



CALLS AND EVENTS



POLITECNICO
MILANO 1863

ITALIAN COURSES – II SEMESTER A.Y. 21/22

Features common to BOTH types of courses

Levels provided: beginner, elementary and intermediate.

Method: online classes – in all 40 hours.

Attendance: 2 lessons a week (in one of the following couples of your choice: Monday & Wednesday or Tuesday & Thursday), from 6.15 to 8.15 p.m.

News: to meet the needs of some students who reported the problem of the overlapping of the Italian lessons with the official ones, has been introduced the option of lessons only on Saturday mornings.

Students interested can find more info and register themselves through the **Language Courses Catalogue** available in the Online Services under the key 'Mobility'.

Further information: italian-courses@polimi.it

All stages are handled there. In detail and in this chronological order:

1. registration and carrying out of the level test (when a call is running),
2. display of the level test result and the related study program, choice of days for the classes and enrollment confirmation,
3. display of the details of of one's own course, i.e. online link, title of the book, etc.

Students will be able to display on the Catalogue the guidelines about how to carry out the online test, as well as the instructions related with the payment terms.

PAY ATTENTION: the placement test is not an exam and has no official value. It is a level test designed to set up homogeneous classes. We warmly recommend the students to do it by themselves.

Courses for foreign students with the Additional Educational Obligation in Italian

The time window in order to register and carry out the online level test is from January 20 to February 18 2022.

Courses for people without the OFA in Italian

The time window in order to register and carry out the online level test is from January 20 to February 8 2022.

Deadline for application: 8th / 18th February 2022





ANILE PRIZE 2022

The Angelo Marcello Anile Association announces the fifth edition of the Anile Prize.

The prize will be awarded for a PhD thesis written in English and submitted in an Italian university, concerning a topic that bridges the gap between mathematics and its applications. Works that use advanced mathematics and/or propose new mathematical models and methods FOR HEALTHCARE (particularly related to epidemics) are strongly encouraged. The work will be evaluated on the basis of the quality of the mathematics and of its impact on the application.

Eligibility

The candidate must have completed his/her doctoral dissertation and all other requirements for his/her doctorate during the period running from May 1st 2018 to July 31st 2022.

The award will consist of:

- A citation certificate
- A cash award of € 5000 (tax included)
- Refund of reasonable travel expenses to Catania
- The winner will also be given free life membership of the Angelo Marcello Anile Association (as an ordinary member).

Further information are available [here](#)

Deadline for application: July 31st 2022



STARTING COURSES – DOCTORAL PROGRAMMES

PHD IN MECHANICAL ENGINEERING

SMART MATERIALS BASED ON METALLIC AND CERAMIC SYSTEMS

Prof. Maurizio Vedani

The course provides a survey about the main groups of smart materials Aspects related to their structure, physical and mechanical properties, manufacturing routes, application-oriented design and case studies are covered.

From 7th February 2022



INTEGRATED EXPERIMENTAL AND COMPUTATIONAL APPROACHES TO THE DIAGNOSTICS OF STRUCTURES AND COMPONENTS

Prof. Emanuele Zappa

The course focuses on measuring strategies of the damage state of structures. The use of unmanned aerial vehicles for 3D shape, strain field and vibration measurement is discussed, in particular for applications in dangerous, harsh or hardly reaching environments.

From 9th February 2022





PHD IN INFORMATION TECHNOLOGY

ADVANCED DEEP LEARNING MODELS AND METHODS

Prof. Giacomo Boracchi

Nowadays deep learning spans multiple fields in science and engineering, from autonomous driving to human machine interaction, achieving human performance in solving many complex tasks, such as natural language processing and image recognition. This course presents recent advances in deep learning that brought data-driven models to achieve the state-of-the-art performance in many diverse problems including: metric learning, image generation, reinforcement learning and graph processing. This is intended as an advanced course, thus proficiency in neural networks, convolutional neural networks and basic notions of optimization are assumed as prerequisite to the participants.

From 1st to 17th February 2022



DISTRIBUTED ALGORITHMS FOR OPTIMIZATION AND CONTROL OVER NETWORKS

Prof. Maria Prandini

Motivated by the challenges arising in modern energy and transportation systems, the course will introduce the students to a mathematical framework for the analysis and design of distributed decision making schemes in multiagent systems seeking convergence to the optimal cooperative solution. The case when uncertainty is affecting the multi-agent system will also be addressed. As a learning outcome goal, students attending the course will be able to analyze and design distributed decision making solutions to cooperative multi-agent problems, while familiarizing with multi-agent applications of contemporary interest.

From 14th to 18th February 2022



INTRODUCTION TO QUANTUM COMPUTING

Prof. Gerardo Pelosi

Provide a basic understanding of the principles of quantum computing. Provide the notions required to understand if solving a problem may profit from quantum computing. Enable a hands-on experience on existing quantum computer simulators, to allow further experimentation by the candidate.

From 22nd February to 16th March 2022



ORGANIC ELECTRONICS: PRINCIPLES, DEVICES AND APPLICATIONS

Prof. Dario Andrea Nicola Natali

Organic semiconductors are both a subject of advanced research worldwide and have already shown to offer interesting opportunities in the realization of new products of high innovative content. The interest in organic semiconductors stems not only from their intriguing optoelectronic properties but also from their chemical and physical peculiarities, resulting in a stimulating environment for applications that can be hardly addressed by means of inorganic semiconductors. The course aims at providing the scientific and technological background of this emerging field, and will give to the participants a critical assessment of the development so far and of future opportunities.

From 7th to 11th February 2022



REINFORCEMENT LEARNING

Prof. Marcello Restelli

Reinforcement Learning (RL) is a Machine Learning paradigm that addresses sequential decision-making problems in which intelligent agents interact with an environment to optimize a utility signal. In the last decade, RL has become a pervasive approach to deal with complex control tasks and has achieved significant results in several fields, including robotics manipulation, finance, self-driving cars, industrial plant automation, and news recommendation. This course aims to provide the students with a self-contained overview of: i) the fundamental theoretical aspects of RL; ii) the essential algorithms (classical and modern ones) of the RL literature; iii) some applications to real-world scenarios

From 7th to 18th February 2022





PHD IN MATHEMATICAL MODELS AND METHODS IN ENGINEERING

DISCRETE AND GEOMETRIC TOMOGRAPHY

Prof. Paolo Dulio

Moving from Computerized Axial Tomography, the Course then focuses on discrete aspects of the reconstruction process, and considers several related algebraic and geometric problems.

On March 2022, also according to possible needs of the attending students

