



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

AREA  
FORMAZIONE E DOTTORATO


## PHD PROGRAMME TABLE

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

PROGRAMME'S NAME	NANOSCIENCE FOR MEDICINE AND THE ENVIRONMENT
DURATION	3 years
PROGRAMME START DATE	01/11/2025 (DD/MM/YYYY)
LANGUAGES	English
COORDINATOR	Prof. Matteo Calvaresi ( <a href="mailto:matteo.calvaresi3@unibo.it">matteo.calvaresi3@unibo.it</a> )
PhD POSITIONS	14
ADMISSION PROCEDURE	Qualifications evaluation Oral examination

### Available Positions and Scholarships

Pos. n.	Financial Support	Description	Positions linked to research topics
1	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget	Synthesis and characterization of phage bioconjugates for targeted therapies
2	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget	Sustainable photocatalysts for hydrogen production and water purification
3	<b>PhD Scholarship</b>	Totally funded by the University of Bologna general budget in the framework of the "Dipartimenti di Eccellenza" initiative	Development of innovative diagnostic tools through FFF techniques and multiparametric detection for applications in clinical, environmental and pharmaceutical fields
4	<b>PhD Scholarship</b>	Funded by the University of Bologna general budget and by the Department of Chemistry "Giacomo Ciamician"	Computational and experimental investigations of photoactive molecular materials
5	<b>PhD Scholarship</b>	Funded by the University of Bologna general budget and by the Department of Chemistry "Giacomo Ciamician"	Nanomaterials for biomedical and technological applications
6	<b>PhD Scholarship</b>	Funded by the University of Bologna general budget and by the Department of Chemistry "Giacomo Ciamician"	Luminescence-based detection of analytes of clinical and environmental applications
7	<b>PhD Scholarship</b>	Funded by the Department of Chemistry "Giacomo Ciamician" with funds made available by the project SENSOPAD	Sensing endometriosis on portable auxiliary devices
8	<b>PhD Scholarship</b>	Funded by the Department of Chemistry "Giacomo Ciamician" with funds made available by the project SENSOPAD	Electrocatalytic and bioanalytical application of electrochemistry

9	<b>PhD Scholarship</b>	Funded by Regione Emilia-Romagna in the framework of the research training projects for PhD programmes 41st cycle "High skills for resilience and sustainability of land and communities - ESF+ PR 2021/2027 Priority 2. Education and Training Specific Objective e) - Action No. 2 - Ecological Transition" - under the public notice approved by resolution of the Regional Council n. 344 of 10/03/2025 – funding approved by resolution of the Regional Council n. 732 of 19/05/2025 – CUP J33C25000520006 	Crystal engineering of molecular materials for antimicrobial and pharmaceutical applications: from complex cocrystals to solid solutions
10	<b>PhD Scholarship</b>	Funded by the Department of Industrial Chemistry "Toso Montanari" with funds made available by the project HORIZON-ERC-2021-STG - Project nr. 101040681 - SUPER "SUPramolecularly engineered functional PERovskite quantum wells" - CUP J33C22003830006 - Prof. Daniele Cortecchia, and by the Department of Physics and Astronomy with funds made available by the project SPACE IT UP! Contract ASI N. 2024-5-E.0 CUP (master) I53D24000060005 - SPECE IT UP - PROVENTI SPOKE 8 - ATT - DIFA CUP: J53C24000580006 Ref. Tobias Cramer	Synthesis of functional low-dimensional perovskites and application in optoelectronic devices
11	<b>PhD Scholarship</b>	Funded by CNR ISMN - Istituto per lo Studio dei Materiali Nanostrutturati	Fabrication, characterization and implementation of organic/hybrid optoelectronic multifunctional devices for light sensing, light emission, biodiagnostics and neuromorphic applications
12	<b>PhD Scholarship</b>	Funded by CNR ISMN - Istituto per lo Studio dei Materiali Nanostrutturati	Ecosustainable material processing and multifunctional organic and hybrid devices for flexible electronics and optoelectronics with low environmental impact
13	<b>PhD Scholarship</b>	Funded by CNR ISOF - Istituto per la sintesi organica e la fotoreattività	Development and validation of nanomaterials and resulting innovative technologies for water purification from emerging pollutants"
14	<b>PhD Scholarship</b>	Funded by Ferrari S.p.A.	Optimization of Si cells for automotive application

The yearly gross amount of the scholarships awarded for the PhD Programme in "Nanoscience for medicine and the environment" is €17,805.

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
<b>Qualifications evaluation</b>	Applicants' participation is not required	Available from <b>14/07/2025</b>

<b>Oral examination</b>	<b>Date:</b> starting from <b>21/07/2025 – 10.00 a.m. CEST</b> <b>Place:</b> Remotely, using Microsoft Teams	Available from <b>25/07/2025</b>
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The results of the qualifications evaluation, as well as the oral examination detailed schedule, shall be available on the webpage [Studenti Online](#) (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	
<b>Identity document</b>	Valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae</b>	The Curriculum Vitae <b>must be drawn up using the <a href="#">CV Form</a></b> , downloadable in .docx from the <a href="#">University website</a> (select the PhD Programme → “More information”, then check “Notices” at the bottom of the page).
<b>Degrees</b>	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)
SUPPORTING DOCUMENTS	
<b>Thesis abstract</b>	Abstract of the <b>second cycle degree thesis</b> . 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.
<b>Personal Statement</b>	The statement shall include the reasons prompting the applicant to attend the PhD Programme and <b>those relevant experiences and research interests</b> , that make the applicant suitable for the specific PhD Programme (3,000 characters maximum, including spaces).
<b>Other documents</b>	<ul style="list-style-type: none"> <li>- Study periods completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>- Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc.)</li> </ul>

## Evaluation criteria\*

Scores will be expressed in points out of 100, as follows.

### 1. Qualifications evaluation

Minimum score for admission to the oral examination: 30 points, Maximum score: 50 points

Second cycle degree (Master’s) final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	10 points max
Consistency of the thesis abstract with the PhD programme main topics	14 points max
Personal statement	20 points max
Other evaluable documents	6 points max

### 2. Oral examination

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

English language proficiency	5 points max
General, theoretical and methodological knowledge of the PhD programme’s main research topics and of the research topics linked to the available PhD positions, suitability of the applicant for scientific research	45 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 applicants'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", at the bottom of the page in the section "Notices".