#### **Objectives**

The PhD degree confirms an original and innovative contribution towards the knowledge progress, a high scientific level in a branch of Science and the ability to do independent scientific work.

DM offers a PhD program (3rd cycle) in Mathematics, divided into two parts: a year of course work and three years of original research to elaborate a thesis. This program is especially directed to students who have a 2nd cycle in Mathematics or in a related area.

The high quality of this Ph.D. Program at international level is guaranteed by DM's staff, that includes specialists in various areas of Mathematics with research work internationally recognized, and also by the regular collaboration of other researchers of its Research Centers, namely Centro de Análise Funcional, Estruturas Lineares e Aplicações (CEAFEL-Ciências), Centro de Matemática Computacional e Estocástica da Universidade de Lisboa (CEMAT-Ciências), Centro de Aplicações Fundamentais e Investigação Operacional (CMAF-CIO) and Grupo de Física Matemática (GFM).

#### Skills

Among the skills developed in a PhD program in Mathematics we mention the ability to represent, model and quantify phenomena, structures and knowledge, resilience in problem solving, creativity in knowledge production, the ability to learn from mistakes, the ability to ask the right questions and look for their answers.

These generic skills, rather than the specific knowledge acquired in the process, qualify a PhD in mathematics for any position in the industry.

## Financing

PhD fellowships from FCT. PhD fellowships and financial support from research centers.

# Employment

**Teaching and research institutions** (such as universities, polythecnical schools, research centers, laboratories), **Public services, Public and private companies** (banks, insurance companies, financial, informatics and engineering consultancies), Industry.

# **Specialties**

Algebra, Logic and Foundations of Mathematics; Geometry and Topology; Mathematical Analysis; Mathematical Physics and Continuous Mechanics; Numerical Analysis and Computational Mathematics.

## Structure

#### This is a four-year program.

In the 1styear the student is required to complete an Advanced Training Course, centered on advanced optional courses and advanced seminars on the main specialties of PhD program.

In the remaining three years the student should develop original work for the written PhD dissertation.

#### **Algebra and Logic**

**Geometry and Topology** 

**Mathematical Analysis** 

**Numerical Analysis** 

**Mathematical Physics** 

International reputation High quality research Wide expertise Excellent facilities Support from research centres Information & Contacts: ciencias.ulisboa.pt/pt/dm matematica@ciencias.ulisboa.pt

Coordinators: Carlos André caandre@ciencias.ulisboa.pt Pedro Miguel Duarte pmduarte@ciencias.ulisboa.pt

#### Support:

CEAFEL - Ciências CEMAT - Ciências CMAF-CIO GFM



LISBOA

UNIVERSIDADE DE LISBOA

**PHD IN** 

**MATHEMATICS**