

Indian Knowledge System and Mental Health Applications

Call for M.Tech (by research)/Ph.D/M.Tech(R)+Ph.D.(Dual Degree) - Program (Jan- June, 2025)

IIT Mandi invites applications from bright and dedicated young scholars interested in joining the full-time M.Tech (R)/Ph.D/M.Tech(R)+Ph.D.(Dual Degree) - program in the **Indian Knowledge System and Mental Health Applications (IKSMHA) Centre at IIT Mandi**. For this purpose, the IKSMHA Centre seeks applications for the M.Tech(R)/Ph.D/M.Tech(R)+Ph.D.(Dual Degree) - programs in the following areas:

| Discipline | Broad Research Area | Driving Research questions |
|-------------------------|---|--|
| Indian Knowledge System | Integrative study of body, mind, and consciousness | -Laws of semantics and Foundations of Psychology |
| | Scientific characterization of brain network with the intervention of Yoga and Meditation | -What are the cognitive biomarkers of consciousness? |
| | Learning Mind-brain paradigm from Ayurveda | -How to measure and improve states of epistemic curiosity (or lack of cognitive inertia)? |
| | Mind-brain paradigm in Bhagavata Samkhya | -What are the cognitive biomarkers of creativity and the effect of IKS interventions? |
| | Traditional Indian Medicine Research for mental wellbeing | -What is the connection between consciousness and sleep states? |
| | Indian Performing Arts and Cognition | -How to investigate dreams and the contents of dreams? |
| Cognitive Science | Cognitive Neuroscience | -How to evaluate the level of sleep and enhance sleep and dream quality? |
| | Cognitive Psychology | -How does physiological data relate to common yoga practices? |
| | Cognitive Technology and Bio/Neurofeedback | -What are the relations between neural, physiological, and molecular signatures, and how are they affected by IKS-based interventions? |
| | Judgment and Decision Making | -Use of neurofeedback and biofeedback mechanisms to improve meditation and yoga practices |
| | Mental Health | -How does one assess the importance of intention and goodness from the perspective of cognitive biomarkers? |
| | | -Could computer vision and VR applications improve yogasana practices? |
| | | -Could Mantra chanting and tDCS in Virtual Reality (VR) improve mental conditions? Can this improvement be predicted via machine learning methods? |
| | | -What is the relationship of Prakriti on the effectiveness of meditation therapies for psychological and lifestyle disorders? |

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|-----------------------------|--|--|
| Virtual Reality and Sensors | Virtual Reality Applications | <ul style="list-style-type: none">- Could machine learning predict a person's Prakriti?- Could Indian music and dance therapies help improve clinical cases of mental and lifestyle disorders?- How do we personalize music and dance therapies (e.g., based on the Prakriti of the subject or other factors)?- How can IKS interventions aid in the cases of deaddiction?- How to develop translational technology based on IKS interventions for clinical and home-based setups? |
| | Bio/Neuro/Physiological Sensing | |
| Mental Health Applications | Depression, Stress and cognitive loading, Sleep Disorder, Autism, Alzheimer, Parkinson | <ul style="list-style-type: none">- What are the biomarkers of mental health conditions?- Could interventions from the Indian knowledge system improve the mental health conditions? |

Link to the online application: <https://iitmandiadm.samarth.edu.in/aug24/index.php/>

It is kindly advised to get in touch with faculty members directly for further information regarding the different research areas and positions available with them listed on <https://iksmha.iitmandi.ac.in/fstaff.php>

General Information

Information on eligibility, minimum qualifications, and scholarship rules are briefly provided on the following links:

M.Tech(R) Ordinance and Regulations (O&R) IIT Mandi:

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

Ph.D. Ordinance and Regulations (O&R) IIT Mandi:

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

M.Tech(R)+Ph.D.(Dual Degree) - Regular Ordinance and Regulations (O&R) IIT Mandi:

https://www.iitmandi.ac.in/pdf/ordinances/Ordinances_phd_mtech.pdf

For Masters applicants (Full-Time Research Scholars):

General eligibility criteria for M.Tech. (Research) Admission:

Qualifying Degree:

1. Bachelor's degree in Engineering/Technology/Medicine or equivalent with a valid GATE score, **OR**
2. Master's or equivalent degree in Science/Medicine Arts/Commerce/Management (or allied subjects) with a valid GATE score, **OR**

3. Masters or equivalent degree in Engineering/Technology

Exemptions from mandatory requirements of Valid GATE or National Level examination:

1. B.Tech/B.E./B.S. (or equivalent) degree from CFTI (Centrally Funded Technical Institute)/ any of the top 100 institutes according to NIRF ranking (overall category) at the time of application/ any Himachal Pradesh Govt. institution or universities with CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent.
2. 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) or equivalent.
3. NIRF Ranking (within the top 100) should be in the overall category granted for the year during which admission is sought.

For Ph.D. applicants (Full-Time Research Scholars):

General eligibility criteria for Ph.D. Admission:

Qualifying Degree:

1. Master's or equivalent degree in Engineering/Technology, OR
2. Bachelor's degree in Engineering/Technology or equivalent*, OR
3. Master's or equivalent degree in Science/Medicine/Arts/Commerce/Management (or allied subjects) *

***For qualifying degree listed under (2) & (3) candidates must also fulfill ONE of the following additional requirements:**

1. Qualified GATE / NET including lectureship (Assistant Professorship) or any other equivalent National level examination.
2. Selected through a National level examination conducted by MoE or its agencies /Institutions such as UGC/ IIT/ IISc. / IISER/ IIIT etc.
3. Minimum of TWO years of professional experience (acquired after obtaining the qualifying degree and completed before the start of the semester in which admission is sought)

***Exemptions from mandatory requirements of valid GATE or National Level examination:**

1. B.Tech/B.E./B.S. (or equivalent) degree from CFTI (Centrally Funded Technical Institute)/ any of the top 100 institutes according to NIRF ranking (overall category) at the time of application/ any Himachal Pradesh Govt. institution or universities with CGPA/CPI of at least 7.5 (on a scale of 10) or equivalent
2. 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) or equivalent.
3. NIRF Ranking (within the top 100) should be in the overall category granted for the year during which admission is sought.

For M.Tech(R)+Ph.D.(Dual Degree) - Regular applicants (Full-Time Research Scholars):

Students under this category are entitled to the Scholarship/ Assistantship from Institute / MoE if they qualify for any one of the

following criteria.

- The candidate must possess BE/B.Tech or M.Sc. or equivalent Degree with a valid GATE Score for HTRA fellowship.
- B.Tech./B.E. from CFTI institute with CGPA ≥ 8 on a 10.0-point scale (or equivalent), National level examination (GATE/NET) is waived off for HTRA fellowship.

Full details of the programme are available {As per 37th Senate Item No. 37.16} at <https://cloud.iitmandi.ac.in/f/cbc9eb261d8b472d9b25/>

*For complete details regarding eligibility, please refer to the Ordinance and Regulations (O&R) available on the IIT Mandi webpage (<https://www.iitmandi.ac.in/ordinances>)

For Part-time Research Scholars (MTech(R), Ph.D.)

- Institute Staff Members/Research scholars under QIP/Research Scholars under External Registration/Research Scholars working on a part-time basis
- Individuals employed in R&D environments in Scientific Institutions (including IIT Mandi) or industries
- Faculty members of all engineering colleges/universities are recognized by appropriate government agencies.

The required qualifications remain the same as for 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.

Note: Industrial or Academic Institute Sponsored or Part-time M.Tech (R), Ph.D., and M.Tech(R)+Ph.D.(Dual Degree) - program candidates are not eligible for MHRD/HTRA scholarships.

Employed candidates seeking admission to M.Tech(R)/PhD must submit a “**No Objection Certificate**” from their current employer while filling the application form.

For any problems regarding filling out online applications, please contact it_helpdesk@iitmandi.ac.in

For any other queries regarding M.Tech (R)/Ph.D/M.Tech(R)+Ph.D.(Dual Degree) programs in IKSMHA, please contact the IKSMHA office through email: iksmha-office@iitmandi.ac.in. We look forward to reviewing your application.

Application Fee for M. Tech (by research)/Ph.D. Admission:¹

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

Important dates:

Start of online application: 25th October 2024

Deadline for online application: 20th November 2024 till 05:00 PM

Date of Interviews: This will be announced shortly after the application deadline for shortlisted candidates. Those not appearing for their interview on the announced date will not be considered further for admission.

Note: 1. IIT Mandi reserves the right to recruit/ not recruit for any of the advertised areas and apply appropriate criteria for shortlisting candidates.

2. Upload self-attested documents as a single zip file to the provided drive link below. These documents should include Proof of Identity (Aadhar card, Voter ID, PAN card, or equivalent), Class 10 certificate (as proof of date of birth), mark sheets of UG and PG degrees (rank certificate, if applicable), qualifying certificate of GATE/CSIR/UGC/other examinations, caste certificate, experience certificate (as per eligibility requirements), and any other documents supporting your eligibility.

Drive Link: https://drive.google.com/drive/folders/15rUCdaMLPuQ7LR9RXDg0arLJU_c1OIHG?usp=sharing

¹ Applicants should submit the fee on the payment gateway of IIT Mandi and the generated transaction number to the Smarath admission application portal. One application fee is valid for a single application and is non-refundable.

Notes:

1. Please carefully check the eligibility criteria that fit your application and make sure you get all the relevant documentation related to the same.
2. To apply for other specific areas not listed above, kindly fill in “Others” in the specific area section after selecting the Broad Research Area on the Smarath portal.