Dear Candidates, …

... I will be soon the Rector of Politecnico di Milano, taking office January the 1st, 2017. It is a great responsibility; even greater in these ever-changing scenarios: continuous urbanization, aging population, growing needs opposed to need for de-growing, territories and communities more and more fragile ... and a technology constantly, sharply changing our social and economic habits.

Change is overturning our common future (which are the jobs of tomorrow, for example?); universities have a critical role to address the challenges that this evolving context offers us, training our students and producing research, and we face changes and challenges even in education and research (a stronger competition, for example). Politecnico di Milano needs and wants to keep growing, to improve, to innovate: our training programs, our research and teaching laboratories, the quality of life within our Institution.

To succeed in this, we need investments (and we are brave enough to do them). Then we need strategic alliances (with companies, other Institutions, the same labor market). Eventually, we need all our people. The responsibility of being Politecnico Rector will be more bearable with all the colleagues alongside, faculties and administrative staff with great skills and motivations, with prepared and earnest students and with you, graduate students and postdocs, our best resource for the future.

We shall focus on people, and we will do it starting from PhD candidates. We will support you in your research activity and we will provide you with solutions and projects connected to actual Society needs. Thank you. Thanks for your confidence in the Politecnico di Milano and for trusting doctoral training and the development of knowledge as the best investment for your career as well as for this Country.

Thanks for all and my best wishes for the coming year,

Ferruccio Resta
Calls and events

WINTER SCHOOL IN ENGINEERING

The Polytechnic University “Peter the Great”, Saint-Petersburg (RU), has new Winter School: an opportunity to attend an intensive academic program with lectures, company visits and workshops with Russian and International experts, from January, 23 to February, 3 2017. Studies (5 ECTS credits) are about the following topics, Nuclear Engineering, Turbomachinery and Electrical Engineering and may be recognized as a period abroad.

Deadline for UE students application: January 1st, 2017

ERASMUS+ (Outgoing mobility for study purposes)

The Erasmus Programme offers support for mobility of students within European countries. A new general call for Erasmus mobility program has been issued for students of the Politecnico di Milano who may apply in the "International mobility applications" section of their Online Services.

Application from 11 to 27 January 2017 (12:00 noon)

Starting courses – PhD School

RESEARCH SKILLS

Organized by the Research Service of Politecnico di Milano

This course deals with the basic skills for a career in research (communication, research management, the preparation of a research proposal, public speaking, ...); it offers a wide range of 1-day workshops focused on a single topic, from January to September 2017. Candidates are requested to attend at least 5 of the offered modules, to gain the course credits.

The detailed list of topics will be published here, with the dates of each meeting. The first one is:

UNDERSTANDING H2020 RESEARCH FUNDING – Prof. Roy Pennings

This module includes providing information about the structure of H 2020 programme and gives to attendees a strategic vision on what is the European context of the research funding.

January 31st, 2017

COLLABORATIVE RESEARCH METHODOLOGIES

Prof. Abraham B. Shani, David Coghlan

This course is designed to acquaint students with the basic knowledge of collaborative research methodologies. The aim of the course is to learn and investigate variety of collaborative research methodologies in management and organizations.

January 16th – March 22nd, 2017
HIGH PERFORMANCE COMPUTING IN MULTIBODY DYNAMICS
Prof. Federico Cheli, Alessandro Tasora, Radu Serban
It presents the foundations and a state of the art in multibody system dynamics research, its applications in various engineering fields (robotics and mechatronics, vehicle dynamics, fluid-structure interaction, mechanical, aerospace and industrial problems, wind turbine modelling, contact forces; efficient analysis of large systems ...) and the related computational methods.
January 9th – January 31st, 2017

SCIENTIFIC AND SCHOLARLY WRITING
Prof. Luca Guerrini, Kenneth S. Friedman
Few people are great writers; everyone may become a good one. This course teaches students to produce good scientific and scholarly articles, providing the basic skills, and methods for effective research writing and serious research publications.
January 16th – January 27th, 2017

SUSTAINABILITY METRICS, LIFE CYCLE ASSESSMENT AND ENVIRONMENTAL FOOTPRINT
Prof. Monica Lavagna, Paco Melià, Lucia Rigamonti, Giovanni Dotelli
The core of the course is the use of LCA methodology, the best recognized framework for assessing the potential environmental impacts of products and services currently available, and the practice of sustainability metrics as a tool to improve product design, benchmarking options, decision making in business and policy making, through examples and exercises. No preliminary knowledge is necessary. The course is open to any disciplinary area and application.
January 24th – February 3rd, 2017

Starting courses – Doctoral Programmes
PhD in Architecture, Built Environment and Construction Engineering

RESEARCH IN BUILDING PROCESS MANAGEMENT
Prof. Bruno Daniotti
The course aims to deepen and to build a clear research framework about Building Process Innovation, at an international level. It is divided into four modules, dealing with: quality control and assurance, information management (BIM, ICT), service life and maintenance planning, construction process re-engineering.
From January 23rd to February 13th, 2017

PhD in Environmental and Infrastructure Engineering

ENVIRONMENTAL CHEMISTRY AND MICROBIOLOGY
Prof. Manuela Antonelli
Principles are provided to support environmental engineers in analyzing and interpreting contamination and remediation problems.
January 24th, 2017
PhD in *Physics*

**PLASMONICS**

*Prof. Giuseppe Della Valle, Paolo Biagioni*

The fundamental aspects of surface plasmon polaritons will be covered (both as propagating and localized field oscillations). This interdisciplinary overview will result in a broad range of applications of potential interest for students in any branch of condensed matter, biomedical and optical physics.

January 12\(^{th}\), 2017 – h. 14:15 - 18:15

PhD in *Structural Seismic and Geotechnical Engineering*

**DAMAGE MECHANICS**

*Prof. Claudia Comi*

The course focuses on: phenomenological aspects of damage; micromechanics and thermodynamics of damage; damage models for quasi-brittle and ductile materials; strain and damage localization phenomena; enhanced damage models; finite elements analysis of damaging structures.

January 11\(^{th}\), 2017 – Azzurra Room, Building 5 – Leonardo Campus

**Colloquia Doctoralia**

*MeccPhD 2017*

Final Exams of PhD Candidates in Mechanical Engineering.

January 18\(^{th}\), 27\(^{th}\), 31\(^{st}\), 2017 – Department of Mechanical Engineering