

DOCTOR OF PHILOSOPHY (PHD)PROGRAMME IN**SCIENCE AND TECHNOLOGY FOR ENVIRONMENT AND HEALTH(STAS)**Coordinator: Prof Francesco Maria Guadagno, guadagno@unisannio.it

Interested applicants are encouraged to contact the coordinator for information on research topics

FACULTY & ADMINISTRATIONDepartment: *Scienze e Tecnologie* [Science and Technology]**DURATION**

3 years (36 Months)

POSITIONS AVAILABLE (14)

ORDINARY POSITIONS (8)	With University Scholarship	No. 6 (six)	<i>To participate in the selection the candidate, under penalty of exclusion, must expressly indicate in the application the topic for which he intends to present the project.</i>
	Without University Scholarship	No. 2 (two)	
1 (one) additional position* , which will be activated only if covered by a scholarship, following possible financing by the INPS (only for sons or orphans of public employees in Italy)	Type: Subject related to the "Industry 4.0" initiative - Innovative Intersectorial PhD.	N. 1	New formulations of geopolymer binders for sustainable construction and their fluidification
1 (one) additional position , with scholarship funded by the INPS (only for sons or orphans of public employees in Italy)	Type: Sustainable Development	N.1	Integrated monitoring for the security of linear infrastructures and at risk life-line through innovative remote sensing systems and low-cost ground sensors.
4 (four) additional positions (PON-FSC)* , which will be activated only if covered by a scholarship, following possible financing by the MUR- <i>Ministry of University and Research</i>		N.4	<p><i>* The additional position will not be activated without a scholarship (in the event of lack of funding by the MUR, Ministry of University and Research). For more information on this type of scholarship, please see the notice available at the following link:</i></p> <p>http://www.ponricerca.gov.it/media/395889/m_piao_odpfsrregistro-decreti-r-000123330-07-2020.pdf</p> <p>TOPICS</p> <ul style="list-style-type: none"> • The Mediterranean diet in the prevention and treatment of diabetic nephropathy and related cardiovascular complications;

			<ul style="list-style-type: none"> • Synthesis and validation of new anti-HMGB1 antibodies for an innovative diagnostic device and autoimmune diseases; • Animal welfare and product quality: role of innovative nutritional strategies for the development of inland areas; • Functional compounds from tomato agri-food waste: recovery, characterization and enhancement of functional compounds from secondary raw materials
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RESEARCH TOPIC for ordinary positions

1. *Role of edaphic microbial community in the maintenance of soil ecological stability and sustainability.*
2. *Study of morphological and physiological response induced by climate change on agri food interest plant.*
3. *Persistent Organic Pollutants (POP's) and heavy metals (HM's) in agricultural areas: a multipollutant assessment using machine learning algorithms.*
4. *Fungal potential for the degradation of petroleum-based polymers: macro and microplastics biodegradation.*
5. *Enhancement of autophagy for therapy of liver diseases.*
6. *Understanding the role of intermolecular interactions between centrosome and ribosome in cell division and rare genetic disorders.*
7. *Stratigraphic, sedimentological and kinematic evolution of Tertiary mountain wedges and extensional basins in the framework of the Western-Central Mediterranean subduction system.*
8. *Degradable polymeric materials from renewable resources for applications in biomedical applications and 3D printing.*
9. *Geo-Archaeology: Stratigraphic Geology studies and sedimentology near sites of cultural interest for the reconstruction of the natural scenery in order to promote sustainable geo-environmental tourism.*
10. *The versatility of phytocompounds: broad-spectrum bioactive molecules. Applications in the sanitary, zootechnical, food and cosmetic field.*
11. *The role of social media in the scientific research communication.*

Programme Entry Requirements

Italian second level (Masterequivalent) graduate degree ("laurea magistrale") or foreign degree deemed equivalent to an Italian second-level degree in one of the scientific disciplines relevant to the PhD Programme disciplinary areas

LM-6 Biologia
 LM-7 Biotecnologie agrarie
 LM-8 Biotecnologie industriali
 LM-9 Biotecnologie mediche, veterinarie e farmaceutiche
 LM-17 Fisica
 LM-18 Informatica
 LM-21 Ingegneria biomedica
 LM-22 Ingegneria chimica
 LM-32 Ingegneria informatica
 LM-35 Ingegneria per l'ambiente e il territorio
 LM-40 Matematica
 LM-41 Medicina e chirurgia
 LM-42 Medicina veterinaria

LM-46 Odontoiatria e protesi dentaria
 LM-48 Pianificazione territoriale urbanistica e ambientale
 LM-53 Scienza e ingegneria dei materiali
 LM-54 Scienze chimiche
 LM-60 Scienze della natura
 LM-69 Scienze e tecnologie agrarie
 LM-70 Scienze e tecnologie alimentari
 LM-71 Scienze e tecnologie della chimica industriale
 LM-73 Scienze e tecnologie forestali ed ambientali
 LM-74 Scienze e tecnologie geologiche
 LM-75 Scienze e tecnologie per l'ambiente e il territorio
 LM-79 Scienze geofisiche
 LM-80 Scienze geografiche
 LM-82 Scienze statistiche
 LM-86 Scienze zootecniche e tecnologie animali
 6/S (specialistiche in biologia)
 7/S (specialistiche in biotecnologie agrarie)
 8/S (specialistiche in biotecnologie industriali)
 9/S (specialistiche in biotecnologie mediche, veterinarie e farmaceutiche)
 20/S (specialistiche in fisica)
 21/S (specialistiche in geografia)
 23/S (specialistiche in informatica)
 26/S (specialistiche in ingegneria biomedica)
 27/S (specialistiche in ingegneria chimica)
 35/S (specialistiche in ingegneria informatica)
 38/S (specialistiche in ingegneria per l'ambiente e il territorio)
 45/S (specialistiche in matematica)
 46/S (specialistiche in medicina e chirurgia)
 47/S (specialistiche in medicina veterinaria)
 52/S (specialistiche in odontoiatria e protesi dentaria)
 54/S (specialistiche in pianificazione territoriale urbanistica e ambientale)
 61/S (specialistiche in scienza e ingegneria dei materiali)
 62/S (specialistiche in scienze chimiche)
 68/S (specialistiche in scienze della natura)
 74/S (specialistiche in scienze e gestione delle risorse rurali e forestali)
 77/S (specialistiche in scienze e tecnologie agrarie)
 78/S (specialistiche in scienze e tecnologie agroalimentari)
 79/S (specialistiche in scienze e tecnologie agrozootecniche)
 81/S (specialistiche in scienze e tecnologie della chimica industriale)
 82/S (specialistiche in scienze e tecnologie per l'ambiente e il territorio)
 85/S (specialistiche in scienze geofisiche)
 86/S (specialistiche in scienze geologiche)
 91/S (specialistiche in statistica economica, finanziaria ed attuariale)

Selection-Admissions: Policies & Procedures	Evaluation of Qualifications and Oral Test		
	Evaluation of qualifications by reviewing submitted candidate Curriculum Vitae and relevant documentation	Up to 40 points	a) Final graduating marks and Dissertation Topic (up to 30 points); b) Other (up to 10 points) <ul style="list-style-type: none"> ● Reference letter(s) by scholars external to the University; ● Publications; ● Other training and/or research activities undertaken ● Foreign language certifications and other certifications
	Oral Test Interview	30 to 60 points	The interview (oral test) will last approximately 20 mins. Applicants are invited to prepare a presentation, of up to 15 mins, on the chosen research topic, including use of audiovisual

			<p>media. Candidates' English language skills and proficiency will also be evaluated on this occasion.</p> <p>Candidates would need to achieve a minimum grade of 30/60 in the interview in order to pass the oral test.</p> <p>The interview may be conducted via "teleconference" for foreign applicants or for Italian applicants where circumstances so warrant, which should be justified on the basis of appropriate documentationsubmitted with the request.</p>
Selection- Admission Tests: Schedules			
	Oral Test	<p>Oral Test (interview) dates, times and venues will be announced by way of a notice published on the University website at:http://www.unisannio.it/it/studente/laureato/dottorato-di-ricerca</p>	