

# 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, August -December Semester, 2023)**

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"> <li>- Laws of semantics and Foundations of Psychology</li> <li>- What are the cognitive biomarkers of consciousness?</li> <li>- How to measure and improve states of epistemic curiosity (or lack of cognitive inertia)?</li> <li>- What are the cognitive biomarkers of creativity and the effect of IKS interventions?</li> <li>- What is the connection between consciousness and sleep states?</li> <li>- How to investigate dreams and the contents of dreams?</li> <li>- How to evaluate the level of sleep and enhance sleep and dream quality?</li> <li>- How does physiological data relate to common yoga practices?</li> <li>- What are the relations between neural, physiological, and molecular signatures, and how are they affected by IKS-based interventions?</li> <li>- Use of neurofeedback and biofeedback mechanisms to</li> </ul>
	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"> <li>- How does one assess the importance of intention and goodness from the perspective of cognitive biomarkers?</li> <li>- Could computer vision and VR applications improve yogasana practices?</li> </ul>
Virtual Reality and Sensors	Virtual Reality Applications	<ul style="list-style-type: none"> <li>- Could Mantra chanting and tDCS in Virtual Reality (VR) improve mental conditions?</li> </ul>
	Bio/Neuro/Physiological Sensing	<p>Can this improvement be predicted via machine learning methods?</p> <ul style="list-style-type: none"> <li>- What is the relationship of Prakriti on the effectiveness of meditation therapies for psychological and lifestyle disorders?</li> <li>- Could machine learning predict a person's Prakriti?</li> <li>- Could Indian music and dance therapies help improve clinical cases of mental and lifestyle disorders?</li> <li>- How do we personalize music and dance therapies (e.g., based on the Prakriti of the subject or other factors)?</li> <li>- How can IKS interventions aid in the cases of deaddiction?</li> <li>- How to develop translational technology based on IKS interventions for clinical and home-based setups?</li> </ul>

Mental Health Applications	Depression, Stress and cognitive loading, Sleep Disorder, Autism, Alzheimer, Parkinson	
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**Link to the online application<sup>1,2</sup>:**

[https://docs.google.com/forms/d/e/1FAIpQLScHl\\_edHBZn2wVty8QjeGTdEFoE8JqpHzXL0vrnfuan5vtWkQ/viewform](https://docs.google.com/forms/d/e/1FAIpQLScHl_edHBZn2wVty8QjeGTdEFoE8JqpHzXL0vrnfuan5vtWkQ/viewform)

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](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.

### **Students who are working as interns at IIT Mandi, IIT Mandi iHub and HCI Foundation, IIT Mandi Catalyst, or E-WOK**

The students who are working as interns at IIT Mandi, IIT Mandi iHub and HCI Foundation, IIT Mandi Catalyst, or E-WOK, may be offered Provisional Masters or Ph.D. admissions for the next Academic Year subject to fulfillment of eligibility conditions.

The following conditions should be fulfilled for the issue of provisional offers for interns:

- Student should be a pre-final/final year student (B. Tech/M.Sc/M.Tech/PG) of a CFTI institute or Institute with NIRF ranking less than 100 or State Government Institutes / Universities of Himachal Pradesh.
- CGPA should be equal to or more than 7.5 or equivalent percentages.
- The pre-final year intern can join the Masters or Ph. D. in the next academic year. Final-year students may join the same academic year or the next academic year, subjected to their completion of prerequisites.
- Interns, who were offered provisional admission, should complete their qualifying degree before joining IIT Mandi.
- The offer can be extended to other interns also, who are not from CFTIs/Top 100 NIRF Rankings/ Himachal Pradesh Government Institutes or Universities, provided that they qualify other criteria such as GATE, UGC NET, etc., for

scholarships before joining IIT Mandi.

For any problems regarding filling up on online applications, please contact  
[iksmha-office@iitmandi.ac.in](mailto: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](mailto:iksmha-office@iitmandi.ac.in) We look forward to reviewing your application.

### **Important dates:**

Start of online application: 7<sup>th</sup> October 2023

Deadline for online application: 14<sup>th</sup> October 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.