BIOTECHNOLOGY AND LIFE SCIENCE		
CYCLE	XL	
COORDINATOR	Prof.ssa Elena MAESTRI email: elena.maestri@unipr.it Department of Chemistry, Life Sciences and Environmental Sustainability	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
POSITIONS PUT OUT TO COMPETITION	7	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS Oral Exam in PRESENCE or REMOTELY	
Regardless of age and citizenship, applicants holding at least one of the following academic qual can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the by 31.10.2024		

The Ph.D. Course in Biotechnology and Life Sciences aims to train experts to carry out advanced research in the field of biological disciplines and biotechnology. The research topics of the Ph.D. Course are concerned with the study of the function, organization and expression of the genome of microbial, plant and animal organisms (including human beings), in order to deepen the basic knowledge, also with a view to possible applications in biotechnology. The methodologies used are mainly those of genomics, including functional genomics, genetics, molecular biology, biochemistry, applied biology and computational biology. Building on this common goal and a strongly cross-cutting advanced teaching activity, to train PhDs with highly qualifying skills in specific areas of Biotechnology and Life Sciences, three main areas of research have been identified as follows: 1) environmental biotechnologies; 2) genetic and evolutionary biotechnologies; and 3) molecular biotechnologies. PhD students will be involved full-time in a research project, to which they will also make critical and propositional contributions. In this way, they will acquire a marked scientific and managerial autonomy, also thanks to the numerous scientific collaborations, national and international, in which they will be involved.

- Environmental biotechnologies
- Genetic and evolutionary biotechnologies
- Molecular biotechnologies

Position with Scholarship			
N°	Funding entity	Research Topic	
2	Scholarship funded by University of Parma (Ministerial funds)	<ul><li>Environmental biotechnologies</li><li>Genetic and evolutionary biotechnologies</li></ul>	
1	Scholarship funded by University of Parma (University funds)	Molecular biotechnologies	
1	Scholarship co-funded by Fondazione Cariparma	Environmental biotechnologies	
Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			

N°	Funding entity	BOUND RESEARCH TOPIC
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J23000420006  COEDINE COLOR LANGE OF COLOR LAN	RESEARCH TOPIC Genetic and evolutionary biotechnologies Genetic and evolutionary biotechnologies: Assessment of new biomarkers of exposure to urban atmospheric particulates in relation to the ongoing transition between fossil fuel vehicles and electric vehicles
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company preclinics S.r.l. CUP D92J24000210004	RESEARCH TOPIC Molecular biotechnologies  Molecular biotechnologies: Characterization of reduced-size antibodies (nano-body, pico-body) and development of an innovative platform for their selection for diagnostic and therapeutic purposes.

## **POSITION RESERVED**

Reserved to **Holders of RESEARCH GRANT** within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe (**FutureData4EU**)"

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## **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 40 points

(a minimum score of 18 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 80 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAM PROGRAM**

**The ORAL EXAM WILL BE HELD IN PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

The Oral Exam will focus on critical reading and discussion of a scientific article chosen by the candidate among those proposed by the Committee within the each of the three main research topics. Candidates will be asked by the Committee members to discuss and explain the contents of the scientific publication they have selected.

The choice of research topic must be indicated in the application form ANNEX A.

**Foreign Language** 

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam		
DATE 2 <sup>nd</sup> September 2024 (with possible extension in the follows)		2 <sup>nd</sup> September 2024 (with possible extension in the following days)		
	TIME	09:00 am (Italian Time)		
ORAL EXAM PLACE		ROOMS A + B PODERE AMBOLANA (Cascina Ambolana) Parco Area delle Scienze, 33/A - Campus Universitario 43124 PARMA - ITALY		
FURTHER INFORMATION		The choice of the research area to be expressed in Annex A is MANDATORY and determines the choice of the topic of discussion of the oral exam.		

THE INTERVIEW MA	AY BE HELD
ALSO IN ENGLISH	

For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT				
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION				
ANNEX A	(art. 3.2 of the Competition notice)			
Identification Document	Scanned Co	ppy of a valid identity document with photo (i.e. identity card, passpor	t)	
Curriculum Vitae et studiorum	No specific	CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	the draft of	the second cycle master's degree thesis. Undergraduate applicants more than the sis approved by their supervisor (abstract/draft of the the including spaces)		
Academic Qualifications	containing University Name of correspond	is and academic transcript of records for both Bachelor' and Master the following details for each degree held: (art. 3.2 of the Competition that granted the degree - Type of degree (first cycle/second cycle/sing the degree program - Date of graduation - Final mark - List of eding scores (academic transcript of records) - Translation into Italian egrees issued in languages other than Italian or English).	n notice): gle cycle) exams and	
	LIS	T OF EVALUABLE QUALIFICATIONS		
(only qua		ttested by a document drawn up in Italian or in English)		
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.			
Graduation mark	Score related to the final mark: - 110 with honours (magna cum laude): 20 points; - 110: 18 points; - From 103 to 109: points 4-16 (2 points for each mark unit); - Until 102: 3 points.			
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)	·		Up to 18 points	
Graduation thesis			Up to 6 points	
Scientific Publications	Publications in indexed international journals (WOS, Scopus): 2 points for each publication (for evaluation purposes it is mandatory to attach a pdf copy of each publication to the application)  Up to 6 points		-	
Communiations to conferences, publication in indexed national journals, book chapters	1 point for each conference abstract, publication in indexed national journals or book chapters (for evaluation purposes it is mandatory to attach a pdf copy of each term to the application)  Up to 3 points		-	
EVALUATION ORAL EXAM				
Interview Program		Evaluation CRITERIA	POINTS	

The ORAL EXAM is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

The candidates will be summoned individually by the Examination Board to discuss the contents of the scientific publication they have selected from the proposals relating to the research topic. During this test, knowledge of the English language will also be assessed.

The evaluation is based on the candidate's preparation and the critical sense demonstrated.

Up to 80 points

ECONOMICS & MANAGEMENT OF INNOVATION AND SUSTAINABILITY (EMIS)		
CYCLE	XL	
COORDINATOR	Prof.ssa Beatrice LUCERI email: <a href="mailto:beatrice.luceri@unipr.it">beatrice.luceri@unipr.it</a> Department of Economics and Management	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
PARTNER INSTITUTION	<ul> <li>University of Ferrara</li> <li>University Cattolica del Sacro Cuore</li> </ul>	
POSITIONS PUT OUT TO COMPETITION	12	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY	
Regardless of age and citizenship, applicants holding at least one of the following academic qualifican apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian of and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the by 31.10.2024		

The PhD programme is structured to educate scholars who will be able to apply analytical and computational tools to functional data for making complex decisions in the fields of economics and management. Participants may approach the doctoral research project from either an economic theory perspective or a business theory perspective. This encompasses the rapidly evolving fields of study that form the theoretical framework of reference, including business administration, economics and business management, business organization, political economics, public economics, applied economics, corporate finance, and the economics of financial intermediaries. embracing the precipitous fields of study of the theoretical framework of reference: business administration, economics and business management, business organization, political economics, public economics, applied economics, corporate finance, and economics of financial intermediaries. Additionally, the programme incorporates the methods supporting the economic and business disciplines.

The learning objectives are achieved by integrating economics, management and mathematical-statistical tools, as a particular specificity of the PhD programme. The knowledge and skills learned enable a fruitful employability in academia or in companies or public administrations and international institutions in high-skilled occupations in the regional, Italian and European job markets.

The PhD programme offers both an interdisciplinary foundation and a cultural background suited to address the methodology of the research topic investigated, to identify an original research perspective and to develop an original PhD thesis that contributes to the advancement of knowledge. These outcomes are achieved by structuring the PhD program as follows:

- Year 1, provide a foundation in scientific research and shaping of the PhD research project;
- Year 2, development of the PhD thesis, by conducting research activities and eventually spending a period abroad at qualified universities/research institutes;
- Year 3, completion of the PhD thesis by conducting research activities and presenting results to academic conferences.

The first year of the Ph.D. aims to equip students with the requisite knowledge and skills to undertake appropriate research project design. The research foundation courses are structured around three core areas: Theories, Methods and Applications. The theoretical courses in micro-macroeconomics and management theories constitute the Theories pillar. The Methods pillar encompasses courses on literature analysis, research design, quantitative and qualitative research techniques, and qualitative and quantitative data analysis tools. The Applications pillar is structured according to the teaching needs of PhD students, with lectures and seminars provided on a topic-specific basis. Furthermore, other activities, including those designed to enhance soft skills, language proficiency, and computer literacy, are incorporated into the training programme. It is strongly recommended that students undertake a period of study abroad during the second year of their PhD programme. This will enable them to

develop advanced research techniques and to address emerging research issues with respect to the research topic under investigation.

## **RESEARCH AREAS**

(The candidate **MUST mandatorily** indicate one research topic in the form ANNEX A and submit a RESEARCH PROJECT in the relevant field)

- Branding and value creation
- Consumer behavior and marketing management
- Determination and communication of value in businesses
- Knowledge economy, organization, human capital and labour
- Environmental and natural resources economics
- Economics and public management
- Economics and industrial policies: innovation, productivity, growth and convergence
- Finance and risk management
- Health care and health management
- Performance evaluation, balance analysis and business management auditing
- Entrepreneurship and business strategy
- Policies and economics for agri-food.
- Intangible resources and management systems, financial and non-financial assessment and reporting
- Economic decisions in uncertain contexts
- Other field of research

	Position with Scholarship				
N°	Funding entity	Research Topic, if any			
3	Scholarship funded by University of Parma (Ministerial funds)				
1	Scholarship co-funded by Fondazione Cariparma (University of Parma)				
3	Scholarship funded by University of Ferrara				
1	Scholarship funded by University Cattolica del Sacro Cuore				
	Position with Scholarship LINKED TO SPEC	IFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC			
1	Scholaship funded by EMILIA ROMAGNA REGION (PR.FSE + 2021/2027 – DGR n. 2111 del 04/12/2023) - CUP D92J24000010002)  COESCIPLE CONTROLL OF THE PROPERTY OF THE	Forecasting of urban mobility flows and optimal management of local transport  City mobility is constantly at the center of urban policy choices in every city reality. Travel modes have changed in recent years, outlining a complex scenario that requires a highly specialized study to understand all the dynamics, in order to propose new approaches to sustainable mobility.  The project must contain a proposal that deals with the realtime monitoring of the flow of users using "road" means of transport. Preference is given to proposals using modern techniques of automatic image identification. Further positive elements are projects that include solutions with:  Proposals based on modern statistical methods.  Multi-disciplinary proposals.  A strong partnership with the Municipality of Parma and its subsidiaries is expected.			

		Scientific supervisor: Prof. Fabrizio Laurini, University of Parma
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 9 "Public Administration") CUP D92J24000160006	ESG sustainability and impact evaluations in Public Administration and in publicly owned companies."  The research project aims at investigating, with specific reference to the Public Administration and public-owned companies, the economic and social impact evaluations systems, as well as the non-financial and sustainability performance reporting models. The aim is to identify Italian and international best practices to define a sustainability reporting and impact evaluations path in the actions of the Public Administrations and in its publicly owned companies.  Economic and social impact assessments enable public administrations, and in their linked publicly owned companies, to monitor and evaluate the effects of their activities on people and communities, health and the environment, as well as to identify any negative side effects. This enables them to improve their performance and more accurately account for their impacts on society and the environment. This is where the nonfinancial performance reporting models of institutions come in, with particular reference to ESG principles. The latter have become an increasingly important benchmark for companies and public administrations that want to demonstrate their commitment to sustainability and social responsibility. Nonfinancial reporting enables companies in general to communicate transparently and reliably about their goals and performance in this area, providing comprehensive and reliable information to their stakeholders.  The PhD student will have also the opportunity to study the management and organizational models of publicly owned companies through empirical analysis and the development of case studies, operating in close collaboration with publicly owned companies present on the local and national territory and the presentation of the results of the studies conducted at national and international scientific conferences. The PhD student has to spend a period of study and research abroad, in order to acquire new skills and get to know different realiti
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 9 "Public Administration") CUP D92J24000160006	The role of management in promoting innovation and change in public healthcare companies  Good performances in terms of services' quality among public healthcare organizations are strictly related to competences of people working within such organizations.  Therefore, there's a strong need to develop and incentivize good practices in order to promote innovation and change. The research project aims to define management competences as well as managerial tool for improving performance in public healthcare organizations in the forthcoming years.  The PhD student will have the chance to improve his/her knowledge of the Italian public healthcare system, through empirical and in-depth case studies analyses. He/She will also collaborate with major public hospitals across the whole national territory. Results of his/her work will be presented at national and international conferences.

		Furthermore, the PhD student will be entitled to spend a period
		of time abroad, in order to acquire new competencies and get
		to know new contexts.
		Scientific supervisors: Proff. Antonello Zangrandi and Simone
		Fanelli, University of Parma
		TALENTO: what are the most in-demand skills on the labour
		market? New analytical approach, data mining and policy
		implications
		What skills do employers seek in new employees? This is a
		central question to understand and identify policy implications
		not only for industrial development, but also for the education system.
		Employers increasingly reach job seekers through online job
		postings, particularly for jobs requiring a higher education
		qualification (OECD, 2020). Job postings available online provide
		a rich source of real-time and detailed data on the qualifications
		and skills sought by employers across industries, occupations,
		and locations.
		For those reasons, the UNESCO Chair "Education, Growth and
		Equality" proposes the development of TALENTO, an original
	Scholashin funded by FMILIA ROMAGNA REGION	big-dataset of on-line Job Posting in Italy enabling new
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		educational offerings. If analysed and disseminated effectively,
		such data could also assist students and workers in making
		learning and career decisions, for instance by identifying
		opportunities to build their own non-traditional path into high-
		demand occupations.
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1	Scholaship funded by EMILIA ROMAGNA REGION CUP F71J23000130009	analytical approaches and data mining methods to understand what the most in-demand skills on the current labour market are.  The research aims to explore both the content of new-demanded professional profiles, and the geographical distribution of this demand across regions, counties and municipalities.  We believe that Job posting data may hold promise to complement existing labour market information systems and aid educators and policy makers in aligning labour demand and educational offerings. If analysed and disseminated effectively, such data could also assist students and workers in making learning and career decisions, for instance by identifying opportunities to build their own non-traditional path into high-

POSITION RESERVED	
With Scholarship reserved for candidates that have achieved degreee abroad	1

**Assessment of QUALIFICATIONS:** up to 75 points

(a minimum score of 50 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 45 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit **a motivated REQUEST** as per the model attached to the competition announcement)

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

## **Foreign Language**

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist of carrying out part of the interview in English.

	SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam			
	DATE	3 <sup>rd</sup> September 2024 (with possible extension in the following days)			
ORAL EXAM	TIME	09:00 am (Italian Time)			
	PLACE	ROOM D – 1 <sup>st</sup> Floor Department of Economics and Management Via J.F. Kennedy, 6 43125 PARMA - ITALY			
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.			
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.		

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 3.000 characters including spaces)	
Academic Qualifications  Certificates and academic transcript of records for both Bachelor' and Master' degree containing the following details for each degree held: (art. 3.2 of the Competition notice) University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams a corresponding scores (academic transcript of records) - Translation into Italian or Engli (only for degrees issued in languages other than Italian or English).		

Research Project	Written in Italian or in English, according to the format attached to the competition notice (max 8.000 characters including bibliography and spaces),  It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board		
(only qu		OF EVALUABLE QUALIFICATIONS tested by a document drawn up in Italian or in English)	
Curriculum Vitae et studiorum	Score relate graduands.	ed to the final mark or to the average of the exam marks for	Up to 12 points
Graduation thesis	Congruence research me	with the research topics of the PhD course and quality of the ethodology	Up to 15 points
Research Project	The project will be evaluated based on the scientific value, the originality of the proposal the articulation, the feasibility of the proposal and the		Up to 24 points
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests  Up to 6 points		-
Scientific Publications	Monographs, articles in scientific journals, chapters of books, convention papers.  The assessment will be carried out with a view to accessing the PhD course and taking into account the degree of maturity required for the specific position.  Only publications of which a copy has been included among the qualifications presented will be evaluated and not any publications cited exclusively in the curriculum and / or in the form of a list.		
Other qualifications	Qualified professional experiences (in the case of professional experiences, continuous and lasting ones will be privileged - at least one semester - and will be evaluated only if they are recognized as functional to the acquisition of skills, experience and qualification in the research areas covered by the specific doctoral course); other academic qualifications (masters, advanced courses, at least two-monthly training courses provided by university-level training institutions or bodies); didactic, seminar or university training experiences.		=
EVALUATION ORAL EXAM			
Interview Program		Evaluation CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		<ul> <li>knowledge of the foreign language: max 10 points</li> <li>research project presentation: max 35 points</li> </ul>	Up to 45 points

PHYSICS			
CYCLE	XL		
COORDINATOR	Prof.ssa Raffaella BURIONI email: raffaella.burioni@unipr.it Department of Mathematical, Physical and Computer Sciences		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
POSITIONS PUT OUT TO COMPETITION	11		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY		
Regardless of age and citizenship, applicants holding at least one of the following academic of can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain by 31.10.2024			

The PhD programme in Physics, which lasts 3 years, is established as the unifying element of all third-level university education in the field of Physics. In addition to the predominant commitment to research activities, there is a significant teaching and study component consisting of advanced teaching courses and participation in national and international schools. Students are encouraged to spend part of their time abroad to participate in scientific collaborations in their areas of interest and to attend advanced courses relevant to their research programme. Over the three years, the teaching commitment tends to decrease in favour of a full commitment to independent research activities. At the end of each year, an open seminar is held to evaluate the progress made. Independent scientific research must result in peer-reviewed publications in international journals. The aim of the PhD in Physics is to provide high-level professional skills that can be used both in academia and in public and private research centres and laboratories. The PhD in Physics is divided into three tracks, corresponding to the main groups of physical science disciplines in which the research activities of the Department of Mathematical, Physical and Computer Sciences are carried out: Condensed Matter and Materials Physics, Theoretical Physics, Biophysics and Applied Physics.

- Quantitative aspects of Single Molecule fluorescence Microscopy and Spectroscopy (Bound research topic)
- Industrial applications of laser-induced graphene (Bound research topic)
- Application of artificial intelligence protocols to semiconductor oxides for the development of aroma sensors (Bound research topic)
- New aspects and applications of field theories (Bound research topic)
- Rotational domains in Ga<sub>2</sub>O<sub>3</sub>: identification of their origin and strategies to prevent them (Bound research topic)
- Learning Early Universe Physics with Galaxy Survey and Gravitational Wave Data (Bound research topic)
- Comparing feature learning in deep networks in and out of equilibrium: a statistical physics approach
- Reversible-binding aptamers for single-molecule imaging
- Emulsion Dynamics on Earth and in Microgravity
- Characterization and control of molecular qudits for quantum algorithms
- Solving superconformal field theories

	Position with Scholarship				
N°	Funding entity	Research Topic, if any			
2	Scholarship funded by University of Parma (Ministerial funds)				
1	Scholarship funded by University of Parma (University funds)				
1	Scholarship co-funded by Fondazione Cariparma				

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)					
N°	Funding entity	BOUND RESEARCH TOPIC				
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Mathematical, Physical and Computer Sciences (funds Project PRIN 2022 PNRR codice CUP D53d23002180006 "UV-C Sensor based on Gallium Oxide (USE GAO))	Rotational domains in Ga <sub>2</sub> O <sub>3</sub> : identification of their origin and strategies to prevent them				
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Mathematical, Physical and Computer Sciences (funds Project PRIN 2022 "Learning Early Universe Physics with Galaxy Survey and Gravitational Wave Data")	Learning Early Universe Physics with Galaxy Survey and Gravitational Wave Data				
1	Scholarship funded by INFN – The Italian National Institute for Nuclear Physics	New aspects and applications of field theories				
1	Scholarship funded by IIT – Italian Institute of Technology	Quantitative aspects of Single Molecule fluorescence Microscopy and Spectroscopy				
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company X_LAV S.r.l.s. CUP D92J24000220004	Industrial applications of laser-induced graphene				
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company NANO SENSOR SYSTEM S.r.I. CUP D92J24000220004	Application of artificial intelligence protocols to semiconductor oxides for the development of aroma sensors				

POSITION RESERVED	
Reserved to <b>Holders of RESEARCH GRANT</b> within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe ( <b>FutureData4EU</b> )"	1

Assessment of QUALIFICATIONS: up to 50 points

(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 70 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAM PROGRAM**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

Foreign Language

the fluency of which shall be assessed

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist of carrying out part of the interview in English

SCHEDULE OF THE ADMISSION EXAMS			
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam	
	DATE	28 <sup>th</sup> August September 2024 (with possible extension in the following days)	
	TIME	09:30 am (Italian time)	
PHYSICS BUILDING		Parco Area delle Scienze, 7/A – Campus	
FURTHER INFORMATION		The Oral Exam will focus on the description of the research work carried out to prepare the Graduation Thesis for the Laurea Magistrale/Specialistica, as well as on the research project that the candidate proposes to carry out within the research topics of the Research Doctorate Program in Physics at the Department of Mathematical, Physical and Computer Sciences of the University of Parma which are described at <a href="http://smfi.unipr.it/it">http://smfi.unipr.it/it</a> In the application to participate in the competitive examination, the candidate must choose and specify one research topic. The candidate may indicate a second priority choice.	
		For foreign candidates, the admission examinations may be held in English at the candidate's choice.	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A (art. 3.2 of the Competition notice)			
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must subn the draft of the thesis countersigned by their supervisor.		
Academic Qualifications  Certificates and academic transcript of records for both Bachelor' and Master containing the following details for each degree held: (art. 3.2 of the Competition University that granted the degree - Type of degree (first cycle/second cycle/single)			

	Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English		
Research Project and Statement of Research interest	(only for degrees issued in languages other than Italian or English).  A brief text (max 3 pages) in English. The candidates must describe their research interests and indicate the preferred topic among those listed above, possibly suggesting a second choice theme. For the first choice theme, candidates must outlay an original research project including a concise state of the art, the relevance of the problem and the expected results. Candidates are warmly invited to contact the potential supervisors listed at <a href="http://smfi.unipr.it/it">http://smfi.unipr.it/it</a> The presented project does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board.		
(only qua		T OF EVALUABLE QUALIFICATIONS ttested by a document drawn up in Italian or in English)	
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  Up to 25 points		
Graduation thesis	Consistency of the Master' Degree thesis with the doctoral program research topics. The assessment will make use of the information contained in the abstract (max 1 page) of the thesis (although not yet discussed, in this case countersigned by the thesis supervisor) and in the curriculum, where a brief description of the thesis work should be reported.		
Research Project and Statement of Research Interest	The project will be evaluated in relation to its scientific value and originality. The motivation expressed by the candidate in relation to the themes of the research doctorate will be evaluated  Up to 10 points		
Other qualifications	Publications, awards, presentations to scientific meeting, stages, fellowships, reference letters, etc  Up to 10 points		-
EVALUATION ORAL EXAM			
Interview Program		Evaluation CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		<ul> <li>knowledge of the topics of the Master's degree thesis</li> <li>research project presentation</li> <li>general knowledge of issues connected to the PhD course</li> <li>knowledge of the foreign language</li> </ul>	Up to 70 points

CIVIL ENGINEERING AND ARCHITECTURE				
CYCLE XL				
COORDINATOR Prof. Andrea SPAGNOLI				

	email: andrea.spagnoli@unipr.it Dipartimento di Ingegneria e Architettura	
DURATION	3 anni	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
AVAILABLE POSITIONS	13	
ADMISSION METHODS	Assessment of qualifications and research project Oral Examination in PRESENCE or REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024.	

To develop specialized skills in the following fields:

- (1) Infrastructure and Environmental Engineering: civil infrastructures for transport; survey, management, and analysis of land data, control and monitoring of displacements and deformations at all scales; issues related to surface waters and groundwater;
- (2) Structural and Geotechnical Engineering: mechanical behaviour of materials, structural components and structures; behaviour of soils and geotechnical structures;
- (3) Architecture and Urban Planning: theoretical, formal, distributional and functional aspects in architecture; the problems related to methods for survey and to computer-graphics in architecture; issues related to the implementation and the development of urban settlements; historical, artistic, technical and aesthetic themes in the architecture of the past.

**RESEARCH AREAS OF THE DOCTORAL COURSE** (the candidate **MUST mandatorily** select one research area in the ANNEX A and present a research project in the selected area)

- Infrastructure and Environmental Engineering
- Structural and Geotechnical Engineering
- Architecture and Urban Planning

	Posti con Borsa di Studio				
N°	Position with Scholarship	Research Topic, if any			
3	Scholarship funded by University of Parma (University funds)				
1	Scholarship co-funded by Fondazione Cariparma				

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)				
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Department of Engineering and Architecture	Exploring the Role of Street Experiments in Promoting Active Mobility and Sustainable Urban Development		
1	Financed by Eni S.p.A.	Enhancing maximum circularity in the asphalt world through the innovative re-use of recycled asphalt pavements		
1	Financed by REGIONE EMILIA ROMAGNA (PR.FSE + 2021/2027 - DGR n. 2111 del 04/12/2023) - CUP D92J24000010002	Digital archives-platforms for architectural design. Innovative tools for teaching, dissemination, conservation and innovation with reduced environmental impact		
1	Scholarship financed by European Union – NextGenerationEU with funds under the PNRR– Mission 4 component 1, Investment 4.1 (D.M. 629/2024 art. 10 "Patrimonio Culturale") CUP D92J24000200006	Cataloguing and analysing damage to churches in the Emilia-Romagna region following the 2012 earthquake for their preservation		
1	Scholarship financed by European Union – NextGenerationEU with funds under the PNRR– Mission 4 component 2, Investment 3.3 (D.M. 630/2024) e by EcoRevive S.r.l. CUP D92J24000230004	Re-use of plastics derived from multilayered food carton recycling processes as a modifier for asphalt mixtures		
1	Scholarship financed by European Union – NextGenerationEU with funds under the PNRR– Mission 4 component 2, Investment 3.3 (D.M. 630/2024) e by ASE S.r.l. CUP D92J24000230004	Development and application of algorithms based on Machine Learning for the analysis of the behavior of geotechnical structures		
1	Scholarship financed by European Union – NextGenerationEU with funds under the PNRR– Mission 4 component 2, Investment 3.3 (D.M. 630/2024) e by Fassa Bortolo S.r.l. CUP D92J24000230004	Effects and benefits of calcium oxide hydration reaction in cold recycling asphalt mixtures		

Position reserved to HOLDERS OF RESEARCH GRANT	
Reserved to holders of Research Grant of "China Scholarship Council"	1
Reserved to holders of Research Grant within the project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe (FutureData4EU)"	1

Assessment of QUALIFICATIONS: up to 70 points

(a minimum score of 40 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 50 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAMINATION INDICATION**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL EXAMINATION includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of research areas related to the PhD course.

Foreign language

**ENGLISH** 

The language for which the fluency must be assessed during the Oral Examination. The assessment of knowledge of this language will be oral and will consist in reading and translating a scientific text.

SCHEDULE OF THE ADMISSION EXAMS				
EVALUATION OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/">http://unipr.esse3.cineca.it/</a> in the days preceding the date of the Oral Exam.		
	DATE	2 September 2024, with possible extension to the following day		
ORAL EXAM	TIME	09.30 AM (Italian Time)		
	PLACE	Auditorium Centro S. Elisabetta Parco Area delle Scienze, 95 43124 PARMA - ITALY		
OTHER INFORMATION		The choice of the research area to be expressed in Appendix A is not binding on the assignment of the PhD research topic, but is intended to assess the candidates' skills during the admission examination. The PhD research topic will be assigned by the Board of Lecturers.		
		THE INTERVIEW MAY ALSO TAKE PLACE IN ENGLISH	For foreign candidates, it is possible to take the admission tests in English only. For Italian candidates, it is possible to take the admission tests in Italian or English, at the candidate's choice.	

LIS	LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A	(art. 3.2 of the Competition Notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)		

	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held (art. 3.2 of the Competition notice):				
Academic	University that granted the degree - Type of degree (first cycle/second cycle/single cycle)				
Qualifications  Name of the degree program - Date of graduation - Final mark - List of exams and correspo scores (academic transcript of records) - Translation into Italian or English (only for degrees)					
	languages other than Italian or English).				
	The research project shall consist of a maximum of 3 pages, be written in Italian or in En	_			
	shall be structured as follows: introduction of the problem in the scientific context, signification the problem, expected results. The project must focus on an original research topic (ung				
	personally developed by the candidate) related to the topics listed in	Jublished,			
Research Project	https://dia.unipr.it/it/node/6470. It should be noted that the Examination Board can u	se of IT			
·	tools useful for verifying the originality of the submitted Project.				
	It does not represent a constraint with respect to the following choice of the doctoral the				
	be defined together with the supervisor and approved by the Academic Board.II Proget				
	non costituisce vincolo alla successiva scelta del tema di ricerca di dottorato, che sarà a Collegio dei Docenti.	ssegnato dai			
Statement of	Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candida	ite's reasons			
Research Interest	to attend the PhD program and at describing her/his specific research interests				
FURTHER QUALIF	ICATIONS THAT MAY BE ATTACHED TO THE APPLICATION, IF IN POSSESSION OF THE APP	LICANT			
	A maximum of 2 written by professors or researchers at the University of origin of the				
	from other universities or from experts in the research areas working in public or privi				
Reference Letters	facilities. The reference letters must sent directly by the signer to the add <a href="mailto:spagnoli@unipr.it">spagnoli@unipr.it</a> . Reference letters sent directly by the candidate or received in any of				
	not be evaluated.	.iiei way wiii			
Scientific	A maximum of 2 articles on national and international journals, papers presented at co	nferences or			
Publications					
	LIST OF EVALUABLE QUALIFICATIONS  (only qualifications attested by a document drawn up in Italian or in English)				
	Including academic career and postgraduate experience, accompanied by a statutory				
Curriculum Vitae et	declaration in lieu of the certification of the exams passed with the relevant marks, as	Up to 30			
studiorum	well as the final graduation mark.	points			
	Mandatory: Statement of Research Interest Not mandatory: Reference Letters	•			
Curadication mands	Not manuatory. Neterence Letters	Up to 5			
Graduation mark		points			
Average of the exam					
marks (if the candidate will attain the degree no		Up to 5			
later than 31st October		points			
2023)	Consistency of the Mestay's Dogges thesis with the destays was a self-training				
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae by attaching the abstract of the	Up to 6			
Graduction thesis	degree thesis or draft of the thesis approved by the supervisor)	points			
Research Project		Up to 25			
		points			
Scientific		Up to 4			
Publications		points			
	LIST OF EVALUABLE QUALIFICATIONS				
	Reserved to holders of Research Grant				

Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  Mandatory: Statement of Research Interest  Not mandatory: Reference Letters			
Graduation mark				
<b>Graduation thesis</b>	Consistency of the Master's Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae by attaching the abstract of the degree thesis or draft of the thesis approved by the supervisor)		Up to 6 points	
Research Project				
Scientific Publications				
		ORAL EXAM		
Interview program		Evaluation CRITERIA	POINTS	
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of research areas related to the PhD course		<ul> <li>knowledge of the foreign language</li> <li>research project presentation</li> </ul>	Up to 50	

INDUSTRIAL ENGINEERING		
CYCLE	XL	
COORDINATOR	Prof. Gianni ROYER CARFAGNI email: gianni.royer@unipr.it Department of Engineering for Industrial systems and Technologies	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	November 1st 2024	
POSITIONS PUT OUT TO COMPETITION	8	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

The Industrial Engineering PhD program aims at giving to the participants a deep knowledge in the main topics relevant to industrial engineering. The PhD course presents numerical, analytical and experimental techniques, in order to face any technical or scientific problem of the industrial engineering, with managerial skills, to provide autonomy in work and readiness of inclusion in a collaborative environment with other researchers and technicians. The internationalization phase, envisaged in the three-year curriculum, allows to forge links with other foreign realities by providing to the graduate student an additional tool to get into a scientific context, not just limited by national borders.

#### RESEARCH AREAS

- Theoretical and applied mechanics, mechanics of materials and structures, material technology, machine design, measurements and diagnostics;
- · Economic, organizational, managerial, logistics, plants and legal aspects in the field of engineering;
- Energy systems, thermo-fluid dynamics, fluid machinery, applied physics;
- Industry 4.0 and future evolution

	Position wi	th Scholarship
N°	Funding entity	Research Topic, if any
3	Scholarship funded by University of Parma (Ministerial funds)	
1	Scholarship co-funded by Fondazione Cariparma	

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)

N°	Funding entity	BOUND RESEARCH TOPIC
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 8 "PNRR Research") CUP D92J24000150006	Circular materials for green packaging
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 2, Inv. 3.3 (Ministerial Decree 630/2024) and co-financed by the Company GEA PROCOMAC S.r.I. CUP D92J24000240004	Big data analysis e modelling
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 2, Inv. 3.3 (Ministerial Decree 630/2024) and co-financed by the Company SpaceGlass S.r.l. CUP D92J24000240004	Innovative windows for special applications

POSITION RESERVED	
Reserved to Holders of RESEARCH GRANT for the scientific disciplinary sector BIO/09 in the research topic "Sustainability and resilience Assessment of agri food industry and Ho.Re.Ca sector in Italy")	1

**Assessment of QUALIFICATIONS:** up to 70 points

(a minimum score of 40 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 50 points

Minimum score for ELIGIBILITY: 70/120

# **ORAL EXAM PROGRAM**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

## **Foreign Language**

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text

### **SCHEDULE OF THE ADMISSION EXAMS**

ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam	
	DATE	2 <sup>nd</sup> September 2024 (with possible extension in the following days)	
ORAL EXAM	TIME	09:00 am (Italian Time)	
ORAL EXAM	PLACE	Master Room – Building 3 Department of Engineering for Industrial Systems and Technologies Parco Area delle Scienze, 181/A - Campus 43124 PARMA - ITALY	
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT				
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION				
ANNEX A	ANNEX A (art. 3.2 of the Competition notice)			
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passpor	t)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)			
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)			
Academic Qualifications	Certificates and academic transcripts of records for both Bachelor and Master degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).			
Research Project	Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can make use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board			
(only qu	LIST OF EVALUABLE QUALIFICATIONS  (only qualifications attested by a document drawn up in Italian or in English)			
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.	Up to 25 points		
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics	Up to 10 points		

Research Project	Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and or originality of the proposal description and structure of the proposal proposal proposal proposal		
Statement of Research Interest	Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests		
Scientific Publications	Articles on national and international journals, papers presented at conference or symposia, book chapters etc.	Up to 5 points	
Reference Letters	A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities.  They must be uploaded directly by the signatory to the REFERENCE LETTER folder. The file must be named "Candidate's Surname and Name – Reference Letters - PhD in Industrial Engineering". The candidate, therefore, must not upload them through the procedure of online registration for the competition.		
Other Academic qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program		
Other experiences (training, work, research, teaching, etc.)	<ul> <li>Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covered by research grant, and as a staff member of research units</li> <li>Working activity</li> <li>Professional and/or training internship</li> <li>Language proficiency certificates</li> <li>Periods of study abroad, outside the country of origin (e.g. Erasmus program or other similar mobility programs)</li> <li>Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>		
EVALUATION ORAL EXAM			
Interview Program	Evaluation CRITERIA	POINTS	
The ORAL EXAM includes the present the research project and is intendent the suitability of the applicant scientific research as well as the knowledge of issues connected to course	to assess o pursue e general e general o knowledge of foreign languages	Up to 50 points	

MOLECULAR MEDICINE			
CYCLE	XL		
COORDINATOR	Prof. Prisco MIRANDOLA email: prisco.mirandola@unipr.it Department of Medicine and Surgery		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
POSITIONS PUT OUT TO COMPETITION	9		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024		

The Research Doctorate Course in Molecular Medicine aims to provide PhD students with the cultural and methodological skills necessary to carry out high-profile research in different scientific disciplines in the biomedical field, integrated in an interdisciplinary perspective. The acquired training will allow PhDoctors in Molecular Medicine to employ themselves in high level research and development activities in Universities, research centers and industries engaged in the medical, biological and biotechnological sectors.)

- Methodological approach to torture in order to establish an appropriate classification of the subject in the request for political asylum.
- Molecular anatomy of human bone remodeling.
- STRESS LESS: Validation of a digital protocol for prevention, assessment and intervention on work-related stress, "tailored" according to the different professional categories.
- PKC isoforms as biomakers of cortical neuron degeneration in ALS.
- Gastrointestinal Hormone Release as a Promising Strategy for Metabolic Disorders.
- Microbiology and Clinical Microbiology.
- Pharmacology of lipid metabolism and associate disorders: focus on inflammation, senescence, and degeneration.
- New technologies in head and neck surgery.
- Clinical and laboratory evaluation systems of biomaterials in bone and mucosal regeneration in the oro-maxillo-facial district.

Position with Scholarship			
N°	Funding entity	Research Topic	
3	Scholarship funded by University of Parma (Ministerial funds)	Gastrointestinal Hormone Release as a Promising Strategy for Metabolic Disorders.	
1	Scholarship funded by University of Parma (University funds)	<ul> <li>Microbiology and Clinical Microbiology.</li> <li>Pharmacology of lipid metabolism and associate disorders:</li> </ul>	
1	Scholarship co-funded by Fondazione Cariparma	focus on inflammation, senescence, and degeneration.  • New technologies in head and neck surgery.	

	•	Clinical and laboratory evaluation systems of biomaterials in
		bone and mucosal regeneration in the oro-maxillo-facial
		district.

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)				
N°	Funding entity	BOUND RESEARCH TOPIC			
1	Scholarship funded by Department of Medicine and Surgery (funds Project PPMLEG Prof.ssa Valentina Bugelli)	Methodological approach to torture in order to establish an appropriate classification of the subject in the request for political asylum.			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicina and Sugery (code Project 20224TAETP – CUP D53D23008460006; Code Project 20224TAETP- CUP D53D23017460001)	Molecular anatomy of human bone remodeling.			
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company NEOSIN S.r.I. CUP D92J24000260004.	STRESS LESS: Validation of a digital protocol for prevention, assessment and intervention on work-related stress, "tailored" according to the different professional categories.			
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company I.R.C.C.S. Ospedale San Raffaele S.r.l. CUP D92J24000260004	PKC isoforms as biomakers of cortical neuron degeneration in ALS.			

Assessment of QUALIFICATIONS: up to 60 points

(a minimum score of 10 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 60 points

Minimum score for ELIGIBILITY: 70/120

# **ORAL EXAM PROGRAM**

## THE ORAL EXAM TAKES PLACE IN THE PRESENCE.

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

**Foreign Language** 

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be by an oral examination and will consist in translating of a scientific text.

## **SCHEDULE OF THE ADMISSION EXAMS**

ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam
	DATE	4 <sup>rd</sup> September 2024
ORAL EXAM	TIME	10:30 am (Italian Time)
ORAL EXAM	PLACE	Anatomical Room D - Institute of Human Anatomy and Forensic Medicine Department of Medicine and Surgery Via Gramsci, 14 43126 PARMA - ITLAY
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A	(art. 3.2 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passpor	t)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants m the draft of the thesis approved by their supervisor (abstract/draft of the the characters including spaces)		
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).		
Research Project	Written in Italian or in English, according to the format attached to the competition notice It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board		
, ,	LIST OF EVALUABLE QUALIFICATIONS		
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark (up to 10 points).  It will also be evaluated the exam marks and the graduation mark (up to 5 points).  Score related to the final mark:  - 110 with honours (magna cum laude): 5 points;  - 110: 3 points;  - From 100 to 109: 0,2 point for each mark unit	Up to 15 points	

	Score related to the average of the exam marks (only for the candidate will attain the degree no later than 31 October 2023): -> 28/30: 5 points -> 27/30: 3 points -> 25/30: 1 point			
Graduation thesis	Consistency with the research themes of the PhD course and quality of the research methodology	Up to 7 points		
Research Project	Points relating to the research project:      Scientific value and originality of the proposal: max 2.5 points     articulation of the proposal: max 2.5 points     proposal feasibility: max 2.5 points     consistency with the research themes of the PhD course: max 2.5 points			
Statement of Research Interest	Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests	Up to 8 points		
Scientific Publications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.  Evaluation of the candidate's contribution and the editorial location of the product.			
Reference Letters	A maximum of 3 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities. The candidate must uploading them through the procedure of the competition online registration			
Other Academic qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program			
Other experiences (training, work, research, teaching, etc.)	<ul> <li>Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covedere by research grant, and as a staff member of research units</li> <li>Working activity</li> <li>Professional and/or training internship</li> <li>Language proficiency cartificates</li> <li>Periods of study abroad, outside th country of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>			
EVALUATION ORAL EXAM				
Interview Program	Evaluation CRITERIA	POINTS		
The ORAL EXAM includes the press the research project and is intend the suitability of the applicant scientific research as well as the knowledge of issues connected to course	to assess to pursue e general e general  knowledge of the foreign language: max 4 points o ability to argument the project proposal: max 28 points c knowledge of chosen topic: max 28 points	Up to 60 points		

MICROBIOTA AND HEALTH			
CYCLE	XL		
COORDINATOR	Prof. Marco VENTURA email: marco.ventura@unipr.it Department of Chemistry, Life Sciences and Environmental Sustainability		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
POSITIONS PUT OUT TO COMPETITION	5		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS Oral Exam in PRESENCE or REMOTELY		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024		

The main aim of the PhD in "Microbiota and Health" is to train PhDs who are experts in the study of the microbiota in physiological and pathological conditions and of possible translational applications, which constitute a useful premise for carrying out innovative and advanced research in various fields of clinical medicine and basic and applied biology

## **RESEARCH AREAS**

- investigation of the microbiota and its interactions with humans;
- investigation of the microbiota and its interactions with animals;
- investigation of the microbiota and its interactions with the environment

	Position with Scholarship			
N°	Funding entity	Research Topic		
3	Scholarship funded by University of Parma (Ministerial funds)	investigation of the microbiota and its interactions with		
1	Scholarship co-funded by Fondazione Cariparma	humans		

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)				
N°	Funding entity	BOUND RESEARCH TOPIC			
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company GenProbio S.r.l. CUP D92J24000250004	Identification of structural and molecular markers of interaction between microbiota and innate immunity cells for the definition of immunomodulatory strategies based on microbial components			

# **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 40 points

(a minimum score of 14 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 80 points

Minimum score for ELIGIBILITY: 70/120

### **ORAL EXAM PROGRAM**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The Oral Test will focus on the critical reading and discussion of a scientific article chosen from those proposed by the Examination Board within the research topic selected by the candidate. The candidates will be called individually by the Examination Board to discuss the contents of the scientific publication selected by them. During the oral exam he will come knowledge of the English language also assessed.

**Foreign Language** 

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in translating a scientific text

SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam		
DATE		29 <sup>th</sup> August 2024 (with possible e	extension to the following day)	
ORAL EXAM	TIME	09:30 am (CET)		
ONAL EXAM	PLACE	ROMM 5 BIOSCIENCES BUILDING Parco Area delle Scienze, 11/A – 0 43124 PARMA	Campus	
FURTHER INFORMATION		of the research project, and it is	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission I be assigned by the Academic Board.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A (art. 3.2 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	

Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)		
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).		
	LIST	FOF EVALUABLE QUALIFICATIONS	
(only qua	alifications a	ttested by a document drawn up in Italian or in English)	
Curriculum Vitae et studiorum	statutory d relevant marks	cademic career and postgraduate experience, accompanied by a eclaration in lieu of the certification of the exams passed with the arks, as well as the final graduation mark.  of the exams and the graduation mark will be the most relevant the evaluation.	Up to 5 points
Graduation mark	Score related to the final mark: - 110 with honours (magna cum laude): 20 points; - 110: 18 points:		Up to 20 points
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)			Up to 18 points
Graduation thesis	I tonics or consistency with the scientific discinlinary sectors represented in the		Up to 6 points
Scientific Publications	I publication (for evaluation purposes it is mandatory to attach a not conviot each i		Up to 6 points
Communiations to conferences, publication in indexed national journals, book chapters	I or book chapters (for evaluation purposes it is mangatory to attach a pot copy		Up to 3 points
EVALUATION ORAL EXAM			
Interview Program		Evaluation CRITERIA	POINTS
The ORAL EXAM is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course			Up to 80 points

NEUROSCIENCES		
CYCLE	XL	
COORDINATOR	Prof. Luca BONINI email: luca.bonini@unipr.it Department of Medicine and Surgery	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
CURRICULA	Neuroscience     Behavioural Biology	
POSITIONS PUT OUT TO COMPETITION	11	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

- Provide a global and interdisciplinary view of the proposed research areas, ensuring a high degree of specialization in research within these fields;
- Acquire skills and abilities for the autonomous use of at least one neuroscientific investigation technique;
- Promote the development of national and international networks and exchanges aimed at sharing and deepening the research topic addressed.

- **Integrated Neurosciences**: comparative neurophysiology and neuroethology, cognitive and social neurosciences, cognitive psychology, psychology of perception and action, psychobiology, psychophysiology.
- **Behavioral Biology:** biological bases of social, agonistic, and parental behavior, gene/environment interactions on behavioral development, cognitive and emotional ethology in animals and humans.

	n Scholarship	
N°	Funding entity	Research Topic, if any
3	Scholarship funded by University of Parma (Ministerial funds)	
1	Scholarship co-funded by Fondazione Cariparma	

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of of Chemistry, Life Sciences and Environmental Sustainability (funds Project PRIN 2022 PNRR CUP D53D23009910006 Sector ERC SH4 "At origins of sound symbolism. A comparative investigation")	Exploring sound symbolisms in the domestic dog		
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (funds Project PRIN 2022 PNRR COMPAACT CUP D53D2302303000)	Application of imaging techniques for the comparative parcellation of the primate brain		
1	Scholarship co-funded by Department of Medicine and Surgery (funds Project ERC CoG "EMACTIVE") and by the University Claude Bernard Lyon (France)	Computational neuroscience applied to the analysis and modeling of neural signals from extracellular recordings		
1	Scholarship funded by Higher Institute of Health (ISS)	Use of Prebiotics (Inulin) and Metformin as a Combined Therapy for Metabolic and Mental Disorders Associated with Insulin Dysfunction		
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J24000010002  COESIONE (TALIA 21-27) COFFERENCE OF THE PARTY OF THE PART	The physiological mechanisms and neural bases of sustainable food consumption		
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Blackrock Neurotech (USA) CUP D92J24000270004	Bioengineering Methods for Analyzing Multielectrode Recordings in Human and Non-Human Primate Cerebral Cortex		

POSITIO	)N RE	SERV	EC
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Reserved to **Holders of RESEARCH GRANT** for the scientific disciplinary sector BIO/09 in the research topic "Neural bases of the interaction between perception of space and social cognition" - C.N.R. Institute of Neurosciences"

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# **ADMISSION PROCEDURES**

**Assessment of QUALIFICATIONS:** up to 40 points

(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 80 points

Minimum score for ELIGIBILITY: 70/120

# **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

**The ORAL test includes:** 1) the verification of the candidates' general preparation on topics related to the research topics of the PhD course, 2) the presentation and discussion of the research project, 3) the verification of the knowledge of the English language.

Foreign Language	
the fluency of which shall be assessed	
during the Oral Exam	

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in the discussion of the research project presented in English)

SCHEDULE OF THE ADMISSION EXAMS			
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam	
	DATE	2 <sup>nd</sup> September 2024 (with possib	le extension to the following day)
ORAL EXAM	TIME	09:00 am (Italian Time)	
ORAL EXAM	PLACE	ROOM B Department of Medicine and Surgery Integrated Biotechnological Plexus Via Volturno, 39/E – 43125 PARMA - ITALY	
FURTHER INFORMATION		of the research project, and it is	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission be assigned by the Academic Board.
		THE INTERVIEW MAY ALSO TAKE PLACE ENTIRELY IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Degree thesis	the full thesis in pdf format. Undergraduate applicants must submit the draft of the thesis approved by their supervisor. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)	
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).	

Written in English, 3 pages with single spacing in Times New Roman 12, including bibliography, it must focusing on an original research topic (unpublished, developed personally by the candidate. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project) and it shall be structured as follows: introduction of the problem in the scientific context, relevance of the problem, objectives, expected results.  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.  LIST OF EVALUABLE QUALIFICATIONS  (only qualifications attested by a document drawn up in Italian or in English)  Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant		
Curriculum Vitae et Stu	element of the evaluation.  Idiorum will be evaluated based on the following qualifications and scores:	
Graduation mark	Score related to the final mark: - 110 with honours (magna cum laude): 10 points; - 110: 7 points - From 108 to 109: 5 points - From 106 to 107: 3 points - 104-105: 1 point - Under 104: 0 points	Up to 10 points
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2023)	Score related to the average of the exam marks: - From 29/30 to 30/30: 10 points - From 28/30 to 28.99/30: 7 points - From 27/30 to 27.99/30: 5 points - From 26/30 to 26.99/30: 3 points - From 25/30 to 25.99/30: 1 point - Under 25/30: 0 points	Up to 10 points
Graduation thesis	Congruence with the research topics of the PhD course and methodological quality of the experimental or bibliographic work.  • Experimental thesis related to the PhD program of Neuroscience: 10 points  • Non-experimental and relevant thesis: 5 points  • Thesis not relevant: 0 points	Up to 10 points
Research Project	Project evaluation score:  o scientific value: 2.5 points o structure of the proposal: 2.5 points o proposal feasibility in relation to the specific research topics of the PhD course: 2.5 points o originality of the proposal: 2.5 points	Up to 10 points
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English	Up to 2 points
Scientific Publications	<ul> <li>Each article in a peer-reviewed international journal: 1 point</li> <li>Each book chapter: 0.4 points</li> <li>abstracts/papers/posters presented at conferences or symposia: 0.3 points</li> <li>The same categories are half valued if in Italian.</li> <li>The points of the publications are normalized for post-graduate years, that is, divided by the numbers of post-graduate years.</li> </ul>	Up to 5 points
Other Academic qualifications	Other academic qualifications consistent with the research topics of this PhD program	Up to 3 points

	EVALUATION ORAL EXAM	
Interview Program	Evaluation CRITERIA	POINTS
The ORAL examination includes:  A1) Neurosciences: the oral report on 2 topics drawn at random (one from list 1 and one from list 2) among those indicated below:  1.1. Genesis and transmission of the nervous impulses 1.2. The synapses 1.3. The reflexes 1.4. Molecular and cellular bases of signal Transduction 1.5. Neural bases of plasticity 2.1 The motor system 2.2. The visual system 2.3. The somatosensory system 2.4. The autonomic nervous system and emotions 2.5. Neurobiology of language  A2) Behavioural Biology: the oral report on 2 topics chosen by lot from those indicated in the list below:  1) Individual and social learning 2) Imprinting and development of behavior 3) Genetic and epigenetic of behavior 4) Parental effort and sexual selection 5) Social behavior, reproductive systems and parental care 6) Aggression, assault and social hierarchies 7) Hormones, neurotransmitters and behavior 8) Parental selection and altruism 9) Behavioral evolution 10) Communication and emotions emozioni  B) The presentation and discussion of the research project, aimed at verifying the candidate's aptitude for scientific research. The discussion will take in English to evaluate the knowledge and the fluency of the language	<ul> <li>Up to 40 points for the oral report on one of the first 5 and one of the second 5 topics, extracted from the list alongside (up to 20 points per topic);</li> <li>Up to 20 points for the project presentation;</li> <li>Up to 20 points for knowledge of the foreign language</li> </ul>	Up to 80 points

PSYCHOLOGY	
CYCLE	XL
COORDINATOR	Prof.ssa Ada CIGALA email: ada.cigala@unipr.it Department of Humanities, Social Sciences and Cultural Industries

DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
POSITIONS PUT OUT TO COMPETITION	6	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

The main aim of the PhD course is to train qualified researchers capable of planning and carrying out basic research focused on the research topic of the course and studies applied to clinical, social, educational, health and organizational contexts

- Psychosocial processes in complex societies
- Development and learning processes in typical and atypical contexts
- Processes involved in clinical and social intervention
- Work and organizational psychology

Position with Scholarship			
N°	Funding entity	Research Topic, if any	
2	Scholarship funded by University of Parma (Ministerial funds)		
Scholarship co-funded by Fondazione Cariparma			

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)				
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Humanities, Social Sciences and Cultural Industries	Welcoming minors into the community and providing guidance on educational and life projects. A qualitative-quantitative study on representations, experiences and relationships		
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 9 "Public Administration") CUP D92J24000170006	Vertical educational continuity 0-10 years and developmental trajectories		

Scholarship co-financed with funds under the PNRR -Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company TICE

Cooperativa Sociale CUP D92J24000280004



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Neurodivergent voices: representations and stereotypes about neurodivergence

#### **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 60 points

(a minimum score of 35 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 60 points

Minimum score for ELIGIBILITY: 70/120

#### **ORAL EXAM PROGRAM**

THE ORAL EXAM TAKES IN THE PRESENCE and with the possibility of carrying out the interview REMOTELY for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a motivated REQUEST as per the model attached to the competition announcement).

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course.

#### **Foreign Language**

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

	SCHEDULE OF THE ADMISSION EXAMS			
ASSESSMENT OF QUALIFICATIONS		which can be consulted in	y to verify the outcome of the evaluation of qualifications, their reserved area by connecting to the page e.do in the days preceding the date of the Oral Exam	
DATE		2 <sup>nd</sup> September 2024		
ORAL EXAM	TIME	02:30 pm (Italian Time)		
	PLACE	ROOM A POLO DIDATTICO Via del Prato – 43121 PARMA - ITA	ALY	
FURTHER INFORMATION		of the research project, and it is	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission be assigned by the Academic Board.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	

# LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION

UNIVERSITÀ DI PARMA

Via Università, 12 - 43121 Parma

ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applic submit the draft of the thesis approved by their supervisor (abstract/draft of 10.000 characters including spaces)	
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and degrees containing the following details for each degree held: (art. Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle)  Name of the degree program - Date of graduation - Final mark - List of corresponding scores (academic transcript of records) - Translation into English (only for degrees issued in languages other than Italian or English).	3.2 of the ycle/single exams and
Research Project	The research project shall consist of a maximum of 2500 words, be written in Italian or in English, and it must be an original research project (inedited, unpublished, personally developed by the candidate) and be structured as follows: theoretical introduction, relevance of the problem, research design and methodology, expected results and discussion, essential bibliography (maximum 5 bibliographic entries)  The Research Project does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and	
	approved by the Academic Board.  LIST OF EVALUABLE QUALIFICATIONS	
(only qualification	ations attested by a document drawn up in Italian or in English)	
Graduation mark  Or  Average of the exam marks (if the	Score related to the final mark: - 110 and 110 with honours (magna cum laude): 10 points; - From 100 to 109: 8 points - Under 99: 5 points  Score related to the average of the exam marks:	Up to 10 points
candidate will attain the degree no later than 31 October 2024)	- 30/30: 10 points - From 27/30 to 29/30: 8 points; - Under 26/30: 5 points	
Graduation thesis	Congruence with the research topics of the PhD course and quality of the research methodology	Up to 5 points
<ul> <li>Scientific value and internal consistency (aspects that will be considered: validity of the theoretical formulation, relevance of the problem faced, clarity of the objectives and appropriateness of the methodology, consistency of the expected results and relative discussion): 20 points</li> <li>Formal and grammatical aspects: 4 points</li> <li>Congruence with the research themes of the PhD course: 4 points</li> </ul>		Up to 28 points
The candidate's Curriculum Vitae et Studiorum will be evaluated based on the following qualifications and scores:		
Scientific Publications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc	Up to 10 points
Other Academic qualifications	First or second level master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD programme	Up to 5 points

Other experiences (training, work, research, teaching, etc.)	study or research expiences abroad, prizes, scholarships and research grants (documented)	Up to 2 points
EVALUATION ORAL EXAM		
Interview Program	Evaluation CRITERIA	POINTS
The ORAL EXAM focuses on the knowl of the English language, on the discussi the research project, on the knowl related to the research themes of the programme	on of ledge of toreign languages (English): 10 points of discussion and argumentation of the projec: 35 points	Up to 60 points

MATERIALS SCIENCE AND TECHNOLOGY		
CYCLE	XL	
COORDINATOR	Prof. Mauro RICCO' email: mauro.ricco@unipr.it Department of Mathematical, Physical and Computer Sciences	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
PARTNER INSTITUTION	The Italian National Research Council (C.N.R.)	
POSITIONS PUT OUT TO COMPETITION	13	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS Oral Exam in PRESENCE ore REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

The Ph.D. in "Materials Science and Technology" aims to provide graduates in: Materials Science, Physics, Chemistry, Industrial Chemistry, Biological Sciences, Biotechnology and Engineering with the necessary skills to carry out research activities of high scientific and professional qualification in the field of Materials Science and Technology at Universities, Research Centers or private entities. The course offers a strong, interdisciplinary preparation with specific courses, as well as with research activities conducted also abroad within scientific collaborations.

- Materials for sensors and bioelectronics
- Materials for electrochemical storage (batteries and supercapacitors)
- Nanodiagnostic techniques
- Auxetic polymers
- <u>Supramolecular sensors and devices</u>
- Carbon nanostructures
- Low-dimensional semiconductor structures
- Self-repairing and self-diagnostic polymers
- Ceramic and composite materials
- <u>Vitrimers</u>
- Materials for <u>bionanotechnology</u> and <u>nanomedicine</u>
- Photocatalytic solid foams
- Semiconductor materials for applications in power electronics and UVC radiation detection
- Porous materials for chemical separation
- Molecular and nanostructured materials for energy, health and environment
- Multifunctional magnetic thin films and nanostructures
- Magnetic materials for energy transition (<u>permanent magnets, shape memory magnetic materials</u>, <u>magnetocaloric materials</u>)
- Composite hydrogels for 3D printing of biomatrices for tissue engineering (<u>BIO X 3D printer CNR-ISSMC</u>; <u>Bio-Hybrid Composites for Regenerative Medicine CNR-ISSMC</u>)

	Position with Scholarship				
N°	Funding entity	Research Topic, if any			
3	Scholarship funded by University of Parma (Ministerial funds)				
1	Scholarship funded by The Italian National Research Council C.N.R IMEM	The aim of the thesis is the development and study of innovative hard magnetic materials to develop new Green magnets with a reduced content of critical materials such as Rare Earth or Cobalt. In particular, we will study new types of ferrites, metal-ferrite nanocomposites and multi-element alloys based in the concept of "high entropy alloys". The thesis will be developed within the activities of the European project Horizon Europe "Beethoven".			
1	Scholarship funded by The Italian National Research Council C.N.R ISSMC	Biomaterials in the form of injectable hydrogels that can be processed by means of 3D printing will be designed and developed to obtain nano-composite and multifunctional biomimetic porous matrices of bone and cartilage tissue for tissue engineering applications.  The design of bioinspired materials will be linked to the development of customized medical devices for the regeneration of tissues, organs and deep wounds and being able to integrate cells, biomolecules, and drugs to deliver advanced therapies. In addition, the opportunity to design biomatrices will enable the engineering of 3D cellular models to investigate the properties of systems of different complexity and biological activity and for the drug-testing of new pharmacological therapies			
1	Scholarship co-funded by Fondazione Cariparma				
	Position with Scholarship LINKED TO SPEC	IFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds Project Horizon Europe ENRICH)	Molecular receptors for the enrichment of modified peptides for ultra-sensitive proteomics			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR "National Center for Gene Therapy and Drugs based on RNA Technology", codice identificativo MUR CN00000041 – CUP [E63C22000940007] del bando a cascata del Progetto "MUltifunctional synthetic platforms for the precision delivery of NUcleic AcidS"-MUNUS, codice CUP D53C23003990007)	Self-assembled materials for cell transfection and nanomedicine			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by The Italian National Research Council C.N.R IMEM	Materials and devices for flexible organic electrochemical sensing for biological fluid monitoring applications, aimed at wearable and highly integrated devices			
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J24000010002  Operation of the Company of the	Germanium oxide: a new ultrawide bandgap ambipolar semiconductor for power electronics.  We aim to deposit (e.g., MOVPE) and characterize (e.g., XRD, Raman, van der Pauw-Hall) epitaxial thin films of germanium			

		oxide in the rutile phase r-GeO2. For this purpose, different single crystalline substrates will be employed. The possibility to experimentally obtain and control n- as well as p-type conductivity in r-GeO2 will be investigated through the employment of proper extrinsic dopants during growth.
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company A.L.S.I.A. Agenzia Lucana di Sviluppo e di Innovazione in Agricoltura CUP D92J24000290004	Implementation of a "bioristor", a new sensor developed by CNR-IMEM, in the ALSIA station for plant phenotyping
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company NanoPhoenix S.r.l. CUP D92J24000290004	Fabrication and development of nanostructured sensor platforms, to be implemented in miniaturized lab-on-chip systems for molecular diagnostics based on DNA nanotechnologies.
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Versalis S.p.A. CUP D92J24000290004	Study of vitrimeric EPDM elastomers, aiming at producing reprocessable and recyclable polyolefin-based elastomers produced by Versalis (ENI group). Specifically, the PhD scholarship concerns the study of new reversible cross-linking agents using dynamic covalent bonds and multiple hydrogen bonds.

Assessment of QUALIFICATIONS: up to 60 points

(a minimum score of 30 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 60 points

Minimum score for ELIGIBILITY: 70/120

### **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

The ORAL EXAM will focus on the candidate's motivation to attend the PhD, on the description of his specific research interests and on a discussion of the qualifications presented by the candidate.

### **Foreign Language**

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in translating of a scientific text.

# **SCHEDULE OF THE ADMISSION EXAMS**

ASSESSMENT OF QUALIFICATIONS

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam

	DATE	2 <sup>nd</sup> September 2024 (with possible extension in the following days)	
ORAL EXAM	TIME	09:00 am (Italian Time)	
	PLACE	Department of Mathematical, Phy PHYSICS BUILDING Parco Area delle Scienze, 7/A – Ca 43124 PARMA - ITALY	·
FURTHER INFORMATION		of the research project, and it is	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission be assigned by the Academic Board.
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A	(art. 3.2 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, pa	ssport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)		
Academic Qualifications  Certificates and academic transcript of records for both Bachelor' and Megrees containing the following details for each degree held: (art. 3.2 Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle cycle)  Name of the degree program - Date of graduation - Final mark - List of example corresponding scores (academic transcript of records) - Translation into Italian (only for degrees issued in languages other than Italian or English).		3.2 of the cycle/single exams and	
(only qualifica	LIST OF EVALUABLE QUALIFICATIONS attended by a document drawn up in Italian or in English)		
Including academic career and postgraduate experience, accompanied by  Ourriculum Vitae et studiorum  a statutory declaration in lieu of the certification of the exams passed with		Up to 20 points	
Graduation mark	Score related to the final mark: - 110 with honors (magna cum laude): 20 points - 110: 16 points - From 105 to 109: 12 points - From 100 to 104: 8 points - From 95 to 99: 4 points - Under 95: 0 points	Up to 20 points	

Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)	Score related to the average of the exam marks: - 30/30: 20 points - From 28/30 to 29/30: 16 points - From 26/30 to 27/30: 12 points - 25/30: 8 points - 24/30: 4 points - Under 24/30: 0 points	Up to 20 points
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae)	Up to 10 points
Statement of Research Interest	Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests	Up to 5 points
Scientific Publications	Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings	Up to 5 points

EVALUATION ORAL EXAM			
Interview Program	Evaluation CRITERIA	POINTS	
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	<ul> <li>knowledge of foreign languages: 10 points</li> <li>general knowledge of issue connected to the Master's thesis: 25 points</li> <li>general knowledge of issues connected to the PhD course: 25 points</li> </ul>	Up to 60 points	

CHEMICAL SCIENCES			
CYCLE	XL		
COORDINATOR	Prof Giovanni MAESTRI email: giovanni.maestri@unipr.it Department of Chemistry, Life Sciences and Environmental Sustainability		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
POSITIONS PUT OUT TO COMPETITION	12		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024		

The training program aims to allow PhDs in Chemical Sciences to acquire the necessary skills to propose and manage research projects in the advanced sectors of Analytical Chemistry, General and Inorganic Chemistry, Physical Chemistry, Industrial Chemistry, and Organic Chemistry. The Doctorate in Chemical Sciences requires each doctoral student to work within one of the research groups active in the Chemistry Units of the Department of Chemistry, Life Sciences and Environmental Sustainability (SCVSA), and to follow a specific training path within the chosen sector also through the participation to research activities at qualified centers both in Italy and abroad, to national and international schools, to conferences and through the publication of the scientific results achieved in internationally distributed journals. Interdisciplinary training activities are also planned, aimed at developing in PhD students the ability to present, discuss and disseminate the subjects of their work both in an academic and in an industrial context and also, more generally, in the society at large.

- Analytical Chemistry
- General and Inorganic Chemistry
- Physical Chemistry
- Industrial Chemistry
- Organic Chemistry

	Position with Scholarship				
N° Funding entity		Research Topic, if any			
1	Scholarship funded by Department of Chemistry, Life Sciences and Environmental Sustainability (funds of "Departments of Excellence" program)	Separation of 4f transition metals via complexation and liquid-liquid extraction			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M2C2 Investimento 1.1 PRIN PNRR "Xylonite: the new	Photo- and Organo-catalytic radical cascades			

	season of xylochemistry" ID: P2022HSF3R, CUP P2022HSF3R_001)	
	Financiato dall'Università de Ministero dell'Università della Recerca	
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds University call for Research 2023 Action A CUP D93C24000580005)	Novel catalytic approaches for synthesis enabled by emerging technologies
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds fondi Investimento: PNRR – M2C2 Investimento 3.5 PNRR ART-2-HYDROGEN "ARTIFICIAL ENZIMES FOR THE PHOTOCATALYTIC PRODUCTION OF HYDROGEN IN PHOTOSYNTHETIC BACTERIA" ID: RSH2A_000009, CUP F97G22000270006)	Design of artificial redox metalloproteins using the SPY architecture
1	Scholarship funded by ENEA - Agency for new technologies, energy and sustainable economic development as part of the Operational Plan for Research and Development on hydrogen POR H2	Catalytic and Photocatalytic strategies for CO <sub>2</sub> valorization
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 3.1 PNRR METROFOOD-IT ID: IR0000033, CUP I83C22001040006)	Piattaforme analitiche integrate per la valutazione della qualità e della sicurezza alimentare - Integrated analytical platforms for food quality and safety assessment
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 1.3 "MEDICINAL CHEMISTRY TECHNOLOGIES FOR THE DEVELOPMENT OF INNOVATIVE ANTIVIRAL AGENTS", CUP B53C20040570005)	- Design of chelating molecules for the development of antiviral and anticancer compounds
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds (PNRR – M2C2 Investimento 1.1 PRIN 2022 "Crystal Engineering for bees and environmental sustainability (X4BEES)" Codice Cineca 20224NP42W, CUP D53D2301014000 1-)	Crystal Engineering and solid-state reaction via mechanochemistry
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 1.4 "NATIONAL CENTER FOR GENE THERAPY AND DRUGS BASED ON RNA TECHNOLOGY (CN RNA & GENE THERAPY)" - Bando a Cascata Spoke 6 "RNA Drug Development" - Progetto "Polyfunctional PNAs for Precision RNA Targeting and modulation of interactions	Reduction of the environmental impact in the synthesis of modified peptide nucleic acids

	with proteins (POPnART)" — NEXTGENERATIONEU ID: CN00000041, CUP B83C22002860006)  Financiato Official Receasion of the Company	
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Chemistry, Life Sciences and Environmental Sustainability (funds PNRR – M4C2 Investimento 1.1 - PRIN 2022 - "Multifunctional compounds for a multitarget approach against neurodegenerative disorders- MULTIFUN" Codice Cineca 2022N9E847, CUP D53D23010430006)	Multifunctional compounds for a multitarget approach against neurodegenerative disorders and as supramolecular promoters and catalysts

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)				
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J24000010002  COESIONE TIALIA 19-72 TURISUSUSUS UNIVERSITA DI PARMA	Sustainable strategies in aquaculture: development of organic-inorganic hybrid materials with antimicrobial activity		
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Maselli Misure S.p.A. CUP D92J24000300004	Preparation of coordination compounds and their use as optical sensors		

Assessment of QUALIFICATIONS: up to 40 points

(a minimum score of 20 points shall be required to be admitted to the Oral Exam)

ORAL EXAM: up to 80 points

Minimum score for ELIGIBILITY: 70/120

### **ORAL EXAM PROGRAM**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course.

### **Foreign Language**

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in the discussion of part of the research topics in English.

### **SCHEDULE OF THE ADMISSION EXAMS**

ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam			
	DATE	3 <sup>rd</sup> September 2024 (with possible extension in the following days)			
ORAL EXAM	TIME	10:00 am (Italian Time)			
	PLACE	Departiment of Chemistry, Life Sciences and Environmental Sustainability CHEMISTRY BUILDING Parco Area delle Scienze, 17/A – Campus 43124 PARMA - ITALY			
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.			
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice		

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT				
MANDATO	MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A (art. 3.2 of the Competition notice)				
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)			
Curriculum Vitae et studiorum  No specific CV format is required (see art. 3.2 of the Competition notice)				
Abstract of the second cycle master's degree thesis. Undergraduate applicants muss submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis 10.000 characters including spaces)				
Academic Qualifications  Certificates and academic transcript of records for both Bachelor' and Master' of containing the following details for each degree held: (art. 3.2 of the Competition University that granted the degree - Type of degree (first cycle/second cycle/single Name of the degree program - Date of graduation - Final mark - List of example of the degree program is corresponding scores (academic transcript of records) - Translation into Italian or (only for degrees issued in languages other than Italian or English).				
Research Project  Written in Italian or in English, according to the format attached to the competition in It will have to focus on an original research topic (unpublished, developed personathe candidate, PENALTY NOT EVALUATION. It should be noted that the Examin Board can use of IT tools useful for verifying the originality of the submitted Project It does not represent a constraint with respect to the following choice of the doctor thesis, which will be assigned by the Academic Board				
LIST OF EVALUABLE QUALIFICATIONS  (only qualifications attested by a document drawn up in Italian or in English)				

Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.  Relevance of the academic career as well as postgraduate experiences and other research activities related to Chemical Sciences.		Up to 21 points
Graduation thesis		ncy of the Master's Degree thesis with the doctoral program research riefly describe the topics in the curriculum vitae)	Up to 10 points
Research Project	Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and originality of the proposal description and structure of the proposal proposal feasibility consistency with the research themes of the PhD course		Up to 2 points
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD programme; the description of specific research interests, with particular reference to the topics relating to the specific topics proposed;the skills possessed that can contribute to a research project in the field of Chemical Sciences.		Up to 3 points
Scientific Publications	Articles on national and international journals, papers presented at		Up to 4 points
EVALUATION ORAL EXAM			
Interview Program		Evaluation CRITERIA	
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		<ul> <li>knowledge of the subject and skills of the candidate for the proposed research activities are assessed by a discussion on the qualifications submitted for evaluation</li> <li>knowledge of English is assessed by discussion of topics of research and by understanding of scientific texts.</li> </ul>	Up to 80 points

FOOD SCIENCE		
CYCLE	XL	
Prof. Massimiliano RINALDI email: <a href="massimiliano.rinaldi@unipr.it">massimiliano.rinaldi@unipr.it</a> Food and Drug Department		
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
CURRICULA	<ol> <li>Food Science</li> <li>Products for the food and health markets</li> </ol>	
POSITIONS PUT OUT TO COMPETITION 17		
ADMISSION PROCEDURES  Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

The Ph.D. Course in Food Science is offered by the Department of Food and Drug, University of Parma. The focus of the programme is the 3-years PhD research project (setting up, planning and performing research, then writing it up and presenting it), which leads to a thesis and associated publications. The research is done under the supervision of a member of the PhD Course Board.

The PhD Course in Food Science aims at organising the training of PhD candidates to become self-reliant, societal skilled researchers in the field of fundamental and applied research on food science. The PhD Course in Food Science is designed to cover all the step along the food supply chain, "from the farm to the fork", to address cutting-edge topics (i.e. local food systems, circular bioeconomy, human microbiome, and dietary patterns), and to provide the candidates with the knowledge required to tackle the next-to-come challenges in food quality and safety.

The research portfolio, based on a strong interdisciplinary environment, is mainly composed of the work done within the Department of Food and Drug in the following areas: Food microbiology, Food technology and processing, Human nutrition, Plant production and animal science, Food chemistry and circular bioeconomy, Agro-economy, consumer's science, and food systems, Computational Food Chemistry

- 1. FOOD TECHNOLOGY FOOD BIOCHEMISTRY: Modifying techno-functional properties and biological activity of plant proteins by technologies
- 2. FOOD TECHNOLOGY: Upcycling pea waste side streams for developing future food ingredients
- 3. PLANT PRODUCTION FOOD MICROBIOLOGY FOOD TECHNOLOGY FOOD CHEMISTRY: Innovation in the elicitors production for the agricultural sector
- 4. PLANT PRODUCTION FOOD TECHNOLOGY: Innovation in the utilisation and stabilisation of by-products from the agrifood chain
- 5. PLANT PRODUCTION FOOD MICROBIOLOGY FOOD CHEMISTRY: Green solutions from secondary metabolite extraction from *vitro*-derived plantlets
- 6. HUMAN NUTRITION: Unravelling metabolized and non metabolized flavan-3-ols at colonic level using multiple chromatographic tools
- 7. HUMAN NUTRITION: Integrating multiple datasets to guide the provision of effective strategies to promote cardiometabolic health through plant-based diets

- 8. HUMAN NUTRITION Nutritional needs of lung cancer patients: assessment of nutritional status for planning new interventions of personalized nutrition
- 9. (HUMAN NUTRITION: Sport nutrition eating habits, nutritional status in different sport disciplines
- 10. FOOD MICROBIOLOGY: Exploiting lactic acid fermentation for the detoxification of products/by-products to employ in the food chain
- 11. ANIMAL PRODUCTION: The use of Fourier Transform Infrared Spectroscopy as a rapid and reliable tool to analyze milk quality and safety, improving the discriminatory capabilities of spectra through the implementation of innovative statistical models
- 12. FOOD CHEMISTRY: Extraction and characterization of biomolecules from insects reared on food by-products for food and feed applications
- 13. FOOD CHEMISTRY: Development and application of untargeted methods and omics approaches for the characterization of raw materials and semi-finished products in the confectionery industry
- 14. FOOD CHEMISTRY: Development of advanced analytical methodologies for the characterization of new fibre-based food ingredients
- 15. ORGANIC CHEMISTRY FOOD TECHNOLOGY: Milk proteins in confectionary industry: study of the chemical-physical features and bio-functional properties

Position with Scholarship			
N°	N° Funding entity Research Topic, if any		
3	Scholarship funded by University of Parma (Ministerial funds)	<ul><li>Food Technology / Biochemistry</li><li>Animal Production</li><li>Human nutrition</li></ul>	
1	Scholarship co-funded by Fondazione Cariparma	Food Microbiology	

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)				
N° Funding entity		BOUND RESEARCH TOPIC			
1	Scholarship funded by Food and Drug Department (funds of "Departments of Excellence" program)	Unravelling metabolized and non metabolized flavan-3-ols at colonic level using multiple chromatographic tools			
1	Scholarship funded by Food and Drug Department (funds deriving from MASAF within the programs admitted to evaluations and presented pursuant to Notice no. 0182458 of 04.22.2022)	Application of circular economy principles in the brewing supply chain through a multidisciplinary approach to produce innovative food and beverages			
1	Scholarship funded by Food and Drug Department (funds Project MUR FARE CARE-DIET (CArdiometabolic REsponse to plant-based DIETs at individual level: deciphering the complexity of plant bioactives CUP D93C22001060001)	Integrating multiple datasets to guide the provision of effective strategies to promote cardiometabolic health through plant-based diets			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 PNRR "BIOactive compoundS from vitro-derived HOP plants: a green opportunity – BIOSHOP" CUP D53D2301168006)	A green approach to the synthesis and extraction of bioactive compounds from <i>vitro</i> -derived hop plantlets			
1	Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 "Upcycling pea waste side streams	Upcycling pea waste side streams for developing future food ingredients			

	for developing future food ingredients (UPea)" CUP D53D2301152006)		
1	Scholarship funded by Interdepartmental Microbiome Research Center "Microbiome Research Hub" (funds Project HE EIC Pathfinder Precision Nutrition: MENTORING: "assessing malnutrition and metabolic health in non-communicable diseases through precision Nutrition: impact in quality of life and prognosis of lung cancer patients")	Nutritional needs of lung cancer patients: assessment of nutritional status for planning new interventions of personalized nutrition	
1	Scholarship partly financed with UNIVERSITY funds and co-financed by SITEIA Interdepartmental Center	Extraction and characterization of biomolecules from insects reared on food by-products for food and feed applications	
1	Scholarship funded by SOREMARTEC Italia S.r.l.  Development and application of untargeted methods ar approaches for the characterization of raw materials are finished products in the confectionery industry		
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J24000010002  COESIONE (TALIA 2-7) (COESIONE (TALIA 2-7) (CO	Processing and valorisation of agri-food by-products and their use as elicitors in agriculture (Acronym: Tra.Va.So.)	
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company SOREMARTEC Italia S.r.l. CUP D92J24000310004	Milk proteins in confectionary industry: study of the chemical- physical features and bio-functional properties.	
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company SOREMARTEC Italia S.r.l. CUP D92J24000310004	Development of advanced analytical methodologies for the characterization of new fibre-based food ingredients	

POSITION RESERVED	
Reserved to Holders of SCHOLARSHIP FUNDED BY FOREIGN STATES (Ethiopia)	1
Reserved to <b>Holders of RESEARCH GRANT</b> within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe ( <b>FutureData4EU</b> )"	1

Assessment of QUALIFICATIONS: up to 50 points

(a minimum score of 30 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 70 points

Minimum score for ELIGIBILITY: 70/120

### **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

The ORAL test involves the presentation and discussion of the research project by the candidate without the aid of any Powerpoint presentation or other applications, and is aimed at verifying the candidate's aptitude for scientific research and his/her general preparation on topics relating to research topics of the doctoral course.

Foreign Language	
the fluency of which shall be assessed	ENGLISH
during the Oral Exam	

The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific test.

For foreign candidates, basic knowledge of **ITALIAN LANGUAGE** will also be assessed.

SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam		
	DATE	2 <sup>nd</sup> September 2024 (with possible extension to 3 <sup>rd</sup> September 2024)		
ORAL EXAM	TIME	10:30 am (Italian Time)		
	PLACE	Food and Drug Department Parma Area della Scienze, 27/A - Campus 43124 PARMA - ITALY		
FURTHER INFORMATION		of the research project, and it is	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission be assigned by the Academic Board.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates it is possible to carry out the admission examination exclusively in English. For Italian candidates it will be possible to take the admission examination in Italian or in English at the candidate's choice	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A	(art. 3.2 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)		
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).		

The research project shall consist of a maximum of 2 pages, be written in English, accord to the format attached to the competition notice.  It will have to focus on an original research topic (unpublished, developed personally the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Bo can use of IT tools useful for verifying the originality of the submitted Project), concern one of the specific topic indicated in this notice and it shall be structured as follo introduction of the problem in the scientific context, significance of the problem, expect results, argumentation.  It does not represent a constraint with respect to the following choice of the doctoral the which will be assigned by the Academic Board				
(only gu	LIST OF EVALUABLE QUALIFICATIONS alifications attested by a document drawn up in Italian or in English)			
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.	Up to 20 points		
Research Project	Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and or originality of the proposal: max 10 points description and structure of the proposal: max 5 points proposal feasibility: max 5 points	Up to 20 points		
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests	Up to 2 points		
Scientific Publications	Articles and/or reviews in scientific journals with peer reviewing, scientific book chapters with national or international circulation.  The explicit indication of the candidate's contribution to the works presented for evaluation is a necessary requirement.  International peer-reviewed papers: up to 2 points  National peer-reviewed papers: up to 1 point	Up to 3 points		
Other Academic qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program	Up to 2 points		
Other experiences (training, work, research, teaching, etc.)	<ul> <li>Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covedere by research grant, and as a staff member of research units</li> <li>Working activity</li> <li>Professional and/or training internship</li> <li>Language proficiency cartificates</li> <li>Periods of study abroad, outside th country of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>	Up to 3 points		

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT  Positions reserved to holders of scholarship funded by Foreign States				
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.			
Research Project	definition	Congruence with the research topics of the PhD course. Clarity of objectives and definition of success indicators. Implementation and sustainability of the feasibility plan.		
Statement of Research Interest	Originality	and motivation to the research.	Up to 2 points	
Scientific Publications	chapters w The explicition for evaluat Internation	Articles and/or reviews in scientific journals with peer reviewing, scientific book chapters with national or international circulation.  The explicit indication of the candidate's contribution to the works presented for evaluation is a necessary requirement.  International peer-reviewed papers: up to 2 points  National peer-reviewed papers: up to 1 point		
Other Academic qualifications		First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program		
Other experiences	<ul> <li>Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covedere by research grant, and as a staff member of research units</li> <li>Working activity</li> <li>Professional and/or training internship</li> <li>Language proficiency cartificates</li> <li>Periods of study abroad, outside th country of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>		Up to 3 points	
		EVALUATION ORAL EXAM		
Interview Program		Evaluation CRITERIA	POINTS	
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		<ul> <li>English reading and speaking and for foreign candidates also Italian language: up to 10 points</li> <li>research project presentation: max 40 points</li> <li>general knowledge of issues connected to the PhD course: max 20 points</li> </ul>	Up to 70 points	

DRUG SCIENCES			
CYCLE	XL		
COORDINATOR	Prof. Fabio SONVICO email: <a href="mailto:fabio.sonvico@unipr.it">fabio.sonvico@unipr.it</a> Food and Drug Department		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
CURRICULA	Innovation in Pharmaceutical Sciences     Products for the food and health markets		
POSITIONS PUT OUT TO COMPETITION	15		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle Master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024		

The PhD Course in "Drug Sciences" has the objective to train PhDs with backgrounds and experiences suitable for entry the field of pharmaceutical research relatively to the design, discovery, development, production and control of medicinal and health products, and to understand pharmacologically active substances mechanisms of action at the biomolecular level.

The course provides teaching dedicated directly to PhD students in the scientific fields mentioned above, as well as in multidisciplinary and interdisciplinary fields. Multi- and interdisciplinarity are typical characteristics of the PhD course, which addresses the final practical objective (producing innovation in drug sciences) from different points of view and with different approaches.

- Biochemistry and Molecular Biology
- Biopharmaceutics Pharmacokinetics
- Bio-organic chemistry
- Experimental Pharmacology and Toxicology
- Drug Design and Synthesis

	Position with Scholarship				
N°	Funding entity	Research Topic			
3	Scholarship funded by University of Parma (Ministerial funds)	<ul> <li>Biochemistry and Molecular Biology</li> <li>Biopharmaceutics – Pharmacokinetics</li> <li>Drug Design and Synthesis</li> </ul>			

1	Scholarship funded by University of Parma (University funds)	Experimental Pharmacology and Toxicology
1	Scholarship co-funded by Fondazione Cariparma	Drug Design and Synthesis

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)						
N°	Funding entity	BOUND RESEARCH TOPIC					
1	Scholarship funded by Food and Drug Department (funds "Departments of Excellence 2023-2027" program)	Characterization and valorization of complex natural matrices for the generation of components with high pharmaceutical, nutritional and cosmetic value and design of advanced formulations capable of maximizing the effectiveness and reducing the environmental impact of the production, use and disposal of active ingredients					
1	Scholarship funded by Food and Drug Department	Sustainable Asymmetric Synthesis of Function-Rich Heterocycles					
1	Scholarship partly financed with UNIVERSITY funds and co-financed by Food and Drug Department (funds Project PRIN 2022 PNRR -M4C2- "Dynamics of recruitment of macromolecular complexes active on the mycobacterial orisome: mechanistic details and target validation" CUP D53D23010750001)	Addressing antibacterial resistance through gene repressors and enzyme inhibitors of nonessential targets in Salmonella Typhimurium					
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J24000010002	Identification of natural products as gene repressors towards a new paradigm to fight antibacterial resistance					
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company VisoStatics S.r.l. CUP D92J24000320004	Design and synthesis of new antiviral molecules with a broad spectrum of action for the treatment of acute infections caused by emerging and re-emerging viruses					
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Chiesi Farmaceutici S.p.A. CUP D92J24000320004	Peptides and proteins for inhalation					

POSITION RESERVED	
Reserved for EMPLOYEES of Company "Chiesi Farmaceutici S.p.A." (with salary maintenance)	1
Reserved for EMPLOYEES of Company "Azienda Unità Sanitaria Locale di Piacenza" (with salary maintenance)	1
Reserved for EMPLOYEES of Company "ERBC Group S.r.l." (with salary maintenance)	1
Reserved to <b>Holders of RESEARCH GRANT</b> within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe ( <b>FutureData4EU</b> )"	1

Assessment of QUALIFICATIONS: up to 50 points

(a minimum score of 30 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 70 points

Minimum score for ELIGIBILITY: 70/120

#### **ORAL EXAM PROGRAM**

#### THE ORAL EXAM TAKES PLACE IN THE PRESENCE.

The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

**Foreign Language** 

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.

SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam		
	DATE	2 <sup>nd</sup> September 2024 (with possible extension to 3 <sup>rd</sup> September 2024)		
ORAL EXAM	TIME	08.30 am (Italian Time)		
	PLACE	Food and Drug Department Parco Area delle Scienze, 27/A 43124 PARMA - ITALY		
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.		
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION			
ANNEX A	(art. 3.2 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)		
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)		

Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).		
Research Project	The research project shall consist of a maximum of 3 pages, be written in Italian or in English, focused on an original research topic and it shall be structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results. It should be noted that the Examination Board can use tools useful for verifying the originality of the submitted Project.  The research project does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board.		
(only		T OF EVALUABLE QUALIFICATIONS ttested by a document drawn up in Italian or in English)	
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  Up to 20 points		
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics  Up to 10 points		
Research Project	Points relating to the research project shall be allocated on the basis of the following criteria:  O Scientific value and ground-breaking nature of the proposal: 5 points O description and structure of the proposal: 5 points O consistency with the themes of the doctorate: doctorate proposal feasibility: 5 points		
Scientific Publications	Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings.  Up to 5 points		
		EVALUATION ORAL EXAM	
Interview Program		Evaluation CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		<ul> <li>knowledge of the foreign language: max 10 points</li> <li>research project argumentation: max 30 points</li> <li>general knowledge of scientific aspects related to the PhD course: max 30 points</li> </ul>	Up to 70 points

EARTH SCIENCES		
CYCLE XL		
Prof. Fabrizio BALSAMO email: <a href="mailto:fabrizio.balsamo@unipr.it">fabrizio.balsamo@unipr.it</a> Department of Chemistry, Life Sciences and Environmental Sustainability		
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
POSITIONS PUT OUT TO COMPETITION	6	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  2. "Laurea Magistrale" LM-11 Science for the conservation of cultural heritage  3. "Laurea Magistrale" LM-35 Environmental Engineering  4. "Laurea Magistrale" LM-60 Natural Sciences  5. "Laurea Magistrale" LM-74 Geology  6. "Laurea Magistrale" LM-75 Environmental and land sciences  7. "Laurea Magistrale" LM-79 Geophysics as well as the equivalent "laurea specialistica" or "laurea" achieved based on the university system in force before the entry into force of Italian Ministerial Decree No. 509/99  8. Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programs  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

The main objective of the Doctorate Course in Earth Sciences is to provide highly qualified teaching and research paths within numerous scientific disciplinary sectors of the Geosciences, also from an interdisciplinary perspective.

### **RESEARCH AREAS**

- Palaeontology and Palaeoecology
- Stratigraphy and Sedimentology
- Structural Geology
- Physical Geography and Geomorphology
- Applied Geology
- Mineralogy
- Petrology and Petrography
- Geochemistry and Volcanology
- Geophysics and Applied Geophysics

## **Position with Scholarship**

N°	Funding entity	Research Topic, if any		
3	Scholarship funded by University of Parma (Ministerial funds)	<ul> <li>Hydrogeological role of carbonate fault zones on regional flow system</li> <li>Study of innovative methods for extracting Critical Raw Materials (CRMs) from natural and anthropogenic sources</li> <li>Reconstructing the isotopic signal of precipitation in the Alps and the Northern Apennines through isotope dendrochronology and ice core analysis</li> <li>The role of the evaporites in gas storage: seals or reservoirs?</li> </ul>		
1	Scholarship co-funded by Fondazione Cariparma	<ul> <li>High resolution quantitative biostratigraphy and paleoecology of planktonic foraminiferal assemblages at the Oligocene-Miocene transition in low latitude oceanic successions</li> <li>The back-arc basalt systematics: the case of the young intracontinental Tyrrhenian back-arc basin (Western Mediterranean Sea)</li> <li>Probabilistic earthquake-risk assessment in Italy via geodynamic models constrained by geodetic data and</li> </ul>		
1	Scholarship funded by Department of Chemistry, Life Sciences and Environmental Sustainability (funds of "Departments of Excellence" program)	<ul> <li>Scenarios of Mediterranean geodynamics since the Late Miocene constrained by sedimentary record of vertical lithospheric motions</li> <li>The search for sustainable critical raw materials along the margin of the mountain chains: looking for the most suitable and favourable geological contexts for different type of materials</li> </ul>		
	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company GEOSEC S.r.l. CUP D92J24000330004	Integrated geophysical measurements to support geotechnical characterization of surface soil deposits		

**Assessment of QUALIFICATIONS:** up to 50 points

(a minimum score of 30 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 70 points

Minimum score for ELIGIBILITY: 70/120

# **ORAL EXAM PROGRAM**

Applicants admitted to the ORAL EXAM can take it either in PRESENCE or REMOTELY in Audio and Video Teleconference (Applicants who intend to take the Oral Exam remotely must submit a formal request, using the form attached to the competition notice)

The ORAL EXAM includes the presentation and discussion of the research project by of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

Foreign	Language
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the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The assessment of knowledge of this language will be oral and will consist in reading and translating a paragraph of scientific text.

SCHEDULE OF THE ADMISSION EXAMS			
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam	
	DATE	2 <sup>nd</sup> September 2024 (with possib	le extension in the following day)
ORAL EXAM	TIME	09:00 am (Italian Time)	
	PLACE	Department of Chemistry, Life Sci EARTH SCIENCES BUILDING Parco Area delle Scienze, 157/A – 43124 PARMA - ITALY	ences and Environmental Sustainability Campus
FURTHER INFORMATION		of the research project, and it is	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission be assigned by the Academic Board.
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A (art. 3.2 of the Competition notice)		
Identification Document Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)	
Academic Qualifications  Certificates and academic transcript of records for both Bachelor' and Master containing the following details for each degree held: (art. 3.2 of the Competition University that granted the degree - Type of degree (first cycle/second cycle/sin Name of the degree program - Date of graduation - Final mark - List of corresponding scores (academic transcript of records) - Translation into Italian (only for degrees issued in languages other than Italian or English).		

Interview Program	Evaluation CRITERIA	POINTS	
EVALUATION ORAL EXAM			
Other experiences (training, work, research, teaching, etc.)	<ul> <li>Periods of study abroad: 1 point</li> <li>Scholarships, scientific associations awards: 1 point</li> </ul>	Up to 2 points	
Other Academic qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program		
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)	Score related to the average of the exam marks: - from 28 to 30: 5 points - from 27 to 27.99: 4.5 points - from 26.5 to 26.99: 3.5 points - from 26 to 26.49: 2.5 points - from 25 to 25,99: 1 point - under 25: 0.5 points		
Graduation mark	Score related to the final mark: - 110 and 110 with honours (magna cum laude): 5 points - from 107 to 109: 4.5 points - from 105 to 106: 3.5 points - from 100 to 104: 2.5 points - from 95 to 99: 1 point - under 95: 0.5 points		
Scientific Publications	<ul> <li>Abstract presented at a national or international congress: 0,5 point</li> <li>Articles on scientific journals (ISI/SCOPUS): 2 points</li> <li>Other publication (related to the topics of PhD program: 1 point</li> </ul>		
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests		
Research Project	Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and or originality of the proposal: max 8 points description and structure of the proposal: max 3 points proposal feasibility: max 3 points consistency with the research themes of the PhD course: max 8 points		
Graduation thesis	Congruence with the research topics of the PhD course and quality of the research methodology	Up to 8 points	
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.		
(only qua	LIST OF EVALUABLE QUALIFICATIONS diffications attested by a document drawn up in Italian or in English)		
Research Project	Written in Italian or in English, according to the format attached to the competition notice It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board		

The ORAL EXAM includes the presentation of		
•		
the research project and is intend to assess	0	knowledge of foreig
the suitability of the applicant to pursue	0	research project pro
scientific research as well as the general	0	general knowledge
knowledge of issues connected to the PhD		points
course		

- ign languages: 5 points resentation: 50 points
- e of issues connected to the PhD course: 15

Up to 70 points

PHILOSOPHY, SOCIAL SCIENCES, CULTURAL AND ENVIRONMENTAL HERITAGE		
CYCLE	XL	
COORDINATOR	Prof.ssa Federica VERATELLI email: <a href="mailto:federica.veratelli@unipr.it">federica.veratelli@unipr.it</a> Department of Humanities, Social Sciences and Cultural Industries	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
CURRICULA	<ol> <li>Philosophical Sciences</li> <li>Socio-Anthropological Sciences</li> <li>Educational Sciences</li> <li>Art History, Music and Performing Arts</li> </ol>	
POSITIONS PUT OUT TO COMPETITION	7	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY VIA VIDEO CONFERENCE (only if special requirements are fulfilled, see below)	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  The qualifications must be included in the classes listed below:  LM-1 Cultural anthropology and ethnology  LM-2 Archaeology  LM-3 Landscape Architecture  LM-10 Conservation of architectural and environmental heritage  LM-11 Sciences for the conservation of cultural heritage  LM-12 Design  LM-14 Modern philology  LM-15 Philology, literature and history of antiquity  LM-19 Information and editorial systems  LM-36 Languages and literatures of Africa and Asia  LM-37 Modern European and American languages and literatures  LM-38 Modern languages for communication and international cooperation  LM-39 Linguistics  LM-43 IT methodologies for the humanities  LM-47 Organization and management of services for sport and physical activities  LM-47 Organization and management of services for sport and physical activities  LM-48 Urban, environmental and territorial planning  LM-49 Design and management of tourism systems  LM-50 Planning and management of tourism systems  LM-50 Planning and management of tourism systems  LM-51 Psychology  LM-55 Cognitive Sciences  LM-62 Political sciences  LM-63 Public, corporate and advertising communication sciences  LM-65 Entertainment sciences and multimedia production  LM-70 Food science and technology  LM-73 Forestry and environmental sciences and technologies	

- LM-76 Economic sciences for the environment and culture
- LM-77 Economic and business sciences
- LM-78 Philosophical Sciences
- LM-80 Geographical Sciences
- LM-81 Sciences for development cooperation
- LM-84 Historical Sciences
- LM-85 Pedagogical sciences
- LM-87 Social work and social policies
- LM-88 Sociology and social research
- LM-89 Art History
- LM-90 European Studies
- LM-91 Techniques and methods for the information society
- LM-92 Communication Theories
- LM-93 Theories and methodologies of e-learning and media education
- LMR/02 Conservation and restoration of cultural heritage
- LM-85 bis Primary education sciences
- LM/GASTR Economic and social sciences of gastronomy

Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

#### TRAINING OBJECTIVES

The objectives of the doctoral course in Philosophy, Social Sciences, Cultural and Environmental Heritage, according to Dublin descriptors for the third cycle, concur to achieve a set of skills and competencies necessary for the final degree:

- full understanding of the disciplinary field of research, as represented by the relevant curriculum, and skill in the research and analytical methods associated with it;
- ability to design, implement and adapt a research process taking into account ethical issues related to knowledge production;
- design and implement original research that can expand the frontiers of knowledge;
- develop skills in critical analysis, evaluation and synthesis of new and complex ideas;
- achieve a level of dissemination and communication appropriate to their field of research;
- engage in activities to promote, in academic and professional contexts, their results through participation in conferences and scientific publications;
- write a research thesis and support it with the prospect of discussing it before a committee at the conclusion of the three years.

The objectives are aimed, first and foremost, at offering students a training project consistent with the outgoing professional profiles (guaranteed by the different curricula) and the knowledge and skills (both disciplinary and interdisciplinary) associated with them. The training project is composed of a series of enabling elements, among which we highlight:

- the financial and structural resources available and the specificities offered by the University, including links with the territory in which it is embedded, i.e., relations with research institutions, the business world, various cultural and social organizations, sensitive to the themes of the doctoral course, open and available to different forms of collaboration;
- the network of relationships, both national and international, developed by the University and the members of the Teaching Board, which allow a constant alignment with the cultural and scientific evolution of the disciplines of reference of the Doctorate and a sustainable, effective and consistent mobility with the research developed, and offer prospects for cooperation at various levels for doctoral students, who will benefit from economic support consistent with current regulations;
- the centrality of the doctoral students, whose growth as an integral part of the scientific community is promoted and fostered, both through the organization of aggregating and common activities between the various curricula, and through disciplinary activities characterizing the curriculum of reference, including participation, also as speakers, in congresses, workshops and/or training schools both national and international;
- the strong interdisciplinary character of the doctoral course, based on a previous and consolidated interaction among the various members of the College pertaining to the different curricula, involved in common research projects and teaching activities, which guarantee different possibilities of collaboration to the advantage of a multifaceted training not limited to one's own disciplinary field

- Philosophical Sciences. In the area of Philosophy, doctoral students' critical and logical-argumentative skills as well as their knowledge of the history of philosophy will be deepened, while enhancing the interdisciplinary character of knowledge and considering the thematic intersections with the other doctoral curricula. Doctoral students in Philosophical Sciences will be enabled to carry out original research-which requires skills of conceptual analysis, argumentation, historical and philological documentation-in the fields of theoretical philosophy, moral philosophy, political and social philosophy, philosophy of language, aesthetics, history of medieval, modern and contemporary philosophy.
- Socio-Anthropological Sciences. As part of the Ph.D. program, the curriculum in socio-anthropological disciplines aims to explore the transformations of contemporary society considering ongoing social, cultural and environmental processes, nationally and internationally. Privileging qualitative methodologies, the curriculum promotes diverse and interconnected perspectives and themes, including mobility and migration, sustainability, social and affective relations, cosmologies, religions and consciousness, social movements, gender, borders and frontiers, educational practices and pathways, and processes of patrimonialisation and (de)colonization.
- Educational Sciences. The curriculum in Educational Sciences aims to initiate research in all pedagogical areas (GSD 11/PAED-01, 11/PAED-02), also in relation to the area of cultural geography (GEOG-01/A), with special attention to methodological aspects and interdisciplinary connections with the other doctoral curricula, customizing the training based on the students' research project. Specifically, training on education theory and epistemology will dialogue with the philosophical disciplines; on the history and cultures of education with the PhD in Historical and Textual Sciences; training in didactics and special pedagogy with the artistic area (museum education) and with the socio-anthropological area for the themes of school and social inclusion, mediation and marginality and deviance; training on research methodology and social statistics will be able to relate with all curricula for the appropriate definition of research design and the analysis of the data collected. The themes of educational spaces, landscape and environmental education will constitute other aspects of the interdisciplinary vocation of the curriculum. Disciplinary teaching will be complemented by transversal modules, offered to the entire doctoral school, related to scientific communication, participation in conferences and competitive calls, and training in innovative teaching in school and university.
- Art History, Music and Performing Arts. The curriculum in Art History, Music and Performing Arts aims to train doctoral students in the areas of cultural and creative expressions, through disciplines aimed at the study, protection and enhancement of cultural heritage, both tangible and intangible. Through the study and research in the history of art, theater, cinema, television, photography, new media and musicology, museology and the history of collecting, librarianship and archives, aesthetics, and the legislation of cultural heritage, and also thanks to the interaction with the other curricula of the PhD program, doctoral students will be able to carry out original research with a strong interdisciplinary character, which will allow them to deepen their understanding of artistic and cultural production, expanding the horizons of knowledge towards a more cohesive and sustainable future.

	Positions with Scholarship		
N°	Funding entity	Research Topic	
3	Scholarship funded by University of Parma (Ministerial funds)	<ul> <li>Philosophical Sciences</li> <li>Socio-Anthropological Sciences</li> <li>Educational Sciences</li> </ul>	
1	Scholarship funded by University of Parma (University funds)	Art History, Music and Performing Arts	

	Positions with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)		
N°	Funding entity	BOUND RESEARCH TOPIC	

1	Scholarship funded by EMILIA ROMAGNA REGION CUP D92J24000010002  COESIONE (TALIA 1-2) COMMISSIONE (TAL	The movie theater and the territory. A social and environmental history of cinema venues and the movie-going experience in the Emilia-Romagna region (1980-2020).
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 4.1 (Ministerial Decree 629/2024 art. 9 "Public Administration") CUP D92J24000180006	The concept of explainability in concrete Public Administration contexts: ethical and social implications (applied component in collaboration with EFSA data analysis department).
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company DAVINES S.p.A. CUP D92J24000340004	Business archives and corporate memory. Reorganization of the Davines s.p.a. historical Archive and development of digital solutions for its implementation, cataloging and enhancement.

Assessment of QUALIFICATIONS: up to 80 points

(a minimum score of 40 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 40 points

Minimum score for ELIGIBILITY: 70/120

# **ORAL EXAM PROGRAM**

**THE ORAL EXAM IS IN PRESENCE.** If the candidate is residing abroad or temporarily abroad for study / work reasons the interview can be carried out **REMOTELY**, prior to filling the **justification FORM** attached to the call for applications.

The ORAL test involves the presentation and discussion of the research project by the candidate and is intended to verify the candidate's aptitude for scientific research and his/her general preparation on topics related to the doctoral course.

**Foreign Language** 

the fluency of which shall be assessed during the Oral Exam

FRENCH,
ENGLISH,
GERMANY
(AT THE CANDIDATE'S
CHOICE)

The evaluation of the knowledge will be oral and will consist in reading and translating of a scientific text

	SCHEDULE OF THE ADMISSION EXAMS		
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area at: <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the preceding day the date of the Oral Exam	
	DATE	28 <sup>th</sup> August 2024 (with possible extension to the following day)	
ORAL EXAM	TIME	10:00 am (Italian Time)	
ONAL EXAM	PLACE	ROOM A Department of Humanities, Social Sciences and Cultural Industries Borgo Carissimi, 10 43121 PARMA - ITALY	
FURTHER INFORMATION		The choice of curriculum, indicated during the online application procedure by the candidate, is not mandatory for the purposes of possible award of the scholarship by the Examination Board.	

THE INTERVIEW	MAY	BE	HELD
ALSO IN ENGLISH			

For foreign candidates, the admission examinations may be held in Italian or in English at the candidate's choice.

For foreign candidates, knowledge of the Italian language level B2 is required.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT				
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION				
ANNEX A	(art. 3.2 of the Competition notice)			
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)			
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)			
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)			
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).			
Research Project	Written in Italian or in English, according to the format attached to the competition notice It is to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use IT tools to verify the originality of the submitted Project)			
LIST OF EVALUABLE QUALIFICATIONS  (only qualifications attested by a document drawn up in Italian or in English)				
Curriculum Vitae et studiorum	Including a university career, accompanied by a declaration in lieu of certification of the profit examinations taken and the relative marks, as well as post-graduate experience, including stays abroad if they were			
Graduation thesis	Congruence with the research topics of the PhD course and quality of the research methodology  Up to point			
Research Project	Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and originality of the proposal description and structure of the proposal points proposal feasibility consistency with the research themes of the PhD course			
Scientific Publications	Monographs, articles in scientific journals, chapters of books, convention papers, reviews, catalog entries.	Up to 12 points		

Other Academicor professional qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the curricula of this PhD program, ost-graduate scholarships, professional activity consistent with the field of research.		
EVALUATION ORAL EXAM			
Interview Program Evaluation CRITERIA		POINTS	
The ORAL EXAM includes the present and discussion of the candidate's res project and aims to test the candidative aptitude for scientific research and ge preparation on topics related to research themes of the PhD course	earch late's o knowledge of the foreign language: 5 points o disciplinary knowledge, methodological and argumentative skills: 35 punti	Up to 40 points	

JURIDICAL SCIENCES			
CYCLE	XL		
COORDINATOR	Prof. Fabio Salvatore CASSIBBA email: <a href="mailto:fabiosalvatore.cassibba@unipr.it">fabiosalvatore.cassibba@unipr.it</a> Department of Law, Politics and International Studies		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
PARTNER INSTITUTION	University of Modena e Reggio Emilia		
POSITIONS PUT OUT TO COMPETITION	9		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024		

The doctoral course in Legal Sciences provides for the performance of a plurality of higher education activities, throughout the three-year period, variously articulated.

First of all, the doctoral course intends to enhance - from the first year - interdisciplinary/multidisciplinary/transdisciplinary activities, through the delivery of various teachings, dealing with topics of general legal interest or, in any case, transversal for the training of doctoral students. The related courses (some delivered exclusively in English) will be taught by university professors, including foreign ones, and by experts in the various scientific-disciplinary fields involved, so as to foster the acquisition of skills and professionalism really suited to the training objectives of the course, at the level of methodology, reasoning and analysis in the legal field, in relation to the in-depth knowledge required for professional outlets. In addition to these courses, there will be teaching aimed at perfecting the language skills of doctoral students in the legal field.

These teaching activities will take place - particularly although not exclusively - in the first year of the doctoral program, so as to enable doctoral students, on the one hand, to acquire a solid and interdisciplinary "initial" training, including on the methodological profiles and tools necessary for research; on the other hand, to leave them the opportunity in the following years to refine their skills in specific disciplinary areas, including through periods of residence abroad, with a view, then, to writing the doctoral thesis.

e doctoral course also plans to strengthen the theoretical skills of doctoral students through the conduct of lectures (including in foreign languages) on legal issues related to individual disciplinary scientific areas attributable to Area 12, held by university professors or researchers, including those from outside the College of Teachers, Italian or foreign, as well as by experts in the field, including foreigners.

The doctoral course, starting from the second year, then intends to promote the gradual maturation and empowerment of doctoral students in the performance of teaching activities in favor of the same students enrolled in the doctoral course, realized through the organization - left to the autonomous initiative of the doctoral students, under the supervision of the coordinator and their tutors - of seminar cycles on topics of interdisciplinary or transversal interest. In such contexts, doctoral students will be called upon to give papers and interventions, which will be followed by discussion among all those enrolled in the course

- IUS/01 Private law
- IUS/07 Labour Law
- IUS/08 Constitutional Law
- IUS/15 Civil Procedure Law
- IUS/17 Criminal Law
- IUS/19 History of Medieval and Modern Law
- IUS/21 Comparative Public Law

	Position with Scholarship		
N°	Funding entity	Research Topic	
3	Scholarship funded by University of Parma (Ministerial funds)	<ul> <li>IUS/01 – Private law</li> <li>IUS/15 – Civil Procedure Law</li> <li>IUS/21 – Comparative Public Law</li> </ul>	
3	Scholarship funded by University of Modena e Reggio Emilia	<ul> <li>IUS/07 - Labour Law</li> <li>IUS/08 - Constitutional Law</li> <li>IUS/17 - Criminal Law</li> </ul>	
1	Scholarship co-funded by Fondazione Cariparma	IUS/17 – Criminal Law	
	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)		
N°	Funding entity	BOUND RESEARCH TOPIC	
1	Scholarship funded by Department of Department of Law, Politics and International Studies (funds Project ERC "Delivering justice on a transnational scale in Europe. The Roman Rota and the enforcement of a legal culture of negotiation (ROTAROM17))	IUS/19 - History of medieval and modern law Bound Research Topic: «Delivering justice on a transnational scale in Europe. The Roman Rota and the enforcement of a legal culture of negotiation (c. 1560-1700)»  Scientific supervisor: prof. Andrea Errera	
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 1, Investment 4.1 (Ministerial Decree 629/2024 art. 9 "Public Administration") CUP D92J24000190006	IUS/08 - Constitutional Law Bound Research Topic: «Al Act in Action: what we have to aspect into the next years after the first European reform bill about artificial intelligence» Scientific supervisore prof. Antonio D'Aloia	

Assessment of QUALIFICATIONS: up to 70 points

(a minimum score of 35 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 50 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit **a motivated REQUEST** as per the model attached to the competition announcement)

The ORAL EXAM includes the presentation and discussion of the research project by of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

Foreign Language

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist in translating of a scientific text

SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam		
	DATE	28 <sup>th</sup> August 2024 (with possible extension in the following days)		
	TIME	10:00 am (Italian Time)		
ORAL EXAM	PLACE	"BANDIERA" CLASSROOM University of Parma - CENTRAL PALACE – 1 <sup>st</sup> FLOOR Via Università, 12 43121 PARMA - ITALY		
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.		
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH for foreign candidates	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)	
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).	

Research Project	Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board		
(only	LIST OF EVALUABLE QUALIFICATIONS qualifications attested by a document drawn up in Italian or in English)		
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  Score related to the final mark: - 110 with honours (magna cum laude): 5 points; - 110: 3 points  Score related to the average of the exam marks (if the candidate will attain the degree	Up to 40 points	
	no later than 31 October 2023): - 30/30: 5 points - From 27/30 to 29/30: 3 points		
Graduation thesis	Congruence with the research topics of the PhD course for the scientific disciplinary sectors available for competition		
Research Project	Points relating to the research project:  o methodological rigor: max 10 points o originality: max 8 points o consistency with the topics of the scientific disciplinary sector of reference: max 2 points  Up to points		
Scientific Publications	Monographs, articles in scientific journals, chapters in collective volumes (uniquely referable to the candidate).		
Other Academic qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program		
Other experiences (training, work, research, teaching, etc.)	<ul> <li>Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covedere by research grant, and as a staff member of research units</li> <li>Working activity</li> <li>Professional and/or training internship</li> <li>Language proficiency cartificates</li> <li>Periods of study abroad, outside th country of origin (e.g. Erasmus programme or other similar mobility programmes)</li> <li>Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>		
EVALUATION ORAL EXAM			
Interview Program	Evaluation CRITERIA	POINTS	
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course  oppositely presentation of the project: max 30 points preparation on the topics of the scientific disciplinary sector of reference for the project: max 20 points		Up to 50 points	

TRASLATIONAL MEDICAL AND SURGICAL SCIENCES		
CYCLE	XL	
COORDINATOR	Prof. Nicola SVERZELLATI email: nicola.sverzellati@unipr.it Department of Medicine and Surgery	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM 01/11/2024		
POSITIONS PUT OUT TO COMPETITION	11	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE	
Regardless of age and citizenship, applicants holding at least one of the following academic qualicant can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the by 31.10.2024		

#### TRAINING OBJECTIVES

The PhD Program in Translational Medical and Surgical Sciences is a multidisciplinary program, in which the common denominator of the various research activities conducted by the PhD students is represented by the application of the acquired knowledge to clinical practice. In fact, the close link between preclinical and clinical research will allow discoveries and methodological skills acquired through experimental studies to be transferred into medical practice. Such a link will enable PhD students to deal with real problems, ranging from diagnosis to therapy and from prevention to rehabilitation, all of which deeply connected with human diseases and patient care.

The bidirectional exchange between lab and clinical research will bring back to the lab the results of clinical and epidemiological observations, and at the same time it will anchor experimental research to issues that originate from real-world inputs and tests carried out directly on humans.

Therefore, the final goal of the PhD Program in Translational Medical and Surgical Sciences is to provide a highly qualifying training to the PhD students, offering them opportunities, skills and technological resources necessary to practice translational research at a high level in either public or private Institutions, national or international, including, but not limited to, Universities, Research Institutes and PharmaMed Industries.

### **RESEARCH AREAS**

- 1. Stem cells in the diagnosis and treatment of neoplasms, chronic and degenerative disorders, cardiovascular diseases and musculoskeletal diseases;
- 2. Translational medicine and immunologic dysregulation of gastrointestinal, respiratory, infective, haematological, oncological, endocrinological, nephrological and dermatological diseases, and of vasculitis;
- 3. Plasticity, function and diagnostic-therapeutic use of genomic, transcriptomic, proteomic and metabolomic platforms of cells, organs and tissues to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;
- **4.** Development and "theragnostic" function of imaging and technologically advanced phenotyping platforms to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;
- **5.** Development and application of technologically advanced devices (i.e. biological devices), to measure and support and/or replace the function of cells, tissues or organs in medical and/or surgical diseases;

- **6.** Advanced and innovative strategies for recovery and functional rehabilitation to prevent or treat neoplasms, infections, chronic and degenerative diseases, metabolic dysfunctions, obstetrics and neonatal diseases as well as in response to environmental factors, lifestyles and drugs;
- **7.** Role of governance and organization of healthcare systems and services in the prevention and care of disorders with a potentially high social and economic impact, including, but not limited to, environmental and professional diseases;
- **8.** Role of microbiota and microbiome in translational medicine and surgery;
- 9. Retrieval and role of "big data" in translational medicine and surgery;
- **10.** Role of advanced technologies, including robotics, in translational surgery;
- **11.** Role of qualitative and quantitative imaging in the diagnosis of neoplasms, infections and chronic degenerative diseases.

	Position with Scholarship			
N°	Funding entity	Research Topic, if any		
3	Scholarship funded by University of Parma (Ministerial funds)			

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC		
2	Scholarship funded by Department of Medicine and Surgery (funds Project Human Technopole Foundation Convention – ECF)	<ul> <li>Molecular characterisation of interaction partners of distal cholesterol biosynthesis genes</li> <li>Identification of interaction partners of cholesterol biosynthesis intermediates with data mining and machine learning approaches</li> </ul>		
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (funds Project "MFAG AIRC Storti")	Study of the bone microenvironment in monoclonal gammopathies progression		
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Medicine and Surgery (funds Project "POS-T3-AN_5")	Functional Chemogenomics for Malignant Neoplasia Personalized Therapies		
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company VirosSatics S.r.l. CUP D92J24000350004	Effects of myrtleciclib, a cycline-dependent kinases inhibitor, in malignant pleural mesothelioma models		

POSITION RESERVED		
Reserved to Holders of SCHOLARSHIP FUNDED BY FOREIGN STATES (Germany)	1	
Reserved to <b>Holders of RESEARCH GRANT</b> within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe ( <b>FutureData4EU</b> )"		

# **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 45points

ORAL EXAM: up to 75 points

Minimum score for ELIGIBILITY: 70/120

ADMISSION PROCEDURES for positions reserved to holders of scholarship funded by foreign States

Assessment of QUALIFICATIONS: up to 120 points Minimum score for ELIGIBILITY: 70/120

### **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN PRESENCE** and with the possibility of carrying out the interview **REMOTELY** only for candidates unable to take the exam in person for valid personal and/or health reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

**Foreign Language** 

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The knowledge of the English language will be assessed orally and will consist in reading and translating a scientific text

	SCHEDULE OF THE ADMISSION EXAMS		
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam	
DATE 29 <sup>th</sup> August 2024 (with possible extension to the following day)		29 <sup>th</sup> August 2024 (with possible extension to the following day)	
ORAL EXAM	TIME	09:00 am (Italian Time)	
	PLACE	ROOM A (ROOM B in case of extension to August 30 <sup>th</sup> ) INTEGRATED BIOTECHNOLOGICAL PLEXUS Via Volturno, 39 – 43125 PARMA - ITALY	
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A (art. 3.2 of the Competition notice)		
Identification Document Scanned Copy of a valid identity document with photo (i.e. identity card, passport)		
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	

	Abstract of the second cycle master's degree thesis. Undergraduate applicants m	ust suhmit	
Abstract of degree thesis	the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000		
	characters including spaces)		
Academic Qualifications  Certificates and academic transcript of records for both Bachelor' and Master' degree containing the following details for each degree held: (art. 3.2 of the Competition notice University that granted the degree - Type of degree (first cycle/second cycle/single cycle/same of the degree program - Date of graduation - Final mark - List of exams a corresponding scores (academic transcript of records) - Translation into Italian or Eng (only for degrees issued in languages other than Italian or English).			
Research Project	Written in Italian or in English, according to the format attached to the competition notice It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board		
	LIST OF EVALUABLE QUALIFICATIONS		
(only qua	alifications attested by a document drawn up in Italian or in English)		
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.	Up to 9 points	
Graduation mark	Score assignable for the final mark: - 110 with honours (magna cum laude): 5 points - 110: 3 points - From 106 to 109: 2 points - From 102 to 105: 1 point		
Average of the exam marks (if the applicant will attain the degree no later than 31st October 2024)	Score assignable for the average of the exam marks: - 30/30: 5 points - From 28/30 to 29/30: 3 points - From 26/30 to 27/30: 2 points - From 24/30 to 25/30: 1 point	Up to 5 points	
Graduation thesis	Congruence with the research topics of the PhD course and quality of the research methodology	Up to 2 points	
Research Project	Score assignable for the research project:  Scientific value and ground-breaking nature of the proposal: max 8 points  Description and structure of the proposal: max 2 points  Proposal feasibility: 1 point  Congruence with the training objectives of the PhD program: 1 point	Up to 10 points	
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests	Up to 1 point	
Scientific Publications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.	Up to 9 points	
Reference Letters	A maximum of 2 letters, written by Professors or Researchers from the applicant's University or from other Universities or from experts in the research field working in public or private research facilities.  The reference letters must be produced on the letterhead of the University/Operating Unit/Structure of the Referee and attached to the online application by the applicant.	Up to 3 points	

Other Academic qualifications	<ul> <li>Second level Master's degree and Specialization: 3 points</li> <li>First level Master's degree and/or Advanced training and/or specialization and/or Higher Education course: 1 point</li> </ul>	
Other experiences (training, work, research, teaching, etc.)	<ul> <li>Research activities (basic, applied, translational, etc.) carried out in any way, including those covered by research grant, and conducted as a staff member of research units</li> <li>Working activity</li> <li>Activities at accredited laboratories</li> <li>Professional and/or training internship</li> <li>Language proficiency certificates</li> <li>Periods of study abroad, outside the country of origin (e.g. Erasmus or similar programmes)</li> <li>Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)</li> </ul>	Up to 3 points
	QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT ons reserved to holders of scholarship funded by Foreign States	
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  o specific CV format is required	Up to20 points
Graduation thesis	Congruence with the research topics of the PhD course and quality of the research methodology	Up to 8 points
Research Project	Written in Italian or in English, according to the format attached to the competition notice  It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board.  Score assignable for the research project:  Scientific value and ground-breaking nature of the proposal: 30 points  Description and structure of the proposal: 20 points  Proposal feasibility: 10 points	Up to 60 points
Statement of Research Interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests	Up to 4 points
Scientific Publications	Articles and/or reviews published on peer-reviewed scientific journals, abstracts of papers or posters presented at conventions or meetings; book chapters, etc.	Up to 10 points
Reference Letters	A maximum of 2 letters, written by Professors or Researchers from the applicant's University or from other Universities or from experts in the research field working in public or private research facilities.  The reference letters must be produced on the letterhead of the University/Operating Unit/Structure of the Referee and attached to the online application by the applicant.	Up to 6 points
Other Academic qualifications	First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program	Up to 6 points
Other experiences	<ul> <li>Research activities (basic, applied, translational, etc.) carried out in any way, including those covered by research grant, and conducted as a staff member of research units</li> <li>Working activity</li> </ul>	Up to 6 points

•	<b>Activities</b>	at accredite	d laboratories
•	ACHVILLES	at actieuite	u iapolatories

- Professional and/or training internship
- Language proficiency certificates
- Periods of study abroad, outside the country of origin (e.g. Erasmus or similar programmes)
- Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)

EVALUATION ORAL EXAM			
Interview Program Evaluation CRITERIA		POINTS	
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	<ul> <li>Ability to argument the project proposal: up to 28 points</li> <li>Discussion of the critical points of the project: up to 18 points</li> <li>Ability to provide an adequate scientific context to the project proposal: up to 12 points</li> <li>Ability to mitigate risks deriving from unexpected results: up to 10 points</li> <li>Knowledge of the English language: up to 7 points</li> </ul>	Up to 75 points	

VETERINARY SCIENCES		
CYCLE	XL	
COORDINATOR	Prof. Gaetano DONOFRIO email: gaetano.donofrio@unipr.it Department of Veterinary Science	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
POSITIONS PUT OUT TO COMPETITION	10	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - "Laurea Magistrale" LM-42 Veterinary Medicine  - "Laurea Magistrale" LM-6 Biology  - "Laurea Magistrale" LM-9 Medical Biotechnology, Veterinary and Pharmaceutica  - "Laurea Magistrale" LM-86 Zootechnical Sciences and Animal Technologies  - as well as the equivalent "laurea specialistica" or "laurea" achieved based on the university system in force before the entry into force of Italian Ministerial Decree No. 509/99  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programs  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

### TRAINING OBJECTIVES

Veterinary Science Doctoral course aims at training PhD-students about research topics on basic, pre-clinical, clinical and nonclinical areas (animal production and food inspection) by novel methodology and technology. PhD student chooses to develop his/her own research project under the supervision of a Tutor and to produce scientific outcomes in the following area: VET, AGR and BIO.

# **RESEARCH AREAS**

- Biopathology
- Clinical Sciences
- Basic Sciences
- Animal Production Sciences and Technologies
- Food Inspection and Public Health

	Position with Scholarship			
N°	Funding entity	Research Topic, if any		
3	Scholarship funded by University of Parma (Ministerial funds)			
1	Scholarship co-funded by Fondazione Cariparma "CARLO GABBI"			

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholarship funded by Department of Veterinary Science.	Innovation and sustainability in therapeutic protocols for bacterial infections in the veterinary medical field with reference to reproductive pathologies in pets and livestock		
1	Scholarship funded by Department of Veterinary Science.	A comprehensive study on <i>Equus asinus</i> from biodiversity management to milk nutraceutical and technological properties		
1	Scholaship funded by EMILIA ROMAGNA REGION CUP D92J24000010002  COESIONE TIALIA 1979  CO	Evaluation of inbreeding in local and cosmopolitan breeds as a tool for monitoring the sustainability of dairy cattle herds		
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Chiesi Farmaceutici S.p.A. CUP D92J24000360004	Generation of tools with a sustainable approach to be used in vitro and in vivo to study inflammation and consequent pulmonary fibrosis with the aid of viral vectors		

POSITION RESERVED	
Reserved for EMPLOYEES of Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna "Bruno Ubertini" (with salary maintenance)	2

### **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 40 points

ORAL EXAM: up to 80 points

Minimum score for ELIGIBILITY: 70/120

### **ORAL EXAM PROGRAM**

# THE ORAL EXAM TAKES PLACE IN THE PRESENCE.

The ORAL EXAM includes the presentation and discussion of the research project by of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course

### **Foreign Language**

the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

Reading, translation and comprehension of a part of an English scientific paper.

## **SCHEDULE OF THE ADMISSION EXAMS**

ASSESSMENT OF QUALIFICATIONS

It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam

TIME 29 <sup>TH</sup> August 2024 with positive O9:00 AM (Italian Time)		29 <sup>™</sup> August 2024 with possible e	xtension in the following days
		09:00 AM (Italian Time)	
ORAL EXAM	PLACE	ROOM "D"  Department of Veterinary Science  Via del Taglio, 10  43126 PARMA - ITALY	
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A (art. 3.2 of the Competition notice)		
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, pa	ssport)
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applic submit the draft of the thesis approved by their supervisor (abstract/draft of 10.000 characters including spaces)	
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice):  University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).	
Research Project	Written in Italian or in English, according to the format attached to the competition notice It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project) It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board	
LIST OF EVALUABLE QUALIFICATIONS  (only qualifications attested by a document drawn up in Italian or in English)		
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  The marks of the exams and the graduation mark will be the most relevant element of the evaluation.	Up to 2 points

Graduation mark	Score related to the final mark: - 110 with honours (magna cum laude): 3 points; - 110: 2 points; - From 100 to 109: 0.1 points for each mark unit		Up to 3 points
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2024)	Score related to the average of the exam marks: - 30/30: 3 points; - From 26/30 to 29/30: 2 points; - From 22/30 to 25/30: 1 point; - From 18/30 to 21/30: 0.5 points		Up to 3 points
Graduation thesis	Congruence wi	ith the research topics of the PhD course and quality of the odology	Up to 3 points
Research Project	following crite  Scientific v  description proposal fe	alue and or originality of the proposal nand structure of the proposal	Up to 5 points
Statement of Research Interest	Short text – maximum 2 pages – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests		Up to 5 points
Scientific Publications	Articles publish	ned in journals indexed in databases Wos and Scopus	Up to 5 points
Reference Letters	A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities.  They must be sent directly by the signer to the address e-mail: <a href="mailto:gaetano.donofrio@unipr.it">gaetano.donofrio@unipr.it</a> (The candidate, therefore, must not uploading them through the procedure of the competition online registration)		Up to 5 points
Other qualifications	Other qualifications certifying the candidate's training and skills (scholarships, prizes, etc.) relevant to the PhD topics:  — Scientific research, of any type (basic, oriented, finalized, translational, applied, etc.) and carried out with different level of qualification, including the ownership of research grants and participation in research projects  — Working activity  — Professional and/or training internship  — Language proficiency certificates  — Periods of study abroad, outside the country of origin (e.g. Erasmus program or other similar mobility programs)  Other qualifications attesting the suitability of the applicants (scholarships, awards, etc.)		Up to 5 points
EVALUATION ORAL EXAM			
Interview Program		Evaluation CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course			Up to 80 points

HISTORICAL AND TEXTUAL SCIENCES			
CYCLE	XL		
COORDINATOR	Prof. Giulio IACOLI email: giulio.iacoli@unipr.it Department of Humanities, Social Sciences and Cultural Industries		
DURATION	3 years		
STARTING DATE OF THE PHD PROGRAM	01/11/2024		
CURRICULA	<ol> <li>Italian Studies</li> <li>Foreign Languages and Literatures</li> <li>Classical Studies</li> <li>Historical Sciences</li> </ol>		
POSITIONS PUT OUT TO COMPETITION	5		
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY VIA VIDEO CONFERENCE (only if special requirements are fulfilled, see below)		
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  Laurea specialistica or Laurea magistrale (second cycle master's degree)  Laurea vecchio Ordinamento (degree obtained under the previous Italian regulations);  Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  The qualifications must be included in the classes listed below:  LM-1 Cultural anthropology and ethnology  LM-2 Archaeology  LM-3 Landscape Architecture  LM-5 Archival and library science  LM-10 Conservation of architectural and environmental heritage  LM-11 Sciences for the conservation of cultural heritage  LM-12 Design  LM-14 Modern philology  LM-15 Philology, literature and history of antiquity  LM-19 Information and editorial systems  LM-36 Languages and literatures of Africa and Asia  LM-37 Modern European and American languages and literatures  LM-38 Modern languages for communication and international cooperation  LM-39 Linguistics  LM-43 IT methodologies for the humanities  LM-45 Musicology and musical heritage  LM-49 Design and management of tourism systems  LM-45 International Relations  LM-49 Clossing Sciences  LM-50 Cognitive Sciences  LM-50 Public, corporate and advertising communication sciences  LM-62 Political sciences  LM-63 Public Administration Sciences  LM-65 Enceromic Sciences and advertising communication  LM-75 Sciences and technologies for the environment and territory  LM-76 Economic Sciences for the environment and culture  LM-77 Sciences and technologies for the environment and culture		

- LM-80 Geographical Sciences
- LM-81 Sciences for development cooperation
- LM-84 Historical Sciences
- LM-85 Pedagogical sciences
- LM-87 Social work and social policies
- LM-88 Sociology and social research
- LM-89 Art History
- LM-90 European Studies
- LM-92 Communication Theories
- LM-93 Theories and methodologies of e-learning and media education
- LM-94 Specialized translation and interpreting

Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024

#### TRAINING OBJECTIVES

The objectives of the doctoral course in Historic and Textual Sciences, according to Dublin descriptors for the third cycle, concur to achieve a set of skills and competencies necessary for the final degree:

- full understanding of the disciplinary field of research, as represented by the relevant curriculum, and skills in the research and analytical methods associated with it;
- ability to design, implement and adapt a research process taking into account ethical issues related to knowledge production;
- design and implement original research that can expand the frontiers of knowledge;
- develop skills in critical analysis, evaluation and synthesis of new and complex ideas;
- achieve a level of dissemination and communication appropriate to their field of research;
- engage in activities to promote, in academic and professional contexts, their results through participation in conferences and scientific publications;
- write a research thesis and support it with the prospect of discussing it before a committee at the conclusion of the three years.

The objectives are aimed, first and foremost, at offering students a training project consistent with the outgoing professional profiles (guaranteed by the different curricula) and the knowledge and skills (both disciplinary and interdisciplinary) associated with them. The training project consists of a series of enabling elements, among which we highlight:

- the financial and structural resources available and the specificities offered by the University, including links with the territory in which it is embedded, i.e., relations with research institutions, the business world, various cultural and social organizations, sensitive to the themes of the doctoral course, open and available to different forms of collaboration;
- the network of relationships, both national and international, developed by the University and the members of the Teaching Board, which allow a constant alignment with the cultural and scientific evolution of the disciplines of reference of the Doctorate and a sustainable, effective and consistent mobility with the research developed, and offer prospects for cooperation at various levels for doctoral students, who will benefit from economic support consistent with current regulations;
- the centrality of the doctoral students, whose growth as an integral part of the scientific community is promoted and fostered, both through the organization of aggregating and common activities between the various curricula, and through disciplinary activities characterizing the curriculum of reference, including participation, also as speakers, in congresses, workshops and/or training schools both national and international;
- the strong interdisciplinary character of the doctoral course, based on a previous and consolidated interaction among the various members of the College pertaining to the different curricula, involved in common research projects and teaching activities, which guarantee different possibilities of collaboration to the advantage of a multifaceted training not limited to one's own disciplinary field.

# **CURRICULA AND RESEARCH AREAS**

#### • ITALIAN STUDIES

The curriculum aims at developing specialistic formations in a wide historical and methodological spectrum, in a variety of disciplines, comprising romance philology to the history and hermeneutics of medieval, modern, and contemporary literature; philology of Italian Literature and linguistics and History of Italian language; the relationship between publishing and literature; literary theory and comparative literature. The curriculum aims at forming researchers who are at ease with both linguistic and philological notions and theoretical ones. They will be able to create critical and annotated editions of texts belonging to the romance or Italian tradition, as well as to innovative analyses in the fields of literary history, educative linguistics, didactics of language and literature, cultural and thematic studies.

#### FOREIGN LANGUAGES AND LITERATURES

The curriculum revolves around the study of foreign languages and literatures (English, French, Spanish, German, Russian, Portuguese, Chinese) as well as on their postcolonial expressions. The constant search for original and innovative trajectories favors the connection with most recent theories and methodologies of linguistic disciplines (translation, discourse analysis, corpora studies, lexicography), as well as the theoretical and historical critical analysis of different literary and cultural expression, from Early Modern to the Contemporary Age.

#### CLASSICAL STUDIES

The curriculum aims at expanding, in the enrolled students, knowledge and competences about classical studies, and especially in the fields of linguistics, classical philology and literature, archaeology, Medieval and Humanistic tradition of Greek and Latin language and culture. Students will be brought to create a critical edition, a commentary, or an essay, concerning texts written in Greek or Latin, or the edition of archaeological sources or contexts, considering the entire timeframe of their tradition, or prolonged life.

#### HISTORICAL SCIENCES

The curriculum aims at forming young scholars in the critical analysis of the past, from Antiquity to Contemporary age, with a specific focus on socio-economic, institutional-juridical, political-religious, and cultural dimensions of human communities. The curriculum will also involve the history of historiography, intellectual history, the history of political thought, historical geography, and economic history. In this light, the curriculum will promote research paths based on most recent theoretical-disciplinary methods, that will allow students to confront themselves with sources, as well as reconstructing the contexts, as well as classic interpretations and traditions, fostering an original research project, as well as the capacity to look at and reproduce the complexity of the past. In terms of formation, students will acquire solid critical methodologies, among which the capacity to establish a dialogue with archival disciplines, social sciences, and Digital Humanities.

Positions with Scholarship		
N°	Funding entity	Research Topic, if any
3	Scholarship funded by University of Parma (Ministerial funds)	<ul> <li>Foreign Languages and Literatures</li> <li>Classical Studies</li> <li>Historical Sciences</li> </ul>
1	Scholarship co-funded by Fondazione Cariparma	Italian Studies

Positions with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC	
1	Scholarship co-financed with funds under the PNRR - Mission 4, Component 1, Inv. 3.4 (Ministerial Decree 629/2024 art. 7 "Digital and environmental transitions") CUP D92J24000140006	A Virtual Reconstruction of Ugo Foscolo's Library  The project aims at digitally reproducing the entire library owned by Foscolo, including some precious annotated books, now dispersed in libraries and private collections in Italy and abroad, as well at collecting documents, memories and relics from the whole corpus.	

## **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 80 points

(a minimum score of 40 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 40 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

## Foreign Language

the fluency of which shall be assessed during the Oral Exam

ENGLISH,
FRENCH,
SPANISH,
GERMANY
(AT THE CANDIDATE'S
CHOICE)

The evaluation of the knowledge will be oral and will consist in reading and translating of a scientific text

	SCHEDULE OF THE ADMISSION EXAMS			
Which can be consulted in their reserved		y to verify the outcome of the evaluation of qualifications, their reserved area by connecting to the page e.do in the days preceding the date of the Oral Exam		
DATE 3 <sup>rd</sup> September 2024 (with p		3 <sup>rd</sup> September 2024 (with possibl	e extension to 4 <sup>th</sup> September 2024)	
ODAL EVANA	TIME	09:00 am (Italian Time)		
ORAL EXAM	PLACE	ROOM B Department of Humanities, Social Sciences and Cultural Industries Via D'Azeglio, 85 43125 PARMA - ITALY		
FURTHER INFORMATION		The choice of the Research Topic to be expressed in Annex A is not binding on the assignment of the research project, and it is intended to assess candidates skills during the admission exam. The PhD research topic will be assigned by the Academic Board.		
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in Italian or in English at the candidate's choice.	
			For foreign candidates, knowledge of the Italian language level B2 is required.	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A	(art. 3.2 of the Competition notice)	
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)	
Curriculum Vitae et studiorum	No specific CV format is required (see art. 3.2 of the Competition notice)	

Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)			
Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).			
Research Project	It will have the candid can use of It does not	Written in Italian or in English, according to the format attached to the competition notice. It will have to focus on an original research topic (unpublished, developed personally by the candidate, PENALTY NOT EVALUATION. It should be noted that the Examination Board can use of IT tools useful for verifying the originality of the submitted Project)  It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board		
(only qu		T OF EVALUABLE QUALIFICATIONS  ttested by a document drawn up in Italian or in English)		
Curriculum Vitae et studiorum	Including a statutory of	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.  Up to 7 points		
Graduation mark (or alternatively average of the exam marks	Score related to the final mark: - 110 with honours (magna cum laude). Alternatively, where this is not yet present: score relating to the average of the exam marks  Up to 1 points			
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics, methodological rigor, knowledge of critical literature			
Research Project	Points relating to the research project (originality, articulation, feasibility of the proposal)		Up to 28 points	
Scientific Publications	Monographs, articles in national and international scientific journals, book chapters, conference proceedings, reviews		Up to 11 points	
Other qualifications	Post laurea	m scholarship, experience abroad, award	Up to 8 points	
EVALUATION ORAL EXAM				
Interview Program Eva		Evaluation CRITERIA	POINTS	
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course		<ul> <li>knowledge of foreign language: max 5 points</li> <li>knowledge and methodology necessary for the realization of the project: max 35 points</li> </ul>	Up to 40 points	

INFORMATION TECHNOLOGIES		
CYCLE	XL	
COORDINATOR	Prof. Marco LOCATELLI email: marco.locatelli@unipr.it Department of Engineering and Architecture	
DURATION	3 years	
STARTING DATE OF THE PHD PROGRAM	01/11/2024	
POSITIONS PUT OUT TO COMPETITION	17	
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:  - Laurea specialistica or Laurea magistrale (second cycle master's degree)  - Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations);  - Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program  Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree by 31.10.2024	

# TRAINING OBJECTIVES

The course aims at educating the future Ph.D.'s so that they will enter the research world with an active role, within both universities and industries

# **RESEARCH AREAS**

- Electronics instrumentation and electrical drives
- Computer systems and automatic control
- Telecommunications and electromagnetic fields

	Position with Scholarship		
N°	Funding entity	Research Topic, if any	
3	Scholarship funded by University of Parma (Ministerial funds)		

	Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 6 of the Competition notice)			
N°	Funding entity	BOUND RESEARCH TOPIC		
1	Scholarship funded by Department of Engineering and Architecture (funds Project EmilAmbiente)	Study and development of data collection and analysis models for optimized management of water distribution networks		
1	Scholarship funded by Department of Engineering and Architecture (funds Project KOSME)	Study and development of simulation methods for complex systems based on Artificial Intelligence (AI) techniques		

1	Scholarship funded by Department of Engineering and Architecture	Study of path planning strategies for Autonomous Vechicles by means of imitation or reinforcement learning techniques
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Engineering and Architecture	Study and development of IoT systems for data collection and analysis in smart agriculture applications
1	Scholarship partly financed with UNIVERSITY funds and co-financed by the Department of Engineering and Architecture	Artificial intelligence algorithms for optimal efficiency control of electric machines.
1	Scholaship funded by EMILIA ROMAGNA REGION (PR.FSE + 2021/2027 – DGR n. 2111 del 04/12/2023) - CUP D92J24000010002	Methods for knowledge verification and update in Large Language Models: towards a reliable and adaptable artificial intelligence
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Sygest S.r.l. CUP D92J24000370004	(Study of) innovative methodologies and experimental evaluation for efficient and robust recommender systems based on Machine Learning techniques. Main application will be to B2B after-sales services.
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company things2i S.r.l. CUP D92J24000370004	Design and implementation of multi-interface IoT gateways with embedded intelligence
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company Vislab S.r.l. CUP D92J24000370004	Study of techniques for sensor fusion using cameras, radars, or lidars exploiting AI for ADAS and Autonomous driving systems
1	Scholarship co-financed with funds under the PNRR - Mission 4 component 2 (Ministerial Decree 630/2024) and co-financed by the Company OCME S.r.l. CUP D92J24000370004	Development of algorithms for motion planning and coordination of a fleet of autonomous vehicles

POSITION RESERVED	
Reserved for EMPLOYEES of Company "Crédit Agricole Group Solutions Scpa" (with salary maintenance)	2
Reserved to <b>Holders of RESEARCH GRANT</b> within the Project MARIE SKLODOWSKA-CURIE ACTIONS – COFUND "Training Future Big Data Experts for Europe ( <b>FutureData4EU</b> )"	2

# **ADMISSION PROCEDURES**

Assessment of QUALIFICATIONS: up to 70 points

(a minimum score of 40 points shall be required to be admitted to the Oral Exam)

**ORAL EXAM:** up to 50 points

Minimum score for ELIGIBILITY: 70/120

## **ORAL EXAM PROGRAM**

**THE ORAL EXAM TAKES IN THE PRESENCE** and with the possibility of carrying out the interview **REMOTELY** for candidates residing abroad or temporarily abroad for study / work reasons. To this end, candidates must submit a **motivated REQUEST** as per the model attached to the competition announcement)

The ORAL test involves the presentation and discussion of the research project by the candidate and is aimed at verifying the candidate's aptitude for scientific research and his general preparation on topics related to the research topics of the doctoral course

**Foreign Language** the fluency of which shall be assessed during the Oral Exam

**ENGLISH** 

The evaluation of the knowledge of this language will be oral and will consist of a brief interview on a technical topic (for example a translation of a scientific text).

SCHEDULE OF THE ADMISSION EXAMS				
ASSESSMENT OF QUALIFICATIONS		It is the candidate's responsibility to verify the outcome of the evaluation of qualifications, which can be consulted in their reserved area by connecting to the page <a href="http://unipr.esse3.cineca.it/Home.do">http://unipr.esse3.cineca.it/Home.do</a> in the days preceding the date of the Oral Exam		
DATE		4 <sup>th</sup> September 2024 (with possibl	e extension in the following days)	
	TIME	10:00 am (Italian Time)		
ORAL EXAM	PLACE	Department of Engineering and A Scientific Engineering Headquarte Parco Area delle Scienze, 181/A – 43124 PARMA - ITALY	ers	
FURTHER INFORMATION		of the research project, and it is exam. The PhD research topic wil	to be expressed in Annex A is not binding on the assignment intended to assess candidates skills during the admission be assigned by the Academic Board.  The ents written in a language other than Italian will have to be a they will not be evaluated.	
		THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT			
MAND	MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION		
ANNEX A (art. 3.2 of the Competition notice)			
Identification Document Scanned Copy of a valid identity document with photo (i.e. identity card, passport)			
Curriculum Vitae et studiorum  No specific CV format is required (see art. 3.2 of the Competition notice)			
Abstract of the second cycle master's degree thesis. Undergraduate applicants must the draft of the thesis approved by their supervisor (abstract/draft of the thesis characters including spaces)			

research groups related to the PhD course in Information Technologies (information on the research groups and their contacts can be found at <a href="https://clia.unipr.it/en/node/3080">https://clia.unipr.it/en/node/3080</a> ).  Failure to submit the project will result in exclusion from procedure for admission to the course.  UIST OF EVALUABLE QUALIFICATIONS (only qualifications attested by a document drawn up in Italian or in English)  Evaluation of the marks of the exams and of the master's degree mark (if available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same  It will also be evaluated the congruence of the degree obtained with the PhD themes.  It will be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics  Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and originality of the proposal: max 10 points  Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific Publications  Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.  Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.  Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.  Reference Letters  It must be sent directly by the signer to the address e-mail: marco.locatelli@unip.if (The candidate, therefore, must not upload them through the procedure of the competition online registration).  Evaluation of the judgments reported in the reference letters.  Other experiences (training,	Academic Qualifications	Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 3.2 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle)  Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).		
Curriculum Vitae et studiorum    Evaluation of the marks of the exams and of the master's degree mark (if available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same the warms of the master's degree, in addition to the details of the same the warms of the master's degree, in addition to the details of the same the warms of the master's degree, in addition to the details of the same the warms of the master's degree, in addition to the details of the same the will also be evaluated the congruence of the degree obtained with the PhD themes.    It will also be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics    Points relating to the research project shall be allocated on the basis of the following criteria:   Scientific value and originality of the proposal: max 10 points     Oscientific value and structure of the proposal: max 10 points	Research Project	and structured as follows: introduction of the problem in the scientific context, significance of the problem, expected results, argumentation.  It does not represent a constraint with respect to the following choice of the doctoral thesis, that shall be defined together with the supervisor and approved by the Academic Board. However, this project must be prepared after having contacted and consulted one of the research groups related to the PhD course in Information Technologies (information on the		
Conly qualifications attested by a document drawn up in Italian or in English)			sion to the	
Evaluation of the marks of the exams and of the master's degree mark (if available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same  It will also be evaluated the congruence of the degree obtained with the PhD themes.  It will be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics  Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and originality of the proposal: max 10 points  Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.  Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.  Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.  Reference Letters  It must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it (The candidate, therefore, must not upload them through the procedure of the competition online registration). Evaluation of the judgments reported in the reference letters.  Other experiences (training,				
available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same  It will also be evaluated the congruence of the degree obtained with the PhD themes.  It will be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics  Points relating to the research project shall be allocated on the basis of the following criteria:  Scientific value and originality of the proposal: max 10 points  proposal feasibility: max 10 points  Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.  Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.  Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.  It must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it (The candidate, therefore, must not upload them through the procedure of the competition on line registration).  Evaluation of the judgments reported in the reference letters.  Other experiences (training,	(only q	ualifications attested by a document drawn up in Italian or in English)		
The mass   It will be evaluated the congruence of the Master's Degree thesis with the doctoral program research topics	Curriculum Vitae et studiorum	available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same	-	
Points relating to the research project shall be allocated on the basis of the following criteria:   Scientific value and originality of the proposal: max 10 points				
Following criteria:   Scientific value and originality of the proposal: max 10 points     description and structure of the proposal: max 10 points     opints     Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.     Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.    Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.    It must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it (The candidate, therefore, must not upload them through the procedure of the competition online registration).	Graduation thesis	It will be evaluated the congruence of the Master's Degree thesis with the	=	
or symposia, book chapters etc. Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.  Maximum 1 letter from professors or researchers belonging to the Collegio Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.  Reference Letters  It must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it (The candidate, therefore, must not upload them through the procedure of the competition online registration). Evaluation of the judgments reported in the reference letters.  Other experiences (training,	Research Project	following criteria: <ul><li>Scientific value and originality of the proposal: max 10 points</li><li>description and structure of the proposal: max 10 points</li></ul>	=	
Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.  It must be sent directly by the signer to the address e-mail: marco.locatelli@unipr.it (The candidate, therefore, must not upload them through the procedure of the competition online registration).  Evaluation of the judgments reported in the reference letters.  Other experiences (training,  Duration evaluation (for scholarships and interpships) score (for the GRE test)	Scientific Publications	or symposia, book chapters etc.  Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators. It will be evaluated only publications from the past five years.	•	
I Direction evaluation itor scholarships and internships) score itor the GRE test)   Lin to 3	Reference Letters	Docenti (PhD board) of the PhD in Information Technologies, after a preliminary interview with them.  It must be sent directly by the signer to the address e-mail:	-	
nrestige (for awards)	Other experiences (training, work, research, teaching, etc.)		-	
EVALUATION ORAL EXAM		EVALUATION ORAL EXAM		

Interview Program	Evaluation CRITERIA	POINTS
The ORAL EXAM includes the presentation of the research project and is intended to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the PhD course	<ul> <li>knowledge of the foreign language: max 5 points</li> <li>research project presentation: max 25 points</li> <li>general knowledge of issues connected to the PhD course: max 20 points</li> </ul>	Up to 50 points