

# PhD in Applied Mathematics for Economics & Management

**New syllabus proposed to A3ES for the 2027/2028 academic year, currently under approval**

	Course Units	Professor	Credits	Semester
<b>YEAR 1</b>	Advanced Topics in Econometrics*	Paulo Parente	10	1
	Advanced Topics in Operations Research*	Cristina Requejo	10	1
	Advanced Topics in Statistics*	Rui Paulo	10	1
	Analysis and Computation*	Manuel Guerra, João Janela	10	1
	Elective	-	6	1
	Seminar	Cristina Requejo	4	1
	Elective	-	6	2
	Preparation of the Thesis Project	Paulo Parente	24	2

\*The Scientific Committee of the PhD chooses two out of the four course units for each student

<b>YEAR 2</b>	Thesis (Research Seminar)	-	60	-
<b>YEAR 3</b>	Thesis (Research Seminar)	-	60	-

<b>Electives</b>	Econometric Methods for Finance	João Nicolau
	Bayesian Econometrics	Rui Paulo
	Stochastic Differential Equations and Applications	Nuno Brites
	Integer Programming & Combinatorial Optimization	Cristina Requejo
	Computational Tools for Actuaries	Nuno Brites
	Decision Making and Optimization	Cristina Requejo
	Mathematical Economics	Alexandre Rodrigues
	Applied Macroeconometrics	Paulo Marques Rodrigues
	Mathematical Methods in Finance	Carlos Oliveira
	Pension Funds	Daniela Pateiro Pires
	Probability and Stochastic Processes	Alexandra Moura
	Stochastic Finance in Continuous Time	Pieter Spreij
	Programming Techniques	Ivo Tavares
	Stochastic Calculus	João Janela
	Financial Time Series	Nuno Sobreira
	Machine Learning and Data Mining	João Bastos
	Computational Mathematics	João Janela
	Programming for Data Science	Carlos Costa
	Risk Theory	Carlos Oliveira
	Survival Models and Life Contingencies	Onofre Simões
Time Series	Nuno Sobreira	

\* Other electives may be selected according to the student's interests, conditional on availability and approval by the Scientific Committee