POLITECNICO DI MILANO

PhD in DESIGN - 41st cycle

THEMATIC Research Field: NEW PARADIGMS FOR UNIVERSITY CAMPUSES GUIDELINES FOR THE DESIGN OF PEER-TO-PEER, EXPERIMENTAL, AND LEARNING BY DOING EDUCATIONAL ENVIRONMENTS

Monthly net income of PhDscholarship (max 36 months)
€ 1300.0
In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity	
Motivation and objectives of the research in this field	In recent years, partly due to the Covid-19 health emergency, the collective discussion on human spaces has become more intense, focusing first on residential spaces and then on public environments, in particular workplace and educational spaces such as university campuses. The learning system was challenged in new forms, stimulating a heated debate on the role of physical space as a platform for knowledge exchange. University campuses today are conceived as dynamic entities that must adapt and change according to the needs and demands of multiple generations and types of users, satisfying the needs of professors, students, workers, visitors and companies, becoming living organisms, composed by specialized and flexible structures that can be adapted to various conditions and requests. This approach has prompted academic institutions all across the world to reconsider their objectives, to improve the performance and hospitality of their spaces, and to conceive new challenges and experiments. In today's context, it is crucial to consider new creative educational models, defined not only as venues for face-to-face learning, but also as spaces where relational, experimental, and learning-by-doing activities can take place. The research will focus on mapping international

	The research will focus on mapping international experiences, considering laboratories, study spaces and relational spaces, investigating hybrid and interdisciplinary methods to create services and environments to stimulate and support innovative educational and research processes. The main objectives are the identification of a flexible and adaptable paradigm and the definition of guidelines for the design of permanent and temporary, dedicated and interstitial spaces that can contribute to supporting excellent, equitable and inclusive education, fostering different modes of interaction and offering new ways of experiencing space. The research is part of a broader framework of transformation and innovation, in line with RA2 of Framework D.2 Overall Departmental Development Objectives (Progetto Dipartimento di Eccellenza 2023-2027), which envisages the "strengthening of research, teaching and third mission infrastructures to support the development of the project and the achievement of its objectives (D5, D7)."
Methods and techniques that will be developed and used to carry out the research	The research methodology will be based on an interdisciplinary and hybrid approach, integrating qualitative and quantitative methods to analyze and design university campus spaces. The study will be structured into different phases, each one characterized by specific methods and techniques aimed at achieving the research objectives. **Phase 1: Literature review and context analysis**The first phase will focus on an extensive literature review to map existing research on university campus design, including the analysis of international case studies. The review will cover architectural design, pedagogical innovations, and social interaction patterns within educational spaces. Data will be collected from academic journals, institutional reports, and policy documents.

	Phase 2: Field research and data collection This phase will involve direct observation and documentation of selected university campuses worldwide. The study will employ ethnographic methods, including site visits and spatial analysis, interviews and focus groups,large-scale data collection (Surveys and questionnaires).
	Phase 3: Experimental and participatory design approaches To explore innovative campus models, the research will incorporate participatory design workshops where students, educators, and interior designers collaboratively envision new spatial solutions. These workshops will employ co-design sessions, simulation and scenario building, pilot projects and living labs,testing small-scale interventions within existing campus environments to evaluate their impact and feasibility.
	Phase 4: Data analysis and synthesis The collected qualitative and quantitative data will be analyzed using mixed-method approaches, including thematic analysis, statistical analysis and comparative analysis, assessing case studies to identify successful strategies and adaptable design principles.
	Phase 5: Development of Guidelines and Frameworks The final phase will focus on synthesizing the findings into a set of flexible and adaptable guidelines for designing and managing university campus spaces. These guidelines will address key dimensions such as spatial flexibility, technological integration, sustainability, and inclusivity. By employing this methodology, the research aims to contribute to the redefinition of university campuses as dynamic, inclusive, and adaptable environments that support learning, collaboration, and innovation.
Educational objectives	The proposal aims to equip researchers with the knowledge and skills necessary to analyze and design innovative environments within university campuses. Given the evolving nature of educational spaces, the program focuses on interdisciplinary methodologies that integrate interior design, pedagogy, and technological

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advancements.

The major educational objectives are:

Objective 1: understanding the role of space in education

Doctoral candidates will explore the relationship between physical space and learning outcomes. By analyzing contemporary campus models, they will investigate how spatial configurations influence knowledge exchange, collaboration, and accessibility. This will involve:- Studying flexible and adaptive campus infrastructures.- Examining historical and contemporary shifts in educational spatial planning.- Assessing the impact of hybrid and blended learning environments.Â

Objective 2: developing interdisciplinary research skills

The program fosters a cross-disciplinary approach, integrating interior design, sociology, cognitive sciences, and digital technologies. Research methods will include:- Ethnographic studies and field research on university campuses.- Data collection through surveys, interviews, and participatory design workshops.- Simulation and modeling of spatial configurations using digital tools.Â

Objective 3: designing innovative learning environments

PhD candidates will actively engage in developing prototypes and experimental interventions that reimagine university spaces as dynamic learning ecosystems. This includes:- Conceptualizing and testing new campus configurations.- Creating guidelines - Implementing pilot projects.Â

Objective 4: contributing to policy and institutional strategies

By synthesizing their findings, researchers will provide evidence-based recommendations for policymakers and academic institutions. This involves:- Formulating frameworks for the flexible and sustainable development of campuses.- Advising universities on enhancing spatial and technological infrastructure.- Publishing research in academic journals and engaging in global discourse on educational spaces.Â By pursuing these objectives, PhD candidates will contribute to the broader academic discourse on educational innovation, helping universities

	redefine their spatial and pedagogical approaches in response to contemporary challenges.
Job opportunities	The transformation of university campuses into dynamic, flexible environments has led to the emergence of new career opportunities across various sectors. As educational spaces evolve to accommodate hybrid learning models and interdisciplinary collaboration, professionals with expertise in space planning, technology integration, and user-centered design are increasingly in demand. **Opportunities in Academic and Research Institutions** Universities and research centers require experts who can contribute to the design and management of innovative learning environments. Career paths in this sector include:- Campus planning and development specialists- Academic Researchers who explore the impact of spatial configurations on learning outcomes and institutional strategies. **Opportunities in Architecture and Interior Design** As campuses transform, architecture and interior design firms are seeking specialists who can create adaptable, sustainable, and user-friendly spaces, applying the guidelines also to different application areas, such as corporate campuses. **Opportunities in Policy and Consulting** Institutions and governments are increasingly investing in research-based policies to improve educational spaces. Career options include:- Policy advisors in education and urban development- Consultants in learning space innovation.
Composition of the research group	1 Full Professors 1 Associated Professors 0 Assistant Professors 0 PhD Students
Name of the research directors	Mauro Ceconello, Giulia Gerosa

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Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents	--

Scholarship Increase for a period abroad	
Amount monthly	650.0 €
By number of months	6

Stage and period abroad	
Institution or company where the candidate will spend the period abroad (name and brief description)	
By number of months abroad	0

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information

Educational activities (purchase of study books and material, funding for participation in courses, summer schools, workshops and conferences) financial aid per PhD student per year: 5.300,25 euros per student (total for 3 years)

Teaching assistantship (availability of funding in recognition of supporting teaching activities by the PhD student): There are various forms of financial aid both for research and teaching activities. The PhD student is encouraged to take part in these activities, within the limits llowed by the regulations.

Computer availability: 1st year, 2nd year and 3rd year: Each research group may supply phd student with a laptop/desktop PC, if necessary.

Desk availability: 1st year, 2nd year and 3rd year: Each research group may supply phd student with a desk.