



**Politecnico
di Torino**

Regulations for the Ph.D. course in Mathematical Sciences

Art. 1 – Subject of the Regulation

1. In full compliance with the current legislation and regulations regarding Doctoral Programs (hereinafter referred to as University Regulations), this Regulation governs the organizational and educational aspects of the Doctoral Program in Mathematical Sciences (hereinafter referred to as the Program).

Art. 2 – Course Description and Educational Objectives

1. The description of the Doctoral Program in [insert field] along with the definition of the educational objectives is subject to discussion and possible updates by the Academic Board annually, following consultation with the Consultation Committee, typically in conjunction with the accreditation practice of each Cycle.
2. The description of the Program and its educational objectives, as recorded in the Academic Board minutes, is posted on the dedicated website.
3. The administrative headquarters of the Program is located at the Department of Mathematical Sciences.
4. The official language of the Program is Italian. General communications, events organized by the Program, teachings, and related examinations are generally conducted in Italian or English. The doctoral thesis and its final defense are in Italian or English.

Art. 3 – Research Macro-Areas

1. The Program's macro-areas mainly refer to those pertaining to the following scientific fields: Algebra and Geometry; Mathematical Analysis and Controls; Numerical Analysis; Mathematical Physics; Probability, Statistics, and Operational Research, as well as interdisciplinary and multidisciplinary themes related to them.
2. The Academic Board approves the research topics that are the subject of the Training Projects of the doctoral candidates annually. The description of the research topics is posted on the dedicated website of the Program.

Art. 4 – Renewal of the Doctoral Program

1. The Coordinator convenes, within the month of October of each year, a meeting of the Academic Board to discuss the renewal of the Program or the possible new accreditation in the event that the cases referred to in Article 5 of DM 226/2021 occur (change in the name of the Program, change in the composition of the Academic Board by more than twenty-five percent compared to the initial composition of the reference cycle, or change in the coordinator of the Program, while ensuring compliance with the requirements stipulated in Article 4 for each member of the Academic Board).
2. Within the same timeframe, the opinion of the Department of Mathematical Sciences, the administrative headquarters of the Program, must be obtained.
3. The Coordinator then presents the proposal to the Doctoral School Board.

Art. 5 – Course Catalogue

1. Each year, according to the deadlines indicated by the Doctoral School, internal professors of the University can submit proposals for technical-specialist and/or cross-disciplinary teaching through the uploading of the form in the "third-level educational offer" procedure, for review by the Academic Board. Simultaneously, the Coordinator solicits proposals for new courses on topics deemed appropriate by the Consultation Committees.
2. Upon obtaining a favorable opinion from the Academic Board, the Coordinator forwards the final proposal adopted by the Academic Board for approval by the bodies of the Doctoral School, also based on any indications from the Consultation Committee.

3. The catalog of courses approved for the academic year is published on the Doctoral School's website. In the case of courses offered every other year, in order to allow doctoral candidates to have as complete a picture as possible of the catalog available for their study path, a biennial schedule is also published.
4. The catalogue is organized according to a schedule published on the University's website. To ensure that the publication can take place well in advance, instructors of "hard skills" courses communicate the dates at least one month before the beginning of the courses.
5. Regarding invited lectures (guest lectures), as per Article 11, clause 1 of the University Regulations, proposals - indicating the names and CVs of the proposed instructors - are submitted to the Coordinator of the Doctoral Program normally two weeks before the first deadline set annually by the Doctoral School for appropriate deliberations by the Academic Board of the Doctoral Program. The Coordinator, before transmitting the proposals to the School, obtains approval from the Department Director to which the initiative belongs, and assigns an order of priority in the case of multiple proposals.

Art. 6 – Organization of the Doctoral Program

6.1. Bodies of the Doctoral Program

The bodies of the Doctoral Research Program are:

- a) The Academic Board
- b) The Coordinator

6.1.1 The Academic Board

Composition

1. The composition, functions, and eligibility requirements of the Academic Board members are established in Article 9 of the Regulations on Doctoral Research.
2. Individuals eligible to be part of the Academic Board, as indicated in point 1, submit a request to participate in the Academic Board, to be sent by e-mail to the Coordinator within the month of October of every year, accompanied by:
 - a. Confirmation of meeting the minimum requirements specified in Article 9 of the Regulations on Doctoral Research, and the relevant indices for accreditation of the Program,
 - b. Declaration of willingness to carry out activities at the Doctoral Program as a Supervisor or co-Supervisor,
 - c. Declaration of non-membership/membership in Doctoral Committees at other Universities and, in the case of professors and university researchers belonging to another university, also a clearance issued by the home university,
 - d. Any additional documentation at the discretion of the Academic Board.
3. The Academic Board evaluates the membership proposals considering the scientific qualification requirements specified by current regulations, as well as any additional constraints related to the diversity and balance of the cultural components characterizing the Program.
4. Prolonged and unjustified absence from Academic Board meetings during the year may be grounds for exclusion from the Board itself during the annual renewal phase of the composition as per point 6 of this article. Academic Board members who, without justified reason, are absent from meetings three times in a row lose their position.
5. The Academic Board presents to the Department Council, for its deliberation, the proposal for its composition.
6. The composition of the Academic Board is decided once a year, usually in anticipation of the accreditation renewal phase.
7. The Academic Board includes, for discussion of educational and organizational issues, two representatives of the doctoral students elected by the enrolled students in accordance with the Regulations for the election of student representatives in governing bodies and other collegiate

bodies. These student representatives do not participate in discussions and deliberations regarding the annual evaluation of enrolled students and the organization of the final examination.

8. Supervisors and co-Supervisors not belonging to the Academic Board are also invited, without voting rights.
9. The list of Academic Board members is published on the Doctoral Program website and promptly updated in case of changes.

Functioning

1. The Academic Board is convened by the Coordinator at least twice a year and whenever the Coordinator deems it necessary to carry out its tasks in a timely manner.
2. The invitation is sent via email at least five working days before the meeting and includes the agenda. The notice period may be shortened, in case of urgent need, to two days.
3. The Academic Board may also be convened upon request of at least 1/3 of its members, who must specify the topic to be included in the agenda. In this case, the convocation must take place within ten days of the submission of the request.
4. Academic Board meetings may be held remotely or via teleconference as provided for in the Regulations for the conduct of collegiate body meetings via teleconference and using video conferencing systems.
5. Meetings of the Academic Board are chaired by the Coordinator and are valid if the majority of eligible members are present, deducting justified absences. In any case, the presence of at least one third of the members with voting rights is required for validity.
6. Academic Board members commit to regularly attend meetings and, in case of impossibility, provide written notice.
7. Resolutions are adopted with the favorable vote of the majority of those present and are immediately enforceable.
8. The functions of Secretary, responsible for drafting the minutes, are assigned at the beginning of the meeting to one of those present.
9. For matters not covered by these regulations concerning the functioning of Academic Board meetings, reference is made to the University's General Regulations in force.

6.1.2. The Coordinator

1. The requirements and functions of the Coordinator are governed by Article 9.1 of the Regulations on Doctoral Research.

6.1.3. The Vice-Coordinator (*optional*)

1. The Coordinator proposes to the Academic Board a Vice-Coordinator who can replace the Coordinator in their functions in case of absence or impediment.

6.2. Other Roles in the Doctoral Program Contributing to the functioning of the Doctoral Program are:

6.2.1 Consultation Committee

1. The Consultation Committee is appointed by the Academic Board and is composed of representatives of companies and non-academic institutions which are potential stakeholders of the PhD Program.
2. The Committee meets at least once a year to assess the progress of the Program, develop proposals for defining and designing the educational offer and learning objectives, providing guidelines for continuous updating and improvement.

6.2.2 Supervisors and co-Supervisors

1. At the beginning of each doctoral cycle, the Coordinator, or a delegate, conducts an investigation, taking into account the curriculum of the doctoral student, the research topics of interest to the student, the research macro-areas of the Doctoral Program as per the preceding Article 3, any themes of the assigned scholarship, and the availability of one or more professors to assume the role of Supervisor.
2. In the first meeting following the beginning of the doctoral paths, to be convened within two months, the Coordinator reports the results of the investigation to the Academic Board, which assigns each doctoral student a Supervisor and at least one co-Supervisor. Normally, in the case of scholarships with a specified theme, the Supervisor identified during the scholarship publication phase within the admission notice is confirmed.
3. The profile and main functions and responsibilities of Supervisors and co-Supervisors are outlined in the University Regulations. (For Consortium Doctorates, including interuniversity Doctorates and National Interest Doctorates, in accordance with agreements with Partner Entities, it may be provided that the Supervisor is identified from the research staff of the Partner Entity and at least one co-Supervisor at the University).
4. If deemed necessary, and with the agreement of the doctoral student, the Academic Board may replace, by motivated resolution, the Supervisor and/or co-Supervisor at any stage of the doctoral student's training cycle.

Art. 7 – Training Project and Declaration of Intent

1. Within one month from the assignment of the Supervisor, each doctoral candidate submits, by means of dedicated web forms in the “cruscotto” or by a written report sent to the Academic Board, their Training Project outlining the study and research objectives they aim to achieve and the program of activities.
2. The Training Project is approved by the Academic Board (or alternatively by the Supervisor, upon delegation by the Academic Board, specify), within one month of submission, and serves as a reference for the annual verification of the fulfillment of the doctoral candidates' training obligations.

3. During the transition to the next academic year, the Training Project is presented to the Academic Board, which may request any adjustments it deems necessary.
4. The Board may, in agreement with the doctoral candidate, revise the Training Project during the course of study in consideration of emerging factors that may affect its feasibility.
5. The Training Project includes: a) the research program to be developed by the doctoral candidate under the guidance of the Supervisor and co-Supervisor(s), including any off-site research activities; b) the plan for complementary educational activities related to the research, including any pre-planned external activities. With the Supervisor's authorization, the Training Project may include Level I or II courses if the doctoral candidate has not previously taken them or if they are not part of their academic workload in the case of simultaneous enrollment in another study program.
6. For the enhancement of external educational activities and research activities, refer to the Operational Procedures.
7. Within 6 months, the Supervisor and the doctoral candidate compile and sign the Declaration of Intent, which may be confirmed/updated at least once a year.

Art. 8 – Admission to Subsequent Years and Final Examination

1. In accordance with the University Regulations on Doctoral Studies and the related Operational Procedures, the Academic Board, nearing the end of each academic year, evaluates the progress of the educational and research path and decides on admissions to the following year and the final examination.

The admission procedure includes:

- a. Verification of quantitative criteria as outlined in paragraphs 2, 3, and 4 (optional for paragraphs 2 and 3, i.e., annual progression), based on the indicators defined in the Operational Procedures,
 - b. Obtaining the opinion of the Supervisors,
 - c. Verification of the progress of research activities and their consistency with the Training Project through the assessment by dedicated committees.
2. Any critical cases are discussed, gathering input from the Supervisors. At the end of the discussion, the Academic Board deliberates on admissions and documents the decisions.

Admission to the Second and Third Year

3. No quantitative criteria are set for educational and research activities for admission to the second (third) year.

Admission to the Final Examination

4. In accordance with the requirements specified in the Regulations on Doctoral Studies and the Operational Procedures, for admission to the final examination, doctoral candidates must meet the following quantitative criteria:

a. For educational activities:

- at least 40 hours of TRANSVERSAL CHARACTER (SOFT SKILLS) courses
- at least 100 hours of TECHNICAL-SPECIALIZED (HARD SKILLS) courses

b. For research activities

At least one exclusive publication per doctoral candidate as defined in the Operational Procedures of the Regulations on Doctoral Research. Research activity indicator: $R \geq 50$

Art. 9 – Criteria for Distribution of Resources

1. The Course annually transposes the University's resources in terms of funded and/or co-funded grants, as well as the list of thematic grants funded and/or co-funded from departmental and/or external resources.
2. The Teachers' Board (a function that can also be delegated to the Coordinator(s), please specify) defines in which sessions of the call for admission to publish the grants, using the appropriate application made available by the University.
3. The Selection Committee appointed by the Rector according to the Regulations on Doctoral Programs shall allocate the available scholarships to the winners taking into account the final ranking, judgment of eligibility and preferences of the winners.

Art. 10 – Amendment of the Internal Regulations of the Doctoral Program

1. Any amendment to these Regulations must be approved by the Academic Board and submitted for review to the Doctoral School and approval by the Academic Senate, subject to the opinion of the Board of Directors.

Art. 11 – Final and Referral Provisions

1. These Regulations supplement, to the extent expressly provided therein, the provisions established by the current national legislation and the University Regulations regarding Doctoral Research, which are fully and directly applicable in any case.
2. These Regulations apply to students of the 38th cycle and subsequent cycles, except where these regulations impose stricter constraints or requirements.