



PHD PROGRAMME TABLE 40TH CYCLE

ERRATA CORRIGE

Section "Available Positions and Scholarships" integrated on 10/06/2024

PROGRAMME'S NAME	BIOMEDICAL, ELECTRICAL AND SYSTEM ENGINEERING
DURATION	3 years
PROGRAMME START DATE	01/11/2024 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof. Michele Monaci (michele.monaci@unibo.it)
CURRICULA	1. Automatic Control and Operational Research 2. Bioengineering 3. Electrical Engineering
PHD POSITIONS	15
ADMISSION PROCEDURE	Qualifications and research proposal evaluation Oral examination

Available Positions and Scholarships

Pos. n.	Financial Support	Description	Curriculum	Topic-specific positions
1	PhD scholarship	Totally funded by the University of Bologna general budget	1	
2	PhD scholarship	Totally funded by the University of Bologna general budget	1	
3	PhD scholarship	Totally funded by the University of Bologna general budget	1	
4	PhD scholarship	Totally funded by the University of Bologna general budget	2	
5	PhD scholarship	Totally funded by the University of Bologna general budget	3	
6	PhD scholarship	Funded by the University of Bologna general budget and by the Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi"	3	
7	PhD scholarship	Funded by the EU – Next Generation EU 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	Optimal Control and Learning Methods and Toolboxes for Space Robotics
8	PhD scholarship	Funded by the Department of Electrical, Electronic, and Information Engineering "G. Marconi" with funds made available by the	3	Life and reliability models for high

		project HORIZON EUROPE - HEU-NEWGEN (ref. Prof. Giovanni Mazzanti) GA 101075592 CUP J53C22002580006 and by the project HORIZON EUROPE - SCARLET (ref. Prof. Antonio Morandi) GA 101075602 CUP J53C22002590006		voltage direct current (HVDC) cable systems
9	PhD scholarship	Funded by the Department of Electrical, Electronic, and Information Engineering "G. Marconi" with funds made available by the project HORIZON EUROPE – HEU_2021_INTELLIMAN_PALLI (ref. Prof. Gianluca Palli) GA 101070136 CUP J53C22002750006	1	Robotic hand control and manipulation using EEG signals
10	PhD scholarship	Funded by the Department of Electrical, Electronic, and Information Engineering "G. Marconi" with funds made available by the projects DRYSMES4GRID and HORIZON EUROPE - SCARLET (ref. Prof. Antonio Morandi) GA 101075602 CUP J53C22002590006 in partnership with DTT S.c. ar.l.	3	Development of contactless power supply systems of the Transformer-rectifier flux pump type for use in DC toroidal fusion magnets
11	Research Grant	Provided by the Department of Electrical, Electronic, and Information Engineering "G. Marconi". The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €21,077.66 per year.	1	Learning, optimization and control methods and toolboxes for Morfeo, the adaptive optics module of the ELT telescope
12	Research Grant	Provided by the Department of Electrical, Electronic, and Information Engineering "G. Marconi" with funds made available by the project HORIZON EUROPE - HEU_2022_IPROP_CRISTO_A_01 – HORIZON EUROPE EIC IPROP "Ionic Propulsion in Atmosphere" CUP J33C22004500006 GA 101098900. The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €21,888.34 per year.	3	Development of Insulation Systems for Ionic Propulsion Devices
13	Research Grant	Provided by the Department of Electrical, Electronic, and Information Engineering "G. Marconi" with funds made available by the project HORIZON EUROPE - HEU_2022_IPROP_CRISTO_A_01 – HORIZON EUROPE EIC IPROP "Ionic Propulsion in Atmosphere" CUP J33C22004500006 GA 101098900. The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €21,888.34 per year.	3	Numerical and experimental investigation of plasma and ionic wind in corona discharges
14	Research Grant	Provided by the Interdepartmental Centre for Industrial ICT Research (CIRI - ICT) with funds made available by the programme PR FESR –	1	Controlling complex cyberphysical

		<p>Azione 1.1.2 – Call for strategic industrial research projects addressing priority areas of the Intelligent Specialisation Strategy – Project CYberPHysical Components and advanced matERials for monitoring and sensing (CYPHER – CUP: E37G22000470007). The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €20,996.6 per year.</p> 		systems for mobile manipulation via task priority
15	Research Grant	<p>Provided by the Interdepartmental Centre for Industrial ICT Research (CIRI - ICT) with funds made available by the programme PR FESR – Azione 1.1.2 – Call for strategic industrial research projects addressing priority areas of the Intelligent Specialisation Strategy – Project CYberPHysical Components and advanced matERials for monitoring and sensing (CYPHER – CUP: E37G22000470007). The research grant will have a duration of 12 months, renewable up to 36 months, and gross percipient amount of €20,996.6 per year.</p> 	1	Programming by demonstration via advanced human-robot interfaces for complex cyber-physical systems

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 and research proposal evaluation	Applicants' participation is not required	Available from 01/07/2024
Oral examination	<p>Date: starting from 23/07/2024 – 9.30 a.m. CEST Place: In presence, Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi", Viale Risorgimento 2, Bologna. Remotely, using Microsoft Teams</p>	Available from 26/07/2024

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
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)
SUPPORTING DOCUMENTS	
Research proposal	<p>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:</p> <ul style="list-style-type: none"> - it must mention on the cover page the Curriculum the applicant is interested to and the proposal is about. In case the applicant were not to indicate one of the available Curricula, the Admission Board will assign the applicant the Curriculum most consistent with the research proposal and all the submitted documents. The assigned Curriculum will be communicated within the qualifications evaluation results; - 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); <p>The research proposals 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.</p>
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.
Reference letter/s	No more than 2 reference letters signed by Italian or international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest in the scientific research. Letters shall be uploaded following the procedure detailed in the Call for Applications (Art. 3.2)
Publications	<ul style="list-style-type: none"> - Full text publications (i.e. monographs, articles on scientific journals) – max n.3 - Full text minor publications (conference papers, etc.) – max n. 2
Other documents	<ul style="list-style-type: none"> - Postgraduate vocational training programmes relevant to the PhD Programme main research topics - Teaching and/or tutorship activity 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 - 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. Note that the qualifications and research proposal will be evaluated based on the consistency with the chosen Curriculum.

1. Qualifications and research proposal evaluation

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

Qualifications evaluation	Second cycle (Master's) degree final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM)	15 points max
	Publications	5 points max
	Other evaluable documents	15 points max
Research proposal evaluation	Scientific value and ground-breaking nature of the proposal	5 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
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, with particular reference to the chosen Curriculum (or to the Curriculum assigned by the Admission Board if the candidate does not indicate it).

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".