



SUMMARY OF REGULATION OF THE GRADUATE PROGRAM IN APPLIED MATHEMATICS OF THE INSTITUTE OF MATHEMATICS AND STATISTICS:

III – DEADLINES

III.1. The deadline for completing the master's program, including the deposit of the dissertation is 46 (forty six) months.

III.2. The deadline for completion of the doctoral program, including the deposit of the thesis, is 58 (fifty-eight) months.

III.3. The deadline for the completion of the direct doctoral program (for those who do not hold a master's degree), including the deposit of the thesis, is 70 (seventy) months.

III.4. In exceptional cases, students may apply for an extension for a maximum period of sixty (60) days.

IV – MINIMUM AMOUNT OF CREDITS

V.1. For the completion of the master course the student must complete a total of 103 (one hundred and three) credits, 48 (forty-eight) credits in courses and 55 (fifty-five) credits for preparing the dissertation.

IV.2. For the doctorate (for master's degree holders), students must complete a total of 176 (one hundred and seventy-six) credits, forty (40) credits in courses and 136 (one hundred and thirty six) credits for the preparation of the doctoral thesis.

IV.3. For the direct doctorate, students must complete a total of 200 (two hundred) credits, 64 (sixty four) credits in courses and 136 (one hundred and thirty six) credits for the preparation of the doctoral thesis.

IV.4. For the courses of Master's degree, direct doctorate and doctorate, a maximum of eight (8) special credits are allowed, where four (4) credits are given for each published paper, as long as the publication is part of her/his dissertation or thesis. Two (2) credits are given for poster or oral presentation in international conferences, and one (1) credit for national conferences. Two (2) credits for participation in the PAE program (teaching assistant), limited to four (4).

V – FOREIGN LANGUAGE

V.1 Students must demonstrate proficiency in English in up to 23 (twenty three) months, counting from the enrollment in the program.





V.2 The English exam (for master and doctoral students) will consist of a translation of a mathematical text from English to Portuguese. For doctoral students there will also be a mathematical text to translate from Portuguese to English. These tests will be applied by the Program periodically, so that the student can meet the deadline set in V.1.

V.3 The student who failed the exam must repeat it in up to 1 (one) year after the first examination. If the student fails again, she/he will have a last chance to retake it before the deadline for approval (23 months).

V.4 Alternatively students can demonstrate proficiency in English by showing a proof of results at the International English Language Test - IELTS (with a minimum of 5.5 points for the master and 6.0 points for the doctorate) or in tests similar to this one.

V.5 Students who can prove approval (minimum C for the master and B for the PhD) in the courses 'Leitura de Textos e Inglês para Leitura de Textos II', or similar subjects, in two semesters, of the Faculty of Philosophy, Letters and Human Sciences at the University of São Paulo, will also be considered proficient in English.

V.6 There is no Portuguese proficiency examination.

VIII - QUALIFICATION EXAM

VIII.1. Master's degree

VIII.1.1 – The objective of the master's qualification examination is to ensure that the candidate has a general training that qualifies him for teaching in higher education. It consists of an oral examination of about 90 minutes, based on the contents of three basic disciplines chosen by the student, with the consent of his supervisor, within the following list:

Group 1

MAP-5711 - Ordinary Differential Equations;

MAP-5712 - Partial Differential Equations;

- MAP-5729 Introduction to Numerical Analysis;
- MAP-5747 Nonlinear Optimization;
- MAP-5925 Introduction to Dynamical Systems;

MAP-5856 - Introduction to Ergodic Theory;





Group 2

MAP5879 - Calculus on Manifolds;

MAT5711 - Advanced Calculus;

MAT-5714 - Analytic Functions;

MAT-5721 - Introduction to Functional Analysis;

MAT-5730 - Linear Algebra;

MAT-5751 - Differential Geometry.

VIII.1.2 – Among the three disciplines that define the examination it is required to choose two from the Group 1, as long MAP5925 and MAP5856 are not chosen together.

VIII.1.3 – Each of these disciplines represents a list of topics, specified and published by the CCP. For the definition of the examination, the candidate randomly selects 2 (two) topics of the program of each of the previously selected disciplines. The examination must occur between 2 (two) and 6 (six) weeks after the draw.

VIII.1.4 – The deadline for the student to enroll in the Qualifying Examination is up to 23 (twenty three) months after the program began. The examination must be carried out within 60 (sixty) days after the date of registration.

VIII.1.5 – Students who fail the Qualifying Examination may repeat it only once, with the registration for the new test to be performed on up to 120 (one hundred and twenty) days after the first examination and the new examination must be carried out within 60 (sixty) days after enrollment. In this case, the chosen subjects should not be modified, whereas the topics will be randomly chosen again.

VIII.1.6 – The student need not complete the minimum credits required for the disciplines to pass the exam.

VIII.1.7 – The CCP will indicate the examining committee for the master's qualification exams, which shall consist of three members and one surrogate, all holders of the title of doctor.

VIII.2. Doctorate

VIII.2.1 – The goal of the qualifying examination for the doctorate is to assess the candidate's maturity in their field of research and supplement its orientation to the final stage of the program.





II.2.2 – The application for registration for the exam must be accompanied by a succinct thesis project ("research project"), containing at least a clear description of the area and the problems to be addressed, as well as a list of relevant references and a suggestion of names for to the composition of the examining committee, established by the advisor.

VIII.2.3 – The deadline for enrollment for the qualifying examination for the doctorate is up to 29 (twenty nine) months and the examination must be conducted within 60 (sixty) days after the date of registration. The student who fails in this Qualifying Examination may repeat it only once, and the registration for the new test must be performed on up to 120 (one hundred and twenty) days after the first examination and the new examination must be carried out within 60 (sixty) days after enrollment.

VIII.2.4 – The student need not complete the minimum credits required for the disciplines to pass the exam.

VIII.2.5 – The CCP will indicate the examining committee for the qualifying exams for the doctorate, which shall consist of three members and two surrogates, all holders of a doctorate title.

VIII.3 Direct doctorate

VIII.3.1 – The aim of the qualifying examination for the direct doctorate is the same as for the doctorate's examination and the examination is carried out in the same way as for the doctorate.

VIII.3.2 – Only the student who has passed the basic test described in item XIII.1 of this regulation, can register for the qualifying exam of the direct doctorate.

VIII.3.3 – The deadline for enrollment for the Qualifying Examination of the direct doctorate is up to 35 (thirty five) months and the examination must be conducted within 60 (sixty) days after the date of registration. The student who fails in this Qualifying Examination may repeat it only once, and the registration for the new test must be performed on up to 120 (one hundred and twenty) days after the first examination and the new examination must be carried out within 60 (sixty) days after enrollment.

VII.3.4 A Direct Doctorate student must also pass the master's qualifying exam (called Basic Exam). Students must enroll within the first 20 (twenty) months upon start of the course.

X – UNSATISFACTORY ACADEMIC AND SCIENTIFIC PERFORMANCE

The student enrollment may be revoked according to motives expected in Article 49 of the post-graduation statute, due to poor academic and scientific performance.





The Doctorate and Direct Doctorate student may have her/his enrollment revoked by getting one failed grade and one evaluation 'C'. Also the enrollment may be revoked by general bad performance on research or courses.

XII – PROCEDURES FOR THE DEPOSIT OF THE DISSERTATION/THESIS

XII.1 The final work of the masters degree course will be in the form of a dissertation, containing the following items:

• Cover with the work's title, author's name, area of concentration, standard text stating to be a dissertation presented to the IME-USP to obtain a master's degree, advisor's name and date;

- Title and abstract in Portuguese and English;
- Summary;
- List of figures and list of tables, if applicable;
- Content;
- Bibliography;
- Attachments, if applicable.

XII.2 The final work of the doctorate or direct doctorate course will be in the form of a dissertation, containing the following items:

• Cover with the work's title, author's name, area of concentration, standard text stating to be a dissertation presented to the IME-USP to obtain a master's degree, advisor's name and date;

- Title and abstract in Portuguese and English;
- Summary;
- List of figures and list of tables, if applicable;
- Content;
- Bibliography;
- Attachments, if applicable.





XII.3 The deposits of the doctoral and master's theses are the responsibility of the students and should be made at the secretariat of the program, after the fulfillment of the procedural requirements, through formal approval of the advisor, until the end of the expedient of the last day of the deadline, with the following documentation:

a. An electronic version of the thesis / dissertation, corresponding to the printed copy delivered in pdf format. This electronic version will be sent to the reviewers.

- b. Authorization form for availability in the Digital Library of USP;
- c. Deposit formular;
- d. Formular for a proposition of a Judging Committee;
- e. Thesis/ dissertation data formular.
- f. Summary in format DOC or TXT.

XII.4 In addition to chairing the jury of the defense of dissertations and theses, the supervisor, or cosupervisor, will participate as a voting member of the committee.

XV – LANGUAGES ALLOWED FOR THE REDACTION AND THE DEFENCE OF THE DISSERTATIONS AND THESIS

All dissertations and theses should contain title, abstract and keywords in Portuguese and English. These may be written and defended in one of these two languages. A doctoral thesis may be made by a collection of articles published by the student. In that case, a brief summary of each paper should be added.

XVI – CLASSIFICATION OF TITLE

XVI.1 The Master's student who fulfills all course requirements will receive the title of Master of Science. Post-Graduation program in Applied Mathematics.

XVI.2 The Doctoral student who fulfills all course requirements will receive the title of Doctor of Science. Post-Graduation program in Applied Mathematics.