

Ph.D. PROGRAMME IN ECOLOGY AND SUSTAINABLE MANAGEMENT OF ENVIRONMENTAL RESOURCES			
Coordinator	Prof. Claudio CARERE		
Department	Department of Ecological and Biological Sciences		
Program duration	3 years: 1 st November 2023 – 31 th October 2026 PhD Thesis due date: 30 th September 2026		
Program objectives	<p>The PhD Program in "Ecology and Sustainable Management of Environmental Resources" is active at the Department of Ecological and Biological Sciences (DEB). It is an innovative program with high interdisciplinarity, in which themes of ecological, biological, agro-forestry and chemical sciences converge. The unifying theme is the application of general principles of Life Sciences for the purpose of sustainable management of environmental and natural resources: from biodiversity, to agricultural and forestry resources, to biomolecules. The aim of the course is training in the field of basic and applied ecological research with particular regard to the sustainable use of natural resources, environmental management, eco-sustainable optimization of production processes (including the development of new green active compounds) and the mitigation of human impacts on biodiversity at all organization levels. PhD students will acquire the skills needed to address complex and multidisciplinary problems associated with both the research activity and the management and conservation of natural resources. From a training point of view, specific objectives are: i) to provide the skills needed to operate in highly multidisciplinary scientific research areas with a high degree of autonomy, originality and the use of rigorous methodological approaches; (ii) to drive the development of communication skills in presenting research results and in drafting competitive scientific projects. According to these goals, compulsory educational activities aimed at enhancing language proficiency, data analysis capabilities, and the ability to disseminate scientific results will be offered. The multidisciplinary nature of the research developed by the members of the Scientific Board ('Collegio dei Docenti') matches with the width of the course, including many different disciplines ranging from green chemistry to forestry, from molecular genetics to evolutionary ecology also in relation to global change.</p>		
No. of positions	Total positions	14	
	Positions with scholarships funded by the University of Tuscia	5	
	Positions with "PNRR Research" scholarship	3	D.M. 118/2022 - M4C1 Inv. 4.1
	Positions with "PNRR DM 117" scholarship	5	D.M. 117/2022- M4C2 Inv. 3.3
	Positions without scholarship	1	

<p>Scholarships funded by University of Tuscia</p>	<p>Two (2) scholarships funded by the Ecological and Biological Sciences Department on the following topics (Project leader: Prof. Marco Marcelli):</p> <ul style="list-style-type: none"> - “Study on coralligenous biocenosis in the reef habitat of Civitavecchia” - “Characterization of <i>Posidonia</i> beds in the marine-coastal area of Civitavecchia with molecular ecology methods” <p>One (1) scholarship co-funded by the Ecological and Biological Sciences Department and by The University of Tuscia on the topic” (Project leader: Prof. Laura Selbmann)</p> <ul style="list-style-type: none"> - “Survival of Antarctic cryptoendolithic communities under simulated Martian conditions” <p>Two (2) scholarships funded by the University of Tuscia on the following topics:</p> <ul style="list-style-type: none"> - “Phenotypic plasticity and biodiversity patterns: from genes to ecosystem functions.” - “Innovative methods for the study and monitoring of insect pollinators diversity”
<p>Positions with “PNRR DM 117/2023” scholarship</p>	<p>M4C2 Inv. 3.3 “Innovative doctorates aimed at strengthening the demand of innovation of enterprises and promoting the employment of researchers by enterprises”</p> <p>Five (5) scholarships on the topics:</p> <ol style="list-style-type: none"> a. “Mapping and monitoring old-growth forests” b. “Extraction characterization and synthesis of simplification and complications products of lead compounds from plant matrices with potential pharmaceutical and cosmeceutical interest” c. “Adaptation of birds to urbanization” d. “Design and development of novel nutraceuticals for functional food” e. “Novel approaches and technologies for environmental monitoring”
<p>Positions with “PNRR DM 118/2023” scholarship</p>	<p>M4C1 Inv. 4.1 – “PNRR Research”</p> <p>Three (3) scholarships on the topics:</p> <ol style="list-style-type: none"> a. “Biodiversity monitoring through the use of biomolecular approaches (metabarcoding, metagenomics) based on massive sequencing of environmental DNA from abiotic water samples” b. “Resurrection ecology in conservation biology” c. “Characterization of the oceanographic features of the coastal area of Latium through innovative and autonomous methods”
	<p>Please note that the acceptance of a PNRR scholarship implies obligations additional to those of a regular scholarship: see art. 17 of this Call.</p>
<p>Position without scholarship</p>	<p>The topic of the position is the following: “Development of low-cost technologies applied to the study of marine ecosystems”</p>
<p>Admission requirements</p>	<p>Application to the public competition is open to all who, by the date this call expires, possess one of the qualifications listed hereunder, regardless of age and citizenship:</p>



	<ul style="list-style-type: none"> - an Italian “laurea specialistica” obtained according to the Ministerial Decree n. 509/1999; - an Italian “laurea magistrale” obtained according to the Ministerial Decree n. 270/2004; - an Italian equivalent university degree obtained under Italian regulations previously in force and whose length is no less than 4 years; - a foreign degree equivalent to those mentioned above. <p>Admission is also open to those who will finish their degree by October 31st 2023. In such cases admission will be “conditional”; the applicants will send by mail (dottorati@unitus.it) or hand out to the “Ufficio Offerta Formativa” a self-certification of the relative degree (a certification in case of Non-EU students). Self-certification (or certification in case of Non-EU students) should state the name of the awarding University, award date, grade and type of qualification (“vecchio ordinamento”, “Specialistica”/“magistrale”) and a copy of a valid identity document. Applicants not possessing the admission requirements yet, must indicate the expected date of graduation/qualification.</p>
<p>Evaluation of candidates (maximum score: 80/80 points)</p>	<p>Evaluation of academic qualification and oral interview including English language knowledge</p> <p>The results of the evaluation of academic ranking will be published on the Tuscia University web site (www.unitus.it) at the section “Didattica” (then see under “Dottorati di Ricerca”). The score obtained will be added to the score of the oral examinations to give the final total. The results will be published on the Tuscia University web site at the section “Didattica” (“Dottorati di Ricerca”).</p> <p>Along with the application form, the candidates must present a research project concerning one of the topics of the Ph.D (listed above), with a maximum length of 3 pages, written in Italian or in English. The research project will be discussed during the oral exam.</p> <p>All the (non-mother language) applicants will be evaluated for their English language during the oral examination.</p>
<p>Evaluation criteria for academic qualification (maximum score: 20/80 points)</p>	<ul style="list-style-type: none"> - Academic career (Certificate with the list of marks obtained during the academic career and final grade): max score: 6 points - Scientific publications related to the topics of Ph.D.: max score 6 points - Participation in research projects: max score: 4 points - Professional experiences and other qualifications considered useful: max score 4 points
<p>Evaluation of the oral exam</p>	<p>Oral exam: maximum score 60/80 points</p> <p>Minimum score required to pass the oral interview 21/80 points</p> <p>To gain access to the oral interview, candidates must have attained a minimum score of 21/80 points.</p> <p>Language for the examinations: Italian (Italian candidates, with a further English exam) or English (foreign candidates)</p>



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Examination topics	The oral interview, to ascertain the scientific attitude of the candidates, will focus on the discussion of the research project and the themes of the PhD programme
Exam dates and location	The exams will take place between September 11 th and September 29 th 2023. The date(s) of the oral interview will be published on the University website www.unitus.it >Didattica>Offerta post lauream> Dottorati di Ricerca after the deadline of the application call.
Contacts	Contact persons: Prof. Claudio CARERE (Coordinator) e-mail: dottorato.eco@unitus.it Dr. Fabrizio SCIALANCA e-mail: fabrizio.scialanca@unitus.it