

## PHD PROGRAMME TABLE 37TH CYCLE

Section "Admission Exams" modified on 29/04/2021

Section "Available Positions and Scholarships" integrated on 07/06/2021

PROGRAMME'S NAME	AGRICULTURAL, ENVIRONMENTAL AND FOOD SCIENCE AND TECHNOLOGY
DURATION	3 years
PROGRAMME START DATE	01/11/2021
LANGUAGE	English
MANDATORY STAY ABROAD	3 months
COORDINATOR	Prof. Massimiliano Petracci ( <a href="mailto:m.petracci@unibo.it">m.petracci@unibo.it</a> )
CURRICULA	N/A
RESEARCH TOPICS	<a href="#">Detailed list at the bottom of the present document</a>
PhD POSITIONS	33
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

### Available Positions and Scholarships

Pos. n.	Financial support	Description	Positions linked to research topics
1	PhD Scholarship	Totally funded by the University of Bologna general budget	
2	PhD Scholarship	Totally funded by the University of Bologna general budget	
3	PhD Scholarship	Totally funded by the University of Bologna general budget	
4	PhD Scholarship	Totally funded by the University of Bologna general budget	
5	PhD Scholarship	Totally funded by the University of Bologna general budget	
6	PhD Scholarship	Totally funded by the University of Bologna general budget	
7	PhD Scholarship	Totally funded by the University of Bologna general budget	
8	PhD Scholarship	Totally funded by the University of Bologna general budget	
9	PhD Scholarship	Totally funded by the University of Bologna general budget, with funds made available by the "Departments of Excellence" initiative	
10	PhD Scholarship	Totally funded by the University of Bologna general budget, with funds made available by the "Departments of Excellence" initiative	
11	PhD Scholarship	Totally funded by the University of Bologna general budget, with funds made available by the "Departments of Excellence" initiative	
12	PhD Scholarship	Totally funded by the University of Bologna general budget, with funds made available by the "Departments of Excellence" initiative	
13	PhD Scholarship	Totally funded by the University of Bologna general budget under the "Progetti di Sviluppo Strategico dei Dipartimenti (PSSD)" initiative	Water-Food-Energy-Sustainable Agriculture Nexus

14	PhD Scholarship	Funded by MIUR under the "Departments of Excellence" initiative	Water-Food-Energy-Sustainable Agriculture Nexus
15	PhD Scholarship	Funded by MIUR under the "Departments of Excellence" initiative	Water-Food-Energy-Sustainable Agriculture Nexus
16	PhD Scholarship	Funded by MIUR under the "Departments of Excellence" initiative	Water-Food-Energy-Sustainable Agriculture Nexus
17	PhD Scholarship	Funded partly by the University of Bologna general budget and cofunded by the Department of Agricultural and Food Sciences	Methods of analysis of the CANBUS data for a better monitoring of food production chains
18	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences	Role of feeding strategies in modulating growth, gut functional development and health of weaned piglets
19	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences partly with funds made available by the project H2020 Console (CUP J34I19000390006; Grant Agreement 817949)	Evaluation of results-based and collective agri-environmental policy instruments
20	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences partly with funds made available by the project BBI BIOBEC	Role of education and forms of organization of innovation systems within bioeconomics
21	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences partly with funds made available by the project H2020 COOPID (CUP J39C20000390006; Grant Agreement 101000519)	Cluster, cooperation and networking in bioeconomics development
22	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences	Assessment of the presence and the translocation from soil to plant, waters and atmosphere of contaminants present in fertilizers
23	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences with funds made available by the project H2020-PRIMA 4CEMED (CUP J34I20001090006, G.A. 1911)	Study of resilient cropping systems to boost deployment of conservation agriculture in the Mediterranean
24	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences with funds made available by the project H2020 FoodE (CUP J34I19003050006; G.A. 862663)	Sustainability assessment methodologies for city regions food systems
25	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences partly with funds made available by the project H2020-PRIMA 4CEMED (CUP J34I20001090006, G.A. 1911)	Methods and Tools for the Integrated Sustainability Assessment of Mediterranean Agri-Food Systems
26	PhD Scholarship	Funded by the Department of Agricultural and Food Sciences partly with funds made available by the project PRIN 2017 - PigPhenomics	Applied genomics and phenomics to the livestock production sector
27	PhD Scholarship	Funded by ANIMINE	Effectiveness of an improved form of Zinc Oxide as source of nutritional Zinc in maintaining the gut health and its impact on the growth performance of piglets
28	Research Grant	Provided by the Department of Agricultural and Food Sciences. The research grant will	Pre-harvest strategies to increase productivity, fruit size and quality

		have a duration of 12 months, renewable up to 36 months and gross recipient amount of € 19.367,00.	in yellow-fleshed kiwifruit (Actinidia chinensis var. chinensis)
29	Industrial PhD	Position reserved for employees of Agri-Food and Biosciences Institute (AFBI)	Behavioral Economics for the Analysis of the Agri-Food Sector in Northern Ireland
30	Industrial PhD	Position reserved for employees of THCbd Soc. Agricola A.r.l.	Varietal characterization and development of chemotype linked markers in Cannabis sativa L
31	Industrial PhD	Position reserved for employees of Consorzio della Bonifica Renana	Management of the artificial canals network for both improving water quality and vegetation biodiversity
32	Industrial PhD	Position reserved for employees of Biorenova S.p.a.	Microorganisms for biohydrogen production in the dark
33	Industrial PhD	Position reserved for employees of Seidor Italy s.r.l.	Identification of solutions, transformation pathways and technological key-enablers for SDGs achievement

## Admission Exams

	DATE AND TIME	RESULTS
<b>Qualifications and research proposal evaluation</b>	Applicants' participation is not required	Available from <b>08/06/2021**</b>
<b>Oral examination</b>	Time: starting from <b>14/06/2021</b> – 09.00 a.m. CEST* Place: Remotely, using Microsoft Teams	Available from <b>02/07/2021**</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, under the condition that their research proposal is coherent with the topic-specific scholarship.

\*\* 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

*(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 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>	<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="#">Template attached to this document</a></li> <li>- It must mention on the cover page the research topic (<b>1, 2, 3, 4, 5, 6, 7, 8, 9 o 10</b>) of the PhD Programme the applicant is interested in and that covers the research project proposal. The <b>proposals written without following the template and/or without mentioning the research topic 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>- It must include: the state of the art; description of the project; expected results; lead-time for implementation; outline of the proposed findings assessment criteria 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>
<b>Thesis Abstract</b>	Abstract of the <b>second cycle degree thesis</b> . Applicants who are yet to obtain their second cycle degree may submit the draft of their thesis (abstracts cannot exceed 5,000 characters, including spaces and formulas, if present. The above figure does not include: title, outline, images such as graphs, diagrams, tables etc. if present).
<b>Reference Letter/s</b>	<b>No more than 2 reference letters</b> signed by <b>Italian and/or International academics and professionals</b> in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest for the scientific research. Letters shall be uploaded following the procedure on <a href="#">Studenti Online</a> , 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, volume's chapters etc.), abstracts and posters presented during national and international conferences, etc.
<b>Other documents</b>	<ul style="list-style-type: none"> <li>- University Master Courses (Master Universitari di I e II livello), Postgraduate vocational training programmes and/or specialisation programmes relevant to the PhD Programme</li> <li>- Research activity - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research units</li> <li>- Periods of study abroad, outside the country of origin (e.g. Erasmus programme or other similar mobility programmes)</li> </ul>

## Evaluation Criteria\*

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

### 1. Qualifications evaluation

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

Qualifications evaluation	University degree final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM).	14 points max
	Publications	3 points max
	Research activity, periods of study abroad, reference letters and other documents relevant to the research topics of the PhD Programme	5 points max
Research proposal evaluation	Scientific value and innovative nature of the proposal	14 points max
	Description and structure of the proposal	8 points max
	Proposal feasibility	6 points max

### 2. Oral examination

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

English proficiency	10 points max
Research proposal presentation	20 points max
General knowledge of issues encompassed by the PhD Programme	20 points max

The oral examination includes the presentation of the research proposal and is intended to assess the suitability of the applicant for scientific research as well as the general knowledge of issues encompassed by the PhD Programme ([see the list of research topics at the bottom of the present document](#)). During the oral examination, the Admission Board will assess the applicant's proficiency in the English language. **The oral examination is carried out in Italian and/or in English.**

\*Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme → "More information", at the bottom of the page in the section "Notices".

## Final Ranking List and Enrollment

After the publication of the results of the oral examination, the final ranking list will be available on the [University website](#), selecting the relevant PhD Programme → "More information", section "Notices" at the bottom of the page.

Considering the expressions of interest for the topic-specific positions, the Admission Board will establish if the applicants can be considered eligible for the allocation of the positions linked to specific research subjects, considering their skills, experience and aptitude.

Following the publication of the final ranking list, successful applicants shall enroll on [Studenti Online](#) by the deadline indicated on the [University website](#), selecting the relevant PhD Programme → "More information". If a successful applicant withdraws from a position, the following applicant in the ranking list, who is also eligible for the specific position, will be contacted. During the replacement procedure, the new terms of enrollment shall be communicated via e-mail to the chosen applicant.

## Research 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

## *Template for the Research Proposal*

### **COVER PAGE**

**Name:**

**Surname:**

**Title of the project:**

**Indicate only one Research Topic you would like to be involved in** (the full description of Research Topics is also available on the PhD Programme website, <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:** 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.
- 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.