

Mahindra University

www.mahindrauniversity.edu.in

Ph.D. Program Admission Notification (Spring 2026 Semester starting in January, 2026)

Mahindra University, notified by the Government of Telangana vide Telangana Ordinance No. 1 of 2020 dated 20th May 2020, announces the launch of its 11th Batch of **Ph.D. admissions** in the Spring 2026 Semester starting in January, 2026.

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 2026 semester Ph.D. Specializations for Spring 2026 semester: (Jan'26 Intake)

- **Physics:**

Hollow core anti resonant optical fibers, photonic time crystals, high power beam delivery, and applications; TMDC (2D) based metamaterials, Metasurface based Quantum emissions and Inverse Design of metamaterials for entangled quantum sources; Quantum Condensed Matter Physics: Topological Transport in Quantum Materials, Atomistic Simulation of Quantum Magnets for Modern Spintronics, Quantum Energy Materials; Chalcogenides, Phase Change Memory, Structure-Property correlation Study for Engineered Materials; Nanotechnology and Advance Functional Energy Materials, Solar Cell, Spintronic Devices, Magnetic Materials; Neutrino physics, Supernova neutrinos, Dark matter phenomenology, Physics beyond the standard model (BSM physics) - decoherence, non-standard interactions, decay, etc.

- **Civil Engineering:**

Structural Engineering: Bamboo structures; Structural health Monitoring; Durability issues of Concrete and SCM's. Geopolymer concrete, Structural Engineering of Heritage Structures and Civil Structural Health Monitoring with sensors, Advanced Structural Cementitious Composites, Earthquake, Seismic Risk Assessment, Engineering Seismology, Sustainable materials, Engineered nano cementitious composites, Ultra high performance concrete composites, Structural distress and strengthening systems, Precast elements with 3D concrete printing and Performance based design of Precast structural elements. Structural performance under blast, impact, and fire loadings; Computational mechanics and nonlinear finite element modelling; Ultra-High Performance Fiber Reinforced Concrete (UHPFRC); Structural vulnerability modelling

Transportation Engineering: Travel Behaviour and Choice Modelling, Mobility as a Service (MaaS), Shared Mobility, Sustainable Urban Transportation Systems, Road Safety Audit. Intelligent Transportation Systems, Driver Behaviour, Road Safety Education, Road Traffic Noise. Transportation and Environment- transportation systems modelling, GIS applications and optimization in transportation infrastructure modelling and development, high-speed rail infrastructure planning, and metaheuristics in alignment development and facility location.

Data-Driven Transportation Planning, Urban Analytics, and Policy, Geospatial Analytics and Smart Mobility Systems, Computational Optimization and Artificial Intelligence in Transportation Systems, Transportation Economics, Regional Economics, Spatial Econometrics, and Multi-Criteria Decision Analysis (MCDA), Urban and Regional Planning, Business Network Analysis and Economic Geography

Geotechnical Engineering: Geosynthetics, Sustainable/recycled/secondary pavement materials, stabilization of materials, pavement geotechnics, and NDT Testing.

Construction Management: Project management, Stakeholder management, Risk management in mega construction projects, Sustainability in construction projects, Lean Construction, and Circular economy

Electronics and Computer Engineering:

VLSI Design & Embedded Systems: IoT architecture, Fault tolerant and resilient embedded systems, Embedded/Edge AI, VLSI designs beyond CMOS, Machine learning applications in VLSI, Algorithms for physical design automation, Semiconductor Devices, FET-based Biosensors, 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, Design of digital circuits and memories using Quantum-dot Cellular Automata (QCA), Synthesis of high k nanomaterials for semiconductor applications, hardware

security, approximate computing. Embedded systems for smart homes, smart farming, and smart healthcare, deep neural network accelerator VLSI design, approximate circuit synthesis for deep neural network. AI integrated biosensors in embedded systems.

Renewable Energy System & Smart Grid: Hybrid Energy Storage Systems, Cyber Physical Systems, Cyber Security for Power Electronic Systems, Fuel Cell.

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

Communications and Signal Processing: Biomedical Signal Processing, Biometrics and Computer vision, Wireless communications, 5G and massive IoT, 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, Error correction coding for 5G and IoT communication, underwater optical communications, underwater object identification, and ocean optics, RF security and interference management for 5G IoT, AI/ML for RF signal processing for 5G/6G, Ultra-wideband digital predistortion for 5G/6G, 5G Security and RF

Fingerprinting, Integrated Sensing and Communications, Energy-efficient next generation broadcasting systems, PAPR reduction techniques for 5G and beyond

Chemistry:

Nanomaterials, Electrocatalysis, Photocatalysis, Hydrogen generation, Water remediation, Sensors.

Mathematics:

Partial Differential equations, Image Processing, Deep Learning, Numerics for PDEs, Numerical Analysis, Scientific Computing (C/Fortran/Python/Julia), Simulation of Astrophysical Flows, Operator Learning, Conservation Laws., Finite Group Theory, Mathematical modeling, mathematical biology, nonlinear dynamics, nonlinear PDEs, Graph Theory, Graph Algorithms, Numerical Analysis, Computational Fluid Dynamics and Numerical Methods for PDEs. , Financial Mathematics, PDEs, Stochastic Differential Equations, System

reliability, Applied Statistics, Data modeling using Copulas, Bayesian Reliability, Machine learning, Mathematical modeling of nonlinear PDEs arising in tumor dynamics, Well-posedness analysis of nonlinear PDEs, and Applied functional analysis. Optimization and Operations Research – Scheduling and Timetabling in Industry and Education, and Machine Learning, Numerical Analysis, Scientific Computing, and Machine

Mechanical and Aerospace Engineering:**Fluid & Thermal Engineering:**

Solar Thermal Power, Refrigeration and Air-Conditioning, Cell modelling, Experimental study on Battery thermal management, Direct/indirect cooling of Lithium-ion battery pack, ageing, thermal runaway of Lithium-ion cell, Heat transfer, Microfluidics, Biofluid Dynamics, Biomechanics Modelling and Simulation.

Solid mechanics:

Computational Mechanics, Theoretical solid mechanics, Computer Aided Design, mechanics of 3D printed cellular materials, functionalized 3D print resins (modelling + development)

Materials and Manufacturing Process:

Nano materials, Cyber-Physical Systems, Advanced manufacturing systems, Sheet metal forming of Titanium Alloy Ti6Al4V, Forming, Rolling of Aerospace materials, Manufacturing process simulation for aerospace materials, Additive manufacturing, Numerical Modelling and Simulation of additive manufacturing, advance finishing process, Smart Manufacturing, Industrial Engineering, Tribology, Self-lubricating Polymer Nanocomposites

Robotics:

Robotics, Cable-Driven Robotics, Exoskeletons, Exosuits, Unmanned Aerial Vehicles, legged robots, autonomous navigation aerial and ground vehicles, Augmented and Virtual reality based robot assisted surgery, 3D printing based low cost robot for surgical application etc.

Aerospace Engineering:

Gas turbine Combustion, Computational Turbomachinery, Scramjet Propulsion with hydrogen and hydrogen fuel, Regenerative Cooling in high speed flow, Turbulence modelling, Combustion modelling, Large Eddy Simulation, Direct Numerical Simulation, Turbulence-chemistry interaction, Laminar to Turbulent Transition, CFD code development in high speed reacting and non-reacting flows, Numerical Modelling of Heterogeneous Solid Propellant Combustion, Combustion Instability. Lighter-Than-Air (LTA) Systems, Hybrid Buoyant Aerial Platforms, Buoyant Systems for Monitoring, Surveillance, and Aerial Docking, Bio-Inspired Novel Buoyant Systems, Planetary and Atmospheric Exploration using Buoyant Systems, Wind Turbine Basic design (Wind data analysis, Power capture, Rotor sizing), Wind Turbine Blade design (loads, aerodynamics, structures, dynamics, fatigue), Fluid-Structure Interaction (FSI) of continuous systems (theoretical and computational approaches).

Humanities and Social Sciences:**English Literature, Cultural Studies**

Women's Writing, Indian Writing in English, Cultural Studies, Urban Studies, Postcolonial Literature, Digital Humanities, Medical Humanities, Energy Humanities, Posthumanism, South

Asian Fiction, Literatures from the Global South, Graphic Narratives, Feminis Literary Studies, Crime Fiction and Detective Narratives, Law and Literature, Affect Theory, Literature and Cognition, African Literatures, Literature and the Body, Literature and Technology

Philosophy

Philosophy of Mind, Philosophical Logic, Consciousness, Ethics, Professional Ethics, Indian Philosophy. Analytical Philosophy

English Language Education (ELE)

English as Second Language Studies (ESL), Teacher Training and Professional Development, Classroom-based Research

Economics

AI in Economics, Random control Trial in Economics, Natural experiments in Economics, Law and economics, Stochastic production frontier analysis, Political Economy, Macro Economics, Labour Economics, Development Economics, Economics of Climate Change, Agricultural Economics, Environmental Economics, Energy Economics, Sustainability, Energy Economics, Behavioral Economics and Development Studies

Indian Ocean History; Economic Anthropology; Political Science, Sociology of Migration, Borders and Social and Political Anthropology, History, History of Colonial India (1700- 1947), Indian knowledge system (ancient India), Decolonization, Political Ecology and Climate Change Cognitive Science, Cognitive Linguistics, Applied Linguistics, Speech perception, Syntax, Semantics, Cognitive linguistics, Cultural linguistics, Discourse analysis, Sociolinguistics School Education, Educational Leadership and Governance, Gender and Education Leadership Risk Management, Organizational Behaviour.

- Feminist History and Theory,
- Gender History of Islamic Societies in Early Modern India,
- Social, Culture and Imperial History,
- Law and Colonialism

Life Sciences:

Computational Biology

Eligibility:

Programme	Minimum qualification required for admission	Admission Process
-----------	--	-------------------

Ph.D. (Full Time ONLY)	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. - 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.	Entrance Test followed by Interview (For Shortlisted Applicants)
---	--	--

Ph.D. Entrance Test:

Candidates not having valid GATE score or or UGC/CSIR/DBT/INSPIRE will have to appear in the written Test to be conducted by ECSE-MU, followed by an interview for the shortlisted candidates.

Mahindra University Ph.D. Entrance Test: 06-Dec'25 (Saturday) at Mahindra University Campus

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 is mandatory

Important Dates (* Subject to revision):

Last Date for submission of applications	10th Dec, 2025
Shortlisting of candidates for interview	15th Dec, 2025
Ph.D. Entrance Test / Interview	20th Dec, 2025
Announcement of Results	30th Dec, 2025
Commencement of the Spring 2026 Semester Teaching	15th Jan, 2026

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

[Please click here to Apply](#)