

Indian Institute of Information Technology  
Design and Manufacturing Kurnool



**Information Brochure**  
**Ph.D. admissions**  
**January 2025 Session**

**Department of Sciences**  
**(Mathematics, Physics & English)**

### A Brief about the Department:

The Department of Sciences has three divisions: Mathematics, Physics, and English. Department of Sciences offers Ph.D. Programs on emerging topics in Mathematics, Physics, and English. Please visit the faculty research profiles: <https://iiitk.ac.in/Department-of-Sciences/page>

### Research areas:

**Mathematics:** Mathematical Control Theory and its Applications, Inverse Problems, Dynamics and Control, Non-linear Analysis, Multiplicative Lie Algebra, Lie ring and gyrogroups, Numerical methods for Differential equations.

**Physics:** Experimental Condensed Matter Physics, Magnetism and Magnetic Materials, Skyrmions, Nanocrystalline Materials, Electronic Structure Calculation, Computational Condensed Matter Physics, Computational Materials Science, Quantum Computing, Solar energy materials, Photonics, Fiber Optic Sensors, Thin Film Photo detectors and advanced optical materials.

**English:** English Language Teaching/Education.

### Vacancies:

Available Ph.D. vacancies	Full-Time (HTRA)	Full-time (Sponsored Project)	Part-time-R&D / Industry	Part-Time-Academia
Mathematics	2	0	1	4
Physics	1	1	4	1
English	0	0	0	1*

\*The vacancy is provisional, subject to approval of competent authority.

### Eligibility Criteria for Full-Time Ph.D.:

#### (a) Applicants holding Master's degree:

Master's degree in respective science/engineering/technology with a minimum CGPA of 6.5/10.0 or 60% aggregate of marks at both UG and PG for UR/OBC/EWS category and at minimum CGPA of 6.0/10 or 55% aggregate of marks at both UG and PG for candidates under SC/ST/PWD category with a **valid score in GATE or CSIR-UGC-NET/NBHM**.

#### (b) Applicants holding Bachelor's degree:

- B. Tech. degree holder of any CFTI with a minimum CGPA of 7.5/10 or 70% aggregate marks.
- B. Tech. degree holder of any CFTI with a **valid GATE score** and with a minimum CGPA of 7.0/10.0 or 65% aggregate marks for UR/OBC/EWS category and minimum of 60% aggregate marks or 6.5/10 CGPA for candidates under SC/ST/PWD category.
- B. Tech. degree with **valid GATE score** and at least CGPA of 7.5/10 or 70% aggregate of marks under UR/OBC/EWS category and at least CGPA of 7.0/10 or 65% aggregate for candidates under SC/ST/PWD category.
- BS degree (4 Years) with in respective sciences subject with a minimum CGPA of 7.0 /10 or 65% aggregate marks with a **valid GATE Score**.

## 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  $\geq$  6.5 (out of 10) in UG and PG.

### 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/ ASSOCEM 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.

## Research areas for Ph.D. admissions under Full time/Part time:

Name of the Department	Ph.D. Category	Broad Research Areas
Department of Sciences (Mathematics)	Institute Fellowship (Full-Time) (02)	Control Theory, Inverse Problems, Dynamics and Control, Nonlinear Analysis, Numerical methods for Differential Equations, Numerical Analysis, Multiplicative Lie algebra, Lie ring and gyrogroups.
	Part – Time (05)	Control Theory, Inverse Problems, Dynamics and Control, Nonlinear Analysis, Numerical methods for Differential Equations, Numerical Analysis, Multiplicative Lie algebra, Lie ring and gyrogroups, Fractional Differential Equations
Department of Sciences (Physics)	Institute Fellowship (Full-Time) (01)	Solar Energy Materials
	Part – Time (05)	Experimental Condensed Matter Physics, Magnetism and Magnetic Materials, Skyrmions, Nanocrystalline Materials, Electronic Structure Calculation, Computational Condensed Matter Physics, Computational Materials Science, Quantum Computing, Solar energy materials, Photonics, Fiber Optic Sensors, Thin Film Photodetectors and Advanced optical materials.
Department of Sciences (English)	Institute Fellowship (Full-Time) (0)	No
	Part – Time (01)	English Language Teaching/Education.

## For Ph.D. admissions under Sponsored Project:

PI/Supervisor details	Title of the Project	Funding agency Project Duration	Broad research Area
Dr. Pavan Venu Prakash Madduri	Study of finite size effects on the Skyrmions in magnetic nanowires for utilization in low energy consumption Spintronic Devices.	DST-SERB 3 Years	Magnetism and Magnetic materials, Skyrmions, Nanocrystalline Materials.

## Research Laboratories

1. Catalytic Materials for Renewable Energy (CMRE)
2. Laboratory of Magnetism & Novel Magnetic Materials (LMN)
3. Functional Nanomaterials Laboratory (FNL)
4. Computational Condenser Matter Laboratory
5. Optics & Photonics
6. Language Laboratory.

### **Important Dates:**

Web notification of the PhD Advertisement	04/12/2024
Online application registration process start date	05/12/2024
Last date for the submission of online Application form	22/12/2024, 11:59PM
Notification of shortlisted candidates for Interview/Written Test	24/12/2024
Tentative dates for Interview/Written Test	30/12/2024
Publication of Final Results	01/01/2025
Last date for seat acceptance and fee payment:	04/01/2025
Reporting to the Institute	09/01/2025