

Ph.D. PROGRAMME IN ECOLOGY AND SUSTAINABLE MANAGEMENT OF ENVIRONMENTAL RESOURCES	
Coordinator	Prof. Massimiliano Fenice
Department	Department of Ecological and Biological Sciences
Program duration	3 years: 1 st November 2026 - 31 st October 2029 PhD Thesis due date: 30 th September 2029
Program objectives	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.	
No. of positions	Total positions	8
	Scholarships cofunded by the University of Tuscia, external institutions, and research funds	7
	Position without scholarship	1
Period abroad	PhD students are invited to spend a period of study and research abroad at international universities, companies, or research institutions. The total duration of these stays abroad for each PhD student must be at least 3 months. PhD students, with and without scholarship - with the exception of the positions mentioned in Article 9, paragraph 6 of Ministerial Decree 226/2021 - are entitled to an additional budget of at least 50% of the scholarship amount. This is for periods abroad not exceeding the duration specified above, subject to any further funding becoming available. In any case, the scholarship increase is only granted for continuous periods of no less than thirty days.	
Scholarships cofunded by the University of Tuscia, external institutions, and research funds	No. 7 (seven) scholarships on the following topics: a. "Biological interactions in marine aquatic ecosystems" Project leader: Dr. Marialetizia Palomba Funded by the University of Tuscia b. "Synthesis and enhancement of natural and semi-synthetic products for applications in the pharmaceutical and nutraceutical fields" Project leader: Prof. Bruno Mattia Bizzarri Co-funded by UPB "DEB.PNRR_ORIGINALE" - CUP B83C22002870006	



	c. “Zoning and biodiversity patterns in protected areas: multiscale impact and effectiveness analysis” Project leader: Prof. Daniele Canestrelli Co-funded by UPB “DEB.ENTE_PARCO_ALVEARE” - CUP D31G24000050002 d. “Reconstructing and Resuscitating the Past: Integrated Approaches of Paleoecology, Historical Ecology, and Resurrection Ecology for the Study of Environmental Adaptation” Project leader: Prof. Gianluca Piovesan Co-funded by UPB “DEB.CUFAA_SABAUDIA” e. “From Plant Ecophysiological Responses to Animal Plasticity: Effects of Drought in Mediterranean Forests” Project leader: Prof. Flavia Tauro Co-funded by UPB “DIBAF.FIS.TAURO2025” - CUP J53C25002220001 f. “Development of innovative tools for the aquaculture of marine species of conservation and fisheries interest.” Project leader: Prof. Daniele Canestrelli Co-funded by the Council for Agricultural Research and Agricultural Economics Analysis (CREA) g. “Integrated bioinformatic analysis of omics and structural big data in organisms with high CO₂ capture efficiency using artificial intelligence approaches.” Project leader: Prof.ssa Tiziana Castrignano Co-funded by the Institute of Atmospheric Pollution (CNR-IIA)
Position without scholarship	No. 1 (one) position aimed at carrying out research on the following topic: “Toxicological risk assessment of environmental contaminants” Project leader: Prof.ssa Roberta Meschini



Admission requirements	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: - an Italian “laurea specialistica” (Master’s degree) obtained according to the Ministerial Decree n. 509/1999, belonging to one of the following degree classes: 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) 13/S (Specialistiche in farmacia e farmacia industriale) 21/S (specialistiche in geografia) 23/S (specialistiche in Informatica) 26/S (specialistiche in Ingegneria biomedical) 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) 50/S (specialistiche in modellistica matematico-fisica per l'ingegneria) 54/S (specialistiche in pianificazione territoriale urbanistica e ambientale) 61/S (specialistiche in scienza e ingegneria dei materiali) 62/S (specialistiche in scienze chimiche) 66/S (specialistiche in scienze dell'universo) 68/S (specialistiche in scienze della natura) 69/S (specialistiche in scienze della nutrizione umana) 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)
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	industriale) 82/S (specialistiche in scienze e tecnologie per l'ambiente e il territorio) 83/S (specialistiche in scienze economiche per l'ambiente e la cultura) 85/S (specialistiche in scienze geofisiche) 86/S (specialistiche in scienze geologiche) 92/S (specialistiche in statistica per la ricerca sperimentale) - an Italian "laurea magistrale" (Master's degree) obtained according to the Ministerial Decree n. 270/2004, belonging to one of the following degree classes: LM-3 Architettura del paesaggio LM-6 Biologia LM-7 Biotecnologie agrarie LM-8 Biotecnologie industriali LM-9 Biotecnologie mediche, veterinarie e farmaceutiche LM-13 Farmacia e farmacia industriale LM-21 Ingegneria biomedica LM-22 Ingegneria chimica LM-32 Ingegneria informatica LM-35 Ingegneria per l'ambiente e il territorio LM-42 Medicina veterinaria LM-44 Modellistica matematico-fisica per l'ingegneria LM-53 Scienza e ingegneria dei materiali LM-54 Scienze chimiche LM-58 Scienze dell'universo LM-60 Scienze della natura LM-61 Scienze della nutrizione umana 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-76 Scienze economiche per l'ambiente e la cultura
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	LM-79 Scienze geofisiche LM-80 Scienze geografiche LM-86 Scienze zootecniche e tecnologie animali LM Sc. Mat. Scienze dei materiali LM-Data Data science - 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. Applications can be submitted also by graduate students who are going to graduate no later than 31st October 2026.
Evaluation of candidates (maximum score: 80/80 points)	Evaluation of qualifications, written examination (held in person at the Department of Ecological and Biological Sciences of the University of Tuscia in Viterbo, Italy), and oral examination including verification of English language proficiency. The evaluation of qualifications is preliminary to the written examination. The final score is the sum of the marks obtained in the evaluation of qualifications, the written examination, and the oral examination. The results will be published on the PhD Programs page of the University of Tuscia. 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. All the (non-mother language) applicants will be evaluated for their English language during the oral examination.
Evaluation criteria for academic qualification (maximum score: 15/80 points)	- Academic career (Certificate with the list of marks obtained during the academic career and final grade): max score: 7 points - Scientific publications related to the topics of Ph.D.: max score 3 points - Participation in research projects: max score: 2 points - Professional experiences and other qualifications considered



	useful: max score 3 points
Evaluation of written exam (in person)	Written exam: maximum score 20/80 Minimum score: 10/80
Written examination procedure	The written examination will take place in person at the Department of Ecological and Biological Sciences, University of Tuscia, Viterbo (Italy) and will consist of writing an abstract in English based on a scientific article provided by the Committee (maximum 1 page / approximately 350 words).
Evaluation of the oral exam	Oral exam: maximum score 45/80 points Minimum score required to pass the oral interview 18/80 points Language for the examinations: Italian (Italian candidates, with a further English exam) or English (foreign candidates)
Oral examination procedure	The interview, aimed at ascertaining the aptitude of candidates for scientific research, will focus on the presentation and discussion of the proposed research project, on the research topics of the PhD program and on knowledge of the English language.
Exam dates and location	The exams will be held by 25 September 2026. The complete examinations schedule will be published on the PhD Programs page of the University of Tuscia, by the deadline of the application call.
Contacts	Contact persons: Prof. Massimiliano Fenice (Coordinator): e-mail: fenice@unitus.it Dr. Fabrizio Scialanca: e-mail: dottorato.eco@unitus.it