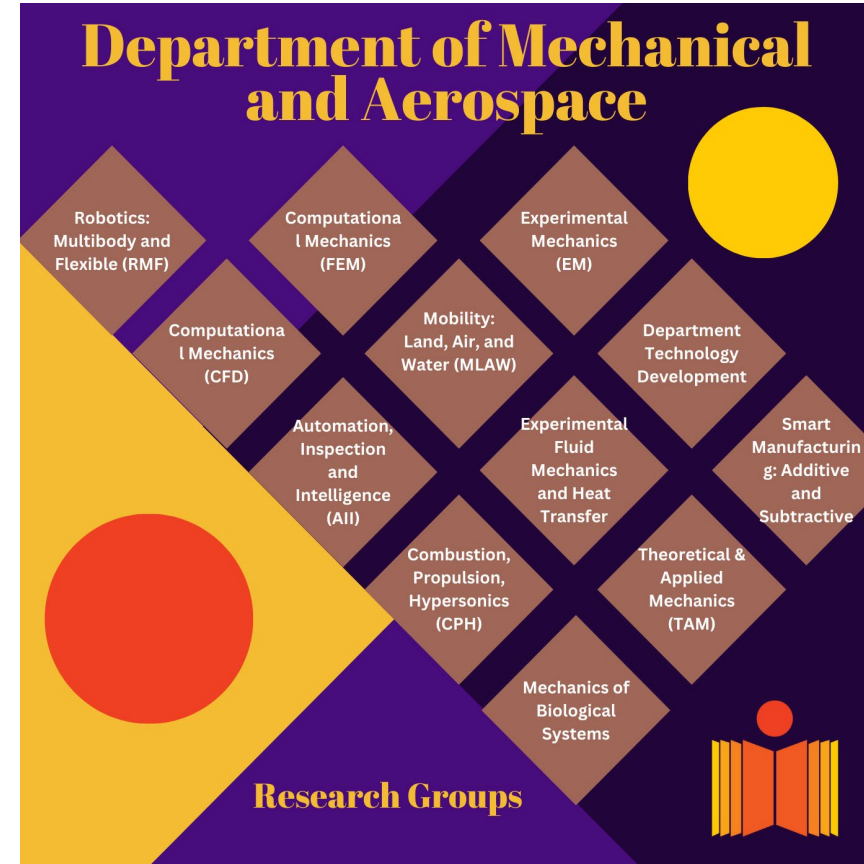
The Department

- 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 238 Undergraduates 181 Postgraduates and 108 Research scholars who are trained 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 (e) Robotics and Intelligent System Engineering in addition to BTech in Mechanical and a Ph.D. program.



The faculty members are highly experienced and deeply committed to research and practical learning, excelling in their respective domains. Their expertise spans a wide range of areas, including CFD, acoustics and vibration, dynamics and controls, mechatronics, thermodynamics, multiphase flows, process modeling and optimization, manufacturing, linear and nonlinear vibrations, robotics, automation, data driven approaches in MAE, condition monitoring FEM, fracture mechanics, additive manufacturing, MEMS, composites, impact mechanics, and smart manufacturing etc.,. Many faculty members are actively engaged with industry and leading research organizations, bringing valuable experience from collaborations with DRDO, DST, BHEL, NRB, GM, and others

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 ≥ 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 with MoE funding. For project funded Ph.D. candidates, supervisor is allocated from the starting of the program.

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. Project funded PhD positions are available. These positions are funded by external agencies.



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.

Admission Process

Who can apply? (Eligibility Criteria)

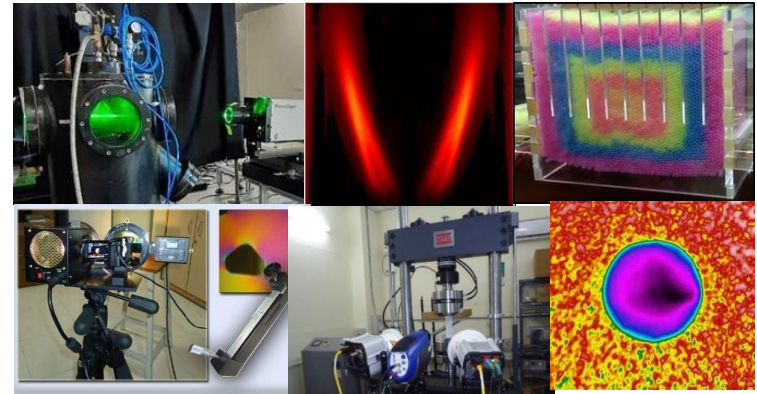
- Candidates with a MTech/ME degree in Mechanical, Aerospace or related disciplines are eligible to apply. A valid GATE score is not a pre-requisite for such candidates.
- Candidates without a Master's degree, but a valid GATE score and a BTech/BE in Mechanical, Aeronautical/Aerospace, Automobile Manufacturing, Machine Tool, Production, Production & Industrial Engineering, and related disciplines are also eligible to apply for the Ph.D. program. However, the GATE criterion is not mandatory for a Centrally Funded Technical Institutes (CFTI) BTech student with a CGPA of 8.0 or above. Also, a few seats are separately available under Direct-Ph.D. admission of CFTI students (above 9 CGPA) in the MAE department. The details with criteria are mentioned in the IITH admission portal.
- **Candidates applying under reserved categories must submit certificates in the Central Government format; certificates issued by State Governments will not be accepted.**
- Candidates currently employed in reputed research organizations with a minimum of two years of experience are also eligible to apply under the external Ph.D. program. Please note that candidates admitted through this program are not entitled to any stipend. Applicants must identify a faculty member willing to supervise their research and are required to submit a research proposal before the commencement of the selection process (written test and interview).
- **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.

- Shortlisted candidates will be invited to a two-stage selection process (in-person or online). Please note that the shortlisting criteria may exceed the minimum eligibility requirements.
- The process involves written test and/or interview. The purpose of this test is to assess the fundamental knowledge of the candidate in Mechanical/Aerospace/Allied Engineering and General Aptitude. **No TA-DA is given for appearing in-person test.**



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

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