



POLITECNICO
MILANO 1863

**MILANO
BOVISA
CAMPUS**

MECHANICAL ENGINEERING

PHD PROGRAMS

Programme

The PhD Programme in Mechanical Engineering is organized and carried out within the Department of Mechanical Engineering of Politecnico di Milano. It covers several different disciplines, namely Dynamics and Vibration of Mechanical Systems and Vehicles, Machine and Vehicle Design, Manufacturing and Production Systems, Materials, Methods and Tools for Product Design and Measurements and Experimental Techniques, with a strong drive for innovation and experimental activities in three major research areas: Advanced Materials and Smart Structures, Sustainable Mobility, Engineering Design and Manufacturing for the Industry of the Future. One of the key elements of our Doctoral Programme is represented by our laboratories: we feature some of the most unique, active and innovative set-ups in Europe. Learn more on our labs at www.mecc.polimi.it/nc/us/.

Mission and goals

Our PhD Programme trains highly skilled profiles, qualified to meet academic and industrial most challenging demands. Our graduates are prepared to embrace careers and industrial paths at the forefront of technology, responding efficiently to a call for innovation and top-level research. The Programme relies on developing an interdisciplinary and integrated high-level educational offer by focusing on a comprehensive scientific proposal, from the initial conception to the final realization. All candidates follow a three-year path under the guidance of a supervisor and a tutor; this path includes specific courses and lectures held by Faculty members and foreign professors and experts, in-depth research, laboratories and active cooperation with international industries, institutions, and research groups. At the beginning of their career, candidates select and outline a major research topic, whose development throughout the whole duration of the Programme will result in a Doctoral Thesis, to be discussed

during the Final Defence.

A strong drive for Internationalization tops off the picture: our PhD Programme proposes an International Track, designed to foster the development of scientific research topics in collaboration with top-level European Technical Universities belonging to the IDEA League (Chalmers University, TU Delft, ETH Zurich, RWTH Aachen) and ENHANCE (TU Berlin, Warsaw University of Technology, Universitat Politècnica de València, the Norwegian University of Science and Technology) partnerships. Candidates enrolled in this framework will carry out a PhD characterized by an international co-supervision.. We also promote, draft and activate European and extra-European Joint Degrees, Double PhD Programmes and Joint Doctoral Thesis (Cotutelle). We have a long tradition of academic cooperation and agreements with some of the highest-level and best-known academic scientific institutions all over the world, such as MIT-Massachusetts Institute of Technology (US), Shanghai Jiao Tong University (CN), École Polytechnique Fédérale de Lausanne (EPFL), TU München (DE), Georgia Institute of Technology (US) and Xi'an Jiao Tong (CN).

Career Opportunities

The PhD Programme in Mechanical Engineering offers top-level knowledge in one of the most profitable sectors in Italy and worldwide; it is a key instrument to access leading enterprises and achieve prominent positions in large international companies devoted to research and development, innovation, and design. The primary employment market comprises leading companies and organizations dedicated to innovation, research and technical development, high-tech SMEs and governmental departments. A recent survey (run by Politecnico's Career Service in 2020) showed that 97% of our PhD candidates are employed within one year after the end of the Programme, in national and international companies and academic and non-academic research institutions, engaged in innovation, research and technical development. On average, the survey showed that people earning our PhD title are paid 35% more than the corresponding employees with a master title.

Eligible students

All graduate students, Italian and International, holding a University Degree equivalent to a Master of Science, can apply for our PhD Programme. Specific information on admission requirements is available annually in the call for application at www.dottorato.polimi.it/en.

Scholarships

Each year we award an average of 35 scholarships (1.325 Euro/month), many of them fully sponsored by national and international top-level enterprises. We also provide all candidates with a yearly budget for study materials, laptop and conferences fees, as well as with additional financial support for research periods abroad (scholarship is increased by 566, 36 Euro/ month).

Contacts

For specific information on our PhD Programme courses and activities, curricula, labs and Faculty, visit www.mecc.polimi.it/en/phd or contact phd-dmec@polimi.it. For further information visit www.dottorato.polimi.it/en or contact the Doctoral School of Politecnico di Milano at phdschool@polimi.it.

