# Research Policy

## Mahindra University

Our Research Vision: *Promote Research at an International Level of Excellence to extend the edge of Scientific Knowledge and Contribute to the Rise of a New India*

Mahindra University envisions a vibrant environment that fosters excellence in research and innovation. The world is witnessing rapid technological growth and the emergence of newer challenges, both technological and social. The growing need for solutions across diverse domains of science, technology and engineering, highlight the need for high-quality research and motivated researchers. Domains such as high-performance computing, health care, biological sciences, artificial intelligence, information security, advanced materials, additive manufacturing, internet-of-things, to name just a few, are in urgent need of passionate and motivated researchers willing to pursue the challenges. The University intends to create an ideal environment where researchers from different domains can work independently in their own areas of expertise and also, pursue inter-disciplinary research. The University aspires to support both undergraduate and postgraduate research. The students not only gain from such research but also contribute significantly through their innovative ideas and tireless efforts. The research eco-system of the University hopes to be a holistic amalgamation of both faculty and students working to achieve research excellence.

One of the key outcomes of research can be high-quality peer-reviewed publications and the disbursement of these results to the respective research community. This will bring global visibility and recognition to our faculty and the University. The key outcomes are the patents and technology generated through research. As stated in the policy of our Centre of Entrepreneurship, the University intends to support attempts to create start-ups that aim to develop products, which are the outcome of the research activities. In the end, the University strongly envisions to generate research that has a long-lasting impact on the respective target community and audience. There are already several key support systems in place at the University to materialize our vision.

The first is the presence of the Research Advisory Committee (RAC), which is composed of renowned experts from reputed universities and the top-tier industries. This

committee oversees and guides the research vision of the University through their combined expertise and vast experience. The RAC also provides a window for collaboration with other universities and industries through their extensive network of connections across the world's universities and industries. The RAC members have strongly supported the University's research vision and have been a guiding influence.

Secondly, the personal development funding provided to the faculty members. This funding supports all kinds of professional research related activities, travel and collaborative efforts. This is an invaluable asset to pursue research in their respective domains and collaborate within their community through conferences, professional interactions like lectures, workshops, etc.

Thirdly, the University provides internal support through seed funding to researchers, particularly those coming freshly into this profession and adjusting themselves to the rigors. This encourages the faculty and gives them some buffer space especially when pursuing new and high-risk research challenges. The internal funding supports short term projects or ideas that may lead towards the pursuit of bigger research challenges or products.

Fourth, the University intends to focus on developing Centers of Excellence (CoE) across several domains. Broadly, in the near future, four Centers of Excellence have been envisaged for further deepening and expansion towards 2025. These include the domains of Artificial Intelligence, Photonics related to Meta-materials & Plasmonics, Smart Structures & Sustainable Infrastructure, and Computational & Experimental Mechanics. The CoEs will provide a meeting ground for like-minded researchers to work and collaborate on areas of mutual interest. Their success will encourage more such CoEs in other areas of science and technology. The CoEs are an important component in our plan to place the University strategically in the national and the global research communities, thereby, giving visibility and recognition to the capabilities of the faculty and the students of the University.

The University has also initiated a number of measures, some of which can be traced back to our pedagogy, which directly and indirectly facilitate research. It encourages its faculty to obtain external grants for research projects, from sources that are both public and private, and also from global sources. It tries to promote Consultancy by faculty with liberal support measures. In this direction, the University has created a post of *Research Facilitator*, one dedicated and qualified staff member who connects the faculty of the University to various Calls for Proposals, Grant Opportunities, Competitions, etc., emanating at a global level. He tries to support individual faculty to create the proposals

in response to these opportunities, for sometimes these are very time consuming and the faculty can be engaged in different pressing activities.

The pedagogy of this University lays stress on Humanities, Creative and Design Thinking, Media, and lays strong emphasis on basic science fundamentals, inter-disciplinary engineering education along with research projects at the 3rd and 4th years of their undergraduate degree. As a consequence, it has successfully stimulated a passion for research among students, and a majority of its research publications have one or more undergraduate students as co-authors.

The university strives to build common cross-departmental research facilities in areas related to both intensive scientific computing, and experimentation. In a short span of time, it has built up major facilities along both these directions, and these are listed in separate documents.