

# HEALTH AND TECHNOLOGIES

Section “Positions and scholarships” integrated on 16/04/2018

Section “Positions and scholarships” integrated on 04/06/2018

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<b>Starting date of the PhD Programme</b>	01/11/2018
<b>Duration</b>	3 calendar years
<b>Language of the PhD Programme</b>	Italian and English
<b>Mandatory stay abroad</b>	Yes (3 months)
<b>Tematiche di ricerca</b>	
<ul style="list-style-type: none"> <li>- Biomechanics</li> <li>- Neurocognitive system</li> <li>- Diagnostics</li> <li>- Therapeutics</li> <li>- Methodologies</li> <li>- Devices and services</li> </ul>	
<b>PhD positions and scholarships</b>	
<b>Total number of the available PhD positions</b>	<b>8</b>
<b>Positions with University scholarship</b>	<p><b>3</b> totally funded by the University of Bologna general budget. The Applicant must choose <u>one</u> of the following six topics on which her/his research project should be focused on:</p> <ul style="list-style-type: none"> <li>- “Biomimetic implantable composite devices as drug delivery systems for local treatment and tissue regeneration in gynecological tumors”</li> <li>- “Chemo-physical and biological mechanisms behind the anticancer activity of plasma activated liquids for the treatment of peritoneal carcinosis from primitive epithelial ovarian/tubular tumor”</li> <li>- “Improving revision hip surgery: in vitro biomechanical testing and refinement of acetabular reconstructions”</li> <li>- “Integrating omics in prion diseases as a model to explore the strains paradigm in neurodegenerative disease (prionomics)”</li> <li>- “Circadian rhythms in early Alzheimer disease: from biological bases to clinical monitoring”</li> <li>- “SmartHeart: Exploitation of built-in sensors of commercial smartphones to improve patient-centred cardiovascular diagnostic”.</li> </ul>
<p><b>Positions with scholarship linked to specific topics</b> (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 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 the scholarships linked to a specific topics. Should the chosen candidate not accept, the offer will be made to the second on the list for the same topic and so on until the position is filled. Should available positions remain vacant, eligible applicants from the general ranking list may be contacted. The remaining available positions shall be awarded from the top of the ranking list downward.</p>	<ul style="list-style-type: none"> <li>- <b>1</b> financed by Centro Interdipartimentale di Ricerca Industriale in Meccanica Avanzata e Materiali (CIRI MAM) with funds of EU H2020 <i>MyLeg</i>, Project (Principal investigator Prof. Andrea Zucchelli), focused on the following research topic: “Smart materials for actuators of transfemoral prostheses”.</li> <li>- <b>1</b> financed by Azienda Ospedaliero – Universitaria “Sant’Orsola” di Bologna and focused on the following research topic: “Hospital Operations Management: optimization of production areas and patient logistics”</li> <li>- <b>1</b> financed by IRCCS Rizzoli di Bologna and focused on the following research topic: “Biomechanics in Orthopaedics (clinical and laboratory aspects)”</li> <li>- <b>1</b> financed by FARMINDUSTRIA and focused on the following research topic: “3D Bioprinted Organ Models for Drug Discovery”</li> <li>- <b>1</b> financed by Regione Emilia-Romagna within the program “Alte Competenze per la ricerca, il trasferimento tecnologico e l’imprenditorialità” – Title of the research project: “Intersectorial and interdisciplinary approach to treat spine pathologies (INTER-SPINE)”</li> </ul>
<b>Admission requirements</b>	

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 <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 in the cover page the research topic of the PhD Programme covered by the research project proposal and for which the applicant is applying
  - 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: description of the project; expected results; lead-time for implementation; (proposed) criteria to be used to assess the findings obtained.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 (3.000 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.).
- List of the abstracts and posters presented during national and international conferences, etc.
- Professional Master courses (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 1.500 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
- 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)

<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 <b>31/05/2018</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>05/06/2018</b> 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	The results of the oral examination shall be available on the webpage <a href="http://studenti.unibo.it">http://studenti.unibo.it</a> starting from <b>20/06/2018</b> (please, select "summary of the requests in progress" - "see detail" and

		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	open the pdf file “risultati prova orale”)
	<b>Place</b>	Bologna - Via Massarenti, 9 Policlinico S.Orsola-Malpighi Padiglione 11 - Aula Pisi	
	<b>Time</b>	9:30 a.m.	
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.			

### Evaluation criteria

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), if possible: max 7 points; score related to the degree mark will be assigned as follows:  
110 cum laude: 7 points  
110: 6 points  
from 108 to 109 included: max 5 points  
from 106 to 107 included: max 4 points  
from 103 to 105 included: max 3 points  
from 100 to 102 included: max 2 points  
from 90 to 99 included: max 1 point
- Publications: max 8 points
- Abstract of the second cycle master’s degree thesis or equivalent: max 6 points
- Letters of presentation: up to 1 point (half point for each reference letter)
- Research activity, research grants, and participation in research projects: max 3 points
- Other qualifications: max 2 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 18 points
- description and structure of the proposal: max 2 points
- proposal feasibility: max 3 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 to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

During the oral examination, knowledge of the following foreign language 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 <http://studenti.unibo.it>. 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.