



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

AREA
FORMAZIONE E DOTTORATO

PHD PROGRAMME TABLE 40TH CYCLE

Section "Available Positions and Scholarships" integrated on 17/06/2024

PROGRAMME'S NAME	HEALTH AND TECHNOLOGIES
DURATION	3 years
PROGRAMME START DATE	01/11/2024 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Igor Diemberger (igor.diemberger@unibo.it)
PhD POSITIONS	10
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	A research topic of your choice from those listed at the end of this document
2	PhD scholarship	Totally funded by the University of Bologna general budget	A research topic of your choice from those listed at the end of this document
3	PhD scholarship	Totally funded by the University of Bologna general budget	A research topic of your choice from those listed at the end of this document
4	PhD scholarship	Totally funded by the University of Bologna general budget	A research topic of your choice from those listed at the end of this document
5	PhD scholarship	Funded by the University of Bologna general budget and by the Department of Industrial Engineering	A research topic of your choice from those listed at the end of this document
6	PhD scholarship	Funded by the University of Bologna general budget and by the Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi"	A research topic of your choice from those listed at the end of this document
7	PhD scholarship	Funded by the University of Bologna general budget and by the Department of Medical and Surgical Sciences	A research topic of your choice from those listed at the end of this document
8	PhD scholarship	Funded by the Department of Industrial Engineering with funds made available by the partnership agreement PR23-CR-P5 – OsteoAmi "Trattamento dell'amputazione di arto inferiore mediante osteointegrazione e interfacce mioneurali agonista-antagonista" – Ref. Prof. Cristofolini – CUP E57G23000240005	Methods for the design and validation of osseointegrated implants for amputees

9	<i>PhD scholarship</i>	Funded by IMA Industria Macchine Automatiche SpA	Smart Diagnosis and development of tools for telemonitoring of heart failure (SMART-HEART)
10	<i>PhD scholarship</i>	Funded by IMA Industria Macchine Automatiche SpA	Development of new wearable tools for the management of clinical complexity in cardiovascular medicine

The number of positions and scholarships may be incremented in case additional funding becomes available, notwithstanding the terms of the application process in the Call. Any amendment, update or integration of the Programme Table will be published on the University website, even after the Call for applications has expired. Any further PhD positions shall be integrated in the PhD Programme Table within ten days before the oral examination.

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.

Admission Exams

	DATE AND TIME	RESULTS
Qualifications and research proposal evaluation	Applicants' participation is not required	Available from 20/06/2024
Oral examination	Date: starting from 27/06/2024 – 9.00 a.m. CEST Place: Remotely, using Microsoft Teams	Available from 01/07/2024

The results of the qualifications and research proposal evaluation shall 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) together with the oral examination detailed schedule. **No personal written communication will be sent to applicants concerning the examinations results.**

During the oral examination, applicants may express their interest in one or more positions linked to specific research topics.

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	
Identity document	Valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae	The Europass format is required
Degrees	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)
Research proposal	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: <ul style="list-style-type: none"> - it must mention on the cover page one of the research topics assigned to a specific PhD position; - it cannot exceed 20,000 characters, including spaces and formula possibly used. This figure does not include: the title of proposal, the outline, references and images (such as graphs, diagrams, tables, etc. - if present);

	<ul style="list-style-type: none"> - it must include: the state of the art; description of the proposal; expected results; articulation of the proposal and implementation times; outlining of the criteria meant to be used to assess the research results.
SUPPORTING DOCUMENTS	
Thesis abstract	Abstract of the second cycle degree thesis . 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.
Reference letter/s	No more than 2 reference letters signed by Italian or 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)
Personal Statement	The statement shall 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).
Publications	Lists of publications (i.e. monographs, articles on scientific journals), minor publications (conference papers, etc.), abstracts and posters presented during national and international conferences, etc.
Other documents	<ul style="list-style-type: none"> - Postgraduate vocational training programmes relevant to the PhD Programme main research topics - Specialisation thesis abstract (max 1,500 characters) - Teaching activities carried out at academic 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 - Study periods completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes)

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

Qualifications evaluation	Second cycle (Master's) degree final mark and Weighted Average Mark (WAM). Graduands shall be evaluated according to the Weighted Average Mark (WAM)	7 points max
	Publications	4 points max
	Second cycle thesis abstract	1 point max
	Reference letter/s	1 point max
	Research activity	3 points max
	Interdisciplinarity and balance between technical and clinical scope	6 points max
	Study or research periods abroad	3 points max
	Other evaluable documents	3 points max
Research proposal evaluation	Scientific value and ground-breaking nature of the proposal	18 points max
	Structure of the proposal	2 points max
	Proposal feasibility	2 points max

2. Oral examination

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

English language proficiency	10 points max
Research proposal presentation	20 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	20 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 language proficiency shall be assessed.

The oral examination is carried out in English.

* Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme > “More information”.

Research Fields

- A. Multiparametric approach for identification, through high-throughput technologies, of risk factors predicting the outcome of patients with atrial fibrillation
- B. Cerebrospinal fluid and plasma proteome for biomarker discovery across neurodegenerative disorders
- C. Advanced Multilevel Microencapsulation Strategies as life-changing treatment of metastatic ovarian cancer – MIMOSA
- D. Image segmentation of ROIs from both medical diagnostic images and histopathological images via semi-automatic and automatic approaches, with special attention to bone structures affected by metastatic regions like osteolytic lesions.
- E. Adverse drug reactions in cardiology: from bench to bedside
- F. Evaluating the risk of massive wear of dual mobility cup total hip arthroplasty in patients at high risk of dislocation
- G. I-DASY: Instrument-based holistic Digital twinS for monitoring neuro-motor developmental trajectory in preterm infants
- H. Development and validation of osseointegrated implants for amputees
- I. Generation of synthetic medical data through swarm learning