

## ADMISSIONS AND REQUIREMENTS

Applicants must have a Bachelor of Science degree or an equivalent first-cycle degree awarded by a foreign university. Enrolment onto the Master's programme is limited (26 places) and requires an admission exam. The selection of candidates is divided into two groupings:

- Up to 10 places for non-EU applicants who do not reside in Italy;
- Up to 10 places for EU applicants and non-EU applicants residing in Italy.

Up to 6 positions are reserved for students of the Scuola Normale Superiore (SNS).

An adequate understanding of English is also necessary (level B1 or equivalent).

An Internal Evaluation Committee will select applicants based on their application and a teleconference interview.

Successful candidates must follow the University of Pisa's standard enrolment procedure. More details at:

[www.unipi.it/eu-student-enrolment](http://www.unipi.it/eu-student-enrolment)

[www.unipi.it/noneu-student-enrolment](http://www.unipi.it/noneu-student-enrolment)

## DEADLINES AND FEES

Non-EU applicants should apply online following the instructions at <http://ce.iet.unipi.it/index.php/en/admission-mce/application> Application instructions and fees for EU applicants are available at <http://matricolandosi.unipi.it/en> Fees depend on the student's country of origin and vary from € 407 to € 2,354. Information on fee waivers, extraordinary contribution and scholarships can be found at [www.unipi.it/tuition-fees](http://www.unipi.it/tuition-fees)

### Website

<http://matnano.ing.unipi.it/>

### Study Programme

#### Director

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ITALY



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## UNIVERSITÀ DI PISA

The University of Pisa (UNIPi) is a public institution composed of twenty departments, with high level research centres in the fields of agriculture, astrophysics, computer science, engineering, medicine and veterinary medicine.

Established in 1343, UNIPi is one of the most prestigious Italian higher education institutions and a modern centre for teaching and advanced research. One of the University's main strategies is that of internationalisation as it aims to engage with students and researchers and establish long-term partnerships with universities and public and private institutions from all over the world. With a current student population surpassing 54,000, UNIPi offers a large number of degree programmes held in English and a variety of exchange programmes.



Scuola Normale Superiore (SNS)

## Study Materials and Nanotechnology in Pisa

*The graduate programme in Materials and Nanotechnology features a unique interdepartmental programme including lecturers from the Civil and Industrial Engineering, Information Engineering, Physics and Chemistry and Industrial Chemistry departments of the University of Pisa. As a result, the programme is open to graduates from different branches of industrial engineering, computer engineering, physics and chemistry. The collaboration with lecturers from the Scuola Normale Superiore (SNS) and from the NEST Laboratory of the SNS also distinguishes the programme on a national level. NEST, the National Enterprise for Nanoscience and Nanotechnology, is a centre for research and interdisciplinary training concerning the nanoscale, which is used to develop new nano-biotechnological systems, devices and nano-electronic and photonic architectures. NEST comprises four different institutions: the Scuola Normale Superiore, the Italian Institute of Technology, the National Research Council and the Scuola Superiore Sant'Anna and is considered a laboratory of excellence internationally. Classes taught by SNS lecturers take place at the Scuola Normale Superiore.*

## COME AND THRIVE

- Experience a rich scientific environment
- Enjoy a positive work setting
- Establish a network of professional contacts

## PROGRAMME OVERVIEW

FIRST YEAR

Biomaterials  
Characterization of Nanoengineered Systems  
Chemistry of Soft Matter  
Computational Material Science  
Electromagnetic Materials and Electron Devices  
Interaction of Electromagnetic Waves with Complex Media  
Materials and Devices for Nanoscale Electronics  
Mechanical Behaviour of Materials  
Nanostructured Materials  
Quantum and Condensed Matter Physics  
Quantum Optics Lab  
Solid State Physicochemical Methods  
Spectroscopy of Nanomaterials

ECTS  
TOTAL 60

SECOND YEAR

**(Curriculum: Nanoscience and Nanotechnology)**  
Polymer Science and Engineering  
Photonics  
Biophysics  
Many Body Physics  
Quantum Theory of Solids  
Computational Nanoelectronics and Metamaterials  
**(Curriculum: Advanced Materials)**  
Polymer Science and Engineering  
Polymeric Materials for Special Applications  
Rheology  
Disordered and off-Equilibrium Systems  
Composite Materials Science and Engineering  
Principles of Microfluidics  
Sustainable and Degradable Polymers  
Processing and Recycling of Polymers

ECTS  
TOTAL 60

12 CFUs to be chosen by the student

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TOTAL 60

12 CFUs to be chosen by the student

The first year will focus on building and standardising a common knowledge about materials amongst the physicists, chemists and engineers admitted onto the course. The second year entails a specialised course divided into two topics, "Nanoscience and Nanotechnology" and "Advanced Materials". The programme is structured as follows:

## PROFESSIONAL PROSPECTS

The main career opportunities for graduates in Materials and Nanotechnology are: innovation and development of production, advanced design, planning and scheduling, management of complex systems and the qualification and diagnosis of materials. Graduates in Materials and Nanotechnology will be able to find employment with companies for development and production, processing of metallics, polymers, ceramics, glassy and composite materials for application in the chemical, mechanical, electrical, electronic, telecommunications, energy, construction, transport, biomedical and environmental sectors as well as the conservation of Cultural Heritage.