

# AGRICULTURAL, ENVIRONMENTAL AND FOOD SCIENCE AND TECHNOLOGY

Section "Positions and scholarships" integrated on 07/05/2020

Section "Positions and scholarships" integrated on 19/05/2020

Section "Positions and scholarships" integrated on 22/05/2020

Section "Positions and scholarships" modified on 25/05/2020

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| <b>Coordinator</b>                        | Prof. Massimiliano Petracci<br>Department of Agricultural and Food Sciences<br>Viale Fanin , 44 - Bologna<br><a href="mailto:m.petracci@unibo.it">m.petracci@unibo.it</a>   |  |   |
| <b>Starting date of the PhD Programme</b> | 01/11/2020  |  |   |
| <b>Duration</b>                           | 3 calendar years  |  |   |
| <b>Language of the PhD Programme</b>      | English   |  |   |
| <b>Mandatory stay abroad</b>              | Yes (3 months)  |  |   |
| <b>Research topics</b>                    | <ol style="list-style-type: none"> <li>1. Agronomy, Herbaceous Crops, Flowers and Vegetables Systems, Agricultural Genetics and Agricultural Chemistry</li> <li>2. International Cooperation and Sustainable Development Policies</li> <li>3. Microbial Ecology and Plant Pathology</li> <li>4. Agricultural and Food Economics and Policy</li> <li>5. Agricultural Entomology</li> <li>6. Agricultural Engineering</li> <li>7. Food Science and Biotechnology</li> <li>8. Animal Science</li> <li>9. Tree Production Systems, Fruit, Forest and Ornamental Trees and Grape</li> <li>10. Water-Food-Energy-Sustainable Agriculture Nexus</li> </ol> |  |   |
| <b>PhD positions and scholarships</b>     |   |  |   |
| <b>Position n.</b>                        | <b>Financial support</b>  | <b>Description</b>   | <b>Positions linked to research subjects</b>        |
| 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   | Funded by the University of Bologna general budget and co-funded by the Department of Agricultural and Food Sciences |   |
| 10  | PhD Scholarship   | Funded by the University of Bologna general budget and co-funded by the Department of Agricultural and Food Sciences | Bio-based formulations for agronomical applications |
| 11  | PhD Scholarship   | Funded by the University of Bologna general budget under the "Departments of Excellence" initiative                  |   |
| 12  | PhD Scholarship   | Funded by the University of Bologna general budget under the "Departments of Excellence" initiative                  |   |
| 13  | PhD Scholarship   | Funded by the University of Bologna general budget under the "Departments of Excellence" initiative                  |   |

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| 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 | 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  |
| 18 | PhD Scholarship | Funded by the Department of Agricultural and Food Sciences   | Evaluation of the presence and translocation from soil to plant, water and atmosphere of contaminants present in fertilizers |
| 19 | PhD Scholarship | Funded by the Department of Agricultural and Food Sciences with funds made available by the project PRIN 2017 ARGENTO – UNIBO coordinator, Prof. Monti - Agronomic and genetic improvement of camelina ( <i>Camelina sativa</i> (L.) Crantz) for sustainable poultry feeding and healthy food products (ARGENTO) 2017LZ3CHF_001  | Identification of agronomic strategies aimed at increasing the quality of camelina oil for food markets                      |
| 20 | PhD Scholarship | Funded by the Department of Agricultural and Food Sciences with funds made available by the project EU FoodE (Food Systems in European Cities - Prof.ssa Antonella Samoggia)   | Sustainability in urban agro-food systems  |
| 21 | PhD Scholarship | Funded by the Department of Agricultural and Food Sciences with funds made available by the project EU FoodE (Food Systems in European Cities - Prof. Matteo Vittuari)   | Sustainability assessment methodologies for city regions food systems  |
| 22 | PhD Scholarship | <del>Funded by the Department of Agricultural and Food Sciences with funds made available by Regione Emilia Romagna and private donors (residual funds from commercial activities)</del><br>Funded by the Department of Agricultural and Food Sciences with funds made available by the Project "TROPICSAFE Insect-borne prokaryote-associated diseases in tropical and subtropical perennial crops" - Grant Agreement nr. 727459 - CUP J32F17000650006 (Ref. Prof. Assunta Bertaccini). | Resistance to bacterial diseases in fruit trees  |
| 23 | Research Grant  | Provided by the Department of Agricultural and Food Sciences with funds made available by Regione Emilia-Romagna - Bando Alte Competenze "POR FSE 2014/2020, obiettivo tematico 10, priorità di investimento 10.2" CUP J34I19004870002 – Ref. Prof. Francesco Orsini. The research grant will have a duration of 12 months, renewable up to 36 months, and a gross percipient amount of € 24.425,99.   | Nutraceutical indoor farming in Emilia Romagna through artificial intelligence sensing                                       |
| 24 | PhD Scholarship | Funded by the Department of Agricultural and Food Sciences with funds made available by the project H2020 CONSOLE - CONtract SOLution for Effective and lasting delivery of agri-environmental-climate public goods by EU agriculture and forestry - Grant. N. 817949 CUP J34I19000390006 (Ref. Prof. Davide Viaggi)   | Evaluation of resultsbased and collective agri-environmental policy instruments  |
| 25 | PhD Scholarship | Funded by the Department of Agricultural and Food Sciences partly with funds made available by the project H2020 CONSOLE - CONtract SOLution for Effective and lasting delivery of agri-environmental-climate public goods by EU agriculture and forestry - Grant. N. 817949 CUP J34I19000390006 (Ref. Prof. Davide Viaggi)  | Integration of instruments for the provision of public goods and risk management in production contracts in agriculture      |

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| 26 | Research Grant       | Provided by the Department of Agricultural and Food Sciences. The research grant will have a duration of 12 months, renewable up to 36 months, and a gross percipient amount of € 19.367. | Applied genomics in livestock to improve animal breeding and selection and animal products  |
| 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 | Industrial Doctorate | Position reserved for employees of Novamont S.p.a.  | A study of the interactions of biodegradable and nonbiodegradable plastics on soil fertility and functionality: comparison of medium and long-term trials       |
| 29 | Industrial Doctorate | Position reserved for employees of Natural Development Group S.r.l.   | Evaluation of nanostructured essential oil-based bioformulations for biotic stress management on plants   |

**Positions linked to specific research subjects:** during the oral examination, applicants may express to the Admission board their interest in one or more positions linked to specific research subjects. Considering the expressions of interest above, the Admission Board will establish if the applicants can be considered eligible for the allocation of the positions linked to specific research subjects, taking into account their skills, experience and aptitude.

#### Admission requirements

Please, see art. 2 of the Call for applications

#### Mandatory documents to be attached to the application

Please, see art. 3 of the Call for applications

**Further qualifications that may be attached to the application, if in possession of the applicant** (only qualifications attested by documents drawn up in Italian, English, French, German and Spanish shall be considered as valid and assessed by the Admission Board)

- Abstract of the second cycle master's degree thesis. Undergraduate applicants may submit the draft of the thesis approved by their supervisor (please, note that abstracts cannot exceed 5.000 characters, including spaces and formula possibly used. The above figure does not include: the title of thesis, the outline, and images such as graphs, diagrams, tables etc. - where present);
- At least one and no more than 2 reference letters 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 for the scientific research.  
Please, note that the above letters cannot be uploaded by applicants. When filling the online application form on <http://studenti.unibo.it>, applicants will be only allowed to provide the email accounts of the requested academic/professional. The latter shall receive an email from the University of Bologna providing for the instructions for uploading. Only letters in pdf format submitted before the expiry date and time of the Call shall be accepted.
- Multi-annual research project, with special emphasis on the activities to be completed during the first-year course. The proposal must meet the following requirements:
  - o It must indicate on the cover page the research topic (**1, 2, 3, 4, 5, 6, 7, 8, 9 or 10**) of the research project proposal and for which the applicant is applying (**to research projects without the indication of the research topic on the cover page, the Examination Board will assign zero points**).
  - o It cannot exceed 20.000 characters, including spaces and formula possibly used. This figure does not include: the title of project, the outline, references and images (such as graphs, diagrams, tables etc - where present);
  - o It must include:
    - the state of the art;
    - description of the project;
    - expected results;
    - lead-time for implementation;
    - (proposed) criteria to be used to assess the findings obtained;
    - references.

(The research projects that successful applicants shall carry out during their doctoral career may possibly differ from the project proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board.)
- List of the publications (monographs, articles published on scientific journals, volume's chapters).
- List of the minor publications (conference papers, etc.).
- Professional Master courses completed in Italy (1st or 2nd level) relevant to the PhD Programme.
- 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..
- Study periods completed by students outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes).

| Admission exams (art. 4 of the call for applications) |   |   |
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| <b>Examination type</b>                               | <b>Schedule</b> (please, note that applicants shall not receive any communication concerning the exams schedule)                                      | <b>Examination results publication</b> (please, note that applicants shall not receive any communication concerning the publication of results)   |
| <b>Qualifications and research project evaluation</b> | Non-presential.   | The results of the qualifications and research project evaluation shall be available online starting from the <b>10/06/2020</b> at the page <a href="http://studenti.unibo.it">http://studenti.unibo.it</a> (please, select “summary of the requests in progress” - “see detail” and open the pdf file “risultati valutazione titoli e progetto”) |
| <b>Oral examination</b>                               | <b>Date</b>   | <b>15/06/2020</b><br>In case that the oral examination cannot be completed in one day due to the large number of applicants, the oral exam schedule shall be made available at the webpage <a href="http://studenti.unibo.it">http://studenti.unibo.it</a> together with the results of the qualifications and research project evaluation        |
|   | <b>Time</b>   | 9:00 a.m. (local time)  |
|   | Applicants shall take the exam remotely. For further details please refer to the relevant provision laid down in art. 4 of the Call for applications. |   |

### Evaluation criteria

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| <p>Points will be allocated to applications out of a total of 100 on the basis of the following weighting:</p> <p><b>1. Qualifications and research project</b></p> <ul style="list-style-type: none"> <li>- Minimum for admission to the oral exam: 30 points</li> <li>- Maximum: 50 points</li> </ul> <p>Only qualifications relating to the last 5 calendar years prior to the calendar year of publication of the Call for applications shall be taken into consideration, with the exception of the University Degree (Diploma di laurea). Please, note that qualifications must be consistent with the PhD Programme.</p> <p>Points relating to qualifications shall be allocated on the basis of the following criteria:</p> <ul style="list-style-type: none"> <li>- Graduation final mark. Undergraduates shall be evaluated on the basis of the Weighted Average Mark (WAM): max 14 points</li> <li>- publications: max 3 points</li> <li>- research activity in qualified research institutes, periods spent abroad for study purposes, cover letters, other qualifications related to the research topics of the PhD course: max 5 points</li> </ul> <p>Points relating to the research project shall be allocated on the basis of the following criteria:</p> <ul style="list-style-type: none"> <li>- scientific value and ground-breaking nature of the proposal: max 14 points</li> <li>- description and structure of the proposal: max 8 points</li> <li>- proposal feasibility: max 6 points</li> </ul> |
| <p><b>2. Oral examination</b></p> <ul style="list-style-type: none"> <li>- Minimum for inclusion in the final ranking list: 30 points</li> <li>- Maximum: 50 points</li> </ul> <p>Oral examination is intended to assess the suitability of the applicant in respect of the pursuing of scientific research as well as the general knowledge of issues connected to the PhD Programme. During the oral examination, knowledge of the English language shall be assessed.</p> <p>The oral examination is carried out in Italian or in English.</p>  |

Points relating to the oral examination shall be allocated on the basis of the following criteria:

- knowledge of the English language: max 10 points
- good research project presentation: max 20 points
- general knowledge of issues connected to the PhD Programme: max 20 points

Possible evaluation sub-criteria will be available on the [Unibo website](#), selecting the relevant PhD Programme → “PhD programme information” at the bottom of the page in the section “Notices”.

**Final ranking list and enrolment** (arts.6 and 7 of the Call for applications)

After the publication of the results of the oral exam, the final ranking list will be available on the [Unibo website](#), selecting the relevant PhD Programme → “PhD programme information” at the bottom of the page in the section “Notices”.

Following the publication of the final ranking list, successful applicants must enroll on <http://studenti.unibo.it> by the deadline indicated on the [Unibo website](#), selecting the relevant PhD Programme → “PhD programme information”.