

DIPARTIMENTO DI MECCANICA



The PhD Programme in Mechanical Engineering

POLITECNICO DI MILANO



WHY US

Academic Excellence

- Founded in 1863, today Politecnico di Milano is ranked 1st for its engineering programmes in Italy (Repubblica-Censis 2011).
- 51st worldwide for mechanical, aeronautical & manufacturing engineering (Qs World University Rankings 2011-2012).

Industrial Connections

- Scientific programmes ranked 22nd for employer reputation (Qs World University Rankings 2011-2012).
- Featuring one of the strongest national economies by GDP: 8th on a worldwide scale (International Monetary Fund 2011).
- Italy is 4th in the world, 2nd in Europe, in terms of per-capita manufacturing production (Confindustria 2010-Figure 1).

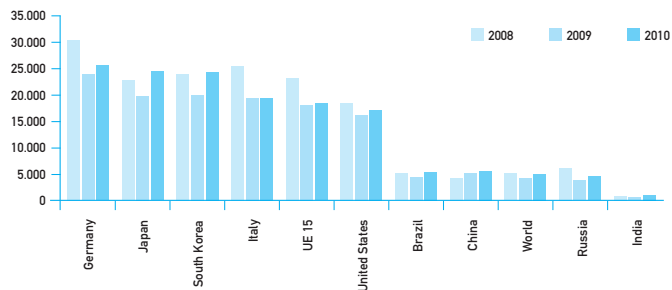
Lifestyle

- Milan: 21st among the best cities for students around the world (Qs Best Student Cities in the World 2012).

Figure 1

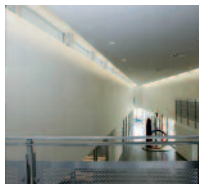
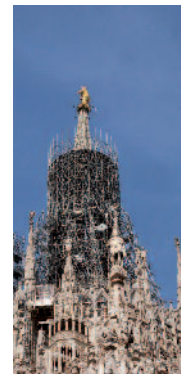
Most industrialized countries

(Per-capita manufacturing production, ranking 2010, prices and dollars 2010)



SOURCE: CSC PROCESSING ON GLOBAL INSIGHT DATA

Source: Centro studi Confindustria - Scenari industriali n. 2, June 2011





...highest-level
academic knowledge
in the field of Mechanics,
featuring top quality
teaching programmes
and research laboratories
among the most active,
innovative and
productive in Europe.



OUR PHD



The PhD represents worldwide the highest academic degree awarded, and aims at preparing top-level profiles through a path mainly devoted to research.

Our PhD Programme is part of the PhD International School of Politecnico di Milano. We offer highest-level academic knowledge in the field of Mechanics, featuring top quality teaching programmes and research laboratories among the most active, innovative and productive in Europe.

Learn more about our labs at www.mecc.polimi.it

The programme covers a number of different subjects, and proposes research paths consistent with the best academic technological practices all over the world. It addresses both theoretical and experimental activities in six major research areas:

[Dynamics and vibration of mechanical systems and vehicles]

- Mechatronics and Robotics - M&R
- Rotordynamics - RTD
- Wind Engineering - WND
- Road Vehicle Dynamics - RVD
- Railway Dynamics - RWD

[Measurements and experimental Techniques]

- Mechanical and Thermal Measurements - MTM

[Machine and vehicle design]

- Advanced Design of Mechanical Components - DMC
- Structural Integrity and Prognostics - SIP

[Manufacturing and Production Systems]

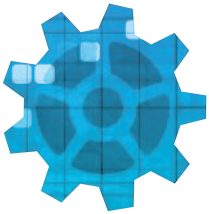
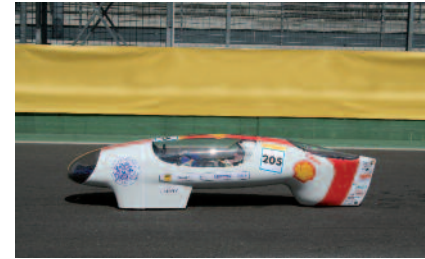
- Manufacturing Processes - MPR
- Manufacturing Systems and Quality - MSQ

[Materials]

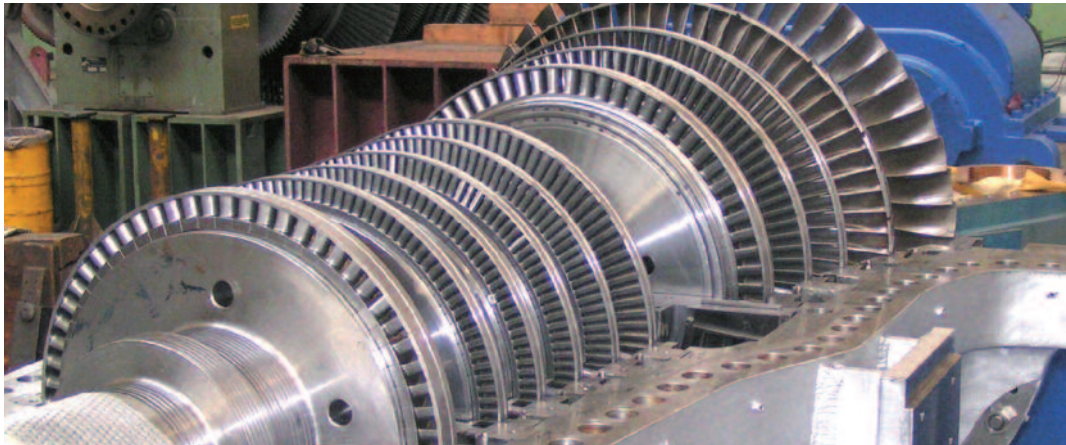
- Advanced Materials - AMT
- Bulk Heat Treatment and Surface Modification - HTS
- Steel Making and Metallurgical Processes - SMP

[Methods and Tools for Product Design]

- Product Lifecycle Management - PLM
- Virtual Prototyping - VPR
- Inventive Design and Systematic Innovation - INN



INTERNATIONALIZATION



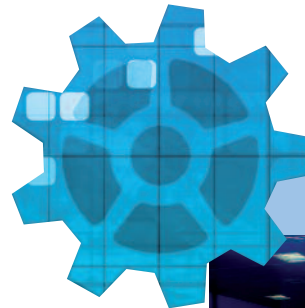
Our candidates are offered a wide range of international academic partners and universities to plan research periods abroad. We have a strong tradition of academic cooperation and agreements with some of the highest level and best known academic institutions all over the world, such as MIT-Massachusetts Institute of Technology (US), University of California at Berkeley (US), Imperial College London (UK), Tsinghua University (CN), University of Illinois at Urbana-Champaign (US), Delft University of Technology (NL), University of Michigan (US), École Polytechnique Fédérale de Lausanne (CH), Technische Universität München (DE), University of Southampton (UK), Technical University of Denmark (DK), Pennsylvania State University (US), Chalmers University of Technology (SE), Technion-Israel Institute of Technology (IL), Virginia Tech (US), Technische Universität Darmstadt (DE), University of Bristol (UK), The University of Sheffield (UK), École Centrale de Paris (FR), Politécnica de Madrid (ES).





THE PHD FACULTY

Our faculty consists of some of the best and most renowned academic Italian researchers and professors in the field of Mechanics.



Our Professors:

Bianca Maria Colosimo (Head of PhD Programme), Stefano Beretta, Andrea Bernasconi, Marco Bocciolone, Marco Boniardi, Monica Bordegoni, Francesco Braghin, Stefano Bruni, Gaetano Cascini, Federico Casolo, Federico Cheli, Alfredo Cigada, Andrea Collina, Giorgio Colombo, Umberto Cugini, Giorgio Diana (*Prof. Emeritus*), Fabio Fossati, Marco Giglio, Massimiliano Gobbi, Mario Guagliano, Carlo Mapelli, Gianpiero Mastinu, Michele Monno, Paolo Pennacchi, Barbara Previtali, Ferruccio Resta, Bortolino Saggin, Quirico Semeraro, Tullio Tolio, Maurizio Verdani, Roberto Viganò, Alberto Zasso.

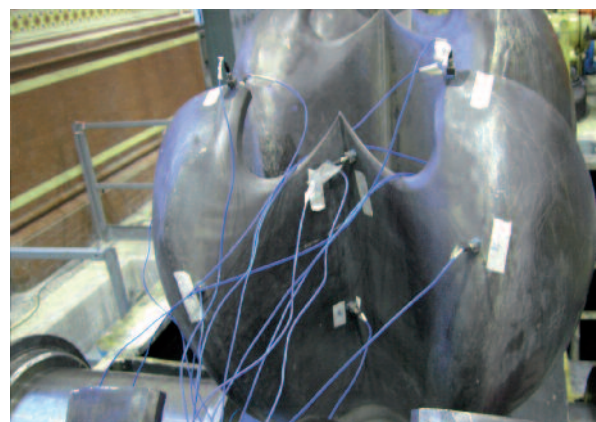


SCHOLARSHIPS AND ELIGIBILITY

SCHOLARSHIPS

Our Programme relies on academic activities, English-taught courses, and, mostly, on the development of an original scientific research carried out throughout a three-year period. Each year we award an average of 25 scholarships and give extra financial support for research periods abroad. We also provide a yearly budget for course material and conference fees, and housing support for top-level foreign students.

All graduate students holding a University Degree equivalent to a Master of Science can submit application to our PhD Programme. Specific information on admission requirements is available in the call for application at www.polimi.it/phd





DIPARTIMENTO DI MECCANICA



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For further information visit www.polimi.it/phd or contact the Doctoral School of Politecnico di Milano at dottorato.ricerca@ceda.polimi.it. For specific information on PhD Programme courses and curricula, visit www.mecc.polimi.it