

PhD Programme table 37th cycle – PON Call for application “Ricerca e Innovazione” 2014 – 2020



UNIONE EUROPEA
Fondo Sociale Europeo



PROGRAMME'S NAME	EARTH, LIFE AND ENVIRONMENTAL SCIENCES
DURATION	3 years
PROGRAMME START DATE	01/01/2022
LANGUAGE	Italian, English
COORDINATOR	Prof. Maria Giovanna Belcastro (maria.belcastro@unibo.it)
CURRICULA	1. Geology 2. Biology
RESEARCH TOPICS	Detailed list at the bottom of the present document
PhD POSITIONS	4
ADMISSION PROCEDURE	Qualifications and research proposal evaluation

Available Positions and Scholarships

Actions	Pos. n.	Financial Support	Research topic
Action IV.5 – “PhDs on green topics”	1	PhD Scholarship	Forecasting long-term effects of climate change on the discharge of main Italian springs for public water supply
	2	PhD Scholarship	The museal entomological collections as an environmental memory of global change
	3	PhD Scholarship	Carbon-based biomaterials for the recovery of Critical Raw Materials (CRMs) from soils, sediments, industrial and contaminated waters
	4	PhD Scholarship	Pollination service for environmental sustainability: citizen science and scientific monitoring

Required and Supporting Documents to be attached to the application

(only documents in Italian, English, French, German and Spanish shall be considered as valid and be assessed by the Admission Board)

Only qualifications obtained during the last 5 calendar years shall be taken into consideration, except for the University Degree. **The Admission Board will assess the relevance of the supporting documents to the criteria listed in Art. 3 of the Ministerial Decree 1061/2021 (see also Art. 4 of the Call for applications).**

REQUIRED DOCUMENTS	
Identity document	Valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae	No specific CV format is required
Degrees	Documents attesting the awarding of the first and second cycle degrees (see Art. 3 of the Call for Applications)
Research proposal	Multi-annual research proposal, with special emphasis on the activities to be completed during the first-year course. The proposal must meet the following requirements:

AFORM Settore Dottorato di ricerca

Strada Maggiore 45 | 40125 Bologna | Italia | Tel. + 39 051 2094620 | aform.udottricerca@unibo.it

	<ul style="list-style-type: none"> - it cannot exceed 20,000 characters, including spaces and formulas, if present. This figure does not include: the title, the outline, references and images (such as graphs, diagrams, tables etc. - where present); - it must be written following the template provided for Action IV.5 “PhDs on Green topics”. The template is attached to the Call for Application and available for download on the University website.
SUPPORTING DOCUMENTS	
Publications	Lists of publications (i.e. monographs, articles on scientific journals), minor publications (conference papers, etc.), abstracts and posters presented during national and international conferences, etc.

Evaluation criteria

The **results of the admission exams** will be available **from 03/11/2021** on [Studenti Online](#) (select “summary of the requests in progress” > “see detail” and open the .pdf file at the bottom of the page). **No personal written communication will be sent to applicants concerning the examinations results.**

Scores will be expressed in points out of 100, as follows.

Minimum score for eligibility: 60 points, Maximum score: 100 points

Qualifications evaluation	University degree final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	10 points max
	Publications	10 points max
Research proposal evaluation		80 points max

Research Topics

n. 1 - GREEN

Thematic area SNSI 2014-20	Health, nutrition, quality of life
PNR 2021-2027	5.5.2 Climate change, mitigation and adaptation
Project title	Forecasting long-term effects of climate change on the discharge of main Italian springs for public water supply
Project description	The objective is to quantify the effects of climate change, at 2040-2060, on the discharge of important Italian springs for public wate supply. The project will be divided into 3 phases: <ol style="list-style-type: none"> 1. creation of a data set of secular historical flow series. 2. statistical analysis and correlation of the historical series of weather and discharge data. 3. prediction of future impacts on the discharge process in light of a) the expected effects of weather dynamics and b) the identified correlation between weather and spring flow.
Mandatory traineeship	6 months
Company name or type	Management of integrated water service
Stay abroad	6 months

n. 2 - GREEN

Thematic area SNSI 2014-20	Health, nutrition, quality of life
PNR 2021-2027	5.5.2 Climate change, mitigation and adaptation
Project title	The museal entomological collections as an environmental memory of global change
Project description	Lepidoptera are an important guiding group for assessing the structure of biocenoses. The project will contribute to the main European databases with a relational database built on a historical collection followed by analyses to evaluate spatial-temporal trends of specific and phylogenetic diversity and identification of drivers in specific case studies.

	This will result in scientific products (papers on journals with IF; contribution to European databases for the study of GC) and possibly dissemination (temporary exhibitions, Citizen Science initiatives).
Mandatory traineeship	6 months
Company name or type	Biodiversity monitoring services and environmental data analysis for applied ecology interventions.
Stay abroad	6 months

n. 3 - GREEN

Thematic area SNSI 2014-20	Health, nutrition, quality of life
PNR 2021-2027	5.5.2 Climate change, mitigation and adaptation
Project title	Carbon-based biomaterials for the recovery of Critical Raw Materials (CRMs) from soils, sediments, industrial and contaminated waters
Project description	Biochar is a vegetable carbon produced from biomass by pyrolysis. Biochar can replace activated carbon as a filtering and/or adsorbing medium in several processes. Through conditioning, biochar can be modified. The project has the ambition to demonstrate how biochar and some of its conditioned derivatives, can act as a substrate carrier for the removal and subsequent recovery and use of some Critical Raw Materials (CRMs) from natural substrates and industrial and contaminated wastewater.
Mandatory traineeship	6 months
Company name or type	Production of natural fertilizers. Valorization of industrial soils, waters and wastes through remediation and recovery projects.
Stay abroad	6 months

n. 4 - GREEN

Thematic area SNSI 2014-20	Health, nutrition, quality of life
PNR 2021-2027	5.5.2 Climate change, mitigation and adaptation
Project title	Pollination service for environmental sustainability: citizen science and scientific monitoring
Project description	Pollinator decline poses a threat to ecosystem stability and food security. Pollination is a priority ecosystem service, strategic at the global and European level. In line with the EU Pollinator Initiative, the project foresees the validation of indicators to assess: 1) environmental and socio-economic impacts of monitoring through participatory science, 2) effectiveness of agri-environmental measures and sustainable management practices (pesticide reduction, greening measures).
Mandatory traineeship	6 months
Company name or type	Evaluation of policies and programs co-financed by the EU and technical assistance to Managing Authorities involved in the implementation of Community Programs
Stay abroad	6 months