# PhD Programmes







Sant'Anna School and PhD Programmes





Welcome to Sant'Anna School of Advanced Studies: a research university, a school of talent, for a more sustainable and inclusive world

he Sant'Anna School of Advanced Studies is one of the six specialstatute public universities, known as Scuole Universitarie Superiori (Schools of Advanced Studies) operating in Italy. It engages in the field of applied sciences such as Economic and Managerial Sciences, Legal Sciences, Political Science, Agricultural Sciences and Plant Biotechnology, Medical Sciences and Industrial and Information Engineering.

Established in 1987, Sant'Anna School of Advanced Studies rapidly affirmed as a dynamic and strongly innovative institution amongst Italian and international universities, a learning community in which faculty and students closely interact to address frontier research topics with an interdisciplinary approach. The School's mission is indeed to be a high-quality public institution of reference, where talent is nurtured and innovative ideas are born and developed in this environment, in collaboration with foreign universities, institutions, companies and research centres.





**4th** at world level of best **young universities** (under 50 years old)\*

2nd at national level on a census of 49 institutions\*

\*2020 edition

2nd at the national level on a census of 30 institutions\*



# **Training**

ant'Anna offers training programmes to undergraduates and postgraduates, which are accessed by way of a competitive selection process in order to guarantee the level of excellence that the School pursues at an institutional level, such as university training for students of merit which supplements and complements courses at the University of Pisa, Master's Degree Courses, PhD Programmes and Advanced Education Courses.

The education offer is characterized by an **interdisciplinary approach** in a context of continuous cultural exchange between faculty and students. For this reason, most students live on campus, but the town of Pisa itself is a campus, a lively place, multicultural and safe, home to many cultural, social and sports events.

## Research

cientific research represents a key lever for the School, that is reflected on training programmes. Research is conducted within the Institutes and the Labs enhancing the relationship between training and research, interdisciplinary teaching and interaction with the cultural, social and economic world. The scientific community of the Sant'Anna School of Advanced Studies counts over 400 people including teaching staff, research staff, research fellows, collaborators and PhD students. Half of them are research fellows and PhD students.

Strategic themes for the future of the world - climate change, environmental sustainability, justice and social inclusion, new procedures for international relations, health and connected technologies, big data and the impact on economic systems and technologies - are areas in which the School wishes to work for attaining culture and scientific development and contributing to build the common good.

# Third Mission: technology transfer, innovation, ecosystem and impact

he Sant'Anna School of Advanced Studies undertakes to upgrade its ability to produce value for the community, acting as a driving force for social and economic, cultural and technological development, through and beyond research and education. Moreover Sant'Anna School is top ranked within the best universities in Italy for the Science & Technology patents/research staff ratio. In the last five years the School filed an average of 15 patent/year which had a positive impact on society and business in stimulating high-tech spinoffs creation.

The School is also committed in the **generation of spinoff companies** operating in ICT, robotics, photonics, micro engineering, biomedical and environmental sectors, finance and legal consulting.

Thanks to its commitment in technology transfer, innovation, ecosystem and impact, Sant'Anna aims to improve its role as economic and cultural engine, fostering progress and innovation, promoting dialogue with citizens, the economic system and public and private institutions.

## Where we are

he main buildings of Sant'Anna School are located in **Pisa**, one of main attractions of Tuscany. Pisa is a city of art, science and culture, an open-air museum that is not only famous for the "Piazza dei Miracoli", a UNESCO World Heritage Site, but also for its universities and research centres, which constitute a cluster of excellence and research among the most advanced in the world. Illustrious scientists such as Galileo Galilei, Enrico Fermi, Antonio Pacinotti, Carlo Rubbia studied in Pisa, and the city continues to hosts talents that **create an active and lively academic environment**, contributing to a richer university experience for all students who take part in it.

Pisa's streets and squares, populated by tourists and students from all over the world, make it a welcoming and stimulating city to discover after an intense day of study.

# Research talent training: PhD programmes

hd Programmes of Sant'Anna School aim to link basic and applied research in dynamic fashion, with a strong focus demands for innovation by industry and public institutions. Sant'Anna's PhD programmes last three or four years: they are designed for bright young graduates, from Italy and abroad, who are admitted after a selective examination which values candidates' educational background and their attitude for scientific research and interdisciplinary approach. All positions are fully-funded: the PhD student scholarship is renewed annually following a successful assessment. There are no tuition fees for the enrolment to the PhD and all PhD students have free access to the School's canteen for a meal a day.

The programmes entail - in different proportions according to the different disciplines - structured courses and supervised research. Periods of visiting fellowship in other Italian and foreign institutions are encouraged by the School which financially supports them with integrations to the basic grant.

Important features of the programmes offered by the School are the early introduction to research activities with intensive training at Sant'Anna research labs, and, the steady interaction between students and the faculty members.

The completion of the programme requires the successful discussion of a dissertation presenting original results, publishable on the major international journals in the respective fields.

# How to apply



Calls open every year in January and close by June.

Applications must be submitted on-line.



Some programmes follow a different scheduling: please check timing and deadlines in the QRcode of every programme.

# Admission requirements



Master Degree (M.Sc. or M.A.) or equivalent title

Undergraduate students may also apply if they will graduate within 31st October

### The selection



Selection consists in the assessment of the qualifications submitted and an interview.

Qualifications consist of:

- CV and academic transcript of exams and career records,
- abstract of the M.Sc./M.A.Thesis
- a research project where the candidate is asked to briefly outline a research proposal for their PhD studies.

After the assessment of the qualification, shortlisted candidates undergo an **interview** with a discussion about qualifications and the proposed research plan, as well as the candidate's attitude to the programme.

# **Scholarships**



#### All PhD positions are fully funded with scholarships.

The number of positions is set each year in the call for admission. Positions may be increased if further funding becomes available, within special agreements, research projects or industrial partnerships.

In addition to the scholarship, PhD students will be provided with personal research funds and specific funding for visiting periods abroad.



# PhD Programmes

# PhD Where research pushes forward

PhD in Agrobiodiversity

PhD in Agrobiosciences

PhD in BioRobotics

PhD in Economics

PhD in Emerging Digital Technologies

PhD in Health Science, Technology and Management

PhD in Human Rights and Global Politics: Legal, Philosophical and Economic Challenges

PhD in Law

PhD in Management - Innovation, Sustainability and Healthcare

PhD in Translational Medicine

# PhD in Agrobiodiversity

#### Overview

The PhD Programme in Agrobiodiversity is a four-year residential Course, it aims at the enhancement of human resource capacities in the utilisation and management of genetic variation in agricultural and natural systems, in order to improve the sustainability of agricultural systems and the conservation of genetic resources for the well-being of present and future generations.

The Programme is structured into two curricula:

- Plant genetic resources;
- Functional biodiversity in agroecosystems.

#### Areas of study and research facilities

During the Course, PhD students are required to attend 150 hours of in class training on methodological, curricular, and interdisciplinary courses. Students are also involved in seminars, journal clubs, workshops, and conferences. However the main activity will be devoted to research activities.

All courses are taught in English.

Students may spend research activity abroad, as a visiting scholar at foreign University or research institutions, deemed relevant for their PhD project.

The PhD Programme aims at the enhancement of human resource capacities in the utilisation and management of genetic variation in agricultural and natural systems, in order to improve the sustainability of agricultural systems and the conservation of genetic resources for the well-



The Programme is structured into two being of present and future generations.

Here below are listed a few examples of research areas dealt in this PhD programme.

Genetic variation in single genes and entire genomes of agricultural and forestry plants and their wild relatives.

Mechanisms that control the variability in genes and/or groups of genes, as those involved in resistance to pathogens and/or pests and tolerance to environmental factors.

Role of functional biodiversity in maintaining genetic diversity, including evolution and co-evolution of pests/pathogens and host plants.

Role of functional diversity, including interactions between pests/ pathogens/ weeds and domesticated/volunteer/wild plants, in agroecosystem health.

Plant and crop physiology, including plant stress physiology and post-harvest physiology.

Application of agrobiodiversity solutions at genetic, species and habitat level to improve crop performance, crop protection, sustainable crop/agroforestry ma-

nagement and multifunctional land use.

#### **Job Opportunities**

Research and counselling in national and international organisations.

The Programme is intended for students willing to pursue an academic career but also provides professional research skills to work in public and private research institutions. Most of our previous PhD students now work as research fellow or have tenure track in national and international institutions.

#### **Highlights**

The Doctoral Programme in Agrobiodiversity particularly welcomes applications from candidates coming from Emerging Countries, whose research may include activities either in their Country of origin or in other Emerging Countries. The doctoral programme has active several Memorandum of Understanding with national and international institutions for the studying and valorization of agrobiodiversity, among which the Alliance of Bioversity and CIAT (ABC), CIMMYT, CIRAD.

#### Info and contacts

info-phdlifesciences@santannapisa.it Phone: +39 050 882 604



# PhD in Agrobiosciences

#### Overview

The PhD in Agrobiosciences is a three-year programme that aims at educating highly competent researchers with an interdisciplinary background that will be able to face research frontiers in plant sciences.

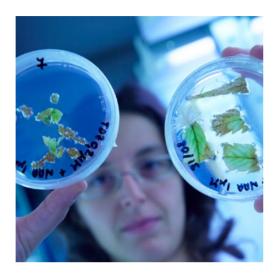
The programme is structured in two curricula: i) Genomics and crop production and ii) Agriculture and environment, offering training in frontier topics of plant sciences, including molecular biology, plant genomics and biotechnology, environmental and agronomic sciences.

The course gives doctoral research students the opportunity to carry out research in a stimulating and supportive environment, being directly involved in research activities in the laboratories of the Institute of Life Sciences: BIOLabs, LANDLAB and PLANTLAB.

To assist in the delivery of learning outcomes, assessment of an individual student's progress is made via a standard series of review protocols including the drafting of yearly reports, delivery of seminars, and preparation of a thesis submitted to a review process by highly qualified experts in the field. Upon recommendation of the referees, the student is admitted to the final examination for the award of the Doctoral Degree.

#### Areas of study and research facilities

Doctoral research students are expected to develop research and techniques skills, including the ability to address research problems and to formulate and test hypotheses and a full understanding



of relevant research methodologies and techniques. Students will also be trained to develop communication skills for effective writing and oral presentation of research outcomes to a range of audiences.

Different mechanisms will be applied to achieve this goal, including supervisor support and mentoring, institute support, workshops, conferences, elective training courses, formally assessed courses and informal opportunities.

Doctoral research students are also required to undergo a 3-6 month research period aboard, as a visiting scholar at foreign University or Research Center deemed relevant for their PhD project.

Students are expected to make a substantial, original contribution to knowledge in their area, normally leading to published work.

Research activities of the students are carried out in BIOLabs, LANDLAB and PLANTLAB, equipped with state-of-the-art laboratory instruments and technologies and open field facilities.

#### **Job Opportunities**

The programme aims to apply innovati-

ve teaching and research methodologies to train brilliant and highly motivated young researchers who will be able not only to carry out solid and high-quality academic research, but also to undertake professional careers within a wide range of international, national and regional entities, in both the private and the public sectors in the field of plant biotechnology and crop production.

#### **Highlights**

The PhD programme in Agrobiosciences takes three years of full-time study to complete and consists of research and courses as required under academic supervision.

For the accomplishment of their research projects, the doctoral research students rely on a very qualified and fertile scientific environment, including a small but dynamic Faculty with eminent scientists involved in international research networks. This allows doctoral research students to develop solid research and transferable skills, useful for a future both, in and outside of academia.

ABS training provides conceptual and technical approaches in research and also up-to-date methodological knowledge from research frontiers in plant sciences. Courses and workshops are offered with the aim to enhance interdisciplinary research competence of doctoral research students in the field of plant sciences.

#### Info and contacts

info-phdlifesciences@santannapisa.it Phone: +39 050 882 604



## PhD in BioRobotics

#### Overview

The PhD Programme in BioRobotics is an innovative, cross-sectoral and interdisciplinary three-year course of advanced studies and supervised research, established at Sant'Anna School of Advanced Studies in 2012.

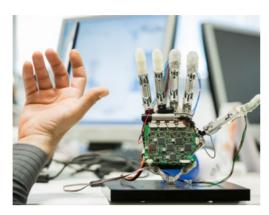
It enrolls 100+ students, on average 30 students or more per year, and thus is among the largest doctoral schools in robotics and biomedical engineering worldwide.

The Programme aims at educating and training young students to study, design, and develop radically novel robots, machines, systems and services, putting the human being and society at the center of the process, according to principles of technological, environmental, social, ethical, and economic sustainability. In the BioRobotics PhD path, robotic technologies are bio-applied (e.g. dedicated to medical applications) or bio-inspired, with the aim to significantly enhance their abilities.

PhD students can benefit from a living research environment, with a continuous supervision by BioRobotics leaders who accompany them in the execution of their research projects. They will be trained in preparing research articles for international scientific journals and international events, as well as in intellectual property and industrial oriented issues.

#### Areas of study and research facilities

PhD projects will be carried out in very well equipped, state-of-the-art laboratories (mainly dedicated to projects of biomedical engineering, biomimetic and soft robotics,



rehabilitation technologies, micro-engineering, surgical robotics, neural engineering, robotic companions) and through an individual and team work performed under the supervision of a full-time faculty.

During the three years of the PhD programme, students have to collect:

- 20 ECTS (European Credit Transfer System) by the attendance of internal courses, but also of external courses, summer schools, projectual works.
- 160 ECTS for research activities, distributed over the three years.

The PhD programme in BioRobotics guarantees a wide and multidisciplinary educational offer, organized both on horizontal clusters, which contain the fundamental teachings on the scientific issues characterizing the cultural approach of Biorobotics, and on vertical clusters, which contain the courses proposed by the scientific themes of The BioRobotics Institute, namely: wearable and collaborative technologies, artificial organs and prostheses, medical robotics and regenerative medicine, mathematical and computational modeling, bioinspired and soft robotics, bioelectronics and neuroscience robotics.

#### **Job Opportunities**

Placement information of PhDs in Bio-Robotics report an occupation rate of 100% in a very short time from graduation, if not even before the thesis defense, both in the academic field (with positions at prestigious universities such as, for example, Harvard University, Stanford University, Boston University, ETH Zurich, EPFL, University of Pittsburgh, University of Alabama, Khalifa University) and in national and international research centers. A quite large rate of PhDs find an industrial job, both in existing companies and in high-tech start-up ones.

#### **Highlights**

- PhD students in BioRobotics work in a stimulating environment, with multiple opportunities of scientific and personal growth.
- State of the Art technologies and novel equipment from the Excellent Department of Robotics and Al allow to design and develop in a short time all the brilliant project ideas of the PhD students.
- Variegated teaching offer, merging fundamental courses with high-level seminars and tailored on the specific needs of the students.
- Multiple collaborations with industries also in the form of Joint Labs between industries and university.
- Multiple collaborations with hospitals and clinical centers, for a straightforward translation of the bioengineering activities.
- Multiple collaborations with international teams, thanks to a 30-year tradition of European and International collaborative projects.

#### Info and contacts

info-phdbiorobotics@santannapisa.it Phone: +39 050 883 136 / + 39 050 883 420



Scan the QR code: more detailed information on the Programme and the call for admission

Photo Credit: Hauke Seyfarth

## PhD in Economics

#### Overview

The PhD in Economics is a 4-year programme designed for highly qualified and motivated students who wish to acquire the research and analytical skills of the international scientific community in Economics.

The Programme is offered in close cooperation with UCA-University of Cote d'Azur (Nice, France), and an agreement for exchange of students and faculty is also in place with the University of Strasbourg (France) and IMT-School Lucca.

Students attend one year and a half of intensive course work, part of which (2-3 months) is hosted at the UCA. After the training period, students will proceed to supervised research work, yielding an original dissertation to be discussed in a final, public examination. It is expected that students produce articles publishable in international journals.

PhD students are exposed to the vivid research environment and participate to various ongoing research activities at the Institute of Economics at Scuola Sant'Anna (seminars, conferences, research projects). The Programme is also part of a large international network of institutions and scholars, supporting exchanges of research students and faculty.

#### Areas of study and research facilities

The training covers traditional domains of economic analysis (micro, macro, econometrics) but also offers the unique opportunity to study and get involved in research fields often neglected in standard PhD Courses. In line with the core research interestes



and expertise of the Institute of Economics at Sant'Anna and associate institutions. Advanced and Field topics encompass: evolutionary perspectives on economic change, firm-industry dynamics, economics of innovation, agent-based computational economics, economic networks and complexity, economic history and history of economic thought, and a broad range of quantitative tools for the analysis of big-data and economic dynamics.

PhD students have access to research facilities (software, hardware, data) available via the Scuola library, the Institute of Economics, and the computational infrascture of the Department of Excellence EMBEDS.

#### **Job Opportunities**

The Programme is primarily intended for students willing to pursue an academic career but also provides professional research skills to work in public and private research institutions. Former PhD candidates now work as post-doc, research fellow or tenure track in well-reputed Italian and international universities (Paris-Sorbonne, Utrecht University, University of York, New School New York, Sciences Po, University of Strasbourg, Cattolica Milano, CNR Florence), institutions (UN-ECLAC, ECB, Bank of Italy, STATEC-Luxembourg, OECD-Paris, JRC-Seville, Italian Ministry of Economic and Finance), and in the private sector (UBS).

#### **Highlights**

- The number and scope of courses offered in the training part of the programme equip students with a broad view of economic and social phenomena, partially contrasting current tendency toward excessive specialization of the economic profession.
- Through a small but growing and dynamic Faculty, including some of the major international scholars in their field, students are exposed to the international frontier of research, which is essential for enhancing the quality of their research, for developing their own network of international collaborations and ultimately for successfully approaching the academic job market.

#### Info and contacts

info-phdeconomics@santannapisa.it Phone: +39 050 883 136 / + 39 050 883 420



# PhD in Emerging Digital Technologies

#### **Overview**

The PhD in Emerging Digital Technologies is a 3-year programme which provides an exhaustive training path with structured teaching and supervised research activities.

The objective of the programme is to train a professional figure that is sought by both national and international, public and private research facilities and by companies manufacturing products or service providers, operating in the field of communication, information and perception technologies.

The PhD Programme is heavily interdisciplinary mixing Telecommunications, Information Engineering and Perceptual Robotics.

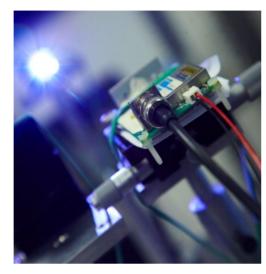
The PhD Programme collaborates with national and international, private and public research bodies. PhD students are required to undertake a compulsory minimum 6-month period abroad, in prestigious Universities or companies.

At the successful completion of the Programme, the School awards the student with the "PhD" (Philosophy Doctor) Degree.

#### Areas of study and research facilities

The Programme is organised in 3 curricula.

Photonic Technologies focuses on photonic integrated circuits, sensors, photonic communications networks and microwave photonics for 5G/6G, photonics for radar and lidar with automotive and space applications, visible light communications, artificial intelligence applications in the telecommunication networks;



**Embedded Systems** focuses on real-time embedded software for safe and secure cyber-physical systems, hardware acceleration of deep neural networks, operating systems, cloud computing, hypervisors, software architectures for a predictable support of machine learning algorithms in safety-critical systems, as autonomous driving;

Perceptual Robotics focuses on human-robot interaction systems, telerobotics and virtual environments, intelligent automation systems and artificial intelligence, mechanical engineering and intelligent machine design, human-robot interaction and wearable robotics, virtual and augmented reality, haptics, rehabilitation robotics, control and automation engineering.

#### **Job Opportunities**

Sample career opportunities for a graduated PhD EDT are:

- Researcher and project manager in the specialization fields;
- Project leader and unit manager for IT and ICT companies
- Designer of Industrial machines or ICT sy-

#### stems

- System and software designer
- Domain expert in the field of applications and hardware software technologies
- Process and methodology manager for the development of software systems
- Head of development units in manufacturing companies of telecommunications devices.

#### **Highlights**

The PhD EDT is characterized by both fundamental and applied research. After acquiring the necessary knowledge provided by the offered courses the PhD students perform their research in state of the art research facilities available at the TeCIP Institute (https://www.santannapisa.it/en/institute/tecip/tecip-institute). PhD students are offered the opportunities to actively participate in international (e.g., H2020) and national research projects (e.g., PRIN). The TeCIP Institutes counts 87 active projects.

Professors and researchers participating to the PhD EDT board and acting as supervisor and tutor are strictly collaborating with many top tier international universities, such as Universidad Carlos III de Madrid, University of California Santa Barbara, Osaka University, IIT Hyderabad, IIT Dharwad, University of California at Berkley, University of Illinois at Urbana Champaign, ETH Zurich.

The TeCIP is part, together with the Biorobotics Institute, of the department of excellence Robotics and Al (https://www.santannapisa.it/en/robotics-ai).

#### Info and contacts

phdtecip@santannapisa.it
Tel: +39 050 882 189 / 2191 / 2105



# PhD in Health Science, Technology and Management

#### Overview

The PhD course in Health Science. Technology and MAnagement (TeAM) concerns the theme of health and equity which is probably the most important challenge of humanity in the coming decades, in the intertwining with social, clinical, economic, technological, legal, political issues, managerial and environmental ones that testify to the rapid change in the needs of the wor-Id population, in the sign of the principles dictated by the Ottawa Charter for Health Promotion and in compliance with the criteria of the Sustainable Development Goals of the United Nations 2030 Agenda. The topic is that of the organization of the functioning of health systems (HS), characterized by complexity, interdisciplinarity and dynamism, requiring technological innovation and management skills to guarantee sustainability and adequate levels of care for citizens in every country and for every age.

The TeAM PhD is a true crossroad at Sant'Anna, being participated by all Institutes (Biorobotics, DIRPOLIS, Life Sciences, Management, Economics, Mechanical Intelligence, TECIP) testifying the global effort of the Institution.

The challenges to be faced are numerous and among these the ability of the HS to continuously to be resilient in emergency health situations, as it is the case for the Covid-19 pandemic.



#### Areas of study and research facilities

This course aims to train researchers and professionals with an interdisciplinary background including:

- Medical reasoning:
- Health care management;
- Ethics, Technology and Care Relationship;
- Information and Communication Technologies (ICT) enabling e-Health and Telemedicine;
- Introduction to Civil Liability and Risk Management in Healthcare Systems;
- Population health data to inform decision making;
- Introduction to Human Perception; from Ordinary to Mixed and Virtual Reality;
  - Criminal issue;
  - Introduction to Surgical Robotics;
- Principles of behavioral science in healthcare management;
- Introduction to digital perception and control in medical diagnosis applications;
- Introduction of Knowledge Transfer in STEM disciplines

PhD candidates are required to attend the mandatory courses of the first year. The training will continue on the field working with the research teams of the Institutes in which he/she will be assigned.

#### **Job Opportunities**

This course aims to provide an interdisciplinary background to the PhD student. Indeed, in addition to his/her academic background, this PhD introduces the student to other disciplines from both experimental and social sciences: medicine, engineering, economics, management, law. While the traditional PhDs focus on a single discipline, this PhD leads people to work in an interdisciplinary environment. This aspect is distinctive for conducting research on the edge as well as for offering a competitive advantage to candidates aiming to reach high level job positions in real life settings.

#### **Highlights**

The main feature of this PhD is its interand multi-disciplinary approach. Candidates will learn the principles of many different disciplines directly from both the School faculty which will provide multiple complementary tools mandatory for analyzing the complexity of Health Science, declined as a modern multidisciplinary knowledge of the everchanging needs of individuals, populations, societies, as well as of the entire globe. The PhD course, beyond a multidisciplinary teaching programme, includes the opportunities of national and international internships thanks to the collaboration with professionals, academics and experts in Italy and abroad, the development of an experimental Research Project, with the final production of peer reviewed scientific deliveries.

#### Info and contacts

info-phdteam@santannapisa.it m.emdin@santannapisa.it Phone: +39 050 882 608



# PhD in Human Rights and Global Politics:

# Legal, Philosophical and Economic Challenges

#### Overview

The international PhD in Human Rights and Global Politics: Legal, Philosophical and Economic Challenges gives you the opportunity to carry out research in a lively and supportive environment.

The Programme addresses the issue of Human Rights and Global Politics, and is characterized by a strongly interdisciplinary approach, which implies the intersection among the following research areas:

- Agri-food and Environmental Law
- Public International Law
- Political Economy
- Political Philosophy

The ideal candidate is a curious and open-minded researcher, willing to explore the variety of disciplines and approaches the programme has to offer.

The goal of this three-year PhD Programme, entirely delivered in English, is to provide an educational path which will enable participants not only to carry out sound academic research, but also to undertake professional careers within a wide range of international, national and regional entities, in both the private and the public sectors.

#### Areas of study and research facilities

The PhD programme's structure inclu-



des mandatory lectures and research activities. In particular, first-year PhD students are required to attend the compulsory classes specifically designed for the programme. They are also encouraged to attend lectures, especially at graduate level, within the general field of their research. Given the interdisciplinary nature of the programme each student will be required to attend courses related to the four areas involved in the PhD (Agricultural Law; Public International Law; Political Economy; Political Philosophy). These courses will revolve around the topics of Human Rights and Global Politics in order to give an understanding of their interdisciplinary components.

Research methodology courses are offered which will provide students with the opportunity to acquire methodological expertise and to apply it to substantive research in their chosen topic.

Moreover, the PhD programme is recognized as a mutual learning and research community with a peculiar identity.

#### **Job Opportunities**

The course aims to adequately prepare

students to undertake academic careers in the field of the social sciences. The knowledge and skills acquired place them in a privileged position to work within public bodies, in international agencies, in numerous areas of the private sector, in non-governmental organizations.

Former students have obtained research positions in Italian and foreign universities or research bodies. Some of them have started diplomatic careers or have positions as civil servants in national, EU and international public institutions and agencies.

#### **Highlights**

Throughout their studies, participants will work under the supervision of a faculty member who will meet with them reqularly to discuss their work and provide feedback and advice. As well as providing expert supervision from experienced faculty members, we offer a friendly and supportive environment for our PhD students and consider them an integral part of the School's research community. Moreover, they will have the opportunity to spend a fully funded research period abroad. Students are also encouraged to carry out extracurricular activities (seminars, summer schools, etc.). An extra budget is allocated to each student to finance the attendance of such activities.

#### Info and contacts

info-phddirpolis@santannapisa.it Phone: +39 050 882 681



## PhD in Law

#### Overview

The PhD in Law hosts graduate students interested in achieving the highest level of academic education, and pursuing advanced studies in law, with a strong interdisciplinary perspective, in a lively international setting in our leading Italian University.

The course aims at training scholars capable of critical thinking and innovative research in their respective fields of interest, at the forefront of the international debate.

The PhD programme encompasses a broad set of areas of law, ranging from private and private comparative law, public comparative and European law, constitutional and administrative law, general theory of law, applied legal theory, criminal - national and international - law, law and technology.

Over the 3-year programme, PhD students attend courses, both in their field of interest and in the others covered by the faculty: interdisciplinary perspective and a sound methodological preparation are essential for competitive scholars in the academic and professional market.

#### Areas of study and research facilities

During the first year, PhD students are required to attend 120 hours of in class interdisciplinary courses. They are also involved in seminars, workshops, conferences and in research activities.

During the second year, the requirement for in class training reduces to 80



hours, since students are expected to be working primarily on the dissertation, in close collaboration with their supervisor.

The third year is devoted to refining the thesis, to be discussed within two months from the end of the programme.

The vast majority of the courses offered are taught in English.

During alternatively the second or third year, students are required - as noted above - to undergo a 3 to 6-month research period aboard, as a visiting scholar at one prominent foreign University or center deemed relevant for their PhD project.

Publication requirements amount to at least two contributions over the second year, to an Italian or an international scientific journal.

#### **Job Opportunities**

Researchers who got their PhD in Law training on methodological, curricular, and at the Sant'Anna School of Advanced Studies have achieved remarkable and high level positions in different fields, from academy to public administration, political appointments, the law profession, the judiciary branch, the diplomatic career, managing and directive roles in multinational companies. Placement in international organisations and non-governmental ones brings our PhD in Law at the forefront of most impelling contemporary issues, from environmental protection and sustainability to artificial intelligence legal and moral basis unfolding.

#### **Highlights**

Notably, the international quality of our programme, the recruitment of a wor-Id-class teaching staff, the ongoing research exchange with academic organizations and our networking on a sustained intercontinental range, powerfully increased in the last ten years, paves the way to an unlimited number of opportunities worldwide. Applicants can choose their research area in advance by an in depth analysis of the information we provide regarding the research carried on by the professorial staff. The main areas converge upon the common DIRPOLIS project concerning sustainability, environment, human rights, the rule of law, technological challenges, transnational governance through law, law and democracy.

#### Info and contacts

info-phddirpolis@santannapisa.it Phone: +39 050 882 681



#### Overview

The PhD in Management – Innovation, Sustainability and Healthcare is a three-year training programme leading to research activity in the public and private domains as well as managerial jobs in public and private organizations.

The aim of the PhD programme is to train students for academic and managerial positions in both public and private organizations. Particular emphasis is given to the management of innovation, sustainability and healthcare management, and to the linkages among these three topics. More precisely:

- the management of innovation processes and the competitiveness of firms and public institutions within regional, national and international systems;
- the management of sustainability in public institutions, private companies and wide territorial areas is specifically focused on resource efficiency management, corporate social responsibility, environmental policies and circular economy. The Sustainability Management research group combines the knowledge with the principles of sustainability, through scientific research and empirical investigations
- the management of healthcare, which deals with the development of governance models, managerial tools and performance



assessments to support health professionals involved in the provision of care at all levels.

#### Areas of study and research facilities

The programme deals the main topics in management with a strong interdisciplinary approach and offers courses about consolidated and innovative research methodologies in social sciences. In particular:

- 1) **Management of Innovation** includes topics such as Open Innovation, technology transfer, cost accounting, finance for innovation, purpose driven organisations, tourism management, neuro-marketing, technological innovation in healthcare;
- 2) **Sustainability Management** combines the knowledge of business management and policy making with the principles of sustainability, through scientific research and empirical investigations;
- 3) Management of Healthcare covers a wide range of topics ranging from health policies, performance measurement, innovative models of healthcare delivery and organization, to the study of decision-making processes that guide the choices of both

health professionals and users.

#### **Job Opportunities**

The PhD in Management offers the opportunity to acquire competences which can be used not only for academic careers, but also for many other knowledge-based jobs. Former PhD graduates currently work in Italian and international Universities as well as in private and public organisations, especially those for which innovation, sustainability and healthcare are important assets.

#### **Highlights**

The programme examines the main themes of management, together with essential teachings, especially from a methodological viewpoint, to carry out research activities in the field of social sciences:

The training course also aims to enhance the opportunities for dialogue and joint research between the different disciplines of the School in both Social and Experimental Sciences. These opportunities are sought both in the educational offer and in the definition of the students' research projects.

#### Info and contacts

info-phdmanagement@santannapisa.it Phone: +39 050 882 608



# PhD in Translational Medicine

#### **Overview**

The PhD in Translational Medicine is a three-year Programme. The Mission of Programme is to educate and train post-graduate students with different academic backgrounds and highly motivated to pursue a career in experimental biomedicine and/or clinical research. The students are trained in a stimulating, interdisciplinary environment. Particular emphasis is placed on the multidisciplinary approach, with the ultimate aim of translating the results of laboratory, experimental and clinical research into novel and more effective diagnostic procedures and therapeutic strategies, with a particular focus on cardiovascular diseases. A qualifying part of the curriculum is centered on basic and applied research towards development and validation of new drugs, nutraceuticals, therapeutic nanovectors and biomedical devices and on innovation in healthcare management.

#### Areas of study and research facilities

PhD students start working at their research project from the first year of the Programme. They are also expected to attend mandatory Courses in scientific communication, scientific English, biostatistics and clinical statistics, research and lab methodology, as well as workshops and journal clubs, equivalent to a total of at least 150 hours over the 3 years. Moreover, PhD students are encouraged to attend a wide variety of elective classes, choosing them on the basis of their specific interests. A research period of in a



laboratory abroad is part of the training programme.

For the accomplishment of their research projects, PhD students rely on a very qualified and fertile scientific environment. In fact, they can choose among several laboratories and academic clinical units available in Pisa. Some of these are part of the research facilities of the Scuola including the MedLab and the Management and Health Lab, others belong to Institutions formally involved in the Programme, namely the National Council for Research, the Fondazione Gabriele Monasterio, the Fondazione Pisana per la Scienza and the Italian Institute of Technology in Genoa.

#### **Job Opportunities**

On completion of the Programme, the PhD students are expected to have acquired a high level of training in experimental and/or clinical research methodologies, plus excellent skills in written and oral scientific communication. These achievements, besides the academic career, open the possibility to be part of a team of scientists in the area of biomedicine and health sciences, to apply for post-doc positions in highly qualified biomedical research centers, to collaborate with policy makers about scientific matters that impact health management, to translate discoveries and inventions from the most fundamental level to every day clinical usage.

#### **Highlights**

PhD students will carry their research project in a multidisciplinary environment, having the possibility to share their ideas with people with very different, but often complementary, scientific background. Direct access to high-quality research facilities is guaranteed by several ongoing agreements with top research institutes in Italy and Europe.

Besides the standard PhD programme, the Fondazione Gabriele Monasterio, in collaboration with the Institute of Life Sciences of the Scuola, offers a scientific-clinical track as part of the PhD Programme. Medical Doctors, holding a specialty degree in one of the FTGM clinical areas, may also apply for this integrated programme.

#### Info and contacts

info-phdlifesciences@santannapisa.it Phone: +39 050 882 604

