APPLIED MATHEMATICS FOR ECONOMICS AND MANAGEMENT

Scientific Board

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Margarida Vaz Pato (Coordinator)
Full Professor

Maria do Rosário Grossinho
Full Professor

Isabel Proença
Assistant Professor

Rui Paulo
Assistant Professor

The main objective of the PhD in Applied Mathematics for Economics and Management is to contribute to the advancement of the frontiers of knowledge in the field of Mathematics, especially in its application to Economics and Management, and also to fill an important gap in the offer of advanced education in this field.

TARGET

This degree is useful for those who want to pursue an academic career, or who wish to carry out research, as well as for those who want to further their education and to learn the new techniques and scientific practices required for the pursuit of excellence in their professional lives in companies, or private or public institutions.

STUDY METHODOLGY

As the name implies, the course on "Preparation of the Thesis Project" is the beginning of the research work. After passing the other course units, the PhD students have to defend the research project that they plan to develop before an examination panel.

The next two years are dedicated to the thesis.

STUDY TOPICS

PhD students may opt for research, primarily based on theory, as this is the basis of the education of professionals who dedicate their careers to innovation and scientific research in departments of companies, or in higher education establishments, or those who opt for a more applied approach which enables the transfer of knowledge to society and a competitive professional performance.

The research topics are the following:

> Actuarial Science;
> Dynamical Systems;
> Financial Econometrics;
> Financial Mathematics;
> Macro and Microeconometrics;
> Mathematical Analysis;
> Operational Research;
> Statistics;
> Time Series.

ENTRY CONDITIONS AND SELECTION CRITERIA

Applicants must hold the following degrees, in accordance with the required level:

> Masters;
> Bachelors (4 years or more, if part of the "pre-Bologne process"), together with a relevant adequate or scientific background curriculum in Mathematics, or related field, such as, for example: Economics, Finance, Management, Statistics, Engineering, or Physics. Applicants may be accepted conditionally if they are expected to achieve the above qualifications before the start date of their PhD studies.

Exceptionally, candidates may be admitted who do not satisfy any of the above conditions, as long as they have a scientific, academic and professional curriculum that is considered appropriate.

Agnieszka Izabella Bergel

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PhD in Applied Mathematics for Economics and Management, 2013
Assistant Professor at ISEG

It has been a great opportunity for me to study for my PhD at ISEG. I have been able to expand my knowledge beyond my previous background. Working as a researcher in the Department of Mathematics is interesting and challenging and allows me to interact with colleagues from all over the world. To add, Lisbon is actually a really nice place to live in.

FACULTY AND SUBJECT AREAS

ALFREDO EGÍDIO DOS REIS
PhD from Heriot-Watt University, UK
Actuarial Mathematics and Statistics

AMÉLIA BASTOS
PhD from ISEG, Universidade Técnica de Lisboa
Economics and Statistics

ANA MARGARIDA NETO
PhD from Faculdade de Ciências, Universidade de Lisboa
Mathematics – Algebra

ARTUR DA SILVA LOPES
PhD from ISEG, Universidade Técnica de Lisboa
Macroeconometrics

CARLOS SILVA RIBEIRO
PhD from Université Paris X, France
Econometrics

FÁTIMA FABIÃO RIBEIRO
PhD from ISEG, Universidade Técnica de Lisboa
Mathematic Analysis and Differential Equations

FERNANDO GONÇALVES
PhD from University of Edinburgh, UK
Mathematics and Statistics

FILIPA CARVALHO
PhD from ISEG, Universidade Técnica de Lisboa
Operational Research

GRAÇA LEÃO FERNANDES
PhD from ISEG, Universidade Técnica de Lisboa
Statistics and Actuarial Science

ISABEL PROENÇA
PhD from Université Catholique de Louvain, Belgium
Microeconometrics and Panel Data

JOÃO ANDRADE E SILVA
PhD from ISEG, Universidade Técnica de Lisboa
Actuarial Science

JOÃO DIAS
PhD from ISEG, Universidade Técnica de Lisboa
Econometrics

JOÃO GUERRA
PhD from Universidad de Barcelona, Spain
Analysis and Financial Mathematics

JOÃO JANELA
PhD from IST, Universidade Técnica de Lisboa
Mathematical Analysis and Numerical Methods

JOÃO LOPES DIAS
PhD from Cambridge University, UK
Analysis – Dynamical Systems

JOÃO NICOLAU
PhD from ISEG, Universidade Técnica de Lisboa
Financial Econometrics

JORGE CAIADO
PhD from ISEG, Universidade Técnica de Lisboa
Econometrics, Time Series and Forecasting Methods

JOSÉ PASSOS
PhD from Bristol University, UK
Microeconometrics

LEONOR SANTIAGO PINTO
PhD from ISEG, Universidade Técnica de Lisboa
Operational Research

LÍGIA AMADO
PhD from ISEG, Universidade Técnica de Lisboa
Operational Research

MANUEL CASTRO GUERRA
PhD from Universidade de Aveiro
Optimisation and Control Theory

MARGARIDA MOZ
PhD from ISEG, Universidade Técnica de Lisboa
Operational Research

MARGARIDA VAZ PATO
PhD from Faculdade de Ciências, Universidade de Lisboa
Operational Research

MARIA CÂNDIDA MOURÃO
PhD from ISEG, Universidade Técnica de Lisboa
Operational Research

MARIA DE LOURDES CENTENO
PhD from Heriot-Watt University, UK
Actuarial Science

MARIA DO ROSÁRIO GROSSINHO
PhD from Faculdade de Ciências, Universidade de Lisboa
Analysis and Financial Mathematics

NICOLETTA ROSATI
PhD from Università di Padova, Italy
Econometrics and Panel Data

NUNO CRATO
PhD from University of Delaware, USA
Econometrics and Time Series

NUNO SOBREIRA
PhD from Nova School of Business and Economics, Universidade Nova de Lisboa
Econometrics and Time Series

ONOFRE SIMÕES
PhD from ISEG, Universidade Técnica de Lisboa
Actuarial Science

PIERRE HOONHOUT
PhD from University College London, UK
Econometrics and Panel Data

RAÚL BRAS
PhD from ISEG, Universidade Técnica de Lisboa
Operational Research

RUI PAULO
PhD from Duke University, USA
Statistics

TERESA CHAVES DE ALMEIDA
PhD from London School of Economics, London University, UK
Operational Research

DETAILS AND STUDY PLAN

SCHEDULE:
EVENING LECTURES

PARTICIPATING CENTRES:
APPLIED MATHEMATICS (CEMAPRE), ECONOMICS (UECE).

START DATE:
SEPTEMBER

TUITION FEES:
€3,000€ - 1ST YEAR; €2,000 – 2ND AND 3RD YEARS; €1,000 - 4th - 6th YEARS

YEAR 1	COURSE UNITS	PROFESSOR	CREDITS	SEMESTER
	ADVANCED TOPICS OF ECONOMETRICS*	JOSÉ PASSOS	10.0	1
	ADVANCED TOPICS OF STATISTICS*	RUI PAULO	10.0	1
	ANALYSIS AND OPTIMISATION*	MANUEL CASTRO GUERRA	10.0	1
	COMPUTATIONAL MATHEMATICS*	JOÃO JANELA	10.0	1
	ELECTIVE	-	6.0	1
	SEMINAR I	MARGARIDA VAZ PATO	4.0	1
	ELECTIVE	-	6.0	2
	PREPARATION OF THE THESIS PROJECT	ISABEL PROENÇA	24.0	2

YEAR 2	COURSE UNITS		CREDITS	SEMESTER
	THESIS	-	60.0	-

YEAR 3	COURSE UNITS		CREDITS	SEMESTER
	THESIS	-	60.0	-

ELECTIVES	COURSE UNITS	PROFESSOR
	ADVANCED RISK THEORY	ALFREDO EGÍDIO DOS REIS
	FINANCIAL ECONOMETRICS	JOÃO NICOLAU
	MACROECONOMETRICS	ARTUR DA SILVA LOPES
	MATHEMATICAL METHODS FOR FINANCE	JOÃO GUERRA
	OPERATIONAL RESEARCH	TERESA CHAVES DE ALMEIDA
	PANEL DATA	ISABEL PROENÇA
	TIME SERIES ANALYSIS AND FORECASTING	JORGE CAIADO

*The Scientific Board of the PhD chooses two out of the four course units for each student.