







EARTH SCIENCES	
CYCLE	XLI
COORDINATOR	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	01/11/2025
POSITIONS PUT OUT TO COMPETITION	5
ADMISSION PROCEDURES	Assessment of QUALIFICATIONS and Research Project Oral Exam in PRESENCE or REMOTELY
ADMISSION REQUIREMENTS	<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 31.10.2025</b></p>
TRAINING OBJECTIVES	
<p>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.</p>	
RESEARCH AREAS	
<ol style="list-style-type: none"> <li>1. Palaeontology and Palaeoecology</li> <li>2. Stratigraphy and Sedimentology</li> <li>3. Structural Geology</li> <li>4. Physical Geography and Geomorphology</li> <li>5. Applied Geology</li> <li>6. Mineralogy</li> <li>7. Petrology and Petrography</li> <li>8. Geochemistry and Volcanology</li> <li>9. Geophysics and Applied Geophysics</li> </ol>	



Position with Scholarship		
N°	Funding entity	Research Topic (the complete description of the research topics is visible in “Notices from the course” on the website <a href="https://corsi.unipr.it/en/phd-ster">https://corsi.unipr.it/en/phd-ster</a> )
3	Scholarship funded by University of Parma (Ministerial funds)	<ul style="list-style-type: none"><li>• Controls of lower plate on the shape and development of collisional accretionary wedges: the Calabrian Accretionary Wedge as a case study (AREA no. 2)</li><li>• The North Anatolian Fault in the Aegean Sea: structural and geochronological constraints (AREAS no. 3, no. 6)</li><li>• Scenarios of Mediterranean geodynamics since the Late Miocene constrained by stratigraphic record of vertical lithospheric motions (AREAS no. 9, no. 2, no. 3)</li><li>• Probabilistic earthquake-risk assessment in Italy via geodynamic models constrained by geodetic data and prior structural-geology information (AREAS no. 9, no.2, no. 3)</li><li>• Saline Waters of Emilia-Romagna as a Resource for Critical Raw Materials: Geochemical Characteristics and Environmental Implications (AREA no. 8)</li><li>• Tracing magma source evolution across the Mariana Arc: new insights from drilled volcanics and gabbros (DSDP Leg 60) (AREAS no. 7, no. 8)</li><li>• Impact of carbonate fault zone on groundwater flow at different scale (AREAS no. 5, no. 3)</li><li>• Brittle reactivation of Precambrian shear zones in NE Brazil: implications for the evolution of the offshore Equatorial Margin (AREAS no. 3, no. 2)</li></ul>
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 funded by EMILIA ROMAGNA REGION (PR.FSE + 2021/2027 – DGR n. 2072 del 04/11/2024) CUP D92J25000010006 <div></div>	<ul style="list-style-type: none"><li>• EVELIN - Transient Effects of VEgetation on rainfall-INDuced landslides: territorial-scale modelling for infrastructures’ protection.</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>	8 <sup>TH</sup> September 2025 (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. The PhD research topic will be assigned by the Academic Board.</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>



LIST OF EVALUABLE QUALIFICATIONS (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 2025)	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> <li>Scholarships, scientific associations awards: 1 point</li> </ul>	<b>Up to 2 points</b>
EVALUATION ORAL EXAM		
Interview Program	Evaluation CRITERIA	POINTS
<b>The ORAL EXAM includes the presentation of the research project</b> 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>