



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

AREA
FORMAZIONE E DOTTORATO

PHD PROGRAMME TABLE

Call for applications for the admission to the PhD programmes (42nd cycle) - A.Y. 2026/2027
Second round

PROGRAMME'S NAME	INDUSTRIAL CHEMISTRY
DURATION	3 years
PROGRAMME START DATE	01/11/2026 (DD/MM/YYYY)
LANGUAGES	English
COORDINATOR	Prof. Stefano Zacchini (stefano.zacchini@unibo.it)
PhD POSITIONS	13
ADMISSION PROCEDURE	Qualifications evaluation Oral examination

Available Positions and Scholarships

Post o n.	Sostegno finanziario	Descrizione	Posizioni a tema vincolato
1	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	Transition Metal Carbonyl Clusters: Tailored Synthesis and Multi-technique Characterization towards Functional Nanosystems
2	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	Design and development of sustainable materials for additive manufacturing and advanced textile applications
3	<i>PhD Scholarship</i>	Totally funded by the University of Bologna general budget	Unraveling Fluid Dynamic Phenomena in Bioreactors with Evolving Rheology
4	<i>PhD Scholarship</i>	Funded by the University of Bologna general budget and by the Dept. of Industrial Chemistry "Toso Montanari"	Sustainable approaches for the preparation of advanced polymeric materials
5	<i>PhD Scholarship</i>	Funded by the Dept. of Industrial Chemistry "Toso Montanari"	Electrified catalytic processes for the industrial chemistry
6	<i>PhD Scholarship</i>	by the Dept. of Industrial Chemistry "Toso Montanari" with funds made available by the project HORIZON-ERC-2025-SyG - Project nr. 101224087 - CONCERT "Capturing and cONTrolling coniCal intErsections in Real Time" CUP J33C25001800006 - Prof. Marco Garavelli	Modelling quantum phenomena and coherent control approaches in photochemical processes of photoactive molecular systems
7	<i>PhD Scholarship</i>	Funded by the Dept. of Industrial Chemistry "Toso Montanari" with funds made available by the project HORIZON-ERC-2025-SyG - Project nr. 101224087 - CONCERT "Capturing and cONTrolling coniCal intErsections in Real Time" CUP J33C25001800006 - Prof. Marco Garavelli	Modelling non-adiabatic molecular dynamics and non-linear multi-pulse transient spectroscopies at different spectral regimes

8	PhD Scholarship	Funded by the Dept. of Industrial Chemistry "Toso Montanari" with funds partly made available by the project HORIZON-ERC-2021-STG - Project nr. 101040681 - SUPER "Supramolecularly engineered functional PERovskite quantum wells" - CUP J33C22003830006 - Prof. Daniele Cortecchia	Structure-property relationships in functional perovskite quantum wells
9	PhD Scholarship	Funded by the Dept. of Industrial Chemistry "Toso Montanari" with funds made available by the project PTR 2025 - 2027 Research into the National Electricity System 1.3 Integrated project on hydrogen technologies and end uses – CUP J33C24003420001 and by the project PTR 2025 - 2027 Research into the National Electricity System 1.10 Bioenergies - CUP J33C24003410001	Catalysts and processes for the development of the solar reforming of biogas. From solar thermal chemical loop to electrochemical alternatives
10	PhD Scholarship	Funded by the Dept. of Industrial Chemistry "Toso Montanari" in partnership with Consiglio Nazionale delle Ricerche – Istituto di Scienza, Tecnologia e Sostenibilità per lo Sviluppo dei Materiali Ceramici – CNR - ISSMC	Development of new electrochemical high temperature ceramic cell architectures for the production of fuel
11	PhD Scholarship	Funded by Fondazione Ing. Luciano Toso Montanari	Photoinduced processes and transient spectroscopies in azobenzene derivatives and mimics
12	PhD Scholarship	Funded by National Research Council – Institute of Science, Technology and Sustainability for Ceramics – CNR – ISSMC	Design of multifunctional biobased nanostructured hybrid materials for environmental sustainability and public health
13	PhD Scholarship	Funded by Istituto Italiano di Tecnologia – IIT	Electronic Doping of Metal Halide Perovskites

The yearly gross amount of the scholarships awarded for the PhD Programme in “Industrial chemistry” is € 18,341.04.

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 evaluation	Applicants' participation is not required	Available from 10/07/2026
Oral examination	Date: starting from 14/07/2026 – 9.00 a.m. CEST Place: In presence, Sala Riunioni 2, UE4 Building, Departments of Chemistry and Industrial Chemistry, Via Pero Gobetti 85, Bologna. Remotely, using Microsoft Teams	Available from 20/07/2026

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	
Identity document	Valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae	In the Curriculum Vitae a brief description of the topics researched in the second cycle degree final thesis is required. The Curriculum Vitae must be drawn up according to the “EuroPass” standard.
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). Please, note that the correct completion of the fields relating to the qualifications on the application procedure on Studenti Online is required (declarations about “Degree - Second or single cycle degree” e “Degree – First cycle degree”). A 10 points penalty on the total qualifications evaluation score shall be applied to applicants not filling correctly the said fields.
Thesis abstract	Abstract of the second cycle degree thesis . Graduands applicants may submit an abstract of the thesis about to be defended. Abstracts cannot exceed 3,000 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.
SUPPORTING DOCUMENTS	
Personal statement	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, with particular reference to a justified preference for one or more of the topic-specific positions available at the time of application (3,000 characters maximum, including spaces).
Publications	- List of publications (i.e. monographs, articles on scientific journals) - max 2 – information required: author(s)’s name, title of article, name of the journal, year of publication, first page number-last page number, journal’s IF, article/publication’s DOI number - List of presentations at academic conferences - max 3 – the presentation will be evaluated only if the candidate is the presenting author. Required information: presentation type (oral or poster), national or international relevance of the conference. Abstract required.
Other documents	- Postgraduate vocational training programmes and/or specialisation programmes relevant to the PhD Programme - Teaching activities carried out at academic level - Research activity - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research units - Work activity - Curricular and non-curricular professional internships - Periods of study abroad, outside the country of origin (e.g. Erasmus programme or other similar mobility programmes) - Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc)

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

First and Second cycle degree final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	20 points max
Publications	3 point max
Consistency of the thesis topics, as described in the abstract, with the research topics of the PhD programme	17 points max
Personal statement	5 points max
Other supporting documents	5 points max

2. Oral examination

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

English language proficiency	5 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	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 applicant's English proficiency shall be assessed.**

The oral examination is carried out in Italian or English.

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