

Date: 08.04.2025

**Call for Admissions in Ph.D, Dual Degree & M.Tech (Research) at Centre for AI & Robotics,
IIT Mandi (JULY. - DEC.- 2025)**

Centre for Artificial Intelligence & Robotics, IIT Mandi is inviting applications for admission in the Ph.D., Dual Degree & M.Tech (Research) program in a variety of disciplines and Interdisciplinary areas under Regular/Part-time mode.

Available Program and Specializations for Admissions:

BROAD RESEARCH AREA	SPECIFIC AREAS (BUT NOT LIMITED TO)	BRANCHES
Drones	<ul style="list-style-type: none"> • Aerial manipulation • Autonomous navigation and control In GPS denied environment. • Drone analytics • Nano Drones • Drone application for Surveillance and Industrial Structure Inspection • Swarm Drones • Novel propulsion mechanism for Drones • Airborne sensors such as Lidar, Multispectral Cameras • Drone Electronics • Energy management of Drones 	Master's / Bachelor's degree in: Mechanical Engineering/ Electrical and Electronics Engineering/ Electrical and Communication Engineering/ Computer Science Engineering/ Information Technology/ Instrumentation and control/ Mechanical (Robotics)/ Automation Engineering/ Automobile Engineering/ Industrial Engineering/ Aeronautical Engineering/ Aerospace Engineering.
Multi-Agent Systems	<ul style="list-style-type: none"> • Visual Servoing • Visual Robot Programming • Multi-agent Systems • Swarm Robotics • Formation control • Collision Avoidance • Autonomous navigation • Human-Robot Collaboration 	
Robotics	<ul style="list-style-type: none"> • Grasping and manipulation • Collaborative manipulation • Teleoperation • Marine Robotics 	
Legged Robotics	<ul style="list-style-type: none"> • Quadruped • Humanoid 	

<p>AI & Robotics for Biomedical Applications</p>	<ul style="list-style-type: none"> • Robot-assisted diagnosis and surgery • Image-guided surgery intervention • Nano robots for sensing and diagnosis • Generative AI tools for Enhanced sampling of biomolecules • Drug Target identification • Machine learning for molecular/drug design 	
<p>Cyber-Physical Systems (CPS) and Connected and Autonomous Vehicles (CAVs)</p>	<ul style="list-style-type: none"> • Driverless Cars • Cloud-Facilitated Control of CAVs • Optimal control of CAVs • Intelligent control in CPS • Electric and Hybrid Electric Vehicles 	
<p>Cyber Security</p>	<ul style="list-style-type: none"> • Cyber security of connected systems • AI/ML based threat detection and protection • AI/ML based analysis of cyber-Attack and Deep fake Detection. • Network Security • Blockchain for cyber security • Quantum cryptography 	
<p>AIML for Robotics</p>	<ul style="list-style-type: none"> • Robot Learning • Robotic Inspection and AI/ML based anomaly detection. • Predictive maintenance of Industrial Structures based on data from Intelligent agents. • NLP (LLM) integration with Robotic Agents • Reinforcement Learning for Robotic Agents • Generative AI for training of Robotic agents • Deep Learning for Robotics 	
<p>Sensors for Robotics</p>	<ul style="list-style-type: none"> • Developing sensors for Robotics • Robot fabrication • Smart materials for Robots • Developing actuator for Robotics 	
<p>Computer Vision</p>	<ul style="list-style-type: none"> • Generative AI • Vision Language Models • Deep Fake Detection • Multimodal AI Agents • Underwater Imaging • Quantum Machine Learning 	

Minimum Eligibility Criteria for Appearing in Admission Process:

The candidate must fulfill any one of the criteria mentioned below:

For PhD 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.

- Master's degree in Sciences/ Engineering/ Technology with a good academic record
- Bachelor's degree holder in Engineering/ Technology from any CFTIs with a minimum CGPA of 7.5 on a 10.0-point scale.
- 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.

For Masters applicants (Full-Time Research Scholars):

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

- Candidates with a Bachelor's Degree in Engineering/Technology or Master's Degree in appropriate Sciences. A valid GATE score is required for admission to the M. Tech (by research) program, and for availing HTRA scholarship.
 1. Upload self-attested documents as a single zip file (Proof of identity (Aadhar card/voter card/PAN card/any other), Class 10th 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.)
 2. To apply for other specific areas not listed above, kindly fill "Others" in the specific area section after selecting the Broad Research Area on the Samarth portal.
- 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 (or equivalent). (National Level examinations are waived off for HTRA Scholarship)

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

- 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, with CGPA/CPI at least 7.5 (on a scale of 10) or equivalent
- 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.
- NIRF Ranking (within the top 100) should be in the overall category granted for the year during which admission is sought.
- Any Himachal Pradesh Govt. Institutions/Universities, with CGPA/CPI at least 7.5 (on a scale of 10) or equivalent.

For Dual Degree (M.Tech (R) + Ph.D. 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
- GATE Score is waived off for candidates having B.Tech/BE degree from CFTI with CGPA ≥ 8 .

Notes:

- The shortlisted candidate will be called for a written test/interview.
- **Candidates who have applied in previous rounds will apply through a new email-id.**
- Reservation policies as per prevailing GoI rules will be followed. IIT Mandi reserves the right to admit /not admitted for any of the advertised areas, wherever the eligibility for admission is 7.5 CGPA, to relax the criteria for OBC (NCL): 7.0 CGPA & SC/ST/PwD: 6.5 CGPA.
- For each specialization and program, candidates should submit a separate application with the application fee.
- 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 application shall be summarily rejected.
- Industrial or Academic Institute Sponsored /Part-time/Self-sponsored M. Tech (Research)/Ph.D candidates are not eligible for MHRD/HTRA scholarships.
- Employed candidates seeking admission to M. Tech (Research)/PhD must submit a “No Objection Certificate” from their current employer at the time of interview.
- 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 at <https://research.iitmandi.ac.in/cair/faculty.php>

Link to the online application:

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

Application Fee:

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

Mode of Payment: Online within application form

Important Dates:

Start of online application	08 April. 2025
Last date for filling Online Application	25 April. 2025 (till 5 PM)
Tentative date of Written/Interview	2nd week of May 2025. (To be announced on the website/email)

Note:

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

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

For any queries related to the admission process you may contact cairoffice@iitmandi.ac.in, Ph: 01905-267791
