

APPLICATIONS AND REQUIREMENTS

International candidates must have a Bachelor's degree or an equivalent Diploma.

Adequate knowledge of English is mandatory (level B2 or equivalent).

Candidates must apply online at applymscenglish.unipi.it.

Successful applicants must follow the University of Pisa's standard enrolment procedure.

More details at: www.unipi.it/enrolment.

Website

matnano.ing.unipi.it/en/

Study Programme

Director

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General Information

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Join us
STUDY IN
ITALY



ENROLMENT AND FEES

Enrolment instructions are available at matricolandosi.unipi.it/en.

Fees depend on the student's country of origin and vary from € 356 euros to € 2,452 for each academic year.

Information on fee waivers, extraordinary contribution and scholarships can be found at www.unipi.it/tuition-fees.



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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

(Curriculum: Nanoscience and Nanotechnology)

Polymer Science and Engineering
Photonics
Biophysics
Many Body Physics
Quantum Theory of Solids
Computational Nanoelectronics and Metamaterials

(Curriculum: Advanced Materials)

SECOND YEAR

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

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12 CFUs to be chosen by the student

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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.