

Indian Institute of Information Technology
Design and Manufacturing Kurnool



Information Brochure

Ph.D. admissions

July 2025 Session

**Department of
Mechanical Engineering**

A Brief about the Department:

Mechanical Engineering with specialization in Design and Manufacturing (MDM) offered by IIITDM Kurnool augments the existing Mechanical Engineering curricula offered by IITs by offering design courses on conceptualization, visualization, and engineering simulations. Equipped with well-structured instruction and learning resources and research facilities, the institute aims to disseminate education in the interdisciplinary areas of design and manufacturing engineering. Design visualization imparted through graphic art practice and product design practice enable students to conceptualize, design, simulate and develop tangible products. Students undergo interdisciplinary courses such as embedded systems, instrumentation, controls, automation and advanced manufacturing technology that will help them to design and develop innovative engineering products. Students can choose courses among electives and pursue their interests. The program offers a blend of courses that impart knowledge on design thinking and interdisciplinary engineering in addition to basic sciences.

For more details, visit dept. page: <https://iiitk.ac.in/Academics/Mechanical-Engineering/page>

Specializations:

Thermal Engineering, Design, Manufacturing

Vacancies:

Full-Time:		Part-Time:	
Institute Fellowship (HTRA)	31	Vacancies for applicants from Industry/R&D labs/Academia	31

Eligibility Criteria for Full-Time Ph.D.:

Applicants holding Master's degree: in ME or allied Branches only

- **Minimum Education Qualifications:** Applicants with a postgraduate degree (M. Tech. / M.E. / M.Sc. /M.S. (Research) or equivalent) in a relevant branch/specialization from any institute with a CGPA of 6.5/10 or 60% for UR/OBC/EWS category and CGPA of 6.0/10 or 55 % for SC/ST/PwD category.
- **Screening and Selection:** Entrance Test* and/or Interview. (* based on the number of applications received)

Direct admission to PhD with Graduation (B.E. / B. Tech. /B.S.): in ME or allied Branches only

Minimum Education Qualifications:

- Applicants with a Bachelor's degree (B. Tech. / B.E. / B.S. or equivalent) in a relevant branch/specialization from any CFTI with a CGPA of 7.5/10 or 70% for UR/OBC/EWS category and CGPA of 7.0/10 or 65 % for SC/ST/PwD category. (**GATE Qualification is not Mandatory**)
- Applicants with a Bachelor's degree (B. Tech. / B.E. / B.S. or equivalent) in a relevant branch/specialization from any **non-CFTI** with a CGPA of 7.5/10 or 70% for UR/OBC/EWS category and CGPA of 7.0/10 or 65 % for SC/ST/PwD category. (**GATE Qualification is Mandatory**)
- **Screening and Selection:** Entrance Test* and/or Interview. (* based on the number of applications received)

- In cases where the candidates are directly admitted to the PhD programme in Engineering /Sciences with a Bachelor's Degree in Engineering/Technology, the scholar should successfully complete prescribed courses (Coursework) with a minimum of 24 Credits.

Eligibility Criteria for Part-Time Ph.D.:

Educational Qualifications:

Master's/M.S. (by Research) degree in the appropriate branch of study with first class and a minimum 60% aggregate marks or CGPA ≥ 6.5 (out of 10) in UG and PG.

Note: For engineering departments, candidates with B.Tech. /B.E. degree may also be considered, if the candidates have at least 6 years of experience with proven track record of research experience.

Essential experience: (Candidates should satisfy any one of the below-mentioned criteria)

Permanent employees who can submit "No Objection Certificate" (NOC) from their employer and are working in the cadre equivalent to Scientist-C/Assistant Professor/Lecturer in Government R&D laboratories /Government organizations / Government industries/ PSUs / State Govt. Undertaking with at least three years of experience are eligible.

(OR)

Permanent/ Regular Employees from Private organization /Industries/Education Institutions with R & D facilities (i.e., established at least five years before the last date of applying for PhD (Part-time) admission as per the advertisement) with membership in CII/ ASSOCHEM or any other equivalent membership having at least three years of experience are eligible.

(OR)

Permanent employees of IIITDM Kurnool, having at least 3 years of experience.

- **Screening and Selection:** Entrance Test* and/or Interview. (* based on the number of applications received)
- Shortlisted candidates will go through an interview before the final selection.

Specializations and Research areas:

Name of the Department	Ph.D. Category	Broad research areas
Mechanical Engineering	HTRA (Full-Time)	<ul style="list-style-type: none"> • Machining, Multi-Criteria Decision Making, Optimization; • Al/Mg based Hybrid composite, Advanced Metal Forming- Conventional-Micro-Macro-Forming, Shape memory alloys; • Additive Manufacturing, Defence Applications, Drones for Renewable and Defence applications; • Manufacturing, Tribology, Surface Engineering, • Robotics, Machine Learning, Deep Learning, Wire Arc Additive Manufacturing; • Vibrations, Dynamics and control, Data Driven Dynamical Systems, Nonlinear dynamics, Micro-scale devices, Scanning probe microscopy; • Cyber Physical Systems, Digital Twins, Deep Learning, Data Driven Methods, Autonomous Systems, Robotics and Automation, Smart Manufacturing, Industry 4.0, SCM, Processes, Automated Inspection;

Mechanical Engineering		<ul style="list-style-type: none"> • Thermal energy storage, Solar Energy, PCM, Thermal management, Heat Transfer, CFD; • Heat Transfer, Fluid Mechanics, IC Engines, Thermal Engineering
	Part - Time	<ul style="list-style-type: none"> • Machining, Multi-Criteria Decision Making, Optimization; • Al/Mg based Hybrid composite, Advanced Metal Forming-Conventional-Micro-Macro-Forming, Shape memory alloys; • Additive Manufacturing, Defence Applications, Drones for Renewable and Defence applications; • Manufacturing, Tribology, Surface Engineering, Coating, Machining, Precision Engineering, Water treatment; • Robotics, Machine Learning, Deep Learning, Wire Arc Additive Manufacturing; • Data Driven methods, Dynamics, Smart Materials, Finite Element method, Medical applications using Machine learning; • Vibrations, Dynamics and control, Data Driven Dynamical Systems, Nonlinear dynamics, Micro-scale devices, Scanning probe microscopy; • Cyber Physical Systems, Digital Twins, Deep Learning, Data Driven Methods, Autonomous Systems, Robotics and Automation, Smart Manufacturing, Industry 4.0, SCM, Processes, Automated Inspection; • Thermal energy storage, Solar Energy, PCM, Thermal management, Heat Transfer, CFD; • Heat Transfer, Fluid Mechanics, IC Engines, Thermal Engineering

Facilities in the Department:

The latest and cutting-edge research facilities are available in the Laboratories: Design and Dynamics; Thermal and Fluids laboratory; Design Realization, Additive and Advanced Manufacturing Systems (DREAAMS) Laboratory; Quality Inspection and Product Validation Laboratory; Computational laboratory; Robotics Laboratory.

Convener/coordinator of Ph.D. admissions and contact details:

Dr. Ravi Kumar Mandva, Ph: 9885291316

Important Dates:

Web notification of the PhD Advertisement	05-05-2025
Online application registration process start date	05-05-2025
Last date for the submission of online Application form	25-05-2025
Notification of shortlisted candidates for Interview/Written Test	29-05-2025
Tentative dates for Interview/Written Test	16-18 th June 2025
Publication of Final Results	20-06-2025
Last date for seat acceptance and fee payment:	29-06-2025
Reporting to the Institute	02-07-2025