

Indian Knowledge System and Mental Health Applications

**Call for M.Tech (by research), Ph.D., and M.Tech(R)+Ph.D.(Dual Degree) -
Regular**

(Online Spot Round, January-July Semester, 2024)

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

| Discipline | Broad Research Area | Driving Research questions |
|-------------------------|---|---|
| Indian Knowledge System | Integrative study of body, mind, and consciousness | <ul style="list-style-type: none"> - Laws of semantics and Foundations of Psychology - What are the cognitive biomarkers of consciousness? - How to measure and improve states of epistemic curiosity (or lack of cognitive inertia)? - What are the cognitive biomarkers of creativity and the effect of IKS interventions? - What is the connection between consciousness and sleep states? - How to investigate dreams and the contents of dreams? - How to evaluate the level of sleep and enhance sleep and dream quality? - How does physiological data relate to common yoga practices? - What are the relations between neural, physiological, and molecular signatures, and how are they affected by IKS-based interventions? - Use of neurofeedback and biofeedback mechanisms to |
| | Scientific characterization of brain network with the intervention of Yoga and Meditation | |
| | Learning Mind-brain paradigm from Ayurveda | |
| | Mind-brain paradigm in Bhagavata Samkhya | |
| | Traditional Indian Medicine Research for mental wellbeing | |
| | Indian Performing Arts and Cognition | |
| Cognitive Science | Cognitive Neuroscience | |
| | Cognitive Psychology | |
| | Cognitive Technology and Bio/Neurofeedback | |
| | Judgment and Decision Making | |



| | | |
|-----------------------------|---------------------------------|---|
| | Mental Health | <p>improve meditation and yoga practices</p> <ul style="list-style-type: none"> - 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? |
| Virtual Reality and Sensors | Virtual Reality Applications | <ul style="list-style-type: none"> - 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? - 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 | |
|----------------------------|--|--|

Link to the online application^{1,2}: <http://oas.iitmandi.ac.in/External/Admission/Login.aspx>

***If you encounter any difficulties while filling out the form, please use the Google Form provided below**

Google Form Link:

https://docs.google.com/forms/d/e/1FAIpQLScHI_edHBZn2wVty8QjeGTdEFoE8JqpHzXL0vrnfuan5vtWkQ/viewform?usp=sf_link

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 regarding the different research areas and positions available with them listed on

<https://iksmha.iitmandi.ac.in/research.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://iitmandi.ac.in/pdf/admissions/Information%20Brochure.pdf>

For Masters applicants (Full-Time Research Scholars):

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

Qualifying Degree:

1. Bachelor's degree in Engineering/Technology or equivalent with a valid GATE score, **OR**
2. Master's or equivalent degree in Science/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.

B. Financial Support: Students joining the M.Tech. (Research)-Regular program may be considered for the HTRA Fellowship (subjected to availability of funds) based on the above admission norms if recommended by the selection committee.

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

A. 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/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 starting 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.

B. Financial Support: Students joining the Ph.D. program may be considered for the HTRA Fellowship (subjected to availability of funds) based on the above admission norms if recommended by the selection committee.

*For complete details regarding eligibility kindly refer to Ordinance and Regulations (O&R) available at IIT Mandi webpage.

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

A. General eligibility criteria for M.Tech(R)+Ph.D.(Dual Degree) - Regular Admission:

Qualifying Degree:

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

***For qualifying degrees 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 8.0 (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 8.0 (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.

B. Financial Support: Students joining the M.Tech(R)+Ph.D.(Dual Degree) - Regular program may be considered for the HTRA Fellowship (subjected to availability of funds) based on the above admission norms if recommended by the selection committee.

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

Employed candidates seeking admission to M.Tech(R) Regular must submit a “**No Objection Certificate**” from their current employer at the time of the interview.

For any problems regarding filling up on online applications, please contact iksmha-office@iitmandi.ac.in

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

Important dates:

The deadline is Extended till 07th December 2023

Date of Interviews: Will be announced shortly after the received application to shortlisted candidates. Those who do not appear for their interview on the announced date will not be considered further for admission.

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

1. Please carefully check your eligibility criteria which fits your application, and make sure you get all the relevant documentation related to the same.
2. Upload self-attested documents as a single zip file (Proof of identity (Aadhar card/voter card/PAN card/any other), Class 10 certificate as proof of date of birth, Mark sheets of UG and PG degrees (rank certificate, if any), Qualifying certificate of the GATE/CSIR/UGC/other examination, Caste Certificate.)
- 3.. 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 OAS portal.

