# AGRICULTURAL, ENVIRONMENTAL AND FOOD SCIENCE AND TECHNOLOGY

Section "PhD positions and scholarships" integrated on 17/05/2018

Section "PhD positions and scholarships" integrated on 25/05/2018

Section "PhD positions and scholarships" integrated on 05/06/2018

Section "PhD positions and scholarships" integrated on 11/06/2018

Coordinator	Prof. Giovanni Dinelli Dept. of Agricultural and Food Sciences Viale Fanin 44 - Bologna giovanni.dinelli@unibo.it
Starting date of the PhD Programme	01/11/2018
Duration	3 calendar years
Language of the PhD Programme	English
Mandatory stay abroad	Yes (3 months)

### Research topics

The PhD program aims to train specialists in accordance with the following nine research topics:

- 1) Agronomy, management of field crops, horticulture, agricultural genetics, agricultural chemistry and agri-environmental systems with the main purpose of ensuring a specialist qualification for researchers who intend to work in companies in the agricultural sector or in public or private research bodies;
- International cooperation and sustainable development policies in developing, transition and newly industrialized countries through the analysis of governmental and non-governmental interventions;
- 3) Microbial ecology and plant pathology through training in research laboratories, in laboratories of high qualification and affiliated research centers in foreign countries;
- 4) Economics and politics related to agricultural raw materials (food and non-food), industrial processing, distribution and consumption of food, management of rural areas and environmental resources;
- 5) Entomology through a rational and low-impact protection of crops and their products, forests and anthropized environments;
- 6) Agricultural engineering, to address emerging issues in the areas encompassed by the environmental protection and enhancement of agro-territorial, forest and landscape;
- 7) Food sciences and biotechnology with emphasis in all areas included in the food production and agri-food chain;
- 8) Animal sciences with particular reference to breeding technologies , animal genetics , nutrition and animal feed ;
- Tree production systems, forest and ornamental with particular reference to genetics, physiology and cultivation of fruit, woody and ornamental tree species.

woody and ornamental tree species.		
PhD positions and scholarships		
Total number of the available PhD positions	26	
Positions with scholarship	<ul> <li>10, totally funded by the University of Bologna general budget</li> <li>1 financed by funds from the 5x1000 campaign 2015;</li> <li>1, funded by the University of Bologna general budget and co-financed by the Department of Agricultural and Food Sciences – DISTAL.</li> </ul>	
Positions with scholarship linked to specific topics (art. 9 of the Call for applications) During the oral examination, applicants will have the possibility to show their interest for one or more scholarships linked to specific topics. Taking into account the preferences expressed by the	1 funded by the Department of Agricultural and Food Sciences – DISTAL with funds from the EU project UE H2020 NEXTFOOD GA nr. 771738 - "Educating the next generation of professionals in the agrifood system", and focused on the following research topic "Educating the next generation of professionals in the agrifood system"  1 – financed by Enecta S.r.I, focused on the following research topic: "Harmonized procedures of analysis of medical, herbal, food and industrial cannabis: development and validation of cannabinoids' quality control methods, of extraction and preparation of	

derivatives from the plant raw material, according to

3 – financed by the Department of Agricultural and Food Sciences with "Budget Dipartimenti Eccellenti".

focused on the research topic "Water-Food-Energy-

1 – financed by Vivai Manfrica Società Agricola and focused on the research topic "Tree production systems, forest and ornamental with particular reference to genetics, physiology and cultivation of

the product destination."

Sustainable agriculture Nexus"

applicants and with due consideration of the applicants'

of the scholarships linked to specific topics

skills and expertise, the Admission Board will establish if the applicants can be considered eligible for the allocation

# fruit, woody and ornamental tree species" 1 - financed by Regione Emilia-Romagna within the program "Alte Competenze per la ricerca, il trasferimento tecnologico e l'imprenditorialità" – Title of the research project: "Genomics and phenomics big data for sustainable agricultural and animal productions". 1 – financed by the Department of Agricultural and

- **Reserved positions** (pursuant to art. 2, para 2, lett. e) of the M.D. n. 45/2013)
- 1 reserved to employees of ILSA S.p.A

Food Sciences, focused on the research topic "Horticultural, forest and ornamental tree systems"

- 1 reserved to employees of Agricola Grains S.p.A.
- 2, covered by research grants issued by the Department of Agricultural and Food Sciences DISTAL. Research grants shall have a duration of 12 months, renewable up to 36 months; they shall amount to €19.367,00 per year (gross amount including the taxes incurred by the receiver). Research grants shall be focused on the following topics:
- Strategies to mitigate salinity effects in field crops
- Development of agro ecological grape wine systems

1, covered by research grant issued by the Department of Agricultural and Food Sciences -DISTAL with funds from the EU project BESELINE. Research grant shall have a duration of 12 months, renewable up to 36 months; it shall amount to €19.367,00 per year (gross amount including the taxes incurred by the receiver). Research grant shall be focused on the following topics: "Microbiota e resistoma profile of foods of animal origin coming from traditional intensive and antibiotic-free farms" 1, covered by research grants issued by the Department of Agricultural and Food Sciences -DISTAL. Research grants shall have a duration of 12 months, renewable up to 36 months; it shall amount to €21.169,51 per year (gross amount including the taxes incurred by the receiver). Research grants shall be focused on the following topics: "Application pulsed electric fields (PEF) for food processing".

## Positions covered by research grants

During the oral examination, applicants will have the possibility to show their interest for one or more scholarships linked to specific topics.

Taking into account the preferences expressed by the applicants and with due consideration of the applicants' skills and expertise, the

Admission Board will establish if the applicants can be considered eligible for the allocation of positions covered by research grants

## 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);
- 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 <a href="http://studenti.unibo.it">http://studenti.unibo.it</a>, applicants will be only allowed to provide the email accounts of the requested <a href="https://studenti.unibo.it">academic/professional</a>. 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:
  - It must indicate in the cover page the research topic of the PhD Programme covered by the research project proposal and for which the applicant is applying
  - 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);
  - 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.

- Motivational letter. This must include the reasons prompting the applicant to attend the PhD Programme and those relevant experiences and research interests, that make the applicant suitable for the specific PhD Programme (3000) characters maximum, including spaces).
- List of the publications (monographs, articles published on scientific journals).
- List of the minor publications (conference papers, volume's chapters, etc.).
- Professional Master courses completed in Italy (1st or 2nd level) relevant to the PhD Programme.
- Postgraduate vocational training programmes/specialisation programmes relevant to the PhD Programme.
- Summary of the thesis defended within the framework of Specialization Schools. The summary cannot exceed 4000 characters.
- Teaching activity carried out at university level.
- 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.
- Work activity.

**Evaluation criteria** 

- Vocational internships:
- Curricular and non-curricular training and guidance internships
- Foreign languages
- Study periods completed by students outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes).
- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc).

### Admission exams (art. 4 of the call for applications) Examination results publication (please, **Schedule** (please, note that applicants shall not receive any Examination note that applicants shall not receive any communication concerning the exams schedule) communication concerning the publication type of results) The results of the qualifications and research project evaluation shall be available online starting from the Qualifications 04/06/2018 at the page and research Non-presential. project http://studenti.unibo.it (please, select: evaluation (please, select "summary of the requests in progress" - "see detail" and open the pdf file "risultati valutazione titoli e progetto") 11/06/2018 In case that the oral examination cannot be completed in one day due to the large number of applicants, the The results of the oral examination shall be oral exam schedule shall be made Date available on the webpage available at the webpage http://studenti.unibo.it starting from http://studenti.unibo.it together with the 05/07/2018 (please, select "summary of the results of the qualifications and Oral requests in progress" - "see detail" and research project evaluation examination open the pdf file "risultati prova orale") Bologna - Viale Fanin 44 Place Dipartimento di Scienze Agrarie IV piano - Aula Baldoni Time Pursuant to art. 4 of the call for applications, applicants residing regularly abroad can ask to take the exam remotely using videoconferencing tools (e.g. Skype). Please, for further details refer to the relevant provision laid down in the Call for applications.

Points will be allocated to applications out of a total of 100 on the basis of the following weighting:

### 1. Qualifications and research project

- Minimum for admission to the oral exam: 30 points
- Maximum: 50 points

Only qualifications relating to the last 5 years 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 course.

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

- Graduation final mark. Undergraduates shall be evaluated on the basis of the Weighted Average Mark (WAM): max 16 points
- Publications: max 4 points
- Further training relevant to the PhD programme, study periods spent abroad at foreign qualified academic and research institutions, reference letters, other qualifications: max 8 points

Points relating to the research project shall be allocated on the basis of the following criteria:

- scientific value and ground-breaking nature of the proposal: max 10 points
- description and structure of the proposal: max 4 points
- proposal feasibility: max 8 points

### 2. Oral examination

- Minimum for inclusion in the final ranking list :30 points
- Maximum: 50 points

Oral examination includes the presentation of the research project and 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 course.

During the oral examination, knowledge of the following foreign languages shall be assessed: English The oral examination is carried out in Italian or in English.

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

- knowledge of the foreign language: max 10 points
- research project presentation: max 20 points
- general knowledge of issues connected to the PhD course: max 20 points

Possible evaluation sub-criteria shall be made public on http://studenti.unibo.it (select: "summary of the requests in progress" - "see detail" and open the pdf file named "sub-criteri di valutazione").

### Final ranking list and enrolment (arts.6 and 7 of the call for applications)

Only after the publication of the results relating to the oral exam, the final ranking list shall be available at the page <a href="http://studenti.unibo.it">http://studenti.unibo.it</a>. In the section "Summary of requests in progress", the status of the application submitted shall be "Final ranking List available". A click on "See detail", will open the webpage where the pdf file "Graduatoria" can be downloaded (at the bottom of the page).

Please, note that written communication about the final results and the deadlines for the enrolment shall not be sent to the applicants.

The enrolment of successful applicants must be completed by the deadline laid down at the bottom of the final ranking list.