

Mahindra University

www.mahindrauniversity.edu.in

Ph.D. Program Admission Notification **(Spring 2024 Semester starting in Jan, 2024)**

Mahindra University, notified by the Government of Telangana vide Telangana Ordinance No. 1 of 2020 dated 20th May 2020, announces the launch of its 8th Batch of **Ph.D. admissions in the Spring 2024 Semester starting in January, 2024.**

The Doctor of Philosophy (Ph.D.) degree is acknowledged to be the highest university degree that is conferred on a doctoral student, who successfully defends her/his Ph.D. thesis in front of a panel of experts in the field appointed by the University after having spent a stipulated time and having achieved publications in reputed international journals and conferences.

The first year would require the Ph.D. candidate to go through a set of prescribed course work followed by initiation to research and comprehensive examination and carrying out actual research with the Ph.D. Adviser. The journey to earning Ph.D. degree typically goes through a cycle of four phases involving preparation, challenges, small and big successes and ultimate joy of successful defense of the written thesis. Completion of a thesis, depending on individual performance, typically may take about 4 years.



The Mahindra Edge

Ph.D. students at Mahindra University would have great opportunities for interdisciplinary research by working closely with our faculty, some of who are at the forefront of their fields (may like to check faculty profiles on our website). Our research infra-structure in terms of state-of-the-art laboratories in science and engineering are of high quality and are being continually upgraded. Government of India funding agencies like SERB, BRNS, DRDO, MeitY, etc., have already funded several research projects as well as international collaboration projects granted by DST's International Division.

Ph.D. programs are offered in Engineering and Applied Sciences. For those who wish to pursue liberal arts at Ph.D. level, we have a strong Humanities and Social Sciences program, which is backed by high-quality Media and Design Thinking laboratories and Entrepreneurship cell.

Specialized areas in which Ph.D. students, if found suitable, would be admitted in Spring 2024 semester

Ph.D. Specializations for Spring 2024 semester

- **Physics:** Solar Cell; Spintronic Devices; Dielectric Metasurfaces, Integrated Quantum devices, Liquid crystal microfluidics, Multifunctional materials and devices, Quantum Computing; and Neutrino Physics, Guided Wave Photonics and Fiber Optics, Terahertz metasurfaces, Terahertz magnetotransport, Active metamaterials, Terahertz photonics, 5G/6G communications, Topological photonic insulators, Metamaterials and metasurfaces
- **Civil Engineering: *Geotechnical Engineering*** - Sustainable/recycled/secondary pavement materials; Transportation Engineering - Transportation Planning- pedestrian and travel behavior modelling, traffic safety analysis; Environmental engineering – Indoor environmental quality, Water quality monitoring, Micropollutants, Photocatalysis, Nanomaterials synthesis for air and water pollution mitigation, Microalgal biofuels; Water Resources Engineering – Surface and vadose zone hydrology, Hydrological Modelling; Structural Engineering - Geopolymer concrete, Structural Engineering of Heritage Structures and Civil Structural Health Monitoring with sensors, Advanced Structural Cementitious Composites, Earthquake proof civil structures, Seismic Risk Assessment, Engineering Seismology, Engineered Bamboo, Monitoring corrosion of Infrastructure, Sustainable materials, Engineered nano cementitious composites, Ultra high performance concrete composites, Structural distress and strengthening systems
- **Electrical and Computer Engineering:** VLSI Design, Renewable Energy System & Smart Grid, Power Electronics and Electric Drives, Sensorless Electric Drives, Electric Vehicles, EV charging, Cyber Physical Systems, Cyber security for Power Electronic systems, fuel cell, Hybrid Energy Storage systems, Biomedical Signal Processing, Biometrics and Computer vision, VLSI designs beyond CMOS, Wireless communications, 5G, and massive IoT, Machine learning in VLSI, Algorithms for physical design automation, Semiconductor Devices, High Electron Mobility Transistor modelling for High Frequency applications, Memristor logic for low power logic implementation, Low power reliable memories for In memory compute (IMC), SRAM for space applications, High performance sense amplifier design, Deep learning for wireless communication, Radio Resource Management, MIMO communication, Non-orthogonal Multiple Access Technologies, Optimization in PHY and MAC layers, Dynamic Spectrum Access, Synthesis of high k nanomaterials for semiconductor applications

- **Chemistry:** Hybrid polymers and nanomaterials, Responsive polymers
- **Mathematics:** Numerical Analysis; Differential Equations; Analysis of Partial Differential Equations; Image Processing; Stochastic Control; Probability and Statistics; Fluid Dynamics; Operations Research; Scheduling and Timetabling in Industry and Education; Finite Group Theory; Numerical Linear Algebra; and Machine Learning, Financial Mathematics
- **Mechanical and Aerospace Engineering:** Computational Mechanics, Theoretical solid mechanics, Solar Thermal Power, Refrigeration and Air-Conditioning, Battery thermal management, Heat transfer, Microfluidics, Biofluid Dynamics, Biomechanics Modelling and Simulation, Nano materials, Cyber-Physical Systems, Advanced manufacturing systems, Robotics, Cable-Driven Robotics, Exoskeletons, Exosuits, Unmanned Aerial Vehicles, Sheet metal forming of Titanium Alloy Ti6Al4V, Forming, Rolling of Aerospace materials, Manufacturing process simulation for aerospace materials, Additive manufacturing, Laser manufacturing methods, Numerical Modelling and Simulation of additive manufacturing, advance finishing process etc. , Smart Manufacturing, i4.0, Industrial Engineering, Computer Aided Design, Turbulence modelling, Combustion modelling, Large Eddy Simulation, Direct Numerical Simulation, Turbulence-chemistry interaction, Tribology, Laminar to turbulent transition in Hypersonic, scramjet propulsion with hydrogen and hydrogen fuel, regenerative cooling in high speed flow, Computational turbomachinery, CFD code development in high speed reacting and non-reacting flows.
- **Computer Science and Engineering:** High-Performance Computing; Social Network Analysis; Artificial Intelligence; Machine Learning; Deep Learning; Cyber-Physical Systems; Computer Vision and Image Processing; Natural Language Processing; Computational Intelligence; Theoretical Computer Science; Big Data Computing; Computer Architecture; Computer Networks; Network Security; Cyber Security; Wireless Sensor Networks; Generative AI, Neuroscience, Brain-Computer interface.
- **Entrepreneurship:** Innovation and Entrepreneurship; Start-ups and Technology Entrepreneurship, Family Business Management, Start-ups-Scaling up & Growth, Incubation processes and models
- **Humanities and Social Sciences:** Indian Ocean History; Economic Anthropology; Political Scienc
- **Life Sciences:** Chemistry of Biomolecules, Computational Biology, Plant Molecular Biology

Eligibility:

Programme	Minimum qualification required for admission	Admission Process
Ph.D. (Full Time)	<p>Master's degree in Engineering/Technology/Science/Humanities/Social Sciences with a minimum CGPA of 6.00 on a 10-point scale or 60% marks in aggregate. Full time students who do not possess M.Tech. or equivalent degree and instead possess B.Tech. or equivalent degree with a minimum CGPA of 7.00 on a 10-point scale or 70% aggregate marks are required to have a valid GATE score or UGC/CSIR/DBT/INSPIRE Fellowship Examination for Sciences/Humanities and Social Sciences disciplines.</p> <ul style="list-style-type: none"> - The requirement of GATE/National examination can be waived off for possible admission to Ph.D. programs for all graduates from Centrally Funded Technical Institutes with a B.Tech./B.E./Integrated M.Sc. (or any other program of minimum four years duration, admission to which was on the basis of JEE) with CGPA of 8.00 and above at the time of graduation. - The requirement of GATE/National Examination can be also waived off for M.Sc. graduates from IITs with a CGPA of 8.00 and above. 	Interview

FEE STRUCTURE & Ph.D. ASSISTANTSHIP (Free Boarding & Lodging):

**INR 50000/-
PER ANNUM**

**INR 20000/-
SECURITY DEPOSIT
(ONE TIME PAYMENT)**

Ph.D. Assistanship
 (for full time scholars)
INR 30000/- PER MONTH* (plus Boarding & Lodging)

*8 hours/week TA duty mandatory.

Important Dates (* Subject to revision):

Last Date for submission of applications – 1st Round	12th Dec, 2023
Shortlisting of candidates for interview	15th Dec, 2023
Online interviews for selection	20th -22nd Dec, 2023
Announcement of Results	8th Jan, 2024
Commencement of the Spring 2024 Semester Teaching	22nd Jan,2024

[Please click here to view Application Procedure for Ph.D. Program](#)

[Please click here to download Ph.D. Application Form](#)