Indian Institute of Information Technology Design and Manufacturing Kurnool

Information Brochure

Ph.D. admissions

January 2026 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 inter-disciplinary 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:

Design, Manufacturing, Thermal Engineering,

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.

Age Criteria: (By the last date of apply for Ph.D.)

Full-Time: 30 Years and relaxation for OBC/SC/ST as per the GoI rules

Part-Time: Maximum 50 years for applicants from Industry and R&D Organizations: and maximum 35 for Academic institutions with R & D facilities.

Screening and Selection:

a) Respective Departments will conduct the shortlisting and selection process.
b) Eligible candidates possessing the minimum educational qualifications and satisfying additional criteria set by the institute from time to time only will be called for the written test and/or Interview.
c) An entrance examination shall be conducted for all the applicants (Full-Time and Part-Time) who does not have GATE or NET qualification.
d) The syllabus for the written test and/ or Interview is **GATE 2025 syllabus in respective subject.**
e) Applicants with a valid GATE or CSIR/UGC-NET qualification will be directly eligible for the interview.
f) The question paper for written exam will consist of 50 MCQ based on the GATE/NET syllabus.
g) Each question will carry 2 marks, with a negative marking of 0.5 marks for every incorrect answer.
h) The cut-off marks shall be determined in line with the GATE 2025 standards.
i) The exam will be conducted either in CBT (Moodle) mode or offline based on number of applications.

j) Based on the academic record and the performance of the candidates in the written test and/or Interview test, the selection committee will finalize the applicants for admission to the Ph.D. programme.

Specializations and Research areas:

Name of the Department	Ph.D. Category	Broad research areas
Mechanical Engineering	HTRA (Full-Time / Part–Time)	• Machining, Multi-Criteria Decision Making, Optimization; • Al/Mg based Hybrid composite, Advanced Metal Forming-Conventional-Micro-Macro-Forming, Shape memory alloys; • Solid State Additive Manufacturing, Sustainable Manufacturing, Solid State Joining, Welding, (Metal Recycling); • Additive Manufacturing, Defence Applications, Drones for Renewable and Defence applications; • Bio-Inspired Engineering, Bio-Medical Devices; Thermo-Mechanical Virtual Processes, Sensors & Semiconductor Technology, Metal Additive Manufacturing; • Abrasive Machining & Finishing, Post-Processing of Additive Manufactured Components, Robotics Manufacturing, Machining Dynamics; • 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, Phase Change Material (PCM), Thermal management, Heat Transfer, Computational Fluid Dynamics (CFD), Jet Impingement, EV Battery Charging; • Heat Transfer, Fluid Mechanics, IC Engines, Thermal Engineering

For Ph.D Admissions under Sponsored Project:

PI/Supervisor details	Project Title	Broad Research Areas	Funding availability with Designation	Pay details

Dr. S. Anand Kumar	ABD 900 superalloy for Aero engine application using additive manufacturing technology	Laser powder bed fusion and Direct energy deposition technologies	3 years (JRF – 1st & 2nd years & SRF-3rd year)	JRF - (With HRA Rs 43360/-) SRF – (with HRA Rs 49560/-)
	Indigenous development of IN939 superalloy powder for additive manufacturing of aero-engine components		3 years (JRF – 1st & 2nd years & SRF-3rd year)	JRF - (With HRA Rs 43360/-) SRF – (with HRA Rs 49560/-)
	Freeform finishing of metal additive manufactured parts for aero-engine applications	Laser powder bed fusion and corrosion science knowledge	2 years (JRF – 2nd years & SRF-3rd year)	JRF - (With HRA Rs 43360/-) SRF – (with HRA Rs 49560/-)
	Development and validation of a novel Biomimetic 3D-printed Dental Implant-based on the Voronoi algorithm for early osteointegration	Laser powder bed fusion and bio-medical implants knowledge	2 years (Project research scientist – 2nd years & 3rd year)	2nd year & 3rd year (56000/- + HRA)

Facilities in the Department:

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

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

Dr. Ravi Kumar Mandva, Ph: 08518-289100 (Ext: 208)

Important Dates

Web notification of the PhD Advertisement	26-11-2025
Online application registration process start date	26-11-2025
Last date for the submission of online Application form	10-12-2025
Notification of shortlisted candidates for Interview/Written Test	15-12-2025
Tentative dates for Interview/Written Test	22-23rd Dec 2025
Publication of Final Results	26-12-2025
Last date for seat acceptance and fee payment:	29-12-2025
Reporting to the Institute	01-02nd Jan 2026