

Date: 29.10.2024

Advertisement for Ph.D. (Regular Full Time / Part Time Mode) & M.Tech (Research) (Regular Full Time) Admission in School of Mathematical and Statistical Sciences, IIT Mandi (Even Semester 2024-25)

School of Mathematical & Statistical Sciences of IIT Mandi invites application for the admission to Doctor of Philosophy (Ph.D.) and M.Tech (Research) programme in a variety of disciplines and interdisciplinary areas under Regular Full-Time mode/ Part time mode.

S.No	Discipline	Broad Research Areas	Qualification for Admission
1	Mathematics	<ul style="list-style-type: none"> ❖ PINN (Physics Informed Neural Network) + Differential Equations ❖ PINN for fluid flow problems/ Image Processing ❖ Parallel Computing for turbulent flow modelling/ sediment transport modelling ❖ Numerical Methods for PDEs ❖ Mathematical Image Processing ❖ Computational Fluid Dynamics ❖ Differential Equations and Mathematical Control Problems ❖ Partial Differential Equations and Mathematical Modelling ❖ Differential Equations and Dynamical Systems ❖ Differential Equations with deep learning/ Machine Learning approach ❖ Mathematical Modelling ❖ Algorithms for time series and dynamical prediction ❖ Applied Topology and Combinatorics ❖ Control Optimization Problem 	<p><u>For Ph.D.:-</u> Master's degree in Mathematics/Applied Mathematics/ Engineering/ Technology with a good academic record and also qualified GATE with valid score or UGC/ CSIR/ NET or DST Inspire or other equivalent national level examinations.</p> <p style="text-align: center;">Or</p> <p>Bachelor's degree holder in Engineering/ Technology from any CFTIs with a minimum CGPA of 7.5 on a 10.0-point scale.</p> <p style="text-align: center;">Or</p> <p>Bachelor's degree holder in Engineering/ Technology from any Non CFTIs with at least CGPA of 7.5 on a 10.0-point scale with valid GATE score in relevant subject or other National level exam at the time of admission.</p> <p style="text-align: center;">Or</p> <p>Bachelor's degree holder in Engineering/ Technology and serving for two years or more in a reputed R&D organization and having a proven research record.</p> <p style="text-align: center;">Or</p> <p>B.Tech/B.E./B.S./(or equivalent) degree from CFTI/ any of the top 100 institutes according to NIRF ranking (overall category) at the time of application/ any Himachal Pradesh Govt. institutes or universities with CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent</p> <p style="text-align: center;">Or</p> <p>BS-MS/ M.Sc./MA/MBA/ equivalent from IITs, IISERs, IISc, IIMs, or any of the top 100 institutes according to NIRF ranking (overall category) at the time of application with a CGPA/CPI of at least 7.5 (on a scale of 10) of equivalent.</p> <p style="text-align: center;">Or</p> <p>NIRF ranking (within top 100) should be in the overall category granted for the year during which admission is sought.</p> <p><u>For Reserved Category Students:</u></p> <ol style="list-style-type: none"> 1. OBC (NCL): 7.00 CGPA 2. SC/ST/PwD: 6.5 CGPA <p><u>For Part Time Ph.D. :-</u> Institute Staff Members/ Research Scholars under External Registration/ Research Scholars working on Part Time Basis. Individuals employed in R&D environments in Scientific Institutions (including IIT Mandi) or industries and Faculty members of all Engineering Colleges/Universities recognized by appropriate government agencies. {As per 35th Senate Item No. 35.11} The required qualification remains the same as for the regular candidates except for the requirement of qualifying in one of the national entrance tests. Further the candidate should have at least two years of work experience.</p>
2	Theoretical Computer Science	<ul style="list-style-type: none"> ❖ Graph Algorithms ❖ Algorithms and Data Structures 	
3	Statistics, Optimization, Fuzzy Logic and Applications	<ul style="list-style-type: none"> ❖ Applied Time Series Analysis ❖ Data analytics, Climatology, Climate Change ❖ Reliability theory, Machine Learning & Time Series ❖ Indian monsoon rainfall ❖ Extreme events like cloudbursts Data analytics ❖ Numerical Optimization 	

		<ul style="list-style-type: none"> ❖ Heuristic Optimization ❖ Portfolio Optimization ❖ Computational Finance ❖ Convex Optimization ❖ Fuzzy Optimization ❖ Credibilistic Portfolio Optimization 	<p>For M.Tech (Research):- Students under this category are entitled for the Scholarship/ Assistantship from Institute / MoE if they qualify any one of the following criteria.</p> <p>M.Sc./B.Tech. in Mathematics and Computing/ Applied Mathematics/ Statistics/ Scientific Computing/Data Science/Computer Science/or equivalent + valid GATE score in related discipline.</p> <p>B.Tech/BE/B.S (or equivalent) degree from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale (or equivalent). (National Level examinations are waived off for HTRA Scholarship)</p> <p>BS-MS/M.Sc/equivalent from IITs, IISERs, IISc, IIMs or any of the top 100 institutes according to NIRF ranking (overall category) at the time of application with a CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent</p> <p>B.Tech/ BE/BS for any Himachal Pradesh Govt. Institutions/ Universities, with CGPA/CPI at least 7.5 (on a scale of 10) or equivalent.</p> <p>For Reserved Category Students:</p> <ol style="list-style-type: none"> 1. OBC (NCL): 7.00 CGPA 2. SC/ST/PwD: 6.5 CGPA <p>Note:-</p> <p>Gate Score Exemption: The Gate score is exempted for the candidates if they satisfying the following conditions:</p> <p>Candidate with B. Tech/ BE degree from Centrally Funded Technical Institutes (CFTIs), with a minimum CGPA of 7.5 on a 10.0 point scale. (National Level examinations are waived off for HTRA Scholarship)/ any Himachal Pradesh Govt. Institutions/Universities, with CGPA/CPI at least 7.5 (on a scale of 10) or equivalent/ or any of the top 100 institutes according to NIRF ranking (overall category) at the time of application with a CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent</p> <p>Or</p> <p>The candidate applying for M. Tech (Research) program under self-sponsored seat category without fellowship.</p>
4	Artificial Intelligence, Machine Learning	<ul style="list-style-type: none"> ❖ Artificial Intelligence ❖ Statistical Inference ❖ Machine Learning ❖ Operation Research ❖ Machine Learning based Modeling ❖ Support Vector Machine ❖ Neural Networks ❖ Deep Learning ❖ Computer Vision ❖ Algorithmic Trading ❖ High Frequency Trading 	

1. For more details about Ph.D./ Part Time Ph.D. Programme at IIT Mandi, please visit:

https://www.iitmandi.ac.in/pdf/ordinances//Ordinances_Ph.D.pdf

2. For more details about M.Tech (Research) Programme at IIT Mandi, please visit:

[https://iitmandi.ac.in/pdf/ordinances/Ordinances_MTech\(R\).pdf](https://iitmandi.ac.in/pdf/ordinances/Ordinances_MTech(R).pdf)

3. Qualification for Admission to get the HTRA fellowship:-

<https://insite.iitmandi.ac.in/circulars/show.php?ID=IITMandi/Acad/Senate/2023/2196-2201>

4. In addition, the reservation criteria, as per GoI norms:-

<https://insite.iitmandi.ac.in/circulars/show.php?ID=IITMandi/SM-44/2024/456-462>

How to Apply:-

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

SAMARTH PORTAL: - <https://iitmandiadm.samarth.edu.in/aug24/index.php>

Mode of Interview: The interview will be in offline mode only.

- Reservation policies as per prevailing GOI rules will be followed.
- IIT Mandi reserves the right to admit / not admit for any of the advertised areas and apply appropriate criteria for shortlisting.
- The decision of the competent authority in all matters relating to the eligibility of the candidate, written test/Interview and admission would be final and binding on all the candidates. In case of any dispute/ ambiguity that may occur in the process of admission, the decision of the Institute shall be final.
- All the details furnished in the online application will be treated as final and no changes shall be entertained. Non-submission of valid/required documents and/or incomplete applications shall be summarily rejected.

Application Fee is not refundable:-

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

Mode of Payment: Online only.

For any problems regarding filling up of online applications, please contact it_helpdesk@iitmandi.ac.in .
For any other queries regarding Ph.D. program in SMSS, please contact SMSS Office via the following email smssoffice@iitmandi.ac.in.

Employed candidates seeking admission to Ph.D. must have to submit a “No Objection Certificate” from their current employer at the time of interview.

Note: Industrial or Academic Institute Sponsored or Part-time M. Tech (Research)/ Ph.D. candidates are not eligible for MHRD/HTRA scholarships.

Important Dates:

Start of online application:	Tuesday, 29 th Oct, 2024, 9:00 AM (IST)
Deadline for online application	Monday, 18 th Nov, 2024, 05:00 PM (IST)
Announcement of shortlisted candidates list	Monday, 25 th Nov, 2024 (tentative)
Interview	Thursday and Friday, 12 th and 13 th Dec, 2024 (tentative)

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