GENERAL OBJECTIVES

The main aims of the masters program in advanced and professional mathematics are to provide advanced training in mathematics, to introduce students to the research environment as preparation for later doctorate study, and to provide professional specialization that prepares them for skilled positions (teaching and research posts at university, or posts in government, industry, banking, finance and insurance companies, consultancy, computer and telecommunication companies, and so on). In addition to the specific knowledge needed to fulfil the main aims outlined above, the masters provides students with the general tools necessary to carry out scientific and/or professional activities, offering them the opportunity to work in a multidisciplinary environment, training them to present their results clearly and accurately both orally and in writing, and introducing them to a variety of computer tools.

The masters course conforms to the legal requirements of the new law on postgraduate studies inside the framework of the process of convergence towards the European Higher Education Area (EHEA). It was approved by the Department for Universities, Research and Information Society (DURSI) of the Generalitat de Catalunya and by the Spanish Ministry for Education and Science.

PARTICIPATING DEPARTMENTS

The masters course is organized by the Faculty of Mathematics at the University of Barcelona, with the participation of the following departments: Algebra and Geometry, Applied Mathematics and Analysis, and Probability, Logic and Statistics.

The subjects included in the masters belong to five knowledge areas within mathematics, all taught at the three participating departments: Algebra, Analysis, Statistics and Operational Research, Geometry and Topology, and Applied Mathematics, as well as Computer Languages and Systems. The program covers a wide range of topics, applying a cross-sectional approach which benefits greatly from the synergies created by the presence of these areas of study inside a single framework. The design also allows the creation of three distinct specialities: research, professional and advanced academic training.

The masters offers an expanded version of the syllabus of the Doctoral Program in Mathematics, which received the ANECA Quality Award in 2004-05 and again in 2005-06, 2006-07, 2007-08 and 2008-09.