



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

AREA
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	MECHANICS AND ADVANCED ENGINEERING SCIENCES (DMSAI)
DURATION	3 years
PROGRAMME START DATE	01/11/2025 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Lorenzo Donati (l.donati@unibo.it)
CURRICULA	1. Engineering and Industrial Design, Machine Construction, Metallurgy, and Manufacturing Technologies 2. Fluid Machinery, Energy Systems, Mechanics of Machines, and Industrial Mechanical Plants 3. Thermal Physics, HVAC Systems, Acoustics, Nuclear Technologies and Industrial Applications of Plasmas
PhD POSITIONS	10
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	Funded by the University of Bologna general budget and by the Department of Industrial Engineering	1	
2	PhD Scholarship	Funded by the University of Bologna general budget and by the Department of Industrial Engineering partly with funds made available by the project "DTRIP4H - Enabling Decentralised Digital Twin Era in existing Research Infrastructures for Predictive, Preventive, Personalised, and Participatory Health" - Call: HORIZON-INFRA-2024-TECH-01 - Type of action: HORIZON Research and Innovation Actions - GA n. 101188432 - CUP: J53C24002370006 - Ref: Prof. Leonardo Frizziero	1	
3	PhD Scholarship	Funded by the University of Bologna general budget and by the Department of Industrial Engineering	2	
4	PhD Scholarship	Funded by the University of Bologna general budget and by the Department of Industrial Engineering	2	

5	PhD Scholarship	Funded by the University of Bologna general budget and by the Department of Industrial Engineering	3	
6	PhD Scholarship	Funded by the University of Bologna general budget and by the Department of Industrial Engineering	3	
7	PhD Scholarship	Funded by 01GREEN S.r.l.	1	Production of metals by PBF-LB: optimization of microstructure and mechanical properties by process and post- process control
8	PhD Scholarship	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 	1	Development and integration of advanced technologies with low environmental impact
9	PhD Scholarship	Funded by the Department of Industrial Engineering with funds made available by the project FISA2023-00210 – APACHE - Advanced maniPulation, grasping and control for enhanced machinery Autonomy and reConfigurability in pHarmaceutical processes and E-commerce packaging - CUP J53C25000520001. The decree granting the FISA funding from the MUR is currently being registered with the competent bodies. The position is therefore advertised under a resoluteive suspension clause.	2	Advanced robotic manipulation systems for enhanced automatic machinery autonomy and reconfigurability
10	PhD Scholarship	Funded by the Department of Industrial Engineering with funds made available by the project FISA2023-00210 – APACHE - Advanced maniPulation, grasping and control for enhanced machinery Autonomy and reConfigurability in pHarmaceutical processes and E-commerce packaging - CUP J53C25000520001. The decree granting the FISA funding from the MUR is currently being registered with the competent bodies. The position is therefore advertised under a resoluteive suspension clause.	2	Advanced robotic packaging systems for the e-commerce sector

The yearly gross amount of the scholarships awarded for the PhD Programme in “Mechanics and Advanced Engineering Sciences” is €19,367.

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 19/07/2025
Oral examination	Date: starting from 29/07/2025 – 9.00 a.m. CEST Place: In presence, Aula 5.1, Department of Industrial Engineering, Viale Risorgimento 2, Bologna. Remotely, using Microsoft Teams	Available from 04/08/2025

The results of the qualifications and research proposal 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 may express their interest in one or more 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	No specific CV 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: <ul style="list-style-type: none"> - 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; references.
SUPPORTING DOCUMENTS	
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.
Publications	Lists of publications (i.e. monographs, articles on scientific journals) and minor publications (conference papers, etc.)
Other documents	<ul style="list-style-type: none"> - 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 - Documents attesting the applicant's foreign languages proficiency - Periods of study abroad, 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, vocational programmes, etc.) and consistent with the PhD programme's main research areas

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	First (Bachelor's) and second cycle (Master's) degrees final marks. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	20 points max
	Publications and other evaluable documents	5 points max
Research proposal evaluation	Scientific value and ground-breaking nature of the proposal	15 points max
	Structure of the proposal	5 points max
	Proposal feasibility	5 points max

2. Oral examination

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

English language proficiency	5 points max
Applicant's suitability for academic research and knowledge of the topics connected to the research proposal	20 points max
General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	25 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. The applicant is preliminarily asked to declare any intention to compete for one or more topic-specific positions, if present in the list 'Available Positions and Scholarships'. The oral examination includes a discussion of the research topics for which the candidate is applying and any in-depth questions concerning the candidate's knowledge and mastery of the main research areas of the PhD programme. **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".