

Call for PhD Program (ODD Semester AY2022-23)
School of Basic Sciences, IIT Mandi

IIT Mandi seeks application for the **PhD program** in the School of Basic Sciences (SBS) in the following areas.

Sl No	Specialization	Research Areas	Eligibility Minimum Qualification &	Remarks
1	<u>Physical Sciences:</u>	Research areas of Physical Sciences: <ol style="list-style-type: none"> Theoretical studies of ultracold quantum gases Theoretical/computational atomic physics Active granular system, Soft matter Experimental Condensed Matter Physics Quantum Optics/ Photonics Metal Halide Perovskite Based Optoelectronic Devices 	Master's degree in Sciences/ Engineering/ Technology with a good academic records and also qualified GATE or UGC/CSIR NET/JRF or DST Inspire or other equivalent national level examination.	In online application select main area i.e., Physical Sciences then select the research areas of Physical Sciences. (Candidate can select more than one area according to their preference)
2	<u>Chemical Sciences:</u>	Research areas of Chemical Sciences: <ol style="list-style-type: none"> Catalysis, electrochemistry, nanomaterials, energy materials Transition metal-catalyzed C-H functionalization for the synthesis of heterocyclic scaffolds Computational Chemistry and Catalysis Polymer Chemistry, Materials Chemistry, Nanomaterials, Biodegradable polymers, Biomaterials Chemistry of Inorganic Materials, Interfacial Chemistry Stochastic process, None equilibrium statistical mechanics, Dynamical systems theory Catalysis Spectroscopy of Nanomaterials Coordination complexes for optical and catalytic applications, Metal organic frameworks Synthesis of multifunctional membranes for water purification, Nanomaterials for Theranostics applications. 	Or B. Tech degree of any IIT with a minimum CGPA of 8.0 on a 10.0-point scale with a valid GATE Score.	In online application select main area i.e., Chemical Sciences then select the research areas of Chemical Sciences. (Candidate can select more than one area according to their preference)



3	<p><u>Biological Sciences:</u></p>	<p>Research areas of Biological Sciences:</p> <ol style="list-style-type: none"> 1. Nanotechnology, Nano medicine, Nanomaterials 2. Host pathogen immunology 3. Molecular Biology and Neuroscience 4. Protein aggregation, Aging and C. elegans 5. Insulin Action in Health and Disease, Molecular and Metabolic Pathways underlying Hepatic Metabolic Dysfunction in Type 2 Diabetes and Nonalcoholic Fatty Liver Disease (NAFLD) 6. Systems Biology of Microbes/Plants using Metabolomics and 13C Fluxomics 7. Orthopedic Tissue Engineering 8. Cardiac Fibrosis 9. Bioinformatics and Microbiology 	<p>Or</p> <p>B. Tech. / B.E. degree of any recognized University in India with a minimum CGPA of 8.0 on a 10.0-point scale or equivalent with valid GATE score.</p>	<p>In online application select main area i.e., Biological Sciences then select the research areas of Biological Sciences. (Candidate can select more than one area according to their preference)</p>
4	<p>Mathematical Sciences:</p>	<p>Research areas of Mathematical Sciences:</p> <ol style="list-style-type: none"> 1. Statistics 2. Differential Equations 3. Partial Differential Equations, Nonlinear Analysis, Mathematical Modelling 4. Harmonic Analysis 5. Mathematical Image Processing/ Computational Fluid Dynamics 6. Topology and Combinatorics 7. Algebra 8. Data analysis and statistical methods for applications in climate and disease 9. Harmonic Analysis (Frame theory, Dunkl theory) 10. Machine Learning, Optimization 11. Mathematical Statistics, Bayesian Methodology, MCMC, Analysis of Directional Data 		<p>In online application select main area i.e., Mathematical Sciences then select the research areas of Mathematical Sciences. (Candidate can select more than one area according to their preference)</p>

How to Apply

Interested candidates are encouraged to fill the online application form available in the following link:

<http://oas.iitmandi.ac.in/Admission>

Application Fee for Ph.D. Admission:

Category	Amount in ₹
General/EWS/OBC/OBC (NCL)/Transgender/Foreign Nationals	200
Women/SC/ST/PD	100

Mode of Payment: SBI Collect Portal (<https://www.onlinesbi.com/sbicollect/icollecthome.htm>)

Applicant should submit fee on SBI collect portal of the IIT Mandi; and submit generated transaction number to the OAS admission application portal. One application fee is valid for the single application. The application fee is non-refundable.

Contact for further queries related to:

- Filling-up of online applications and technical queries at - oassupport@iitmandi.ac.in
- For any other queries - sbs-admissions@iitmandi.ac.in
- Employed candidates seeking admission to PhD must have to submit a “No Objection Certificate” from their current employer at the time of interview/document verification.

Important dates:

Start of online application: **Thursday, 7th April 2022**

Deadline for online application: **Friday, 6th May 2022**

- IIT Mandi reserves the right to recruit / not recruit any of the advertised area and can apply appropriate criteria for shortlisting.

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