

**PhD Programme Table - 39th cycle**  
**Call for Applications for further PhD positions**  
**funded by Next Generation EU - NRRP ex M.D. 117/2023 and 118/2023**  
**and from other sources - PhD Programmes (39th cycle)**  
**A.Y. 2023/2024**



Section "Available Positions and Scholarships" integrated on 20/07/2023

Section "Available Positions and Scholarships" integrated on 02/08/2023

PROGRAMME'S NAME	<b>FUTURE EARTH, CLIMATE CHANGE AND SOCIETAL CHALLENGES</b>
DURATION	3 years
PROGRAMME START DATE	01/11/2023 (DD/MM/YYYY)
LANGUAGES	English
COORDINATOR	Prof. Silvana Di Sabatino ( <a href="mailto:silvana.disabatino@unibo.it">silvana.disabatino@unibo.it</a> )
CURRICULA	<ol style="list-style-type: none"> <li>1. One Health</li> <li>2. The Earth System</li> <li>3. Impacts, Adaptation and Vulnerability</li> <li>4. Technological Innovations for a Decarbonized Society</li> <li>5. Socio-economic and Legal Studies for Mitigation of Climate Change</li> </ol>
PhD POSITIONS	15
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

### Available Positions and Scholarships

Pos. n.	Financial Support	Description	Positions linked to research topics
1	<b>PhD Scholarship PNRR ex M.D. 117/2023</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment 3.3 (M.D. 117/2023) and by Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna "Bruno Ubertini"	Climate change and health emergencies at the human/animal/environment interface: a one health approach to syndromic surveillance and diagnostics
2	<b>PhD Scholarship</b>	Funded by the Department of Physics and Astronomy with funds made available by the project SASIP EXTRAUE_2019_SASIP_CARRAS_N_02 CUP: J33C22004130005 Prof. Carrassi	Development of data driven emulators of key Arctic sea-ice and sea-surface processes
3	<b>PhD Scholarship</b>	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project LIFE NatuREEF o "Nature-based reef solution for coastal protection and marine biodiversity enhancement" (Grant Agreement n. 101113742) funded by the EU programme LIFE (Programme for Environment and Climate Action) - call "LIFE-2022-SAP NAT", topic "LIFE-2022-SAP-NAT-NATURE", action "LIFE Project Grants"	NBS for the coastal resilience to expected climate changes scenarios

4	<b>PhD Scholarship PNRR ex M.D. 117/2023</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment 3.3 (M.D. 117/2023) and by ARPAE Emilia-Romagna	Potential regional greenhouse gas emission scenarios: the Emilia-Romagna region's trajectory toward carbon neutrality by 2050
5	<b>PhD Scholarship</b>	Funded by Università di Bologna - Alma Mater Studiorum in the framework of the project Scholars at Risk (SAR) and by the Department of Statistical Sciences with funds made available by the project ERC H2020 "Population Dynamics under Global Climate Change – POPCLIMA" (Grant Agreement n. 101002973 – Ref. Prof.ssa Raya Muttarak). The PhD position is reserved for candidates with international protection (refugees, beneficiaries of subsidiary protection)	Assessing the Impact of Climate Change on Demographic Outcomes: Past, Present and Future
6	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Geofisica e Vulcanologia	Climate and Ground deformation: insights from GNSS and InSAR time series analysis
7	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Geofisica e Vulcanologia	Seismic noise for monitoring crustal variations and determination of shallow Earth structure
8	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Geofisica e Vulcanologia	Seismic monitoring of oceans and ice caps
9	<b>PhD Scholarship</b>	Funded by Istituto Nazionale di Geofisica e Vulcanologia	Estimating and understanding the regional ocean heat content changes
10	<b>PhD Scholarship</b>	Funded by CNR ISMAR - Istituto di Scienze Marine	Next-generation geophysical and climate data assimilation: develop coupled and probabilistic algorithms
11	<b>PhD Scholarship</b>	Funded by Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici (CMCC) with funds made available by NRRP (Spoke 4 of CN-HPC - PNRR – CUP C83C22000560007)	Interdependent role of radiative forcing, land-use and land management on present and future climate scenarios
12	<b>PhD Scholarship PNRR ex M.D. 118/2023 - Green and digital transitions</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 3.4 (M.D. 118/2023) – Green and digital transitions	Analyses of urban microclimate and its impacts using forecasting numerical tools
13	<b>PhD Scholarship PNRR ex M.D. 117/2023</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment 3.3 (M.D. 117/2023) and by Caseifici Gran Terre	The Life Cycle Sustainability Assessment approach applied to the dairy chain with particular reference to the assessment of the environmental, social, and economic impacts in the typical productions of GranTerre
14	<b>PhD Scholarship</b>	Funded by the Department of Physics and Astronomy with funds made available by the Project NRRP Terabit network for Research and Academic Big data in Italy (TeRABIT, CUP: I53C21000370006). In partnership with Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS) and CNR ISAC	Abrupt climate change in the North Atlantic: the subpolar gyre circulation as a tipping element of the climate system

15	<b>PhD Scholarship</b>	Funded by Ente di Gestione per i Parchi e la Biodiversità - Delta del Po with funds made available by the project Horizon-EUROPE LAND4CLIMATE (Utilization of private land for mainstreaming nature-based solution in the systemic transformation towards a climate-resilient Europe)	Numerical modelling and monitoring techniques to assess the efficacy of Nature-Based Solutions for climate change adaptation
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The number of positions and scholarships may be incremented in case additional funding becomes available, notwithstanding the terms of the application process as detailed in Art. 3 of the Call for Applications. Any amendment, update or integration of the Programme Table will be published, even after the Call for Applications has expired. Any further PhD positions shall be integrated in the PhD Programme Table within ten days before the oral examination.

All PhD positions winners shall fulfill the learning and research obligations decided by the Academic Board and the obligations foreseen in the relevant regulations, funding schemes and eventual agreements, and in the Call for Applications. Moreover, applicants awarded with PhD scholarships funded by Next Generation EU shall fulfill specific obligations foreseen in the relevant funding scheme, in the relevant regulations and in the Call for Applications.

## Admission Exams

	DATE AND TIME	RESULTS
<b>Qualifications evaluation</b>	Applicants' participation is not required	Available from <b>25/08/2023**</b>
<b>Oral examination</b>	<b>Date:</b> starting from <b>04/09/2023 – 9.00 a.m. CEST*</b> <b>Place:</b> In presence, Department of Physics and Astronomy, Viale Berti-Pichat 6/2, Bologna. Remotely, using Microsoft Teams	Available from <b>08/09/2023**</b>

\* In case that the oral examination cannot be completed in one day due to the large number of applicants, the oral examination detailed schedule shall be made available on the webpage [Studenti Online](#) together with the results of the qualifications evaluation. **During the oral examination, applicants may express their interest in one or more positions linked to specific research topics.**

\*\* The **results of the admission exams** will be available on the webpage [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.**

## Required and Supporting Documents to be attached to the application

All the documents listed below **shall be drawn up in English or in Italian**. In case of documents originally issued in any other language (e.g. identity document, qualifications), an official translation is required. 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 PhD Programme.

REQUIRED DOCUMENTS	
<b>Identity document</b>	Valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae</b>	No specific CV format is required
<b>Degrees</b>	Documents attesting the awarding of the first and second cycle degrees, the exams taken and the marks obtained (see Art. 3 of the Call for Applications)
SUPPORTING DOCUMENTS	
<b>Research proposal</b>	Multi-annual research proposal, with special emphasis on the <b>activities to be completed during the first-year course</b> . The proposal must meet the following requirements: <ul style="list-style-type: none"> <li>- it must mention <b>on the cover page the Curriculum and the main research topic/s</b> the applicant is interested to and the proposal is about;</li> </ul>

	<ul style="list-style-type: none"> <li>- <b>it cannot exceed 20,000 characters</b>, including spaces and formula possibly used. This figure does not include: the title of proposal, the outline, references and images (such as graphs, diagrams, tables, etc. - if present);</li> <li>- <b>it must include</b>: the state of the art; description of the proposal; expected results; articulation of the proposal and implementation times; outline of the proposed findings assessment criteria; references.</li> </ul> <p>The research proposal that successful applicants shall carry out during their PhD career may possibly differ from the one proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board.</p>
<b>Thesis abstract</b>	Abstract of the <b>second cycle degree thesis</b> . Graduands applicants may submit the draft of the thesis. Abstracts cannot exceed 5,000 characters, including spaces and formula possibly used. The above figure does not include: the title of the thesis, the outline, references, and images such as graphs, diagrams, tables etc.
<b>Personal statement</b>	This must include the reasons prompting the applicant to attend the PhD Programme and those <b>relevant experiences and research interests</b> , that make the applicant suitable for the specific PhD Programme (3,000 characters maximum, including spaces).
<b>Reference letter/s</b>	<b>No more than 2 reference letters</b> signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest in the scientific research. Letters shall be uploaded following the procedure, detailed in the Call for Applications (Art. 3.2).
<b>Publications</b>	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.
<b>Other documents</b>	<ul style="list-style-type: none"> <li>- Postgraduate vocational training programmes and/or specialisation programmes relevant to the PhD Programme main research topics</li> <li>- Specialisation thesis</li> <li>- Teaching activity carried out at academic level</li> <li>- Research activity of any kind - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research projects</li> <li>- Work activities</li> <li>- Documents attesting the applicant's foreign languages proficiency</li> <li>- Study periods completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc.)</li> </ul>

## Evaluation criteria\*

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

### 1. Qualifications and research proposal evaluation

Minimum score for admission to the oral examination: 30 points, Maximum score: 50 points

Second cycle degree (Master's) final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	9 points max
Thesis abstract	8 points max
Research Proposal	8 points max
Reference letter/s	6 points max
Publications	4 points max
Personal Statement	5 points max
Postgraduate programmes, Teaching and Work activity	4 points max
Foreign languages proficiency and study period abroad	4 points max
Other evaluable documents	2 points max

### 2. Oral examination

Minimum score for eligibility: 30 points, Maximum score 50 points

English language proficiency	5 points max
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General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	45 points max
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Oral examination aims to assess the suitability of the applicant for scientific research as well as the general knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions. **During the oral examination, the applicant's English language proficiency shall be assessed.**

The oral examination is carried out in Italian or English.

\* Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme > "More information".