Indian Institute of Information Technology Design and Manufacturing Kurnool

Information Brochure

Ph.D. Admissions

January 2027 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 Engineering,
Manufacturing and Industrial robotics,
Thermal systems and Energy 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.S. (Research) or equivalent) in all branches/specializations from any institute 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.
- Screening and Selection: Screening and Selection: Entrance Test* and/or Interview. (*Syllabus – GATE 2026 in ME)

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

- Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology with exceptionally good academic record in an eligible discipline will be considered for direct admission to Ph.D. Programme as a regular full-time scholar subject to fulfillment of one of the following conditions:

  i. B.Tech ./B.S degree (4 Years) holder of any CFTI/CFI with respective specialization with a minimum CGPA of 7.5 on 10.0 point scale for UR/OBC/EWS category and minimum CGPA of 7.0 CGPA on 10.0 point scale for candidates under SC/ST/PwD category. (GATE Qualification is not Mandatory)

  ii. Bachelors in Engineering/Technology from any non-CFTI with valid GATE score and at least CGPA of 7.0/10 or 65% under UR/OBC/EWS category and at least CGPA of 6.5/10 or 60% for candidates under SC/ST/PwD category.
- Screening and Selection: Entrance Test* and/or Interview. (* based on the number of applications received (Syllabus – GATE 2026 in ME))

- 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:

M.TECH/M.E/M.S. (by Research) degree in engineering or sciences branch of study with first class and a minimum 60% aggregate marks or CGPA ≥ 6.5 (out of 10) and CGPA of 6.0/10 or 55% for SC/ST/PwD category 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 a proven track record of research experience, with a minimum aggregate of 6.5/10 or 60% for UR/OBC/EWS category and CGPA of 6.0/10 or 55% for SC/ST/PwD category.

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. (*Syllabus – GATE 2026 in ME)

Specializations and Research areas:

Name of the Department	Ph.D. Category	Broad research areas
Mechanical Engineering	Institute Fellowship- (Full-Time), Part–Time	**1. Thermal systems and Energy Engineering** • 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 • Renewable energy systems, Wind energy, Hydropower **2. Manufacturing and Industrial robotics** • 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 and Aerospace Applications, Space Application, Application of AI for Defence and Aerospace Modules • 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, Robotic Manufacturing of Space components, Machining Dynamics, On-machine metrology • Manufacturing, Tribology, Surface Engineering, Coating, Machining, Precision Engineering, Water treatment • Robotics, Machine Learning, Deep Learning, Wire Arc Additive Manufacturing • Cyber Physical Systems, Digital Twins, Deep Learning, Data Driven Methods, Autonomous Systems, Robotics and Automation, Smart Manufacturing, Industry 4.0, SCM, Processes, Automated Inspection **3. Design Engineering** • Data Driven methods, Structural Dynamics, Meta-material and Structure, Smart Materials and structures, Constitutive modelling, Numerical

		Method, Soft materials, bio-inspired material, Medical applications using Machine learning, Fluid-structure Interaction. • Under actuated Robotics, Soft Robotics, Probabilistic Robotics, Evolutionary Robotics, Robot motion planning, Bayesian Statistics, Inverse Methods in Engineering, Image processing and computer vision; • Vibrations, Dynamics and control, Data Driven Dynamical Systems, Nonlinear dynamics, computational material science, Micro-scale devices, Scanning probe microscopy;

For Ph.D. Admissions under Sponsored Project:

SI.No	Project Title	Broad Research Areas	Funding availability with designation	Pay Details	Eligibility Criteria
1	Indigenous development of IN939 superalloy powder for additive manufacturing of aero-engine components	Laser powder bed fusion and Direct energy deposition technologies	years (JRF – 1st & 2nd years & SRF-3rd year)	JRF - (Rs 37000/- + HRA) SRF – (Rs 42000/- + HRA)	M.E/M. Tech/M.S (by research)/ Integrated PG degree in Mechanical/Manufacturing/Design/Materials or equivalent with first class marks in aggregate from a recognized technical institute/university as a full-time program.

- Screening and Selection: Entrance Test* and/or Interview. (*Syllabus – GATE 2026 in ME)

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 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. Ashwani Pratap, Ph: 08518-289100 (Ext: 211)

Bank Account Details and Payment QR Code:

Account Name: **IIIT DESIGN AND MANUFACTURING**
Account Number: **37806955974**
IFSC Code: **SBIN0064655**
Branch: IIITDM KURNOOL CAMPUS.



Kindly fill out the Google Form using the link provided:

https://forms.gle/1BC7ALv2HAJZyL3T6

Important Dates:

Web notification of the Ph.D. Advertisement	25-09-2026
Online application registration process start date	25-09-2026
Last date for the submission of online Application form	18-10-2026
Notification of shortlisted candidates for Interview/ Written Test	28-10-2026
Publication of Final Results	29-11-2026
Last date for seat acceptance and fee payment	05-12-2026
Reporting to the Institute	14-12-2026

Tentative Schedule for Interview/Written Test

Name of the Department	Examination Date and Reporting Time	Venue
Mechanical Engineering	12th November 2026, 8:00 AM	Department of ME

***Note:** Accommodation will be provided subject to availability.