

Guidelines for the definition of the Study Plan and the Contents of the Manifesto

Generality

The *Training Plan* is the document that describes the training methods for the doctoral students of the Doctorate Course in Industrial and Information Engineering at the University of Campania "Luigi Vanvitelli".

The *Manifesto* indicates, year by year, the collegial and individual teaching activities implemented for the realization of the training process.

The Training Plan and the Manifesto are approved by the Board of Professors. The Board of Professors is also responsible for the educational process of each doctoral student; in the implementation of these skills the Board of Professors is supported by a Supervisor and a Co-supervisor for each doctoral student and by any preliminary discussions.

The acquisition of the qualification is based on the Educational Credit Transfer and Accumulation system (ECTS). Credits are acquired by completing the activities included in the training plan. The credits that can be acquired are determined for each activity based on the overall commitment required in terms of study and learning. Admission to the final exam requires the acquisition of 180 ECTS.

Articulation of the Training Process

The training process is divided into:

- Educational activities.
- Scientific activities.
- Subsidiary activities.

Educational activities

The educational activities are divided into:

- Alignment teaching of specific interest to students in the first year of the course. It aims to standardize the skills and knowledge of incoming students, so that they can profitably follow the PhD training path. Alignment teaching is prescribed if necessary and, in any case, personalized for each student, taking into account the training curriculum completed before accessing the PhD Course.
- Collegial basic teaching, typically intended for all students of the course or homogeneous groups. The objective is to provide the common fundamental physical-mathematical and technical-scientific skills necessary for the successful attendance of the course and acquisition of the qualification. Basic teaching is usually imparted through higher education courses, held by highly qualified internal or external teachers.

- Advanced collegiate teaching, typically intended for specific groups of students on the Course. Advanced collegiate teaching is usually imparted through higher education courses, held by highly qualified internal or external teachers.
- Personalized advanced teaching, intended for individual students based on their specific training needs.

The education activity can be carried out through:

- Individual study.
- Participation in courses and educational activities on-site or off-site.

Staying abroad for at least one semester in a highly qualified university or research laboratory is strongly recommended.

The Board of Professors, on the basis of the educational objectives of the PhD Course, preliminarily defines:

- The teaching activities to be organized on site for the implementation of the Statement of Study, specifying their contents, structure, timing, responsible person(s), students for whom they are intended and the corresponding ECTS.
- The other teaching activities of the Course, possibly external (national schools, activities borrowed from other courses, seminars, etc.) to be included in the Statement of Study.

For each activity, the Board of Professors establishes the doctoral students for whom it is intended and the corresponding ECTS.

Furthermore, the Board of Professors, with reference to individual students, after consulting the supervisors:

- defines any alignment teaching for each incoming doctoral student, based on the analysis of personal curricula.
- defines the teaching activity of individual doctoral students, within the scope of the training on the basis of the proposal of the doctoral students themselves, establishing the relevant ECTS.

The recognition of the ECTS of an activity requires:

- The certificate of participation issued by the teacher or the institutions that organized the activity.
- The certification of a positive profit evaluation. The evaluation is based on appropriate assessment criteria defined by the Board of Professors on the basis of the specific

teaching needs of the PhD Course. It is part of the general evaluation process envisaged for all activities of the PhD Course.

Scientific Activities

Scientific activities are divided into:

- experimental or numerical activity aimed at scientific objectives.
- preparation of scientific works to be presented at national or international conferences, or to be published in national or international journals.
- participation in conferences, congresses and scientific seminars.
- processing and production of documents (papers, procedures, etc.) of scientific importance.
- participation in the work of national or international research groups.
- participation in technology transfer activities.
- contribution to the organization of scientific events.
- any other items, to be defined by the Board of Professors.

The Board of Professors, on the basis of the educational objectives of the PhD Course, year by year, preliminarily defines:

- the scientific activity of the year for each doctoral student (or homogeneous groups of doctoral students), as part of his training project and on the basis of the Supervisor's proposal.

The recognition of ECTS for an activity requires, if foreseen by the organizers, the certificate of participation

issued by the person who organized the activity.

Subsidiary activities

Other activities include:

- subsidiary or supplementary teaching activities within the limits specified by the regulations.
- the proactive and organizational activity of scientific projects,
- the organization of conferences and scientific meetings or advanced training events.
- any other useful activity, in the opinion of the Board of Professors, for the training of doctoral students.

The Board of Professors, on the basis of the educational objectives of the doctorate, year by year, preliminarily defines:

- the subsidiary activity of the year for each doctoral student (or homogeneous groups of doctoral students), as part of his training project and on the basis of the Supervisor's proposal.

The Board of Professors, at the end of each year, in the final phase, for each of the doctoral students:

- recognizes the ECTS acquired for the activity carried out during the year on the basis of a descriptive report of the activity carried out, a public presentation and the opinion of the Supervisor.
- authorizes admission to the final exam or passage to the following year, if the conditions are met, possibly defining the activities to be carried out to recover unearned ECTS.

Distribution of Activities in the Training Process

As a rule, the activities of each doctoral student's training process respond to the distribution shown in the following table. Specific needs may suggest different articulations for individual students, for example students enrolled in executive PhD courses or winners of scholarships financed by an institution or company can agree with the latter on a personalized training plan in line with their own scientific interests consistently with the educational objectives of the PhD Course.

	First Year	Second Year	Third Year	Total
Educational Activities	21-39	6-18	0-6	27-63
Scientific Activities	21-39	39-54	39-60	99-153
Subsidiary Activities	0-15	0-15	0-15	0-45
Total	60	60	60	180

Training Process Evaluation System

The evaluation system of the training process, framed in the more general evaluation system of the PhD Course, includes the following specific activities:

- Evaluation of the PhD Course by the doctoral students (organization, structure, training program, structures, assistance, tutoring, availability of funds, etc.).
- Evaluation of the PhD Course by the Professors (organization, pre-requisites, structures, etc.).

The organization and management of the Evaluation System are the responsibility of the Board of Professors which, among other things, defines its practical implementation (operational tools, times, responsibilities, etc.).