

<b>PhD Programme in CIVIL ENGINEERING AND ARCHITECTURE</b>	
DISCIPLINARY SCIENTIFIC AREAS	08 - CIVIL ENGINEERING AND ARCHITECTURE; 04 - EARTH SCIENCES; 07 - AGRICULTURAL AND VETERINARY SCIENCES; 09 - INDUSTRIAL AND INFORMATION ENGINEERING; 11 - HISTORICAL, PHILOSOPHICAL, PEDAGOGICAL AND PSYCHOLOGICAL SCIENCES; 13 - ECONOMICAL AND STATISTICAL SCIENCES
COORDINATOR	
HEAD DEPARTMENT	DEPARTMENT OF CIVIL, ENVIRONMENTAL ENGINEERING AND ARCHITECTURE
DURATION	3 YEARS
LEARNING OUTCOMES AND RESEARCH TOPICS	<p>The PhD in Civil Engineering and Architecture puts the built environment and the territory at the centre of scientific interest, intended as a complex research field comprising the historical and contemporary built systems, road and hydraulic infrastructures, the environment and the natural and human-made landscapes, with particular attention to the relationships among environment, economy and society. The vast field of investigation promotes an interdisciplinary vision of the problems and topics addressed, and favours the integration between fundamental and applied research.</p> <p>Within this wide field of research, the primary objective of the PhD programme is to promote the training in research and the acquisition of methods and tools for conducting research projects, together with the ability to teach courses at the level of higher education. Particular attention is paid to the consolidation of the autonomous elaboration capacity of original research programs on the topics of the Doctorate.</p> <p>The PhD also pursues technical and operational objectives, consistent with possible professional connotation of the disciplines of civil engineering and architecture, in which fundamental research is combined with applied research, with notable social repercussions. These objectives aim to strengthen the capacity of the PhD students to identify the existing relationships and interconnections between the engineering, architectural, technological, environmental, economic and social dimensions.</p> <p>For the development of doctoral research, the PhD promotes laboratory activities on engineering, architectural, technological, environmental, economic, and social aspects connected with the construction and integration of construction works, road and hydraulic infrastructures, natural water systems and soil defence systems.</p> <p>The PhD has a strong international characterisation, provides for extended periods of research and study abroad, maintains collaborations and establishes co-supervision and <i>cotutelle</i> agreements with scholars and institutions abroad. Following the signing of agreements with École Nationale Supérieure d'Architecture de Toulouse and Université Bordeaux Montaigne, the Doctorate offers the option for the respective PhD students to undertake joint educational paths, with the consequent release of the double degree.</p> <p>The advanced knowledge and skills acquired during the doctoral course, and the constant stimulus deriving from the interdisciplinary context that characterises the Academic Board, contribute to the formation of PhD graduates, capable of addressing complex problems concerning</p>



	transformations of the territory in its broadest sense, compatibly with a sustainable development of the environment, the prevention and mitigation of natural risks and the sustainable use of natural resources.
ELIGIBILITY AND OTHER REQUIREMENTS FOR CANDIDATES (ART. 2 - NOTICE OF COMPETITION)	EVERY ITALIAN 2ND CYCLE DEGREE (LAUREA MAGISTRALE/SPECIALISTICA/VECCHIO ORDINAMENTO) AND EQUIVALENT AND SUITABLE FOREIGN ACADEMIC DEGREES
ADMISSION TESTS	ASSESSMENT OF QUALIFICATIONS AND CURRICULUM VITAE, AND VIDEOCONFERENCE INTERVIEW The interview will mainly focus on the presentation and discussion of the candidate's research project (to be written using the form available on the webpage <a href="https://unica.it/dottoraticerca">https://unica.it/dottoraticerca</a> - "Instructions for registration to the competition and forms - Annex C"), in order to assess the adequacy of the profile with regard to personal competence in the disciplinary field of the project, aptitude for scientific research and linguistic knowledge (English language).
POSITIONS	2
SCHOLARSHIPS	2 funded by NRRP Ministerial Decree no. 630/2024
CONTACT PERSON	EMAIL: <a href="mailto:dotticar@unica.it">dotticar@unica.it</a>
WEBSITE	<a href="http://dottorati.unica.it/dotticar/">http://dottorati.unica.it/dotticar/</a>
<b>SCHOLARSHIPS FUNDED BY MINISTERIAL DECREE NO. 630/2024</b>	
<b>Scholarship no. 1 - CUP F22B24000230005</b>	
RESEARCH PROJECT	Insertion of Agrivoltaic Systems into the Territory and Landscape
PRINCIPAL INVESTIGATOR	Prof. Giorgio Querzoli
DESCRIPTION OF DOCTORAL TRAINING	In the framework of the EU's strategy for the energy transition and the fight against climate change, agrivoltaic plants play a key role, enabling the production of energy from renewable sources without taking land away from agricultural production. This project aims to investigate the different aspects that characterize the interaction of photovoltaic panels with the environment and the surrounding territory, with specific reference to Sardinia, and will allow to relate the spatial configuration of the panels in order to identify the optimal design characteristics for both the agricultural production, which is a function of the type of crop, and energy production, influenced by the temperature and exposure of the panels. The project is therefore consistent with Mission M2C2.1 "Increasing the share of energy produced from renewable energy sources", investments 1.1 "Agro-photovoltaic development" and 1.2 "Promotion of renewables for energy communities and self-consumption". The PhD program will integrate the scientific knowledge related to physical, ecosystemic processes and all other aspects related to the interaction between agrivoltaic plants and the territory, which will be acquired through the activities carried out at the DICAAR of the University of Cagliari and deepened in the period abroad, with the specific knowledge related to the design, realization and management of agrivoltaic plants, that will be gained as part of the activities carried out at the company, which has specific skills in this field.
COMPANY	RP Global Italy Srl, headquartered in via della Stazione 7, Bolzano - local office, via del Mercato Vecchio 9, Cagliari - Contact person: Maurizio Pitzolu
NO. OF MONTHS TO BE	12



SPENT IN THE COMPANY	
FOREIGN INSTITUTION	Ecole Polytechnique Federale de Lausanne, Rte Cantonale, 1015 Lausanne, Swiss
NO. OF MONTHS TO BE SPENT IN THE FOREIGN INSTITUTION	6
<b>Scholarship no. 2 - CUP F22B24000230005</b>	
RESEARCH PROJECT	Landscapes of Learning
PRINCIPAL INVESTIGATOR	Prof. Marco Cadinu
DESCRIPTION OF DOCTORAL TRAINING	Intervening in the design of school space means responsibly rethinking the role that space itself plays in the dynamics of learning processes, as well as reasoning around the renewal of educational organization. At the same time social changes, technological innovation, easier, faster and more massive access to information, transpose the places of education as spaces of everyday life, not only dedicated and confined environments -Schools-, but spaces capable of generating closer ties with the outside world, according to models based on the genesis of complex interactions. The application objective of the research proposed here, of which the theoretical and methodological framework is presented, is the identification of one or more spaces within the city that retain such latent potentials, and, through design, reveal and strengthen them by recognizing their role as public spaces as urban learning spaces. At the same time develop research aimed at redefining the interior spaces of the school building. The prerequisite is the articulation of a flexible, modular and multifunctional space that adapts to the subjective needs of individual students' growth paths, incorporates principles and materials related to good sustainable practices as its constituent elements, and can accommodate new technological tools as a form of real space enhancement. It calls for design thinking about the possibility of alternative spatial configurations that would facilitate the implementation of the new learning modes leading to the breakdown of the traditional school building scheme, where the closed classroom, for example, has always constituted the basic unit.
COMPANY	Studio Professionisti Associati S.r.l., via Hertz 8, Cagliari - Contact person: Massimo Faiferri
NO. OF MONTHS TO BE SPENT IN THE COMPANY	12
FOREIGN INSTITUTION	Atelier(s) Alfonso Femia S.A.S., 55, Rue Des Petites Écuries, Paris
NO. OF MONTHS TO BE SPENT IN THE FOREIGN INSTITUTION	6