

PhD School in Statistical Sciences

Department of Statistical Sciences, University of Padua

Partner Institutions:

University Ca' Foscari of Venice

University of Udine

University of Trieste

Universit Cattolica del Sacro Cuore, Milan

Vademecum for PhD students

1. First year activities

First year is devoted to courses. Foundation courses are:

Functional Analysis,

Probability Theory,

Theory and Methods of Inference,

Statistical Models.

Each foundation course is under the responsibility of one instructor, who may organise specialised units or course modules, lectured by experts. The School also offers short, specialist, courses on topics such as: Time Series, Survival Analysis, Nonparametric Statistics, Survey Methodology, Stochastic Processes, Robust Statistics. For schedules and detailed programmes see the web page of the School, section Courses and Seminars. Students can also follow courses organized by other PhD Schools of the University of Padova or some upper division courses (Laurea Specialistica) offered by the Faculty of Statistical Sciences and by other Faculties at the University of Padova.

At the end of the first year, the Academic Board will evaluate PhD students for admission

to the second year. Admission is conditional upon achievement of satisfactory level in first year activities.

One side objective of courses during the first year is to train students to team work, seminar presentations and paper preparation. Students are assumed to acquire within the first months a working knowledge of public domain environments such as Latex, for typesetting scientific papers, and R, for data analysis and graphics.

During the first year meetings with PhD students are organized in order to inform them about ongoing research at the Department of Statistical Sciences and at partner Departments. The idea is to have informal meetings where researchers, or groups of researchers, illustrate current research topics and propose topics that might be of interest for the final thesis.

Each student in the first year is assigned a tutor, available to help and guide the student during the first year and in the choice of the research topic for the second and third year. Tutors are chosen by the School Board within the Department of Statistical Sciences.

Students are invited to constantly monitor the School web page as is the main mean to announce activities and exchange information (both related to teaching and to administrative issues).

2. Criteria for admission to second year

With reference to the four foundation courses (Functional Analysis, Probability Theory, Theory and Methods of Inference, Statistical Models) evaluation will be based on the following procedures and criteria.

The instructor of each course expresses a final evaluation for each student using the evaluation scale:

E (failed)

D (poor)

C (fair)

B (good)

A (excellent).

For each course, evaluation will be based on a final exam. The exam is aimed at evaluating the level of knowledge of the course topics, as well as logical/critical and presentation skills. More details will be given by each course instructor at the beginning of the course. Typically, the exam will consist in some written exercises and/or an essay on a specialised topic to be presented in seminar form.

For the course on Statistical Models, which is organised in several units, there will be a written test for each unit. Moreover, each student chooses one course unit for a final seminar and/or short dissertation. Details will be agreed upon together with unit instructors.

For each course, a deadline for exam completion is decided by the course instructor and the school director. The precise exam date is fixed by each course instructor. Each exam can be taken only once by each student. The course instructor will inform each student as well as the school director about the final evaluation in the course.

Admission to the second year will not be possible for a student having either one (or more) E (failed) or three (or more) D (poor). With one or two D evaluations, admission to second year is in doubt and will require a specific discussion within the School Board.

3. Second and third year activities

Within a date of December of the first year (to be communicated in suitable advance), students admitted to the second year propose to the School Academic Board their own research programme to be carried over during the second and third year. They can either join local research groups at Padova or partner departments or start an independent research. Of course, students having positions devoted to a special research subject have to propose a research activity related to the subject. Upon approval of the research programme, the School Board assigns a supervisor to each PhD student.

During the second and third year up to 18 months can be spent at a University or other highly qualified institution abroad. In this case the grant is increased by 50%, for the whole period spent abroad. In addition, the School contributes to travel and, subject to budget availability, to living expenses. Of course, preliminary authorisation of the School Board is required.

Intermediate results are to be presented as a department seminar at the end of the second year, together with a detailed plan of research to be carried out during the third year. Admission to third year is decided by the School Board, on the basis of the results obtained during the second year, taking into account the evaluation by the supervisor.

The third year is especially devoted to writing the PhD thesis, which is expected to contain original research results.

The PhD programme has a standard duration of three years. Candidates can apply for a delay of 6 or 12 months in the presentation of the thesis and final exam, specifying the reason for the request. The application for a delay must be submitted to the University Rector within November 30 of the third year. In any case, the scholarship is limited to the first three years.

The PhD thesis has to be discussed both in front of the School Collegiate (School Board, Teaching Staff and Supervisors) and, subject to positive evaluation by the Collegiate, in front of a thesis defence jury composed by Italian and foreign experts on the thesis topic. Discussion in front of the School Collegiate usually takes place within the end of November of the third year. By the mid-November of the same year, students must submit to the School Director a preliminary draft (pdf file) of the thesis containing:

1. thesis front cover, composed according to School standard,
2. Index,
3. Chapter 1. Introduction. It has to contain two sections: Section 1.1 Overview and Section 1.2 Main Contributions of the Thesis,
4. at least one more chapter displaying original results,
5. Bibliography.

This draft will be sent by the Director to the School Collegiate before the day of the discussion.

The final version of the thesis has to be submitted to the Servizio Formazione alla Ricerca within January 31 after the end of the third year. The University web page www.unipd.it/studenti/Dopo_laurea/dottorati_ricerca/per_dottorandi/tesi.htm contains detailed information about the documentation required for the final exam. The

thesis can be written either in Italian or in English. In the latter case, university regulations require that students should apply in due time to the School Board. According to the University rules, the thesis, with soft cover, is to be in two-sided A4 format with at least 25 lines per page, each containing at least 60 characters.

The *Doctor Europaeus* designation can be added to the doctoral degree if four conditions regarding co-supervision, assessment by an international jury, multilingualism and mobility are fulfilled. Eligible candidates must contact the School Director in September of the third year.

The final exam in front of the thesis defence jury usually takes place in the Spring following the end of the third year. It consists of a presentation by the candidate (30-45 minutes) followed by questions from the committee, on any topic related to the thesis work. The final evaluation by the exam committee will take into account external reviews if the candidate has applied for the *Doctor Europaeus* designation. If the exam is failed, the candidate can repeat it only once.

4. “Rights and duties” of PhD students

Each PhD student has an office position at the department. He/she will also be given a code to make photocopies, a card to make copies in the library, a magnetic card for access to the department. Each student has a department e-mail address and web page.

The School possesses a (limited) budget specifically devoted to PhD students mobility. This is primarily used to contribute to travel and living expenses when going abroad during the second and third year. It is important to apply in advance for authorisation to the School Director and to the School Secretary Ms. Elena Zamborlin.

PhD students are welcome to join departmental research groups, as well as groups at partner departments. Participation in research groups is also recommended in order to be entitled to reimbursement of expenses related to participation in conferences/summer schools/... Please, inform the School director about your collaborations.

Second- and third-year PhD students are entitled to do consulting and teaching activities within the limits stated by current regulations. Preliminary authorisation by the School Board is, however, necessary. Such activities are not permitted during the first year. All

unauthorized activities may be ground for exclusion from the PhD programme.

All students should:

- attend actively all lectures,
- participate actively in all oral presentations of colleagues, both of the same and of different year of course;
- participate in **all** department research seminars;
- keep updated the web page (see Mr. Angelo Scarano for information);
- know and follow the School regulations: www.stat.unipd.it/dottorato/scuola-regolamenti
- check carefully the web page of Padua University for the various bureaucracies: www.unipd.it/studenti/Dopo_laurea/dottorati_ricerca/per_dottorandi/peridottorandi.htm
- register at CINECA through the web page <https://loginmiur.cineca.it/> , insert personal data, curriculum and publications and update the page regularly;
- within November 20th each year, present a summary about the activities;
- use in a proper way the resources available: library, rooms, computers, printers, copying machines;
- use only the affiliation: Department of Statistical Sciences, University of Padua, Via C. Battisti 241, Padova, Italy;
- use department e-mail address; this will be the official address for all the communications related to the School.