
















Annex 1 to the UNIPHD Call (Academic Year 2022/23)**Doctoral Courses & Research topics – PhDs are listed in alphabetical order per scientific domain**Research topics:  | Host Department:  | PhD Course Website: 


LIFE SCIENCES DOMAIN (LS) – 1/1	
Animal and food science	
	a) Food authenticity and quality (phenotypic, genetic and genomic aspects) b) Sustainability of livestock production systems (animal welfare, agroecology and biodiversity)
	Department of Agronomy, Food, Natural Resources, Animals and Environment
	https://www.phdanimalfoodscience.org
Arterial hypertension and vascular biology	
	a) Hyperaldosteronism and atrial fibrillation b) Out of the ivory tower: Detection of secondary arterial hypertension
	Department of Medicine
	https://www.medicinadimed.unipd.it/corsi/dottorati-di-ricerca/dottorati-internazionali/international-phd-program-arterial-hypertension
Biomedical sciences	
	a) Effects of exercise and inactivity in controlling the mitochondrial network and neuromuscular junction b) Mitochondria between degenerative diseases and cancer
	Department of Biomedical Sciences
	http://doctorate.biomed.unipd.it/
Biosciences	
	a) Molecular mechanisms of diseases b) From basic research in plant and animal biology towards biotechnological improvement and sustainable development
	Department of Biology
	https://dottorato.biologia.unipd.it
Crop science	
	a) Role of the epigenome in integrating environmental cues with developmental signal in food crops b) Global change and trophic interactions in agricultural and forest systems
	Department of Agronomy, Food, Natural Resources, Animals and Environment
	https://www.sciproveq.com/spv/?lang=en
Clinical and experimental oncology and immunology	
	a) Immunology of tumors b) Genetic susceptibility to cancer
	Department of Surgery, Oncology and Gastroenterology
	https://www.discoq.unipd.it/doctorate/mission
Pharmacological sciences	
	a) Pharmacologic and environmental modulation of biological aging b) Development of gerosuppressants and senolytic compounds for the treatment of aging and aging-related disorders
	Department of Pharmaceutical and Pharmacological Sciences
	https://www.dsfarm.unipd.it/ricerca/phd-graduate-programs/phd-degree-program-pharmacological-sciences
Translational specialist medicine “G.B. Morgagni”	
	a) Physiopathology of vascular complications in diabetes b) Translational research in arrhythmogenic cardiomyopathies: from animal models to clinics
	Department of Cardiac, Thoracic, Vascular Sciences and Public Health
	http://phdmorgagni.dctv.unipd.it/phd/index.php


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PHYSICAL SCIENCES AND ENGINEERING (PE) – 1/2	
Astronomy	
	a) Star and planet formation and evolution b) Galaxies and cosmology
	Department of Physics and Astronomy
	https://www.dfa.unipd.it/didattica/dottorati-di-ricerca/corso-di-dottorato-di-ricerca-in-astronomia/english-version/
Brain, mind and computer science (interdisciplinary course between PE and LS)	
	a) Computer science and innovation for societal challenges b) Neuroscience, technology and society
	Department of General Psychology
	http://hit.psy.unipd.it/BMCS
Geosciences	
	a) Deep Earth's volatile cycle: processes, fluxes and metasomatism b) Interdisciplinary studies of the geology and mechanics of natural and human-induced earthquakes
	Department of Geosciences
	https://www.geoscienze.unipd.it/corsi/scuola-dottorato
Industrial engineering	
	a) Industry 4.0 and industrial bioengineering b) Industrial and environmental energy sustainability
	Department of Industrial Engineering
	http://www.cdii.dii.unipd.it/en/
Information engineering	
	a) Ultra-reliable and low-latency wireless technologies for mission-critical applications b) Environmental sensing through millimeter wave radios
	Department of Information Engineering
	https://phd.dei.unipd.it/
Land, environment, resources and health (interdisciplinary course between PE and LS)	
	a) Ecosystem services at regional scale in the EU bio-economies b) The Vaia flood event: observations and prediction of sediment and large wood dynamics
	Department of Land, Environment, Agriculture and Forestry
	http://www.tesaf.unipd.it/en/lerh
Management engineering and real estate economics	
	a) Innovations of operations and technology management b) Innovation of new product and services development
	Department of Management and Engineering
	http://www.gest.unipd.it/en/research/phd-programmes/management-engineering-and-real-estate-economics?set_language=en
Mathematical sciences	
	a) Nonlinear differential equations and stochastic models b) Arithmetic and complex algebraic geometry
	Department of Mathematics
	https://dottorato.math.unipd.it/
Mechatronic and product innovation engineering	
	a) Innovative materials in future design of lightweight and sustainable products b) Advanced mechatronics technologies for future competitive industrial and logistics systems under the digital change
	Department of Management and Engineering
	http://www.gest.unipd.it/en/research/phd-programmes/mechatronics-and-product-innovation-engineering?set_language=en


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-  a) Nanochemistry for energy and health
b) Advanced targeted drugs and drug delivery systems

 Department of Chemical Sciences

 <https://phd.chimica.unipd.it/cdsm/>


Physics


-  a) Physics of the universe, from the micro to the macro-cosmos
b) Quantum- Bio- and Physics of complex systems: applications in data science, material science and living systems


 Department of Physics and Astronomy

 <https://www.dfa.unipd.it/didattica/dottorati-di-ricerca/phd-physics/>


Sciences, technologies and measurements for space


-  a) Study, development, realization and scientific utilization of aerospace instrumentation and systems
b) Study and development of sensors and instrumentation for measurements

 Centre of Studies and Activities for Space

 <https://cisas.unipd.it/phd-course-dottorato/phd-course-general-description>


SOCIAL SCIENCES AND HUMANITIES (SH) – 1/1**History, criticism and preservation of cultural heritage**


-  a) Historical landscapes: between research and sustainable management
b) Transdisciplinary and innovative approaches to cultural heritage

 Department of Cultural Heritage: Archaeology and History of Art, Cinema and Music

 <https://www.beniculturali.unipd.it/www/corsi/dottorati-di-ricerca/presentazione/>


Linguistic, philological and literary sciences


-  a) Linguistic change in morphology, syntax and phonology
b) Modern and contemporary comparative literatures

 Department of Linguistic and Literary Studies

 <http://www.maldura.unipd.it/disll-corso-di-dottorato/en.html>


Philosophy


-  a) The natural/artificial distinction
b) Philosophy of translation


 Department of Philosophy, Sociology, Education and Applied Psychology

 <https://elearning.unipd.it/scienzeumane/course/view.php?id=1888>


Psychological sciences


-  a) Innovative methods or technologies for assessment, intervention, or enhancement of psychological functions (cognitive and emotional)
b) Promoting development and well-being from early infancy to adulthood

 Department of Developmental Psychology and Socialisation

 <http://dottorato.psy.unipd.it/en>

Social sciences: interactions, communication, cultural construction

-  a) Technoscience in the public sphere
b) Anti-racist movements in European Cities

 Department of Philosophy, Sociology, Education and Applied Psychology

 <https://socialsciences.fisppa.unipd.it/en/>