



PHD PROGRAMME TABLE 40TH CYCLE

ERRATA CORRIGE

Section “Available Positions and Scholarships” integrated on 11/06/2024

PROGRAMME’S NAME	CIVIL, CHEMICAL, ENVIRONMENTAL AND MATERIALS ENGINEERING
DURATION	3 years
PROGRAMME START DATE	01/11/2024 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Alessandro Tugnoli (a.tugnoli@unibo.it)
CURRICULA	1. Engineering of Infrastructure, Resources and Territory 2. Structural and Geotechnical Engineering 3. Chemical and Process Engineering 4. Materials Engineering and Industrial Biotechnology
PhD POSITIONS	18
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

Available Positions and Scholarships

Pos. n.	Financial Support	Description	Curriculum	Positions linked to a specific research topic
1	PhD scholarship	Totally funded by the University of Bologna general budget	1	Engineering of Infrastructures, Resources and Territory
2	PhD scholarship	Totally funded by the University of Bologna general budget	1	Engineering of Infrastructures, Resources and Territory
3	PhD scholarship	Totally funded by the University of Bologna general budget	1	Engineering of Infrastructures, Resources and Territory
4	PhD scholarship	Totally funded by the University of Bologna general budget	2	Structural and Geotechnical Engineering
5	PhD scholarship	Totally funded by the University of Bologna general budget	4	Materials Engineering and Industrial Biotechnology
6	PhD scholarship	Totally funded by the University of Bologna general budget	3	Chemical and Process Engineering
7	PhD scholarship	Funded by the University of Bologna general budget and by the Department of Civil, Chemical, Environmental, and Materials Engineering	4	Materials Engineering and Industrial Biotechnology
8	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering	3	Chemical and Process Engineering
9	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project	1	Sediment dynamics modelling for hydropower management

		Horizon Europe –STORE2HYDRO “Novel long-term electricity storage technologies for flexible hydropower” - GA n. 101136176		
10	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project Horizon Europe - MINEYE “Earth Observation techniques for Mine life cycle monitoring Using ML-Based data fusion approach” – MINEYE, GA n. 101138456	1	New techniques of data fusion in Mining Engineering for Critical Raw Materials’ characterization
11	PhD scholarship	Funded by the EU – NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) – M4C2I1.3 by Partenariato Esteso 15 - Space It Up! Project (topic 15 PNRR “Space activities”) - CUP J53C24000580006	1	Earth observation for “Space it up!”
12	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project FIS CO22WATER “Stochastic amplification of climate change into floods and droughts change” ALTRIPN_2021_CO22WATER_MONTAN_A_01	1	Stochastic process-based models of the mutual interaction between hydrological and socio-economic systems with uncertainty assessment
13	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project FIS CO22WATER “Stochastic amplification of climate change into floods and droughts change” ALTRIPN_2021_CO22WATER_MONTAN_A_01	1	Simulating Future Floods and Droughts with AI-driven Stochastic Model Parameterization for Smarter Surface Water
14	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project LIFE-2021-IPC-CLIMAX_PO_CASTELLARIN	1	Scalable flood risk modeling in urban areas: integrating physically based and conceptual approaches with ai and machine learning
15	Research Grant	Provided by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project “Novel Insulation Concepts for LH2 Storage Tanks” - NICOLHy - HORIZON-JTI-CLEANH2-2023-1. Project n. 101137629. The research grant will have a duration of 36 months and gross percipient amount of €58,101.00.	3	Safety and Sustainability Hydrogen Technologies for Decarbonization
16	Research Grant	Provided by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project “CO2 Routes Across Europe” - COREu — HORIZON-CL5-2023-D3- 01. Project n. 101136217 + ECO_I_RIC_Cozzani. The research grant will have a duration of 36 months and gross percipient amount of €58,101.00.	3	Safety and sustainability of Carbon Capture and Storage technologies
17	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project	3	Characterization and Modeling of highperformance polymers for gas barrier applications

		Dutch Polymer Institute CUP DPI MuMPol: J55F20000300005		
18	PhD scholarship	Funded by the Department of Civil, Chemical, Environmental, and Materials Engineering with funds made available by the project Horizon Europe - CheMatSustain and Horizon Europe - Progetto EUROPE-LAND	1	Innovative and consolidated tools for the impact assessment of new materials and technologies, striving for planetary sustainability and different solutions for climate crisis mitigation and adaptation

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 evaluation	Applicants' participation is not required	Available from 01/07/2024
Oral examination	Date: starting from 15/07/2024 – 9.30 a.m. CEST Place: Remotely, using Microsoft Teams	Available from 22/07/2024

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	No specific CV format is required. Applicants are required to attach the CV Summary, as first page of the CV (see form at the bottom of the present document).
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 of the programme . The proposal must meet the following requirements: <ul style="list-style-type: none"> - it must mention on the cover page the Curriculum (1,2,3 or 4) the applicant is interested to and the proposal is about; - it cannot exceed 20,000 characters, including spaces and formula possibly used. This character count 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; outline of the proposed findings assessment criteria; references.

	The research proposal that successful applicants shall carry out during their PhD career may possibly differ from the one proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board.
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.
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 (3,000 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 - 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 - Work activity - Curricular or non-curricular professional internships - Documents attesting the applicant's foreign languages proficiency - Study periods completed by applicants outside their countries 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 and research proposal evaluation

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

Qualifications evaluation	University degree final mark and Weighted Average Mark (WAM). Graduands shall be evaluated according to the Weighted Average Mark (WAM)	20 points max
	Publications	3 points max
	Other evaluable documents	2 points max
Research proposal evaluation	Scientific value and ground-breaking nature of the proposal	12 points max
	Structure of the proposal	8 points max
	Proposal feasibility in the context of the PhD programme	5 points max

2. Oral examination

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

English language proficiency	5 points max
Research proposal presentation	25 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 Italian or in English.

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

CV SUMMARY OF THE CANDIDATE (to be attached to the CV)

Surname _____
First name _____
Place and date of birth _____

Curriculum of interest for the Doctorate in Civil, Chemical, Environmental and Materials Engineering (select one):

- 1. Engineering of infrastructure, resources and territory
- 2. Structural and geotechnical engineering
- 3. Chemical and process engineering
- 4. Materials engineering and industrial biotechnology

TRAINING

Bachelor's degree (if more than one, repeat this section as needed)

Degree in: _____
Year of graduation: _____
University: _____
Country: _____
Formal duration of the course: _____ (years or fractions)

Weighted average of the marks obtained in the exams (GPA): _____
Minimum mark for sufficiency _____
Maximum possible mark _____
Average mark achieved by students¹: _____; reference set considered (e.g. degree course / subject area / university): _____

If the course provides for an overall final grade / verbal judgment (exams + final test) other than the GPA of the exams and the final test only:

Evaluation / mark achieved: _____
Grading scale adopted / minimum and maximum achievable mark: _____

Master's degree or single-cycle master's degree (if more than one, repeat this section as needed) Master in:

Year of graduation: _____
University: _____
Country: _____
Formal duration of the course: _____ (years or fractions)

Weighted average of the marks obtained in the exams (GPA): _____
Minimum mark for sufficiency _____
Maximum possible rating _____
Average mark achieved by students¹: _____; reference set (e.g. degree course / subject area / university): _____

If the course provides for an overall final grade / verbal judgment (exams + final test) other than the GPA of the exams and the final test only:

Evaluation / mark achieved: _____
Grading scale adopted / minimum and maximum achievable mark: _____

NOTES

¹ If the information is available. The average mark or the mark of 50% percentile (median) can be reported [specify which one].