



## Study Plan

**School:** School of Social Sciences  
**Degree:** Master  
**Course:** Monetary and Financial Economics (cód. 109)

### 1st Year - 1st Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
ECN07068	Macroeconomic Analysis	Economy	7.5	Semester	198
ECN07075	Complements of Financial Economics	Economy	7.5	Semester	195
GES07098	Corporate Finance	Management	7.5	Semester	195
<b>Group of Options</b>					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
ECN07081	Financial Econometrics	Economy	7.5	Semester	196
ECN10314D	Seminar on Research Methodologies	Economy	7.5	Semester	194
Group of Free Options					

### 1st Year - 2nd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
ECN07099	Financial Derivatives and Risk Management	Economy	7.5	Semester	192
ECN07089	Monetary Economics and Monetary Policy	Economy	7.5	Semester	190
ECN07091	International Financial Economics	Economy	7.5	Semester	191
<b>Group of Options</b>					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
MAT07546D	Advanced Financial Calculus	Mathematics	7.5	Semester	195
Group of Free Options					

### 2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
<b>Mandatory alternatives</b>					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Dissertation				
	Internship				
	Project Work				

### 2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
<b>Mandatory alternatives</b>					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Dissertation				
	Internship				
	Project Work				



## 2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours

### Conditions for obtaining the Degree:

\*\*\* TRANSLATE ME: Para aprovação na componente curricular deste Mestrado, é necessário a aprovação (através de avaliação ou creditação), das seguintes unidades curriculares: { \ } newline

1.º Semestre { \ } newline

- 3 UC Obrigatórias num total de 22.5 ECTS { \ } newline

- 1 UC Optativa ou 1 UC Optativa Livre num total de 7.5 ECTS { \ } newline

2.º Semestre { \ } newline

- 3 UC Obrigatórias num total de 22.5 ECTS { \ } newline

- 1 UC Optativa ou 1 UC Optativa Livre num total de 7.5 ECTS { \ } newline

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Para obtenção do grau é necessário também a aprovação em Dissertação, Relatório de Estágio ou Trabalho de Projecto, no total de 60 ECTS, no 3.º e 4.º Semestre. \*\*\*

## Program Contents

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### Macroeconomic Analysis (ECN07068)

- 1- The long run: from neoclassical growth models to the endogenous growth.
- 2- The business cycles: the new Keynesian economics and the Theory of Real Business Cycles.
- 3 Government deficit and public debt stabilization. the Ricardian equivalence debate.
- 4- The labor market, the Phillips curve debate and the dynamic aggregate supply
- 5-Demand management policies in a open-economy framework.
- 6- The microeconomic foundations
- 7- New frontiers for macroeconomics

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### Complements of Financial Economics (ECN07075)

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### Corporate Finance (GES07098)

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### Financial Econometrics (ECN07081)



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### **Seminar on Research Methodologies (ECN10314D)**

- 1 - The research environment of the Doctoral Program in Economics:
- 2 - Identification of relevant research in Economics / evaluation of scientific production
- 3 - Direct contact with research results
  - 3.1 - Attendance of seminars and conferences
  - 3.2 - Meetings with researchers from the different areas involved in the program
- 4 - Research planning
  - 4.1 - Identification of the student's research area
  - 4.2 - Research, selection and first analysis of relevant literature
  - 4.3 - Pioneering references
  - 4.4 - Data sources
  - 4.5 - Identification of possible supervisors
- 5 - The process of scientific writing
  - 5.1 - The structure of an article
  - 5.2 - Formal and stylistic aspects
- 6 - The thesis project
  - 6.1 - Research questions - identification of topics likely to originate relevant scientific output
  - 6.2 - Bibliographic review
  - 6.3 - Drafting of the project

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### **Financial Derivatives and Risk Management (ECN07099)**

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### **Monetary Economics and Monetary Policy (ECN07089)**

Foundations of monetary theory; Theory of interest rates; Fiscal discipline as the guarantor of monetary stability; Transmission channels of monetary policy; Rules versus discretion in monetary policy; Objectives, indicators and instruments; Monetary policy strategies; The Monetary Policy of the European Union

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### **International Financial Economics (ECN07091)**

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### **Advanced Financial Calculus (MAT07546D)**

Section 1. Introduction to Stochastic Differential Equations: Wiener process and diffusion processes. Stochastic integrals. Sketched construction of the Itô integral. Use of Itô theorem. Reference to the Stratonovich integral. Existence and uniqueness theorems for stochastic differential equations (SDEs). Strong and weak solutions. Dynkin and Feynman-Kac formulas. Boundary classification for unidimensional diffusion processes. First passage times. Stationary solutions of unidimensional SDEs. Ergodicity. Monte Carlos simulations of SDEs. Section 2. Financial Applications of Stochastic Differential Equations: Black-Scholes model for stocks: detailed study, including simulation, estimation and prediction. Models for interest rates and exchange rates. Interpretation of Girsanov theorem. European and American call options and derivation of Black-Scholes formula. Cox-Ross-Rubinstein model. European put options. Generalization of the methodology to general models with several financial assets.