

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



UNIONE EUROPEA
Fondo Sociale Europeo



PROGRAMME'S NAME	STATISTICAL SCIENCES
DURATION	3 years
PROGRAMME START DATE	01/01/2022
LANGUAGE	Italian, English
COORDINATOR	Prof. Monica Chiogna (monica.chiogna2@unibo.it)
CURRICULA	N/A
RESEARCH TOPICS	Detailed list at the bottom of the present document
PHD POSITIONS	3
ADMISSION PROCEDURE	Qualifications and research proposal evaluation

Available Positions and Scholarships

Actions	Pos. n.	Financial Support	Research topic
Action IV.4 “PhDs on Innovation topics”	1	PhD Scholarship	Measuring and mapping digital skills to enhance human capital and promote innovation
Action IV.5 “PhDs on green topics”	2	PhD Scholarship	Optimization of methods for data collection and analysis to reduce the impact on the environment of ENI’s activities
	3	PhD Scholarship	Climate risk and sustainable transition of the EU market

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: <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 templates provided for Action IV.5 “PhDs on Green topics”. The templates are 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.
Thesis abstract	Abstract of the second cycle degree thesis . Graduands may submit the draft of their thesis (abstracts cannot exceed 2.000 characters, including spaces and formulas, if present. The above figure does not include: title, outline, images such as graphs, diagrams, tables etc. if present)

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.

Qualifications evaluation	University degree final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM).	15 points max: - 15 points for 110 and Lode - 12 points for 106 to 110 included - 10 points for 100 to 105 included - 7 points for 90 to 99 included - 5 points under 89 included
	Thesis abstract, with respect to the consistency with the research project	10 points max
	Publications	5 points max
Research proposal evaluation	Scientific value and innovative nature of the proposal	30 points max
	Ability of the project to foster the synergy between research and the productive world	5 points max
	Identification of parameters allowing the measurability of expected results	5 points max
	Adherence of the proposal to the objectives of the Action PON R&I 2014-20	30 points max

Research Topics

n. 1 - INNOVATION

Thematic area SNSI 2014-20	Digital Agenda, Smart Communities, Smart Mobility Systems
PNR 2021-2027*	5.2 Humanistic Culture, Creativity, Social Transformations, Society of Inclusion 5.2.5 Social transformations and society of inclusion Articulations: 3 Inequality, 9 Technological transformations and people-centered design 5.4 Digital, Industry, Aerospace 5.4.1 Digital transition - i4.0 Articulations: 1 Human-centered services, 3 Country competitiveness
Project title	Measuring and mapping digital skills to enhance human capital and promote innovation
Project description	Objective: to study the diffusion of digital skills and access to individual enabling technologies, in relation to the demand expressed by businesses. The relationship between inequalities with respect to these skills and inequalities in demographic dimensions (gender), socio-economic (income), geographic areas (metropolitan and marginal), will help in the definition of policies to stimulate innovation in production processes that companies can achieve through the acquisition of human capital with high digital skills.

Mandatory traineeship	6
Company name or type	Leading company in the analysis of the demand for digital skills expressed by the economic entrepreneurial fabric and distinguished by the offer to companies of skills to support digital transformation and investment in digital innovation.
Stay abroad	No

n. 2 - GREEN

Thematic area SNSI 2014-20	Smart and sustainable industry, energy and environment
PNR 2021-2027*	5.5.2 Climate change, mitigation, and adaptation. Articulation 5. Methods and tools for accounting for climate-altering agent emissions
Project title	Optimization of methods of data collection and analysis for the reduction of the impact on the environment of ENI's activities
Project description	The Ph.D. student will contribute to improving methods for data collection and analysis to reduce the impact on the environment of ENI's activities by: <ul style="list-style-type: none"> - identification of optimal air and water data acquisition strategies - data analysis, also through machine learning methodologies, to identify trends, anomalies and relationships between variables - reviewing and improving the indices for assessing the efficiency of monitoring, water management and emissions reduction - evaluation of the accuracy of the indices.
Mandatory traineeship	12 months
Company name or type	A global energy group whose activities range from natural gas and fuel oil to electricity from cogeneration and renewable sources, including both traditional and organic refining and chemicals.
Stay abroad	No

n. 3 - GREEN

Thematic area SNSI 2014-20	Intelligent and sustainable industry, energy and environment
PNR 2021-2027*	5.5.2 Climate change, mitigation and adaptation. Articulation 6-evaluation of the effectiveness and sustainability of mitigation measures.
Project title	Climate risk and sustainable transition of the EU market
Project description	The project aims to train high competences for research in the field of financial hedging of natural risks related to the transition to a supply based on renewable energy sources in view of a sustainable market transition. The modeling of complex events as well as the use of artificial intelligence and quantum techniques that take into account the contagion effects of the phenomena of interest are among the project objectives. The project will contribute to enhance synergistic and cooperative collaboration between business and academia.
Mandatory traineeship	6 months
Company name or type	The company where the Ph.D. student will spend the six-month period is a global leader in digital transformation with particular reference to products to facilitate decarbonization, the development of sustainable and secure technologies, from the area of quantum computing to the management of satellite data.
Stay abroad	No

*the translation of PNR 2021-2027 has been carried out by the PhD Unit