



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

AREA  
FORMAZIONE E DOTTORATO

## PHD PROGRAMME TABLE 40TH CYCLE

Section "Available Positions and Scholarships" integrated on 27/05/2024

Section "Available Positions and Scholarships" integrated on 03/06/2024

Section "Admission Exams" modified on 11/06/2024

PROGRAMME'S NAME	<b>NANOSCIENCE FOR MEDICINE AND THE ENVIRONMENT</b>
DURATION	3 years
PROGRAMME START DATE	01/11/2024 (DD/MM/YYYY)
LANGUAGES	English
COORDINATOR	Prof. Matteo Calvaresi ( <a href="mailto:matteo.calvaresi3@unibo.it">matteo.calvaresi3@unibo.it</a> )
PHD POSITIONS	12
ADMISSION PROCEDURE	Qualifications evaluation Oral examination

### Available Positions and Scholarships

Pos. n.	Financial Support	Description	Positions linked to research topics
1	<i>PhD scholarship</i>	Totally funded by the University of Bologna general budget	
2	<i>PhD scholarship</i>	Totally funded by the University of Bologna general budget	
3	<i>PhD scholarship</i>	Totally funded by the University of Bologna general budget	
4	<i>PhD scholarship</i>	Totally funded by the University of Bologna general budget	
5	<i>PhD scholarship</i>	Totally funded by the University of Bologna general budget	
6	<i>PhD scholarship</i>	Funded by the University of Bologna general and 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	Development of 2D perovskites with advanced functional cations for optoelectronic applications
7	<i>PhD scholarship</i>	Funded by the Department of Chemistry "G. Ciamician" under the "Departments of Excellence" initiative	Development of optical biosensors for monitoring analytes of environmental and clinical interest
8	<i>PhD scholarship</i>	Funded by the University of Bologna general and by the Department of Physics and Astronomy with funds made available by the project PRIN 2022 PNRR - MUSES - A Multicomponent Solar Energy Conversion System with Extended Spectral Collection and Improved Efficiency - cod.	Advanced perovskites for solar cells applications

		P2022ACY8P_003 – Prof. Daniela Cavalcoli CUP J53D23014540001	
9	<b>PhD scholarship</b>	Funded by the Department of Industrial Chemistry 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	Solid-state NMR and optical spectroscopy of functional perovskite quantum wells
10	<b>PhD scholarship</b>	Funded by the Department of Chemistry "G. Ciamician" with funds made available by the project BESIDES Biomolecular Signature DEtection System [CALL-0948 - "Attività relative al supporto allo sviluppo di progetti/esperimenti scientifici nell'ambito dell'Astrobiologia"] – Funding contract ASI n. 2023-3-E.O – CUP F43D23000130005	Development of bioanalytical methods with luminescent detection in microfluidic devices for astrobiology applications
11	<b>PhD scholarship</b>	Funded by the Department of Chemistry "G. Ciamician" with funds made available by the project NANOTHERM - EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) – Mission 4 Education and research – Component 2 From research to business - Investment 1.1, Call Prin 2022 PNRR - DD N. 1409 del 14/9/2022 "Photothermal catalysis at the nanoscale (NANOTHERM)", code P20224N3WK - CUP J53D23014700001	Photothermal catalysis at the nanoscale
			
12	<b>PhD scholarship</b>	Funded by Consiglio Nazionale delle Ricerche (C.N.R.) - Istituto per la Sintesi Organica e la Fotoreattività – ISOF	Synthesis of graphene based materials for water monitoring and treatment

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
<b>Qualifications evaluation</b>	Applicants' participation is not required	Available from <b>27/06/2024</b>
<b>Oral examination</b>	<b>Date:</b> starting from <del>04/07/2024</del> <b>08/07/2024 – 9.00 a.m. CEST</b> <b>Place:</b> In presence Sala Riunioni, Department of Chemistry "Giacomo Ciamician" Via Selmi 2, Bologna. Remotely, using Microsoft Teams	Available from <del>08/07/2024</del> <b>11/07/2024</b>

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	
<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 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.
<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”.