

Regulations of the Industrial PhD course in Technologies for Resilient Living Environments

(formerly Art. 20 of the University's Rules for the Discipline of Doctoral Studies)

The PhD in Industrial Technologies for Resilient Living Environments refers to the research, development and application of technologically advanced solutions that, with reference to living environments, workplace and cultural production environments at various scales, confer suitable skill for preserving their identity in response to environmental and social changes and stresses, adapting and regenerating, while promoting positive and eco-sustainable change; living environments means all those open and/or confined places, in which living and work activities are carried out, including buildings and infrastructure.

Strengthening resilience means reducing risk, increasing capacity and reducing fragility, improving effective and forward-looking responses developed according to a constructive awareness process, aimed at improving the life quality of individuals, communities and ecosystems: resilience is the operational tool for sustainability, as set out in the 2030 Agenda.

The development and application of new technologies is supported both by the knowledge and the integration of the physical, biological and performance characteristics of the environments considered as well as by their supporting and interacting constructive and technological elements, in order to improve the life quality and the inclusivity of users; it is a question to operate through a shared vision and digital tools, in order to represent and analyze relationships between structures, plants, systems, components and users to strengthen the sustainability of living environments, with an innovative and human-centred approach, in which technologies are integrated with the application context, identifying technologically advanced research solutions.

The general objective of the PhD course is to prepare technical experts and researchers of high level able to operate in cultural, scientific and industrial activities, through the use and development of technologies necessary to improve the resilience of living environments, workplace and cultural production environments at various scales, today more than ever affected by climate and social change and oriented towards the application of green models.

The purpose of the use and/or development of novel technologies allows to achieve targets of waste reduction and minimization/efficiency in the use of resources with high yields and low impacts and at the same time, in a holistic vision, combine the well-being of the individual and the living environments and workplaces; furthermore, in the field of cultural production, the aim is to increase the people participation in cultural life also through access to cultural heritage, encouraging innovation and exploiting the opportunities offered by digital technology.

Finally, the Industrial PhD Course aims at strengthening national and international scientific relations and at achieving specific objectives associated with the promotion of economic development and the production system also at local scale.

SECTION 1 - Structure of the PhD Course

The Industrial PhD Course in Technologies for Resilient Living Environments joins to PhD SCHOOL IN POLYTECHNICS AND BASIC SCIENCES of the University of Campania Luigi Vanvitelli, and does not consider for the current cycle several training curriculum ; starting from the next cycles, it will considered the opportunity of articulations in different curriculum, according both to the composition of the teaching staff as well as the qualifying activities of the institutions/associated companies.

SECTION 2 - Educational and scientific programme.

a. The educational program is approved by the teaching board, usually by the end of December, with

the indication of the teaching modules and seminar cycles, their syllabus and the corresponding training credits.

- b. At the outset of each academic year, usually by the month of December (or at a different date indicated by the Council if there have been causes that have delayed the start of activities), each PhD student will submit a proposal of the planned activities for of his training programme; the activities proposed have to be in accordance with the Guidelines annexed this Regulation. On the basis of this proposal, the PhD Board assigns to each PhD student the training program in agreement with the activities defined by the supervisor(s); the supervisor(s), one of which must belong to the University, and possibly one or more co-supervisors (also not belonging to Universities or Public Research Institutions) require an high scientific or professional qualification in the research areas consistent with the educational objectives of the doctoral course.
- c. As an integral part of the training program and upon the PhD candidate request, the Board can also assign tutoring activities (from 1st year) and supplementary teaching (from 2nd year) for the BSc and MD teaching modules. The application for supplementary teaching must indicate the teaching modules and the hours on which it will take place, within the limits provided by the legislation and/or the University Regulations.

SECTION 3 - ADMISSION TO SUBSEQUENT YEARS AND FINAL EXAMINATION

- a. Each PhD student must submit to the Board a report on the overall activity by the end of the last month of the PhD course year. The Board, within the next month, after consulting the supervisor(s), approves the admission to the next year on the basis of the report presented and a public presentation of all activities carried out; in addition, starting from the 2nd year and for each doctoral year, the PhD student must have contributed, at least as co-author, to the publication of at least one scientific contribution to national/international congress and at least one scientific contribution to indexed scientific journals (bibliometric academic discipline) or scientific journals classified by ANVUR - ITALIAN NATIONAL AGENCY FOR THE EVALUATION OF UNIVERSITIES AND RESEARCH INSTITUTES (non-bibliometric academic discipline).
For PhD Executive students, starting from the 2nd year, they will need to have contributed to at least one national publication for each PhD year; these publications may be supplemented by technical and scientific reports on the activities carried out and the results obtained.
The Board assigns to the PhD student, for each academic year, the University Credits (CFU/hours) recognized on the basis of the report submitted and supervisor(s) validation.
- b. PhD students that take part of the final examination with thesis defense, in addition to the provisions of the previous paragraph, must submit a summary of the doctoral thesis with the indication of the scientific publications produced (for the PhD Executive positions it should be added any reports produced) and the training activities carried out during the PhD course, with particular reference to those carried out at university or research institutes, as provided for by the following Section 4. The Board shall decide on admission to the final examination at the first useful meeting, also considering the assessment provided by external evaluators.
- c. Starting from the 2nd year, in support of admission to the following year, further semi-annual public presentations can be provided by each PhD candidate about the progress and results of the research; the terms and period for the presentations will be determined by the Coordinator.

SECTION 4 - TRAINING PERIODS IN OTHER UNIVERSITIES AND RESEARCH INSTITUTIONS.

- a. Each PhD candidate, excluding the positions indicated in the next paragraph "b.", must carry out training periods in other universities or public and private research institutions, abroad or in Italy,

for minimum duration of 3 months; as regards the maximum extent, please refer to the provisions of the current University Regulations and the Call for Admission to the Doctoral Course.

- b. For doctoral positions financed by Ministerial Decrees awarding doctoral scholarships, please refer to the Decrees themselves for the identification of maximum extent of training at universities or public and private research institutions, abroad or in Italy; for PhD Executive positions, any training period abroad will be agreed between the company and the supervisor(s).
- c. The supervisor(s) communicates to the Coordinator in advance the modalities and the times of development of such activity, with the indication of some or all the expenses coverage. The coordinator, upon approval of the supervisor or supervisors, authorizes the period of training abroad; the Board shall endorse the authorization in its first useful meeting after the finalization of training period.

Section 5 - FOREIGN LANGUAGE REQUIRED FOR ADMISSION

The language requirement for this course is English.

SECTION 6 - MODIFICATION OF THE TEACHING BOARD

- a. Within the month of May, and in any case in time for the submission of the application for confirmation of the Doctorate accreditation procedure, the Teaching Board may decide on its composition, including new components with recognizable scientific qualification as required by the procedure for the accreditation of doctoral courses.
- b. Public and/ or private companies interested in signing an agreement or a letter of understanding to activate one of the agreements planned to finance or co-finance PhD positions, will submit by the month of March, and in any case in time for the submission of the application for confirmation of the Doctorate accreditation procedure, the training programme to be developed within the Doctorate cycle and the CV of their representative in the Teaching Board; this in order to assess the quality of the proposal and the scientific or professional qualification of the eligible component in the Teaching Board.

SECTION 7 - SELF-ASSESSMENT AND QUALITY ASSURANCE COMMISSION

- a. In the first quarter of the start of the doctoral cycle, the Coordinator appoints a Commission for the Self-assessment and Quality Assurance, composed of a representative of the students of the doctoral cycle elected from among all the students enrolled in the cycle and two professors belonging to the Teaching Board; among those professors it is appointed the reference person for the Quality Assurance of the Doctoral Course.
- b. The Commission shall undertake the periodic self-assessment of the doctoral programme and manage the quality assurance system for the design and management of doctoral training in accordance with the Quality Assurance Standards in the European area of higher education (EHEA), as indicated by ANVUR.
- c. In the first instance, self-assessment and quality assurance activities will be governed by appropriate guidelines which the Commission will draw up within three months after its appointment. They must include at least the preparation of questionnaires for the PhD Course evaluation by students and teachers.

SECTION 8 - COORDINATING BODY

- a. The Coordinating Body, after consulting the Teaching Board, is appointed by the Coordinator in

relation to the needs of the Doctorate and aims to support the activity of the Coordinator both with regard to the management of the Course and coordination between the different components of the Course such as Departments, Companies and Students.

- b. Moreover, the Coordinating body operates to reduce operational criticalities and to identify potential development and updating of the training program also in the view of the cultural and scientific evolution of the research area as well as cultural and professional profiles of the PhD students.
- c. The Coordination Group, which will be on duty for an extent no longer than three years, consists of:
 - a number of members of the Board equal to the number of Departments involved in the proposed Doctorate accreditation;
 - two representatives of the companies/institutions present in the Doctoral accreditation proposal;
 - the Coordinator.

