

<b>EARTH SCIENCES</b>	
<b>CYCLE</b>	<b>XL</b>
<b>COORDINATOR</b>	Prof. Fabrizio BALSAMO email: <a href="mailto:fabrizio.balsamo@unipr.it">fabrizio.balsamo@unipr.it</a> Department of Chemistry, Life Sciences and Environmental Sustainability
<b>DURATION</b>	3 years
<b>STARTING DATE OF THE PHD PROGRAM</b>	01/11/2024
<b>POSITIONS PUT OUT TO COMPETITION</b>	<b>6</b>
<b>ADMISSION PROCEDURES</b>	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY
<b>ADMISSION REQUIREMENTS</b>	<p>Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:</p> <ul style="list-style-type: none"> <li>– "Laurea Magistrale" LM-11 Science for the conservation of cultural heritage</li> <li>– "Laurea Magistrale" LM-35 Environmental Engineering</li> <li>– "Laurea Magistrale" LM-60 Natural Sciences</li> <li>– "Laurea Magistrale" LM-74 Geology</li> <li>– "Laurea Magistrale" LM-75 Environmental and land sciences</li> <li>– "Laurea Magistrale" LM-79 Geophysics</li> </ul> <p>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</p> <ul style="list-style-type: none"> <li>– Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programs</li> </ul> <p>Undergraduates can also apply for admission to the selection, with the obligation to obtain the degree <b>by 31.10.2024</b></p>
<b>TRAINING OBJECTIVES</b>	
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.	
<b>RESEARCH AREAS</b>	
<ul style="list-style-type: none"> <li>• Palaeontology and Palaeoecology</li> <li>• Stratigraphy and Sedimentology</li> <li>• Structural Geology</li> <li>• Physical Geography and Geomorphology</li> <li>• Applied Geology</li> <li>• Mineralogy</li> <li>• Petrology and Petrography</li> <li>• Geochemistry and Volcanology</li> <li>• Geophysics and Applied Geophysics</li> </ul>	

Position with Scholarship		
N°	Funding entity	Research Topic, if any
3	Scholarship funded by University of Parma (Ministerial funds)	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 prior structural-geology information</li> <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>
1	Scholarship funded by Department of Chemistry, Life Sciences and Environmental Sustainability (funds of "Departments of Excellence" program)	<ul style="list-style-type: none"> <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 ( <b>Ministerial Decree 630/2024</b> ) and co-financed by the Company GEOSEC S.r.l. CUP D92J24000330004	<ul style="list-style-type: none"> <li>Integrated geophysical measurements to support geotechnical characterization of surface soil deposits</li> </ul>

## ADMISSION PROCEDURES

**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

<b>Foreign Language</b> the fluency of which shall be assessed during the Oral Exam	<b>ENGLISH</b>	The assessment of knowledge of this language will be oral and will consist in reading and translating a paragraph of scientific text.
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### SCHEDULE OF THE ADMISSION EXAMS

<b>ASSESSMENT OF QUALIFICATIONS</b>		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
<b>ORAL EXAM</b>	<b>DATE</b>	2 <sup>nd</sup> September 2024 (with possible extension in the following day)
	<b>TIME</b>	09:00 am (Italian Time)
	<b>PLACE</b>	Department of Chemistry, Life Sciences and Environmental Sustainability EARTH SCIENCES BUILDING Parco Area delle Scienze, 157/A – Campus 43124 PARMA - ITALY
<b>FURTHER INFORMATION</b>		<b>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. <u>The PhD research topic will be assigned by the Academic Board.</u></b>
<b>THE INTERVIEW MAY BE HELD ALSO IN ENGLISH</b>		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

<b>ANNEX A</b>	(art. 3.2 of the Competition notice)
<b>Identification Document</b>	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
<b>Curriculum Vitae et studiorum</b>	No specific CV format is required (see art. 3.2 of the Competition notice)
<b>Abstract of degree thesis</b>	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)
<b>Academic Qualifications</b>	<b>Certificates and academic transcript of records for both Bachelor' and Master' degrees</b> 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).	
<b>Research Project</b>	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 ( <b>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</b> ) <u>It does not represent a constraint with respect to the following choice of the doctoral thesis, which will be assigned by the Academic Board</u>	
<b>LIST OF EVALUABLE QUALIFICATIONS</b> (only qualifications attested by a document drawn up in Italian or in English)		
<b>Curriculum Vitae et studiorum</b>	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.	<b>Up to 6 points</b>
<b>Graduation thesis</b>	Congruence with the research topics of the PhD course and quality of the research methodology	<b>Up to 8 points</b>
<b>Research Project</b>	Points relating to the research project shall be allocated on the basis of the following criteria: <ul style="list-style-type: none"> <li>○ Scientific value and or originality of the proposal: max 8 points</li> <li>○ description and structure of the proposal: max 3 points</li> <li>○ proposal feasibility: max 3 points</li> <li>○ consistency with the research themes of the PhD course: max 8 points</li> </ul>	<b>Up to 22 points</b>
<b>Statement of Research Interest</b>	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	<b>Up to 1 point</b>
<b>Scientific Publications</b>	<ul style="list-style-type: none"> <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>	<b>Up to 5 points</b>
<b>Graduation mark</b>	Score related to the final mark: <ul style="list-style-type: none"> <li>- 110 and 110 with honours (magna cum laude): 5 points</li> <li>- from 107 to 109: 4.5 points</li> <li>- from 105 to 106: 3.5 points</li> <li>- from 100 to 104: 2.5 points</li> <li>- from 95 to 99: 1 point</li> <li>- under 95: 0.5 points</li> </ul>	<b>Up to 5 points</b>
<b>Average of the exam marks</b> (if the candidate will attain the degree no later than 31 October 2024)	Score related to the average of the exam marks: <ul style="list-style-type: none"> <li>- from 28 to 30: 5 points</li> <li>- from 27 to 27.99: 4.5 points</li> <li>- from 26.5 to 26.99: 3.5 points</li> <li>- from 26 to 26.49: 2.5 points</li> <li>- from 25 to 25.99: 1 point</li> <li>- under 25: 0.5 points</li> </ul>	<b>Up to 5 points</b>
<b>Other Academic qualifications</b>	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	<b>Up to 1 point</b>
<b>Other experiences (training, work, research, teaching, etc.)</b>	<ul style="list-style-type: none"> <li>○ Periods of study abroad: 1 point</li> </ul> Scholarships, scientific associations awards: 1 point	<b>Up to 2 points</b>

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 style="list-style-type: none"><li>○ knowledge of foreign languages: 5 points</li><li>○ research project presentation: 50 points</li><li>○ general knowledge of issues connected to the PhD course: 15 points</li></ul>	<b>Up to 70 points</b>