

**PhD Programme Table - 39th cycle**  
**Call for Applications for the admission to the PhD programmes (39<sup>th</sup> cycle) A.Y. 2023/2024**  
**for scholarships funded by Next Generation EU – NRRP ex M.D. 117/2023**  
**and M.D. 118/2023 and from other sources**



Section “Available Positions and Scholarships” integrated on 09/06/2023

PROGRAMME’S NAME	<b>AGRICULTURAL, ENVIRONMENTAL AND FOOD SCIENCE AND TECHNOLOGY</b>
DURATION	3 years
PROGRAMME START DATE	01/11/2023 (DD/MM/YYYY)
LANGUAGES	English
COORDINATOR	Prof. Massimiliano Petracci ( <a href="mailto:m.petracci@unibo.it">m.petracci@unibo.it</a> )
PhD POSITIONS	<b>28</b>
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

**Available Positions and Scholarships**

Pos. n.	Financial Support	Description	Positions linked to research topics
1	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
2	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
3	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
4	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
5	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
6	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
7	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	
8	<i>PhD Scholarship</i>	Funded by the University of Bologna general budget and by the Department Agricultural and Food Sciences	
9	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget under the "Dipartimenti di Eccellenza" initiative	
10	<i>PhD Scholarship</i>	Funded by MUR under the "Dipartimenti di Eccellenza" initiative	Water-Food-Energy-Sustainable Agriculture Nexus
11	<i>PhD Scholarship</i>	Funded by the Department Agricultural and Food Sciences with funds made available by the EU-HE Project BIOSECURE (contract n. 101083923)	Economic impacts of bioscurity improvements in animal farming

12	<b>PhD Scholarship</b>	Funded by the Department Agricultural and Food Sciences	Disentangle the implications of the postbiotic-based feeding strategy on the growth performance and gut health of pigs.
13	<b>PhD Scholarship</b>	Funded by the University of Bologna general budget and by the Department Agricultural and Food Sciences	Emerging processing and packaging technologies for sustainable production of innovative foods
14	<b>PhD Scholarship PNRR ex M.D. 118/2023 - Public Administration</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) - Public Administration	Challenges of governance and policy for agri culture and natural resources
15	<b>PhD Scholarship PNRR ex M.D. 118/2023 - Public Administration</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) - Public Administration	Challenges of governance and policy for agri culture and natural resources
16	<b>PhD Scholarship PNRR ex M.D. 118/2023 - PNRR Research</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) – PNRR Research	Integrated strategies for innovation and sustainable development in agri-food production
17	<b>PhD Scholarship PNRR ex M.D. 118/2023 - PNRR Research</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) – PNRR Research	Integrated strategies for innovation and sustainable development in agri-food production
18	<b>PhD Scholarship PNRR ex M.D. 118/2023 - PNRR Research</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) – PNRR Research	Integrated strategies for innovation and sustainable development in agri-food production
19	<b>PhD Scholarship PNRR ex M.D. 118/2023 - PNRR Research</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) – PNRR Research	Integrated strategies for innovation and sustainable development in agri-food production
20	<b>PhD Scholarship PNRR ex M.D. 118/2023 - PNRR Research</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) – PNRR Research	Integrated strategies for innovation and sustainable development in agri-food production
21	<b>PhD Scholarship PNRR ex M.D. 118/2023 - PNRR Research</b>	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) – PNRR Research	Integrated strategies for innovation and sustainable development in agri-food production

22	<b>PhD Scholarship</b>	Funded by the Department of Agricultural and Food Sciences with funds made available by the project HEU CARINA	Integrated sustainability assessment tools to support policy decisions in agro-food systems
23	<b>PhD Scholarship</b>	Funded by the Department of Agricultural and Food Sciences with funds made available by the project HEU CHORIZO	The role of individual behaviour and social norms on the generation of food waste
24	<b>PhD Scholarship</b>	Funded by the Department of Agricultural and Food Sciences with funds made available by the project HEU ENFASYS	Design and testing of behavioural interventions to foster the adoption of sustainable farming systems through a system dynamic modeling approach
25	<b>PhD Scholarship</b>	Funded by the Department of Agricultural and Food Sciences with funds made available by the project HEU FOODCOST	The true cost of food: internalizing environmental and social costs for a transition towards sustainable food systems
26	<b>PhD Scholarship</b>	Funded by the Department of Agricultural and Food Sciences with funds made available by the project LOFT, PRIN 2020 VFARM (2020ELWM82) - CUP: J33C20002350001 e HEU INCITISFOOD (contract n. 101083790)	Improve the resources use efficiency and overall sustainability of vertical farming
27	<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 (MD 117/2023) and by ENEA - Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile	Scaling-out agroecological innovations for agro-food systems transformation toward sustainable development goals using Artificial Intelligence
28	<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 (MD 117/2023) and by Apovsementi S.p.A.	Genetic studies on the wheat-pathogen interaction response and development of diagnostic molecular assays

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 and research proposal evaluation</b>	Applicants' participation is not required	Available from <b>07/07/2023**</b>
<b>Oral examination</b>	<b>Date:</b> starting from <b>18/07/2023 – 9.00 a.m. CEST*</b> <b>Place:</b> Remotely, using Microsoft Teams	Available from <b>25/07/2023**</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 and research proposal 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>	<p>The Curriculum Vitae shall contain on the first page a <b>Summary</b>, duly filled, in Attachment 1 to the present PhD programme table and downloadable in .docx from the <a href="#">University Website</a> (select the PhD Programme → “More information”, then check “Notices” at the bottom of the page). <b>A 5 points penalty on the total qualification evaluation score shall be applied to applicants not attaching the summary.</b></p> <p>The following experiences will be evaluated:</p> <ul style="list-style-type: none"> <li>- Postgraduate vocational programmes and/or specialisation programmes relevant to the PhD Programme</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>- Study periods completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes)</li> </ul>
<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)
<b>Research proposal</b>	<p>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:</p> <ul style="list-style-type: none"> <li>- It must be written following the <a href="#">Research proposal Template</a>, in Attachment 2 to the present PhD programme table and downloadable in .docx from the <a href="#">University Website</a> (select the PhD Programme → “More information”, then check “Notices” at the bottom of the page)</li> <li>- It must mention <b>on the cover page the PhD programme’s research topic</b> (1,2,3,4,5,6,7,8,9,10 – the main research topics of the PhD programme are listed on the <a href="#">University Website</a>, select the PhD Programme → “More information”) the applicant is interested in and that covers the research project proposal. <b>Research proposals written without following the template will receive 0 points;</b></li> <li>- it <b>cannot exceed 20,000 characters</b>, 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);</li> <li>- <b>It must include:</b> the state of the art and consistency with the applicant study and research path; description of the project; expected results articulation of the proposal and implementation times; outlining of the criteria meant to be used to assess the research results; references.</li> </ul> <p>The research proposal will not necessarily be the topic of the candidate’s doctoral research, if admitted; the research project to be carried out during the PhD Programme will be agreed upon with the Supervisor and approved by the Academic Board.</p>
SUPPORTING DOCUMENTS	
<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>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) and minor publications (conference papers, etc.)

## 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

<b>Qualifications evaluation</b>	Second cycle degree (Master's) final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	14 points max
	Publications	3 points max
	Research activity, study periods abroad, reference letter/s, other evaluable documents	5 points max
<b>Research proposal evaluation</b>	Scientific value and ground-breaking nature of the proposal	14 points max
	Consistency with the applicant's study path	4 points max
	Structure of the proposal	6 points max
	Proposal feasibility	4 points max

### 2. Oral examination

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

English language proficiency	10 points max
Research proposal presentation	25 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	15 points max

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 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".

## Curriculum Vitae Summary

### *PhD Programme in Agricultural, Environmental and Food Science and Technology*

#### **Personal Information**

First name(s) / Surname(s)	
Nationality	
Date of birth (day, month, year)	
Gender	
Email address	

#### **University Education**

##### ***Master***

Official duration in years				
Dates (start – end or planned end)				
Awarding institution	<i>(e.g. University of Bologna - Italy)</i>			
Title of qualification awarded	<i>(e.g. MSc in Biology)</i>			
<b>Marks</b>	<b>YOUR mark</b>	<b>Minimum PASS mark</b>	<b>Maximum mark</b>	<b>ECTS conversion (if available)</b>
Final grade (if available)				
Weighted average of exam marks				
Title and topic of Master Thesis				

#### **Research and Study Abroad Experiences**

***List periods of study abroad (Erasmus and/or others), and research periods at universities or public/private institutions (only the last 5 years will be considered)***

<p>Scientific research of any kind (basic, oriented, translational, applied etc.)</p>   
<p>Periods of study abroad (e.g. Erasmus)</p>   

## **Other qualifications**

*List other experiences relevant to the PhD Programme (only the last 5 years will be considered)*

<b>University Master Courses (Master universitari di I e II livello) relevant to the PhD Programme</b>
<b>Postgraduate training programmes/specialization programmes relevant to the PhD Programme</b>
<b>Internships</b>
<b>University teaching at any level</b>
<b>Other qualifications attesting the applicant's skills and education (prizes, grants etc.)</b>

## **COVER PAGE**

**Name:**

**Surname:**

**Title of the project:**

**Check from the list the main topic the research proposal encompasses** (a detailed description of the research topics is to be found at the following webpage: <https://phd.unibo.it/agricultural-environmental-food-sci-technology/en/phd-programme/reseach-topics/>):

- ( 1) Agronomy, Herbaceous Crops, Flowers and Vegetables Systems, Agricultural Genetics and Agricultural Chemistry
- ( 2) International Cooperation and Sustainable Development Policies
- ( 3) Microbial Ecology and Plant Pathology
- ( 4) Agricultural and Food Economics and Policy
- ( 5) Agricultural Entomology
- ( 6) Agricultural Engineering
- ( 7) Food Science and Biotechnology
- ( 8) Animal Science
- ( 9) Tree Production Systems, Fruit, Forest and Ornamental Trees and Grape
- (10) Water-Food-Energy-Sustainable Agriculture Nexus

**NB:** i) during the oral examination, each applicant can express to the Admission Board their interest for the assignment of one or more topic-specific positions; ii) it must be not indicated the name of possible professors who will be responsible for the PhD candidate research activity and the thesis; a supervisor is appointed by the Academic Board only after enrollment.



## ***PROPOSAL DESCRIPTION***

The project description, with special emphasis on the activities to be completed during the first-year course, cannot exceed 20.000 characters, including spaces and formula possibly used. This figure does not include references and images (such as graphs, diagrams, tables etc - where present). It must contain the following elements:

- 1. State of the art.** Provide a brief survey of existing research efforts and scientific basis, preferably with references to scientific literature. If your project is a part of a larger research effort requiring coordination, explain specifically your planned contributions within the larger framework. Outline the essential elements showing consistency between the submitted research proposal and the applicant's training path and previous experiences
- 2. Description of the project.** Present the main objective and a brief summary, explaining how you intend to attain your goal. Describe how you are planning to use empirical, analytical or other methods for your research.
- 3. Expected results.** The description of expected results should address impact on science, technology and society, if appropriate.
- 4. Lead-time for implementation.** Outline a research plan for each year.
- 5. Proposed criteria to be used to assess the findings obtained.** The project timeline should contain measures of achievement.
- 6. References.** Please list applicable references.