

# UNIVERSITÀ DI PISA

EDUCATION AND RESEARCH

*Natural Sciences*

*Health Sciences*

*Humanities*

*Social Sciences*

*Engineering*

*Applied Sciences*



UNIVERSITÀ DI PISA



[www.unipi.it](http://www.unipi.it)

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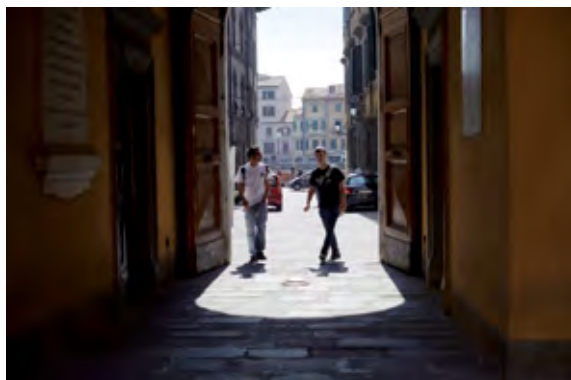
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UNIVERSITÀ DI PISA



### Engineering

Department of Civil and Industrial Engineering  
<http://www.dici.unipi.it>

*Contacts: international.dici@ing.unipi.it*

Department of Energy, System, Territory and  
Construction Engineering

<http://www.ing.unipi.it/destec>

Department of Information Engineering

*Contacts: international@ing.unipi.it*

### Mathematical, Physical and Natural Sciences

Department of Mathematics

<http://www.dm.unipi.it>

*Contacts: international@dm.unipi.it*

Department of Physics

<http://www.df.unipi.it>

*Contacts: international@df.unipi.it*

Department of Computer Science

<http://www.di.unipi.it>

*Contacts: international@di.unipi.it*

Department of Chemistry and Industrial Chemistry

<http://www.dcci.unipi.it>

*Contacts: perla@dcci.unipi.it*

Department of Biology

<http://www.biologia.unipi.it>

*Contacts: adelcorso@biologia.unipi.it*

Department of Geosciences

<http://www.dst.unipi.it>

*Contacts: international@dst.unipi.it*

### Health Sciences

Department of Clinical and Experimental Medicine

Department of Surgery, Medical, Molecular, and  
Critical Area Pathology

Department of Translational Research on New  
Technologies in Medicine and Surgery

Department of Pharmacy

### Humanities

Department of Civilisations and Forms of Knowledge

*Contacts: isaacs@stm.unipi.it*

Department of Philology, Literature and Linguistics

*Contacts: erasmusling@humnet.unipi.it*

### Social Sciences

Department of Economics and Management

*Contacts: international@ec.unipi.it*

Department of Law

*Contacts: international@jus.unipi.it*

Department of Political Sciences

*Contacts: international@sp.unipi.it*

### Agricultural and Veterinary Sciences

Department of Sciences of Agriculture, Food and the  
Agricultural Environment

*Contacts: presidenza@agr.unipi.it*

Department of Veterinary Sciences

*Contacts: erasmus@vet.unipi.it*





*Dear International Students and Researchers,*

*The University of Pisa is one of the oldest in the world and it has been extraordinarily successful in updating its structures and human resources in order to meet the new challenges of international research and education at the highest level.*

*It has an excellent international reputation in all areas – not only in natural sciences and mathematics, but also for example in humanities, social sciences, medicine, engineering, agricultural and other applied sciences. It leads important international research and education networks, and incorporates their findings into its programmes. The University of Pisa is committed to promoting quality in all areas of research and teaching, and to making all its programmes available to an increasing number of international students and researchers.*

*The city of Pisa, where our University has always had its roots, offers students and researchers an ideal environment for living, studying and working: Pisa has a pleasant climate, excellent food and world famous cultural and leisure attractions. Both the sea and the mountains are close by, as are the cities, museums, monuments and the beautiful countryside for which Tuscany is rightly celebrated.*

*With its large and intellectually stimulating scholarly community, Pisa is an attractive environment for researchers in all fields.*

*I hope to see you soon in Pisa!*

*Kind regards*

*The Rector of the University of Pisa  
Professor Massimo M. Augello*





## PROFILE OF THE UNIVERSITY OF PISA

The University of Pisa was officially established in 1343, when it was proclaimed a 'Studium Generale' with the authority to prepare university teachers, although its origins date back to earlier centuries.

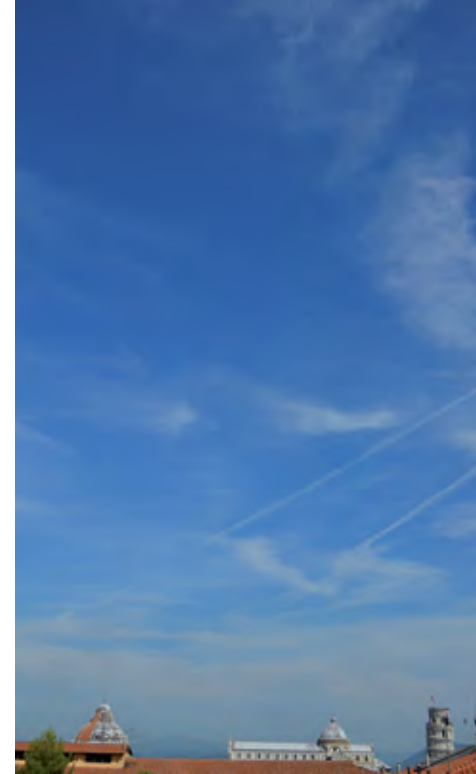
Among its glories is Galileo Galilei, who was born and studied in Pisa, and became professor of Mathematics in 1589. The University also counts several Nobel Prize winners among its alumni, including Giosuè Carducci (Literature), Enrico Fermi (Physics) and Carlo Rubbia (Physics), and a Fields medalist, Enrico Bombieri (Mathematics).

Today the University of Pisa is a prestigious modern centre of teaching and advanced research. It offers 60 undergraduate and 74 postgraduate degree programmes, in all the main areas of knowledge and advanced professional education. The University has 28 doctoral programmes; it also offers 68 third cycle specialisation programmes and 88 special short specialisation programmes of further education at the first and second cycle levels, including an MBA. Research and teaching are combined in all fields and levels.

Overall, the University of Pisa (2011-2012) has about 52000 first and second cycle students, 786 doctoral students and 1100 students enrolled in its more than 50 residency programmes in the medical and health area, or in specialisation courses in other disciplines. The research and teaching staff comprises 1552 permanently employed, and 1338 temporarily employed, persons; the technical and administrative staff numbers 1467.

According to the most recent Shanghai Ranking ARWU 2013, the University of Pisa ranks first among Italian Universities and among the top 150 universities in the world. Its departments of Mathematics and Physics are among the top 100 worldwide. According to QS, Pisa is a "four star" university, with five stars in research, innovation and access.

The 2013 QS ranking of world universities ranks the University of Pisa in the world's elite (top 200) institutions in 13 of the 30 featured subjects. The area of Physics ranks at the 42nd place in the world, Computer Science, History and Archaeology, Mathematics and Modern Languages rank among the top 100-150, and Chemistry, Medicine, Pharmacy, Electrical, Electronic, and Mechanical Engineering, Law



and Statistical and Operational Research among the top 150-200. The 2012 Performance Ranking of Scientific Papers for World Universities (National Taiwan University) ranks Physics at the 96th place, Electrical Engineering at the 100th, Mechanical Engineering at the 104th, and Computer Science at the 127th place.

Almost all departments of the University of Pisa are located in the core of the city, either in prestigious buildings of the old city, or in an ever-growing number of modern structures, some of which are located in the centre and some at its outskirts. Most facilities are within 20 minutes walking distance from the centre of the city.



## ADMISSION TO THE UNIVERSITY OF PISA

International students are warmly welcome to the University of Pisa. Admission to all first and second cycle (undergraduate and postgraduate) degree programmes is generally guaranteed to all those who hold the necessary qualifications (an Upper Secondary School certificate for the former, an appropriate undergraduate qualification for the latter). Only certain long single-cycle programmes, in such fields as Medicine, Dentistry and Veterinary Medicine, and a limited number of first and second cycle degree programmes, have limits on the number of places. To access these programmes one must sit an entry test in early September (see <http://matricolandosi.unipi.it/index.php?page=default&id=3&lang=it>). All degree programmes foresee an entry test to ascertain whether the applicant possesses the necessary minimum competences for access.

Admission to PhD programmes is limited. A public examination regulates the selection of candidates.

Admission of non-EU students to degree programmes taught in Italian is conditional on their passing a language test or presenting a CILS certificate of Italian language proficiency (level B2).

Admission to degree programmes taught in English is conditional on presenting a certificate of English language proficiency (level B2).

**Tuition fees:** the full rate is approximately € 2,200.00 per year. In order to grant equal opportunities to all students, tuition fees may be reduced or waived according to income and country of origin (see [www.unipi.it/index.php/students/itemlist/category/308-requirements-and-admission](http://www.unipi.it/index.php/students/itemlist/category/308-requirements-and-admission)). In some cases, even for those who pay fees, scholarships granted by the DSU (the Regional “Right to Study” Programme) cover the entire amount. Other scholarships are granted by the governments of other countries in agreement with the Italian government.

**For further information see:**

<http://www.unipi.it/index.php/english>

<http://www.unipi.it/index.php/welcome-and-support/itemlist/category/305-international-office>

**Or contact:**

[international@unipi.it](mailto:international@unipi.it)

**For students with disabilities:**

<http://www.unipi.it/index.php/students/item/2312-special-needs>

**Erasmus Code:** I-PISA01





## STUDENT SERVICES

Intensive Italian language courses for international students are offered in September and October each year by the **CLI (Centro Linguistico Interdipartimentale/Interdepartmental Language Centre)**. The CLI also offers regular Italian courses during the year for different proficiency levels. For further information and to register: <http://www.cli.unipi.it>

Most student services are provided by the Tuscan Region's **DSU**. The DSU offers a large number of scholarships and grants an accommodation in university dormitories. Priority is given to low-income students. The DSU also offers all students an excellent food service at very favorable prices in the three university canteens located downtown, as well as other guidance and consultation services. For further information see <http://www.dsu.toscana.it> or write to [info@dsu.toscana.it](mailto:info@dsu.toscana.it).

A wide range of sport facilities and services are provided by **Centro Universitario Sportivo (CUS)**, a member of CONI (the Italian Olympic Committee). The CUS takes part in national and international university championships in every sport.

**For further information see:**

<http://www.unipi.it/index.php/students/item/2314-sports-and-leisure>

CUS Pisa

via Napoli, 49

56123 Pisa (PI)

**Homepage:** <http://www.cuspisa.it>

**Info:** [segreteria@cuspisa.it](mailto:segreteria@cuspisa.it)

## ABOUT PISA

Pisa is world famous for its Leaning Tower and Cathedral (inscribed on the UNESCO World Heritage List) and its many other medieval and Renaissance monuments. It is located in Tuscany, in the central part of the Italian peninsula, on a plain near the coast of the Mediterranean Sea close to the mouth of the river Arno. Its multicultural population totals about 100,000 people, in addition to the many thousands of students who enliven the city. The university buildings are located in the city itself, some in monumental historical buildings and others in new







modern constructions.

Together the University and the city form a single complex, a “campus in a city”, just as they have for many centuries.

In addition to the University the city hosts two prestigious Superior Schools: the Scuola Normale Superiore and the Scuola Superiore Sant’Anna di Studi Universitari e di Perfezionamento. The latter are centres for advanced studies and research in various disciplines: on the basis of a yearly national competition, they admit the best graduates of the Italian Upper Schools, who study at the University, and have special seminars and activities in the Schools.

Pisa is an ideal place for students to live and meet in the city centre’s streets and piazzas, with their bars and pubs, as well as in the classroom.

Both the beaches and the mountains are close and easily

accessible, as are other famous Tuscan cities, such as Lucca, Florence, Volterra and Siena.

The climate in Pisa is generally mild. The city enjoys cool summers and mild winters. There is some rain in autumn and winter although it rarely snows; the summers are dry and make for pleasant excursions to the sea.

Rates of criminality are very low. Overall Pisa is a very friendly and safe city, well attuned to students’ and researchers’ needs.

**Rent rates:** Most students find lodgings in shared private flats in the city centre. Rates vary from about 250.00€ per month for a place in a double room to € 350.00 or more per month for a single room.



## HOW TO REACH PISA

**By Plane:** Pisa International Airport “Galileo Galilei” offers a large and ever-growing number of flight connections with Europe, America and Asia. It is the preferred hub in Tuscany for Low Cost companies as well as for major airlines. The airport is very close to the city centre, and can be reached very quickly by bus, train, car or bicycle. For further information see <http://www.pisa-airport.com>.

**By Train:** Pisa Central railway station offers frequent connections with Florence, Lucca, Viareggio and other Tuscan destinations as well as with major Italian and European cities. The trip by rail to Rome takes 3 hours. For further information see <http://www.fsitaliane.it/>.

**By Bus:** There are regional bus services with connections to Florence, Lucca, Prato, Pistoia, Massa Carrara, Volterra, Livorno, Viareggio and other destinations. For further information see: <http://www.vaibus.it>, <http://wwwwww.cpt.it>.

**By Car:** Pisa is served by two large motorways (“Autostrade”): A12 (Genoa - Rosignano), and A11 Pisa-Florence). There are state highways such as SS67 to Florence and SS1 (the Roman “via Aurelia”) which connects Pisa to Rome in the south and La Spezia to the north, and a “super road” from Livorno-Pisa-Florence.

**Transportation in the city:** The urban bus service is operated by the CPT (Pisa Transport Consortium, <http://www.cpt.pisa.it>). By far the most popular means of transportation among students, given the convenient size of the city, is by foot or by bicycle.





## DEGREE PROGRAMMES OFFERED:

### FIRST CYCLE PROGRAMMES (UNDERGRADUATE STUDIES)

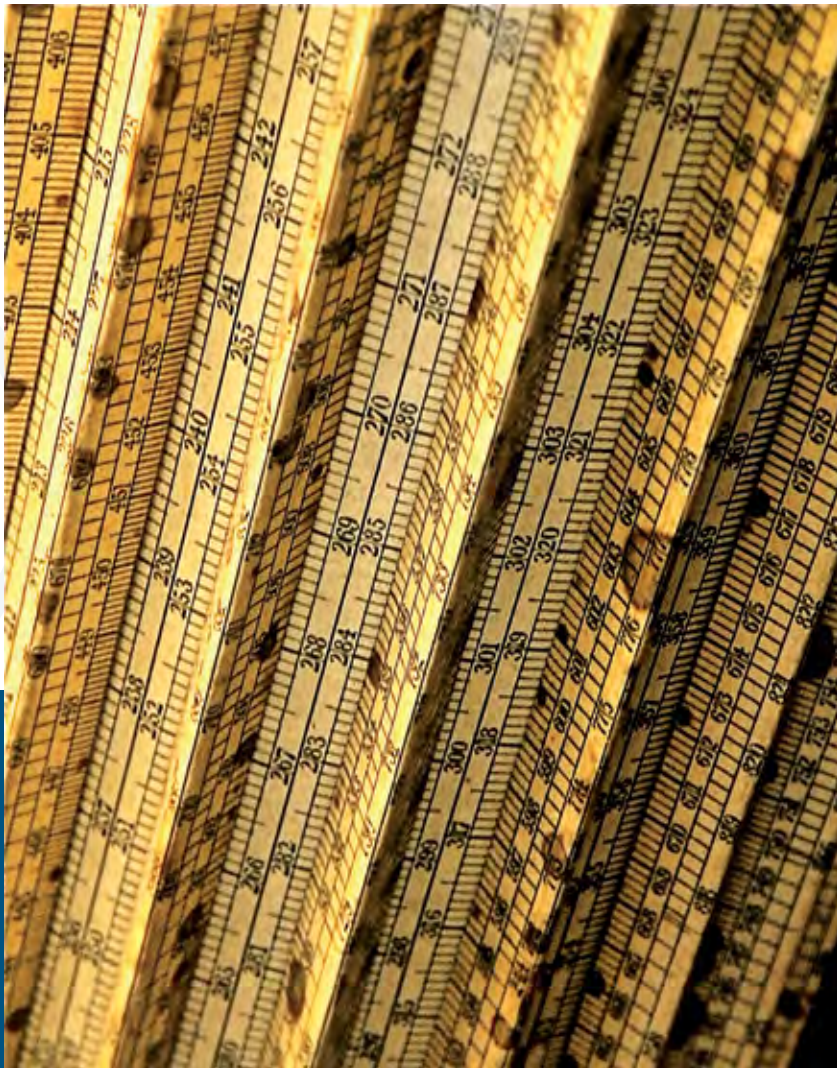
(3 years, 180 ECTS credits)

- Mathematics
- Physics (*some courses in English*)
- Computer Science
- Digital Humanities (with Humanities)
- Chemistry
- Industrial and Environmental Chemistry
- Biological Sciences
- Biotechnology
- Natural and Environmental Sciences
- Geosciences
- Sciences of Peace, International Cooperation and Conflict Transformation (with other areas)

### SECOND CYCLE PROGRAMMES (POSTGRADUATE STUDIES)

(2 years, 120 ECTS credits)

- Mathematics (*some courses in English*)
- Physics (*some courses in English*)
- Applied and Exploration Geophysics
- Computer Science (*in English*)
- Computer Science and Networking (*in English* - with Engineering and Scuola Superiore Sant'Anna)
- Business Informatics (*in English* - with Economics)
- Digital Humanities (with Humanities)
- Chemistry
- Industrial Chemistry



- Marine Biology
- Biology Applied to Biomedicine
- Molecular and Cellular Biology
- Molecular and Industrial Biotechnology
- Biodiversity Conservation and Evolution
- Geosciences and Geotechnologies
- Environmental Sciences
- Sciences of Peace, International Cooperation and Conflict Transformation (with other areas)

#### SPECIAL PROGRAMMES

In the academic year 2012-2013, 18 ECTS will be shared between the Pisa Master program in mathematics and the ACSYON Master program in mathematics of the University of Limoges.

#### THIRD CYCLE PROGRAMMES (DOCTORAL SCHOOLS)

- Mathematics (*some courses in English*)
- Physics (*some courses in English*)
- Computer Science (*in English*)
- Chemical Sciences and Sciences of material
- Geosciences (with University of Florence)
- Biology
- Biochemistry and Molecular Biology (with University of Siena)

#### JOINT DOCTORAL SCHOOL IN COMPUTER SCIENCE WITH UNU-IIST IN MACAO

#### ERASMUS MUNDUS JOINT DOCTORATE – EMJD IN THEORETICAL CHEMISTRY AND COMPUTATIONAL MODELLING

## SPECIAL AND SHORT TERM PROGRAMMES

### 5 ADVANCED PROFESSIONAL EDUCATION COURSES (1 YEAR, 60 ECTS CREDITS)

#### WORKING WITH THE BUSINESS WORLD

Cooperation with major firms like Yahoo and Google results in funding fellowships for our PhD students. A large number of firms, SME, local and regional authorities, hospitals and health institutions, non-academic research centres have cooperation contracts to offer training opportunity to our undergraduate students.



## RESOURCES AND SERVICES FOR STUDENTS AND RESEARCHERS

- Physics, Mathematics and Informatics open-shelf library (47000 books, 210 periodicals)
- Chemistry open access library (9000 volumes, magazines and electronic journals)
- Natural and Environmental Sciences open access library (40.000 volumes, magazines and electronic journals)
- Maths computer room (26 workstations equipped with maple, matlab, scilab, octave)

- Informatics computer centre, including fully equipped computer labs for teaching
- Chemistry computer room
- Natural Sciences computer room
- Full wi-fi coverage
- Print and photocopy self service facility
- International relations offices in each department

## AREAS OF EXCELLENCE IN RESEARCH

For Natural Sciences and Mathematics, the University of Pisa is among the top 100 institutions in the world according to the 2011 ARWU.

For Mathematics, the University of Pisa is among the top 50 universities in the world according to the 2011 ARWU, and has the highest score among Italian universities.

In 2010 there were 100 mathematics talks at the University of Pisa, plus a large number of mathematics talks at the Scuola Normale Superiore and at the "De Giorgi" Center. Mathematics research in Pisa is focused on the following areas:

- Algebra
- Real and complex Analysis
- Numerical Analysis
- Mathematics Education
- Algebraic, complex and differential Geometry and Topology
- Mathematical Logic
- Mathematical Physics
- Probability and Statistics
- Operations Research
- Dynamical Systems

The University of Pisa is, together with the Scuola Normale Superiore and the Scuola Superiore Sant'Anna, a founding partner of the Centro di Ricerca Matematica Ennio De Giorgi (Mathematical Research Centre Ennio de Giorgi), which is part of ERCOM (European Research Centres in Mathematics) and has established agreements for academic collaboration with several prestigious institutions.

For Physics, the University of Pisa is ranked 42 in the world (first in Italy), according to the 2013 QS World University Ranking; Enrico Fermi and Carlo Rubbia, Nobel Prize winners, have been physics

students in Pisa. Research in Physics is done in very close collaboration with the local branches of the National Institute for Nuclear Physics (INFN) and National Research Council (CNR). The only three Italians to win the high energy Panofsky award work in Pisa.

Research is carried out in all of the major fields of Physics:

- Theories of the fundamental interactions
- Quantum field theory
- Theoretical nuclear physics
- Astronomy and Astrophysics
- Condensed matter
- Atoms, molecules and photons
- Plasma physics
- Particle physics at accelerators and colliders
- Experimental Astroparticle physics and gravitational waves
- Medical and Applied Physics

Pisa hosts VIRGO, the large gravitational wave interferometer involving scientists from all Europe, and it is a GRID node. Researchers from Pisa work in all of the most important high energy laboratories around the world: CERN, SLAC, Fermilab to name a few.

For Computer Science, research is carried out in cooperation with leading European and international networks in many actually relevant fields:

- Algorithm Engineering
- Analysis and Synthesis of Numerical Algorithms
- Architectures and Tools for High Performance Computing
- Computational Biology
- Data and Knowledge Engineering
- Human Language Technology
- Machine Learning, Computational Intelligence



- Models and algorithms for network problems and logistics
- Software Engineering
- Specification, Verification and Security of Parallel, Distributed and Mobile Systems
- Web Computing, Semi structured Data Management Systems

Chemical studies at the University of Pisa promote extensive academic and applied research with numerous partnerships within national and EU projects. Research activities cover most of the traditional as well as advanced areas of chemistry and material science. This area has an exceptional tradition of research. Amongst the many sectors in which it excels, there are the following:

- Analytical Chemistry
- Physical Chemistry
- Industrial Chemistry
- Inorganic Chemistry
- Organic Chemistry

For Biology, academic and applied research is carried out with numerous partnerships within national, European and other international projects. Research focuses on the following topics:

- Anthropology
- Cell Biology
- Biochemistry
- Botany
- Ecology
- Ethology
- General Physiology
- Plant Physiology
- Genetics
- Protistology-Zoology

## WEBSITES

Mathematics: <http://www.dm.unipi.it/>  
 Applied Mathematics: <http://www.dma.unipi.it/>  
 De Giorgi Centre: <http://www.crm.sns.it/>  
 Physics: <http://www.df.unipi.it/>  
 Computer Science: <http://www.di.unipi.it/>  
 Chemistry: <http://www.dcci.unipi.it/>  
 Biology: <http://www.bionat.unipi.it/ScienzeBiologiche.htm>  
 Earth Sciences: <http://www.dst.unipi.it/>

Earth Science research involves both fundamental and applied fields, supporting the challenges for a sustainable development of humankind on planet Earth. The key research topics are:

- Plate tectonics: ocean opening, mountain building and destruction
- Water: accountable management of the life basis
- Geomaterials: rocks, minerals and metals for everyday life
- Energy: search for fossil fuels and renewable geothermal energy
- Global change: paleoclimate and paleoenvironmental perspective
- Land and soil management: sustainable use based on thematic mapping
- Natural hazards: earthquakes, volcanic eruptions, landslides, floodings
- Geologic deep time: fossils and the evolution of life
- Planetary geology: meteorites, impacts, planets surface morphology



## INTERNATIONAL NETWORKS

- More than 50 international research networks funded by the European Union and other institutions
- LLP/Erasmus Study and Placement Programme
- LLP Programme “Dynamical and creative Mathematics using ICT” 2010-2012
- Erasmus Mundus joint doctorate PCUBE (Physics)
- 2 international cooperation agreements for the exchange of students and researchers

## CONTACTS:

Mathematics: [international@dm.unipi.it](mailto:international@dm.unipi.it)  
 Physics: [international@df.unipi.it](mailto:international@df.unipi.it)  
 Computer Science: [international@di.unipi.it](mailto:international@di.unipi.it)  
 Chemistry: [perla@dcci.unipi.it](mailto:perla@dcci.unipi.it)  
 Biology: [adelcorso@biologia.unipi.it](mailto:adelcorso@biologia.unipi.it)  
 Earth Sciences: [international@dst.unipi.it](mailto:international@dst.unipi.it)





## DEGREE PROGRAMMES OFFERED:

### LONG CYCLE DEGREE PROGRAMMES

- Medicine (6 years, 360 ECTS credits)
- Dental medicine (6 years, 360 ECTS credits)
- Pharmacy (5 years, 300 ECTS credits)
- Chemistry and Pharmaceutical Technologies (5 years, 300 ECTS)

### FIRST CYCLE PROGRAMMES (UNDERGRADUATE STUDIES) (3 YEARS, 180 ECTS CREDITS)

#### Medicine:

- Dental Hygiene
- Dietetics
- Logopedics
- Motor Sciences
- Nursing
- Obstetrics
- Physiotherapy
- Podology
- Science and Technique of Clinical and Health Psychology
- Techniques of Audiology
- Techniques of Biomedical Laboratory
- Techniques of Prevention in the Environment and Workplace
- Techniques of Psychiatric Rehabilitation
- Techniques of Medical Radiology, Images and Radiotherapy
- Developmental Neuro and Psychomotor Therapy



### **Pharmacy:**

- Herbal Sciences (with Agriculture)

### **Medicine and Pharmacy jointly:**

- Scientific Information on Drugs

### **SECOND CYCLE PROGRAMMES (POSTGRADUATE STUDIES) (2 YEARS, 120 ECTS CREDITS)**

#### **Medicine:**

- Clinical and Health Psychology
- Nursing and Obstetrics
- Sciences of Health Professional Diagnostic Techniques
- Sciences of Health Professional Medical Care Techniques
- Sciences of Health Professional Prevention
- Sciences of Health Professional Rehabilitation
- Sciences and Techniques of Preventive and Adapted Physical Activities

### **THIRD CYCLE PROGRAMMES (DOCTORAL PROGRAMMES)**

- Clinical and Translational Sciences
- Clinical Physiopathology
- Sciences of Drugs and of Bioactive Substances
- Neurosciences (with University of Florence)
- Molecular Medicine (with University of Siena)

### **SPECIALISATION, SPECIAL AND SHORT TERM PROGRAMMES**

**48 Residency Programmes in Medicine and Pharmacy, some of which in cooperation with other universities**

**56 Advanced professional education courses (1 year, 60 ECTS credits)**



### **RESOURCES AND SERVICES FOR STUDENTS AND RESEARCHERS**

Library of Medicine and Surgery (54000 books, 2952 periodicals)

12 Department Libraries

Medical School Computer Centre

C.I.S.I.F. (Interdepartmental Centre of Computer Sciences for Drugs Design and Learning)

Pharmacy Computer Centre (19 workstations).

Department of Human Morphology and Applied Biology Computer Room (18 workstations)  
Museum of Human Anatomy "Filippo Civinini"

## AREAS OF EXCELLENCE IN RESEARCH

### Medicine:

- Study of innovative approaches in computer-aided surgery.
- Study of innovative methodologies in organ transplantation.
- Study of a novel integrated system to measure autonomic functions.
- Analysis of novel markers and therapies in oncology and hematology.
- Up to date imaging techniques translated into medical and surgical practice.
- Innovative techniques and achievements in paleopathology.
- Basic and translational neuroscience related to novel drug treatment and surgical procedures in neuropsychiatric disorders.
- Functional neuroimaging in developmental and adult psychobiology.
- Translational studies on microorganisms related to novel antimicrobial agents.
- Basic and translational studies of the endocrine system related to novel markers and therapeutic outcomes in endocrine and metabolic disorders.
- Translational Research on the cardiovascular system related to novel therapeutic approaches in cardiovascular disorders.
- Translational Research in Human Genetics.
- Set up of an integrated environment for rehearsal and planning of surgical interventions.

### Pharmacy:

- Innovative synthetic methodologies to obtain bioactive compounds.
- Innovative methodologies for the release and bioavailability of bioactive compounds.
- Isolation and study of natural compounds endowed with potential biological activities.
- Computational methodologies for the design and development of bioactive compounds.
- Evaluation and study of the mechanism of interaction between biological systems and new compounds.
- Design and synthesis of compounds possessing therapeutic activity.
- Evaluation of the activity and toxicity of novel compounds in cellular and animal models.





## INTERNATIONAL NETWORKS

- LLP/Erasmus Study and Placement Programme



### WEBSITE:

Medicine: <http://www.med.unipi.it/>  
Pharmacy: <http://www.farm.unipi.it/>

### CONTACTS :

Medicine: [international@med.unipi.it](mailto:international@med.unipi.it)  
Pharmacy: [bernacchi@farm.unipi.it](mailto:bernacchi@farm.unipi.it)

## DEGREE PROGRAMMES OFFERED:

### FIRST CYCLE PROGRAMMES (UNDERGRADUATE STUDIES)

(3 years, 180 ECTS credits)

- Foreign Languages and Literatures
- Digital Humanities (with Computer Science)
- Classical Studies and Italian Literature
- History
- Philosophy
- Sciences of Communications and the Performing Arts
- Peace Studies, International Cooperation and Conflict Transformation (with other areas)
- Sciences of the Cultural Patrimony
- Sciences of Tourism (Lucca Campus)
- Telematic Bachelor's Degree in Italian Language and Culture (for residents abroad only), promoted by the ICoN Consortium of twenty Italian Universities, managed by the University of Pisa

### SECOND CYCLE PROGRAMMES (POSTGRADUATE STUDIES)

(2 years, 120 ECTS credits):

- Ancient History and Philology
- Archaeology
- European Literatures and Philologies
- History and Civilizations
- History and Forms of the Visual and Performing Arts, and of New Media)
- Digital Humanities (with Computer Science)
- Italian Language and Literature



- Linguistics
- Literary and specialized translation
- Mediterranean Tourist Systems: Planning and Management (Lucca Campus, with other areas)
- Modern Euro-American Languages and Literatures
- Oriental Studies: Egypt, Near and Middle East
- Philosophy and Forms of Knowledge
- Peace Studies: International Cooperation and Conflict Transformation (with other areas)

### THIRD CYCLE PROGRAMMES (DOCTORAL PROGRAMMES)

- History and Oriental Studies
- Classical Studies and Archaeology
- Philosophical Disciplines and History of Science (with University of Florence)
- Philology, Literature and Linguistics

## SPECIAL AND SHORT TERM PROGRAMMES

### 9 ADVANCED PROFESSIONAL EDUCATION COURSES (1 YEAR, 60 ECTS CREDITS)

#### WORKING WITH NON-ACADEMIC WORLD

The Humanistic area has particular links with local and regional authorities (for example in the continuing professional course on Political Communication), with publishing houses, museums and archives.

## RESOURCES AND SERVICES FOR STUDENTS AND RESEARCHERS

- Interdepartmental Language Centre (CLI) (courses in Italian for foreign students, courses in foreign languages)
- Humanistic Computing Laboratory
- The Area cooperates with the Interdepartmental Centres for Jewish Studies and for Sciences of Peace.
- A very large number of specialised department libraries (585.500 volumes, 7091 periodicals)



## AREAS OF EXCELLENCE IN RESEARCH

The Humanistic Area of the University of Pisa has an exceptional tradition of research, in some cases going back many centuries.

Amongst the many sectors in which it excels are studies on the Ancient World: Ancient History, Archaeology, Philology not only of Greater Greece and the Roman Provinces, but also of Egypt (Pisa was the first European university to have a course in Egyptology), and the Near and Middle East, including Hellenistic and Roman Cilicia and Asia Minor. The university conducts archaeological excavations in Italy, Egypt and Oman.

There is particular emphasis on Classical and Ancient Oriental studies, including not only Latin and Greek, but Hebrew, Syriac, Sanscrit and pre-Islamic Arabic – as well as ancient Celtic and Armenian. Other significant sectors are Underwater Archaeology, Funerary Archaeology and Palaeopathology, as well as Industrial Archaeology.

The Linguistic area, in addition to research on the more widely-spoken foreign languages and literatures, has particular areas of excellence in Baltic Studies; Slavic Language and literature, Danish and Romanian Literature.

All main areas of History, Art History and Philosophy are cultivated; Medieval, Modern and Contemporary

History include studies on Medieval and Renaissance Europe (including Pisa and Tuscany in a broad perspective), research on the Spanish Empire, the development of early modern and modern political systems, the development of Italian and European Nationalism, History of Culture and Gender. studies on Medieval Arabic Philosophy and on Nietzsche are of special interest, as are Computational Linguistics (with the Antonio Zampolli Centre of the Italian National Research Council).





## INTERNATIONAL NETWORKS

- 7 research and education programmes funded by the European Union
- LLP/Erasmus Study and Placement Programme



### WEBSITES:

Humanities: Letters and Philosophy: <http://lettere.humnet.unipi.it>

Modern Foreign Languages and Literatures: <http://lingue.humnet.unipi.it>

### CONTACTS:

Humanities: Letters and Philosophy: [isaacs@stm.unipi.it](mailto:isaacs@stm.unipi.it), [v.kolp@stm.unipi.it](mailto:v.kolp@stm.unipi.it)

Modern Foreign Languages and Literatures: [erasmusling@humnet.unipi.it](mailto:erasmusling@humnet.unipi.it)



## DEGREE PROGRAMMES OFFERED:

### LONG CYCLE DEGREE PROGRAMME

- Law (5 years, 300 ECTS credits)

### FIRST CYCLE PROGRAMMES (UNDERGRADUATE STUDIES)

(3 years, 180 ECTS credits)

#### Economics:

- Banking, Finance and Financial Markets
- Economics and Business Administration
- Management and Accounting

#### Political Sciences:

- International Political Sciences and Sciences of Public Administration
- Social Sciences and Social Services

#### Law:

- Company Law, Law of Labour and Public Administration Law

#### Joint Programmes:

- Economics and Law of Logistic Systems (with other areas, Livorno campus)
- Sciences of Tourism (with other areas, Lucca campus)
- Government and Administration of the Seas (with Navy Academy, Livorno)
- Maritime and Naval Sciences (with Navy Academy, Livorno)
- Sciences of Peace, International Cooperation and Conflict Transformation (with other areas)

## RESOURCES AND SERVICES FOR STUDENTS AND RESEARCHERS

- Economics Open-shelf library (111.524 books, 1670 journals, 3 specialized data banks)
- Legal Studies Library (83.488 books, 762 current periodical)
- Political Science Department Libraries
- Economics Computer Centre (100 triboot-operated computers, 3 computer labs)
- Law Computer Centre



## SECOND CYCLE PROGRAMMES (POSTGRADUATE STUDIES)

(2 years, 120 ECTS credits)

### Economics:

- Banking, Corporate Finance and Financial Markets
- Business Consulting
- Economics (in English, with Scuola Superiore Sant'Anna)
- Marketing and Market Research
- Strategy, Management and Control
- Business Informatics (in English – with Informatics)

### Political Sciences:

- International Studies
- Sociology and Social Policies
- Business Communication and Human Resource Management

### Joint Programmes:

- Sciences of Public Administration
- Government and Administration of the Seas (with Navy Academy, Livorno)
- Maritime and Naval Sciences (with Navy Academy, Livorno)
- Sciences of Peace, International Cooperation and Conflict Transformation (with other areas)

## THIRD CYCLE PROGRAMMES (DOCTORAL PROGRAMMES)

- Economics and Management
- Legal Sciences
- Political Sciences
- Economics (with University of Siena)

- Economics Language media lab
- Full wi-fi coverage
- E-learning platform
- Bookshop
- Printing centre
- Health care centre

## SPECIAL AND SHORT TERM PROGRAMMES

- **19 ADVANCED PROFESSIONAL EDUCATION COURSES (1 YEAR, 60 ECTS CREDITS), AMONG WHICH A MBA – MASTER IN BUSINESS ADMINISTRATION (IN ENGLISH)**
- **2 SCHOOLS OF SPECIALISATION IN LEGAL PROFESSIONS (1 YEAR) WORKING WITH NON-ACADEMIC WORLD**

### WORKING WITH THE BUSINESS WORLD

A large number of internship opportunities are available with Italian and international companies, among which *Autogrill, Fiat, Eni, Gucci Group, Illy Caffè, Indesit Company, Pirelli, Prada, Salvatore Ferragamo, Vodafone, Piaggio, Ibm, Unicoop Firenze, Ansaldo Breda, Ansaldo Energia, Hera S.p.A, Hp Italia, Ikea, and some multinationals of audit such as Pricewaterhouse Coopers, KPMG, Ernst&Young, Deloitte.*

- Self-service train ticket machine
- Student-managed web radio
- Students' union rooms
- International relations offices in each area of study
- ATM
- Bar / Cafeteria
- Vending machines

## AREAS OF EXCELLENCE IN RESEARCH

- Theory of production
- Development economics at firm, micro- and macroeconomic level
- General equilibrium theory and game theory
- Public Finance
- Internal auditing
- Management accounting with special focus on costing
- Marketing, consumer behaviour and consumer culture theory
- History of economics with an institutional approach
- Operational research and mathematical optimization
- Mathematical Finance with special focus on portfolio selection
- Survey methodology and small area estimation
- Population dynamics of infectious diseases
- Business and tax law
- Private Law
- Roman Law
- History of Law
- Constitutional Law and Justice
- Procedural Law
- Philosophy of Law
- Criminal Law
- Political Parties and Party Systems
- Political Corruption and Organized Crime
- Democracy in the History of Political Thought
- Political Economy Issues
- Social Policy, Participation, Citizenship and Social Exclusion
- European Union and Regional Integration in Latin America
- International Migration Law, Development and Migration
- Constitutional and Administrative Justice
- Political Philosophy of the Enlightenment Age
- Copyright Theory and Open Access Publishing
- Institutional History in Italy and Spain
- Gender Studies
- Social network analysis and Media research
- History of globalization





## INTERNATIONAL NETWORKS

- More than 15 international research programmes, mostly funded by the European Union
- 2 LLP/Erasmus Intensive Programmes: “European school of Development and Security” and Giocalizing Development: Development Perspectives of Rural Regions and Small Towns in globalized world
- 7 international cooperation agreements for the exchange of students and researchers



### WEBSITES:

Economics: <http://www.ec.unipi.it/>  
Economics International Relations Office: <http://international.ec.unipi.it/>  
Political Sciences: <http://www.sp.unipi.it>  
Political Sciences International Relations Office: <http://uri.sp.unipi.it>  
Law: <http://www.jus.unipi.it/>  
Law International Relations Office: <http://www.rapp-int.jus.unipi.it/>

### CONTACTS:

Economics: [international@ec.unipi.it](mailto:international@ec.unipi.it)  
Political Sciences: [international@sp.unipi.it](mailto:international@sp.unipi.it)  
Law: [international@jus.unipi.it](mailto:international@jus.unipi.it)



## DEGREE PROGRAMMES OFFERED:

### LONG CYCLE DEGREE PROGRAMMES

(5 years, 300 ECTS credits):

- Building Engineering and Architecture

### FIRST CYCLE PROGRAMMES (UNDERGRADUATE STUDIES)

(3 years, 180 ECTS credits):

- Aerospace Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Environmental and Building Engineering
- Computer Engineering
- Electronic Engineering
- Energy Engineering
- Management Engineering
- Mechanical Engineering
- Telecommunications Engineering

### SECOND CYCLE PROGRAMMES (POSTGRADUATE STUDIES)

(2 years, 120 ECTS credits):

- Aerospace Engineering (in English)
- Biomedical Engineering
- Building and Structural Engineering
- Chemical Engineering
- Computer Engineering (in English)



- Embedded Computing Systems (in English)
- Electric Engineering
- Electronic Engineering
- Energy Engineering
- Hydraulic, Transportation and Territory Engineering
- Management Engineering
- Mechanical Engineering
- Nuclear Engineering (in English)
- Robotics and Automation Engineering
- Telecommunications Engineering
- Vehicle Engineering

### THIRD CYCLE PROGRAMMES (DOCTORAL PROGRAMMES)

(3 years):

- Energy, System, Territory and Construction Engineering
- Information Engineering
- Industrial Engineering
- Civil and Environmental Engineering (with University of Florence and University of Braunschweig)

### SPECIAL AND SHORT TERM PROGRAMMES

- 11 Advanced professional education courses (1 year, 60 ECTS)
- Summer Schools in cooperation with University of Illinois at Urbana, Champaign (Illinois), San Diego State University (California) and University of Tokyo (Japan).

Double Degree (MEng) in Aerospace Engineering with ISAE Toulouse (F) and in Management Engineering with Cranfield University (UK)

### RESOURCES AND SERVICES FOR STUDENTS AND RESEARCHERS

- Open-shelf library (60.000 books, 1398 journals, several specialized data banks)
- Computer centre (200 workstations, 7 computer labs, printing centre)
- 2 Bars/Cafeterias
- Full wi-fi coverage
- 50 laboratories equipped with specialised machines and instruments

### WORKING WITH THE NON-ACADEMIC WORLD

The Engineering Departments are involved in a continuous activity of technology transfer towards small and medium enterprises, with a turnover of 10M€ annually. Further, a number of international companies outsource research activities to the laboratories hosted by the Engineering Area. Some of these companies are:

*Ansaldo, AustriaMicroSystems, Avio, Boeing, Dana, Enel, Ericsson, Fiat, Intel, Magna, Pagani Geotechnical Equipment, Piaggio, PowerONE, Selex Galileo, SensorDynamics, STMicroelectronics, Thales, Yanmar, La Spezia and Livorno Port Authorities, Robert Bosch Produktie, Continental Automotive Italy.*



## AREAS OF EXCELLENCE IN RESEARCH

The Engineering Area of the University of Pisa has a well-established international reputation in several research fields, with particular excellencies in the following sectors:

### AEROSPACE ENGINEERING

- Advanced chemical propulsion
- Aerodynamics of road vehicles
- Development of fly-by-wire control systems
- Fatigue and damage tolerance of aerospace structures (advanced metals and composites)
- Flow stability and control
- Low thrust space propulsion
- Space mission analysis and space vehicle design

### AUTOMATION ENGINEERING

- Embedded systems for automation and control
- Guidance, navigation and control systems
- Oceanic engineering
- Process and control theory
- Robotics

### BIOMEDICAL ENGINEERING

- Biomedical signal and image processing
- Health information technology
- Mathematical models of physiological systems
- Smart materials for bioengineering

### CHEMICAL ENGINEERING

- Environmental engineering
- Fuel technology and carbon capture
- Industrial chemical process design, control, intensification, modeling
- Industrial safety
- Materials engineering (polymers, functional materials, nanocomposites, metals, biomedical)
- Multiphase flow, fluid mechanics and interfacial engineering
- Product design (membranes, electrodes, fuel cells)

### CIVIL ENGINEERING

- Architectural design and Architectural technologies
- Landscape and town planning
- Preservation and valorisation of the historical architectural heritage
- Geotechnical design of river embankments
- Seismic microzonation
- Design of hydraulic and environmental works (river engineering restoration, coastal engineering and shoreline protection, urban drainage system, water supply and sewer systems, environmental and sanitary engineering)
- Numerical modelling in open channel hydraulics
- Advanced methods for roundabout design and flow simulation
- Freight logistics and port planning
- Mathematical models for transport demand and network analysis
- Road and runway materials, pavement and subgrade design, monitoring and evaluation
- Road safety and mitigation of road traffic noise
- Geomatic engineering
- Actions on structures
- Classical linear and non-linear elasticity
- Damage mechanics, Fracture mechanics and Fatigue
- Earthquake engineering and Structural dynamics
- Fire and explosion resistance of structures
- Structural design of bridges, buildings, industrial plants, and innovative elements (glass & grid shells, low cost buildings)
- Traditional and innovative materials for structural engineering (masonry, wood, reinforced concrete, steel, glass, fibre-reinforced composites, etc.)

### ELECTRIC AND ENERGY ENGINEERING

- Acoustics and lighting technique
- Building physics
- Computational and applied electromagnetics and fluid dynamics
- Distributed generation and cogeneration
- Domotic systems
- Electric machines, power electronics and electrical drives
- Electric propulsion and hybrid vehicles
- Energy market, energy storage and energy systems optimization
- Geothermal plants



- Health, safety, quality and environment systems
- Heat transfer enhancement
- Hydrogen propulsion and fuel cells
- Internal and external combustion engines
- Microgravity heat transfer
- Non destructive tests
- Power line communications and power system reliability • Pulsed power and MHD measurements
- Renewable energy
- Smart Grids and VPP

### INFORMATION ENGINEERING

(COMPUTER, ELECTRONIC AND TELECOMMUNICATIONS ENGINEERING)

- Cognitive radio systems
- Computational intelligence
- Computer security
- Embedded systems
- Future internet
- Green computing
- Image and signal processing
- Metamaterials
- Microelectromechanical systems
- Microelectronics and systems-on-chip
- Microwaves systems
- Nanoelectronics
- Pervasive computing
- Radar systems
- Remote sensing
- RF and millimeter-wave Ics
- Smart antennas and electromagnetic compatibility
- Smart sensor and actuator interfacing
- Software defined radio
- Wireless communications

### MANAGEMENT ENGINEERING

- ICT management and organization

- Innovation management and economics
- Inspection, quality control and management
- Logistics and industrial plants
- Maintenance, virtual and augmented reality
- Manufacturing planning, systems and optimization

### MECHANICAL AND NUCLEAR ENGINEERING

- Acoustic and Bioacoustic: noise analysis and modelling
- Computational and Experimental Biomechanics and Biotribology
- Design and licensing of casks for storage and transport of radioactive materials
- Dynamics and design of Vehicles, transmissions, structural and rotor dynamics
- Dosimetry and image quality in radiodiagnostic
- Environmental and personnel neutron and gamma dosimetry
- Hydrogen Embrittlement
- Laser Applications for Manufacturing
- Mechanics of Materials and components: modelling, testing and computational analyses (fatigue, fracture, creep, wear, residual stress)
- Mechatronics and Robotics
- Surface mechanics and Tribology
- Nuclear Reactor Safety
- Qualification tests of noble radioactive gases delay beds with activated carbon
- Thermal hydraulics of innovative nuclear systems
- Thermal mechanical behaviour of breeder materials for nuclear fusion reactors

Currently about 300 patents have been co-authored and 10 spin-offs have been set up by staff members.

### INTERNATIONAL NETWORKS

- More than 40 international research projects, mostly supported by the European Commission (5M€ annually)
- 5 European networks of excellence including the European Nuclear Education Network (ENEN)
- 12 agreements for student exchange and research cooperation
- LLP/Erasmus study and placement programme

### WEBSITE:

<http://www.dici.unipi.it>

<http://www.iet.unipi.it>

<http://www.ing.unipi.it/destec>

### CONTACTS:

[international@ing.unipi.it](mailto:international@ing.unipi.it)





## DEGREE PROGRAMMES OFFERED:

### LONG CYCLE DEGREE PROGRAMMES

- Veterinary Medicine (5 years, 300 ECTS credits)

### FIRST CYCLE PROGRAMMES (UNDERGRADUATE STUDIES)

(3 years, 180 ECTS credits)

#### AGRICULTURE:

- Agricultural Science
- Herbal Sciences (with Pharmacy)
- Viticulture and Oenology

#### VETERINARY MEDICINE:

- Animal Production Science and Technology
- Animal Breeding Techniques and Canine Education





## SECOND CYCLE PROGRAMMES (POSTGRADUATE STUDIES)

(2 years, 120 ECTS credits)

### AGRICULTURE:

- Agrifood Production and Agroecosystem Management
- Urban Green Areas and Landscape Planning and Management
- Plant and Microbe Biotechnologies

### VETERINARY MEDICINE:

- Animal Production Science and Technology

### JOINT PROGRAMMES:

- Bio Safety and Food Quality

## THIRD CYCLE PROGRAMMES (DOCTORAL PROGRAMMES)

- Veterinary Sciences
- Agricultural Sciences, Food Sciences and Agricultural Environment Sciences

## SPECIAL AND SHORT TERM PROGRAMMES

- 3 Veterinary Specialization Schools
- 7 Advanced professional education courses (1 year, 60 ECTS credits)

## WORKING WITH THE BUSINESS WORLD

The Area of Agriculture has established 770 internship agreements, and the Veterinary area has 450 internship agreements, both with companies with the aim of giving students and graduates the opportunity to gain authentic work experience, enhancing their professional opportunities. Most of the active networks in Veterinary Medicine consist of collaboration with public bodies at national regional and local level in the fields of animal pathology, food inspection, social farming, rural development, animal production, toxicology.



## RESOURCES AND SERVICES FOR STUDENTS AND RESEARCHERS

- Agricultural Sciences Library (42.984 books and 437 current periodicals)
- Veterinary Medicine Library (35.419 books and 774 current periodicals)
- 2 Biology Labs (70 workstations)
- 1 Chemical Lab (30 workstations)
- 1 Molecular Lab (10 workstations)
- 22 Veterinary Labs

- 1 Agriculture Computer Lab (30 workstations)
- 3 Veterinary Computer Labs (53 workstations)
- Full Wi-fi coverage
- Veterinary Hospital (24 hours service, 34 boxes for horses, 40 boxes for small animals)
- University Farm (1300 ha)
- 3 Specialised rooms: Anatomy, Microscopy, Necropsy
- 2 ECDL Test Centres

## AREAS OF EXCELLENCE IN RESEARCH

Students interested in excellencies in the Agricultural and Veterinary areas may find research activities focused in different fields like:

- Agronomy and organic production
- Agricultural chemistry
- Sustainable food production
- Biotechnology
- Food and soil microbiology
- Agricultural mechanization
- Irrigation
- Horticultural and fruit production
- Olive, wine and Mediterranean products
- Multifunctional agriculture and rural development
- Social farming
- Food planning and policies industries
- Bio-technologies applied to food inspection
- Animal pathology
- Veterinary and comparative oncology
- Wildlife diseases
- Animal public health
- Microbiology of typical products
- Hygiene rules and procedures
- Animal behaviour
- Food quality in animal production
- Equine nutrition
- Equine breeding and reproduction
- Equine sports medicine
- Toxicology in food production
- Animal assisted therapy
- Parasitology
- Fisheries





## INTERNATIONAL NETWORKS

- 5 ongoing EU funded projects
- Erasmus Mundus International Master on Rural Development (2 years, 120 ECTS credits)
- Joint Chinese and Italian Centre on Food Safety (CSISA)
- 19 international agreements with universities and research centres
- LLP/Erasmus Study and Placement Programme



### WEBSITES:

- Agriculture: <http://www.agr.unipi.it/>
- Veterinary Medicine: <http://www.vet.unipi.it/>

### CONTACTS:

- Agriculture: [presidenza@agr.unipi.it](mailto:presidenza@agr.unipi.it)
- Veterinary Medicine: [erasmus@vet.unipi.it](mailto:erasmus@vet.unipi.it)



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international office  
UNIVERSITY OF PISA



**GENERALI**  
Agenzia di Pisa/Collesalvetti