

ALMA MATER STUDIORUM | AREA UNIVERSITÀ DI BOLOGNA | FORMAZIONE E DOTTORATO

PHD PROGRAMME TABLE

Call for applications for the admission to the PhD programmes (41st cycle) - A.Y. 2025/2026 Second round

PROGRAMME'S NAME	HEALTH AND TECHNOLOGIES
DURATION	3 years
PROGRAMME START DATE	01/11/2025 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Igor Diemberger (<u>igor.diemberger@unibo.it</u>)
PhD POSITIONS	8
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 (section Research Fields)
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 (section Research Fields)
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 (section Research Fields)
4	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 (section Research Fields)
5	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 (section Research Fields)
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 (section Research Fields)
7	PhD scholarship	Funded by IMA Industria Macchine Automatiche S.p.A.	Reproducible naevus counts using 3d total body photography and convolutional neural networks
8	PhD scholarship	Funded by IMA Industria Macchine Automatiche S.p.A.	Advancing healthcare through emerging technologies

The yearly gross amount of the scholarships awarded for the PhD Programme in "Health and Technologies" is €19,367.

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All winners of PhD positions must fulfil the study and research obligations decided by the Academic Board, as well as the obligations set out in the relevant regulations, in the call for applications, in the funding schemes and in any agreements relating to specific positions.

Admission Exams

	DATE AND TIME	RESULTS
Qualifications and research proposal evaluation	Applicants' participation is not required	Available from 01/08/2025
Oral examination	Date: starting from 03/09/2025 – 9.00 a.m. CEST Place: Remotely, using Microsoft Teams	Available from 08/09/2025

The results of the qualifications and research proposal evaluation, as well as the oral examination detailed schedule, shall be available on the webpage <u>Studenti Online</u> (select "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.

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

Required and Supporting Documents to be attached to the application

Only documents in Italian or English will be considered valid and will be assessed by the Admission Board. Identity documents and diplomas/degree certificates issued in a language other than Italian or English must be accompanied by an official translation. The translation must be carried out by an authorized body or by the awarding university. Only qualifications obtained in the last 5 years will be taken into account, with the exception of university degrees. 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: 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); 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.
Thesis abstract	Abstract of the second cycle degree thesis. Graduands applicants may submit an abstract of the thesis to be defended. 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	 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	20 points max
to the available PhD positions	

Oral examination includes the presentation and discussion of the research proposal and 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 Italiano or in English.

* Possible further evaluation criteria will be available on the <u>University website</u>, selecting the relevant PhD Programme > "More information".

Research Fields

- A. Eco-design of sustainable polymeric solutions with antimicrobial properties for biomedical packaging and devices
- B. Deployment of a Multi-Layered Architecture for Proactive Health Monitoring in the Elderly
- C. Health ForesAlght: Predicting Risks, Preventing Harm
- D. Design and testing of a cold atmospheric air plasma jet for biological applications

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- E. I-DASY: Instrument-based holistic DigitAl twinS for monitoring neuro-motor developmental trajectorY in preterm infants
- F. Tracking vector Borne diseases through point of care diagnostics and a One Health approach
- G. Systematic analysis of chemical and nutritional ingredients on aging and inflammation: advancing the construction of an Adverse Outcome Pathway
- H. Design and pre-clinical validation of osseointegrated implants for amputees
- I. Validation of computational models of vertebrae affected by metastasis
- J. Morphological and mechanical properties of ex vivo metastatic vertebrae
- K. Investigating the Neural Correlates of Cognitive (in)Flexibility combining Electroencephalography, Neurostimulation and Computational Modelling