

ANNEX 1/c		
PhD program: SCIENCE		
XXXVIII CYCLE – a.y. 2022-2023		
Department	Department of Sciences - Potenza	
Coordinator	Prof.ssa Patrizia FALABELLA e-mail: patrizia.falabella@unibas.it	
Duration	3 years	
Web site	http://scienze.unibas.it/site/home/didattica/offerta-post-laurea.html	
Curricula	<ol style="list-style-type: none"> 1. Applied Biology 2. Geo-Sciences 3. Chemical Sciences 	
Aims and topics	<p>The Ph.D. "Science" brings together the educational and research experiences already gained, in the field of tertiary education, within the Department of Science. The course fits into the interdisciplinary field of chemical, geological, biological, pharmaceutical and natural sciences and is intended to provide students with tools for applied research in animal, plant, microbial and environmental biology, also through a One Health approach. The Ph.D. in "Science," incorporating the principles of the Program for a "Zero Waste Europe," aims to provide Ph.D. students with the basic concepts for the proper use of natural resources, green chemistry and the circular economy, i.e., an industrial economy in which any innovation in the production cycle must aspire to zero residue, aiming to reuse any material already used in the process, the development of new green technologies and processes and the design of new eco-friendly products. The course aims to provide the skills needed to carry out, at universities, research centers, public institutions or private entities, highly qualified research activities while contributing to the realization of the European Higher Education Area and the European Research Area and to the professional training of PhDs in line with the requirements of the recruitment policies of the National Recovery and Resilience Plan. The aim is to provide students with a solid preparation in both scientific knowledge and applied solutions (scientific method, ability to write and manage research projects, patenting skills, etc.), in order to conduct advanced research and experimentation and to know how to evaluate and exploit the results. In particular, the course aims to provide the tools to work in the fields of biology and chemistry, both basic and applied, as well as in the fields of environmental control and monitoring, control and use of resources and geo-resources, and the study of systems of geological interest.</p>	
Admission requirements	<ol style="list-style-type: none"> a) University degree obtained under the previous educational systems (ex ante D.M. 509/99, whose legal course has at least a four-year term); b) Laurea specialistica/magistrale (D.M. 509/99 and Dm 270/2004); c) Academic title obtained abroad and eligible for access to the PhD programme, previously recognized by academic authorities, even in the context of inter-university cooperation and mobility agreements. In the absence of such approval, the candidate must apply a request in the application form according to the Art. 3 of this call. 	
Available positions	12	With scholarship
		Without scholarship
		12
		0

<p>Type of scholarships (Description awarding entity and research topic)</p>	<p>D.M. 351/2022 M4C1-INV.4.1</p>	<p><u>3 Scholarship "PNRR-Research"</u></p> <p>on one of the following topics:</p> <ol style="list-style-type: none"> 1) "Bioactive molecules from insects and their applications" (curriculum Applied Biology) 2) "Development of precision anticancer therapies through the use of molecules capable of inhibiting or reprogramming the activity of new and specific molecular targets" (curriculum Applied Biology) 3) "Identification and evaluation of gender-specific biomarkers in chronic diseases" (curriculum Applied Biology) 4) "New technologies for the purification of wastewater and polluted water" (curriculum Geo-Sciences) 5) "Climate change and landscape vulnerability inland of the Ionian coast" (curriculum Geo-Sciences) 6) "Development of novel approaches for the assignment of the absolute stereochemistry of natural molecules of pharmaceutical and agrochemical interest" (curriculum Chemical Sciences) 7) "Starting material" / "Biomimetic and/or eco-friendly syntheses of biologically active products using natural metabolites as starting material" (curriculum Chemical Sciences) 8) "Synthesis of silver and gold complexes stabilized by N-heterocyclic carbene ligands: application in catalytically sustainable processes and primary evaluation of their pharmacological activity" (curriculum Chemical Sciences) <p>A period abroad is mandatory.</p>
	<p>Borse D.M. 352/2022</p>	<p><u>1 scholarship in collaboration with the company "LAB- INSTRUMENTS SRL [Castellana Grotte (MT)]"</u></p> <p>Topic: "New Methods for the Multi-Residue Analyses of Polar Pesticides in Food Matrices" (curriculum Geo-Sciences)</p> <p><u>2 scholarships in collaboration with the company "TotalEnergies EP Italia SpA (Milano)"</u></p> <p>on one of the following topics:</p> <ol style="list-style-type: none"> 1) "Insect-mediated bioconversion of by-products of the agri-food chain into valuable products, with particular attention to the lipid component" (curriculum Applied Biology) 2) "Insect cell lines: a sustainable source of novel food" (curriculum Applied Biology)

		<p><u>1 scholarship in collaboration with the company "NUTRACEUTICA SRL [Monterenzio (BO)]"</u></p> <p>Topic: 'Phytochemical profile and cytoprotective activity of <i>Malus domestica</i> extracts' (curriculum Applied Biology)</p> <p>A period in the company and abroad is mandatory.</p>	
	Ateneo	<p><u>4 scholarships</u> on a topic chosen from those already indicated for the DD.MM. 351/2022 e 352/2022.</p> <p>A period in the company and abroad is mandatory.</p>	
	Department of Sciences	<p><u>1 scholarship</u></p> <p>Topic: "Detailed geological mapping and structural analysis of an area falling on the 489 sheet "Muro Lucano" of the 1:50.000 geological map of Italy, according to the standards used for the CARG project (geological and geothematic cartography)" (curriculum Geo-Sciences).</p> <p>A period abroad is mandatory.</p>	
Positions reserved for graduates in foreign universities		With scholarship	Without scholarship
		0	0
Admission procedure	<p>The admission procedure is conducted through the:</p> <p>a) evaluation of qualifications</p> <p>b) evaluation, as part of the interview, of a research project, drawn up in Italian and English using the format set out in Annex C to the call for proposals, concerning the subject/type of grant for which you are competing (Ministerial Decree 351/2022, Ministerial Decree 352/2022, another specific topic)</p> <p>c) video conference interview using google meet</p>		
Evaluation criteria	<p>a) evaluation of qualifications: up to a maximum of 25 points minimum score to access the interview 15 points</p> <p>b) interview: up to a maximum of 75 points the interview is passed for a score not less than 45 points</p> <p>Minimum total score: 60 out of 100</p>		
Assessable qualifications	Graduation Thesis (The graduate candidate must attach the entire thesis; the candidate graduating a summary of the thesis project, in Italian or English, of max 16.000 characters)		Up to 5 points
	Degree mark (For candidates who have not yet obtained the degree, the weighted average of the marks obtained in all the exams of the degree program, taken on the date of submission of the application for admission, will be evaluated)		Up to 16 points

	<p>Scientific publications (Articles in national and international scientific journals, proceedings of scientific conferences, books or book chapters)</p>	Up to 2 points
	<p>Other titles (University degrees or Master Specialization, Research Grants, Scholarships, Erasmus scholarships and periods of activity abroad)</p>	Up to 2 points
Interview program	<p>The interview, which can be held in Italian or English, will focus on the discussion of the submitted research project and is aimed at ascertaining the candidate's scientific interests and aptitude for research.</p> <p>During the interview, the knowledge of the Italian language will be ascertained for foreign candidates.</p>	
Foreign language	English (knowledge of a foreign language will be assessed during the interview)	
Schedule of the admission tests	<p>Evaluation of qualifications: results will be available from <u>September 8, 2022</u> on the website http://portale.unibas.it/site/home/didattica/dottorati-di-ricerca.html</p> <p>Day of the video conference interview: <u>September 13, 2022 - 10:00 a.m.</u></p>	