PhD Programme

The PhD Course

- Partner Departments
- Duration, admission, scholarships
- Study programme
- Research areas
- Career opportunities

The PhD Course

The doctoral programme in Statistics at University of Padua was introduced in 1984, and was among the first Ph.D. programmes in Italy.

Starting in the academic year 2004/2005, the Department of Statistical Sciences of the University of Padua became the administrative home of the Ph.D. in Statistics.

The new programme replaced two previous research doctoral programmes in Statistics and in
Statistics Applied to the Economic and Social Sciences.

The Ph.D. Course aims to provide an advanced training to support both applied and theoretical research, encouraging independence of both study and research. For a short description of the Course activities see the notice [1].

Partner Departments

Partner Departments in the Ph.D. programme comprise:

- Department of Environmental Sciences, Computer Sciences and Statistics, University Ca' Foscari of Venice [2]
- Department of Economics and Statistical Sciences, University of Udine [3]
- Department of Economics, Business, Mathematics and Statistics "Bruno de Finetti", University of Trieste [4]

Duration, admission, scholarships

The PhD programme in Statistics has an expected length of 3 years. About 8 students enter the programme every year. The School aims at selecting the best candidates applying from all over the country as well as from abroad. Admission is by competition which is open to people of all ages and citizenship who already have a Diploma di Laurea (vecchio ordinamento) or Laurea Specialistica/Magistrale (nuovo ordinamento), issued in Italy, or an academic qualification of equivalent level issued by a foreign university and recognized by the academic authorities, or by interuniversity agreement of cooperation and mobility.

Basic quantitative prerequisites [5] are assumed.

Competitions are held annually, with details being published within the Summer of each year. Courses start the following January.

For full information, see the Admission section [6] and the page of University of Padua competition announcement [7].

Most available positions are supported by scholarships from the University of Padua or from other institutions (awarded on the basis of qualifications only). The annual scholarship amounts to around 13,638 euros. For periods of study abroad (up to 18 months) the scholarship value is increased by 50%. Moreover, the School contributes to travel and living expenses abroad, subject to budget availability. Special additional grants for non-Italian students (awarded on the basis of qualifications only) are awarded by the CARIPARO Foundation [8]. These grants include all University and Department fees, full board at the University accommodation and provide an additional personal scholarship of 13,638 € for year for a total of 3 years. Here is the call for applications [9]. The China Scholarship Council (CSC), offers n. 1 scholarship to candidates from the People’s Republic of China [10].

See the Admission section [6] and the page of University of Padua competition announcement [7] for updates. Please, follow carefully the instructions for application in the announcement [11]. For any additional information, please contact dottorato@stat.unipd.it [12].
Study programme

The first year is devoted to courses, both core courses on Functional Analysis, Probability Theory, Statistical Theory and Statistical Modelling as well as short, more specialised, courses on topics such as: Time Series, Survival Analysis, Nonparametric Statistics, Survey Methodology, etcetera. Lectures are given in English. Students can also follow some upper division courses (Laurea Magistrale) at the Department of Statistical Sciences or other Departments at the University of Padova [13].

At the end of the first year, PhD candidates propose to the Course Collegiate 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. The Course Collegiate assigns a supervisor to each PhD student. Original research results should be presented in the PhD thesis, to be discussed both in front of the Course Collegiate and (subject to positive evaluation by the Collegiate) in front of a Committee composed by Italian and foreign experts on the thesis topic. Intermediate results at the end of the second year are to be presented as a department seminar. During the second and third year up to 18 months can be spent at an University or other highly qualified institution abroad. In this case the grant is 50% more, for the whole period spent abroad. The thesis can be written either in Italian or in English.

Research areas

For an idea of possible research subjects, see the section Alumni and the research pages of the Department of Statistical Sciences [14], University of Padua and of partner departments.

Broad areas of research include:

- **Statistical methodology and its applications.** Methodological aspects range from statistical models to inference and computational issues. Applications may concern a variety of fields such as technology, finance, biology, medicine, environmental studies, etc.
- **Statistical methods and applications in Economics.** In particular: time series analysis, forecasting, statistical methods for labour economics and evaluation of public policies.
- **Social Statistics.** In particular, survey methodology, models for individual and aggregated data, segmentation techniques, multilevel models.
- **Demography.** In particular, population structure and dynamics, statistical analysis of demographic behaviours and policies.

Career opportunities

As a general objective, the Course aims at training specialists at an international level in the fields of data management and analysis. The programme leads to a wide range of career opportunities, both at the academic level and in other highly qualified research institutions. See the section Alumni [15] for details on the current occupation of PhDs from The Department of Statistical Sciences starting from 1987.
Students having completed one of the doctoral programmes in Statistics at Padua now have positions in a wide range of academic, public and private institutions, both in Italy and abroad.

Tab. 1 Some statistics related to the professional results of the research’s doctors of the phd school of the Department of Statistical Sciences of the University in Padua

<table>
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<th>Cycle (years)</th>
<th>Full Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
<th>Post-doc</th>
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