



**MANIFESTO OF STUDIES
NATIONAL PhD PROGRAMME IN SPACE SCIENCE AND TECHNOLOGY - SST
A.Y. 2023/2024**

1. Introduction

The purpose of the [National PhD Programme in Space Science and Technology – SST](#) is the specialized training of young researchers towards future careers at Universities, public and private Research Organizations and Industries, and it is designed as a natural completion of the scientific training achieved with first and second level Degrees, with which it is coordinated and activated in accordance with Ministerial Decree 226/2021.

The PhD Programme has its administrative headquarters at the University of Trento, on behalf of a consortium other Italian Universities and Research Institutions. For each Cycle, scholarships are funded by the consortium, making their expertise and facilities available to the students.

The PhD Programme is articulated into seven training curricula, understood as areas of in-depth study within a specific community of research and scientific discussion. It has a three-year duration and includes research and study activities, as well as the attendance to courses and seminars.

The courses are taken mainly during the first and second year and are intended to strengthen the PhD students cultural base addressing cutting-edge topics in scientific research.

PhD students carry out their research activities mainly at the affiliated site to which the assigned scholarship belong (so-called operating site), according to the results of the selection process. They also spend research periods abroad, for a minimum overall duration of 6 months, during the three years.

During the first year, students are required to identify with their supervisor the topic of their PhD thesis, within the field of research for which they have been selected. The training on research is taking place through the effective participation of the PhD student to the research activity carried out at the operating site. Each PhD student will carry out his or her own research project under the direction of a supervisor and a co-supervisor, chosen by the Programme Board following suggestion of the heads of the research programs or of the Universities and Research Organizations funding the PhD scholarships. Study Plans are approved by the Programme Board, on an yearly base.



2. Admission Requirements

Applications for PhD positions are accepted regardless of gender, age and nationality, from applicants holding:

a) an Italian “Laurea Magistrale” or “Laurea Specialistica”, according to the Ministerial Decree no. 509 of 03.11.1999, subsequently amended by Ministerial Decree no. 270 of 22.10.2004;

or

b) a university degree obtained at an Italian Institution belonging to the AFAM system (Alta Formazione Artistica e Musicale);

or

c) an equivalent foreign degree (Master’s degree) obtained at an officially recognized academic institution, certified for admission to PhD studies in the Country where it has been issued and with a duration and level similar to the Italian degree. The eligibility of the equivalent foreign degrees is defined by the Selection Committee for the sole purpose of accessing this specific PhD Program.

Admission to the Doctoral Programme takes place through a selection process based on qualifications and interview at the end of which an ordered numerical list is provided.

3. Educational path

The educational path of each PhD student enrolled in the National PhD Programme in Space Science and Technology includes the following duties:

- Carrying out the research activity under the guidance of a supervisor and co-supervisor assigned by the Programme Board;
- Participation in courses, schools, and training activities at the PhD level in basic, applied, industrial, and soft skills research, with attainment of a **minimum of 14 CFUs**, equivalent to **112 hours of face-to-face teaching**, as specified in Point 4. Every year, each PhD student must submit a study plan agreed in advance with the supervisor for approval based on the guidelines below;
- Participation in seminars organized by the specific research group where the research activity is performed;
- Participation in **at least 70 %** of the scientific seminars organized on the basis of yearly planning by Universities and/or affiliated Research Institutions and specifically addressed to the students enrolled in the PhD Programme and to which the PhD student(s) are invited, including when they address topics other than the PhD student's research topics;
- Participation to the **national DN SST days**;
- Participation to the **guided tours** organized by the DN SST, if invited.



4. Acquisition of educational credits (CFUs)

a. The acquisition of educational credits (CFUs) is always conditioned to passing a **final test**;

b. a **minimum of 10 credits** must be acquired **by the end of the 2nd year**. Any exceptions must be approved in advance by the supervisor and the Programme Board;

c. the program of selected educational activities should add up to a **minimum of 14 credits** to be earned are as follows:

1. **Multi-Disciplinary – face to face Courses**, common to all Curricula, should be selected for a **minimum of 4 CFUs** during the first two years of PhD Programme (see Annex No. 1 to this Manifest of Studies, Group 1).

2. **Disciplinary – face to face Courses**, specific to each Curriculum, should be selected for a **minimum of 9 CFUs** during the three years of PhD Programme (see Annex No. 1 to this Manifesto of Studies, Group 2).

If the courses are selected from those indicated in the table of the specific Curriculum the PhD student is enrolled to, only the supervisor's Study Plan approval is required.

If the selected courses also include those belonging to a Curriculum different from the one the PhD student is enrolled to, the Study Plan approval requires both supervisor and the Programme Board approval. In the latter case, **a maximum of 3 CFUs can be included into CFUs of the Multi Disciplinary Courses**.

3. Within the required 14 CFUs discussed above, a **maximum of 3 CFUs** of educational activities not included in Annex 1 may be included in the Study Plan, subject to approval by the supervisor and the Programme Board;

4. Participation in national or international Winter and Summer Schools on topics related to the research activity, selected from those indicated in Annex 1 or independently suggested by the PhD student, may be recognized, for a **maximum of 6 CFUs, within the CFUs related to Disciplinary Courses**.

d. Courses on Transversal / Soft Skills (see Annex No. 1 to this Manifest, Group 3), or additional national or international Winter and Summer Schools, conferences and seminars (including abroad), may be recognized for a **maximum of 3 CFUs** in addition to the **minimum 14 CFUs** addressed to in point c) above. The inclusion of these activity(ies) in the Study Plan must in any case be approved by the supervisor.



e. The inclusion of Research Stage(s) at external national or international Laboratories, or Internship(s) in Companies, may be recognized for a **maximum of 3 CFUs in addition** to the **minimum 14 CFUs** discussed in point c) above. The inclusion of these activity(ies) in the Study Plan must be approved by the supervisor.

5. Tutoring and teaching support activities

PhD students may carry out, as an integral part of the educational path, subject to the approval of the Programme Board and without increasing the amount of the scholarship:

- (a) tutoring activities for students of Bachelor's and Master's Degree Programmes;
- (b) teaching support activities (within the limit of 40 hours per academic year).

The total commitment of these integrative activities, during the three years of the PhD Programme, may not exceed 120 hours. The annual commitment limit is established by the University Regulation on PhD Programmes (Art. 26 - Activities related to the training course and commitments compatible with the PhD Programme).

It is up to the supervisors to verify that the teaching or tutoring activity carried out by the PhD student does not interfere with his or her training as a researcher and with the development of the scientific project topic of the thesis.

6. Off-site training activities (in Italy and abroad)

Each PhD student must carry out educational activity abroad for a total period of **at least six months**.

Off-site educational activity (in Italy or abroad) for a continuous period of more than six months may be carried out by the PhD student upon authorization of the Programme Board and upon discussion with the supervisor.

A continuous period abroad of no less than one month is to be considered as a stay abroad, unless otherwise specified by the Coordinator.

In the case of a stay abroad, the PhD student may request an increase in the scholarship, to the maximum extent of fifty percent and for a total period not exceeding twelve months, in accordance with Article 22 of the University Regulations on PhD Programmes.

7. Evaluation and admission to following years



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Admission to the 2nd year of the PhD Programme is subject to the evaluation made by the Programme Board of PhD students final verifications of the courses taken and of their performance in the context of the educational activities planned for the 1st year. In addition, the Programme Board certify, on the basis of the reports provided by the supervisor and co-supervisor(s) and by the PhD student himself/herself, the achievement of the scientific and didactic objectives on the specific topics of the PhD student activity.

For the admission to the 3rd year, the PhD student is required to publicly present in front of the appointed Committee the partial scientific results achieved. The Committee shall provide a written judgment concerning the quality of the exposition (with special attention to the level of English proficiency) and the scientific maturity demonstrated by the PhD student.

The Programme Board, having seen the written reports by the supervisor and by the PhD student himself/herself and taking into account the judgment of the Committee, makes its decision on the admission of the PhD student to the 3rd year.

The supervisor is required to verify the PhD student's attendance to the courses and research activities and to promptly notify the Programme Board of any problems. Upon suggestion of the supervisor, the Programme Board may check the performance of the PhD student at any stage.

8. PhD title award

By the end of the final year of the Programme, the PhD student must submit the following documentation to the Programme Board:

- online application for admission to the final examination/dissertation evaluation procedure;
- a report on the research activity carried out during the third year;
- list of publications for the 3 years with specifics on his/her contribution to each publication;
- index and abstract of the PhD thesis.

The Programme Board evaluates the scientific value of the results achieved and, in case of positive evaluation, identifies two or more evaluators (referees) in accordance with Article 29 of the University Regulations on PhD Programmes.

In case of positive evaluation of the PhD thesis by the referees and within one month from the acquisition of their analytical judgment, the Programme Board designates the members of the Committee for the final examination in accordance with the provisions of Article 30 of the University Regulations on PhD Programmes.

The final examination shall be conducted according to the prescriptions of Articles 31, 32 and 33 of the University Regulations on PhD Programmes and the guidelines decided by the Programme Board and communicated to the members of the Final Examination Committee.



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In the case of candidates involved in specific international inter-university cooperation agreements (e.g., thesis co-tutoring), the Final Examination Committee, the manner of conducting the final examination and the awarding of the degree are defined in accordance with the provisions of the agreements in place.