DOCTORAL PROGRAMME IN ECONOMICS

2023-2024

Index

1. Objectives and Purposes

1.1 Welcoming Message

The PhD Programme in Economics aims to endow doctoral students with advanced and thorough scientific education in Economics, enabling them to conduct high-level research and perform professional work involving reliable and demanding economic analysis.

Since the academic year of 2009/2010, the programme has been jointly offered by the Faculty of Economics at the University of Coimbra (FEUC) and the Department of Economics, School of Economics and Management at the University of Minho (EEG-UM).

The PhD programme relies on the use of the best human resources available in the two universities, in the fields of research and advanced education. Its quality rests upon a highly educated faculty holding doctoral degree awarded by prestigious European and American universities and whose research excellence is documented by a large number of publications in international scientific journals. The academic calendar has been designed in order to facilitate and encourage mobility of students between the two partner institutions. Many complementary activities are offered to students, including advanced training courses in specialized topics, conferences and seminars, hence contributing to the enhancement and refinement of their general and specific skills. Students are also offered the opportunity to participate in other research and training activities organized by both universities.

The programme aims at offering students a high quality educational experience, whilst effectively preparing them for an active life in an increasingly globalised world. If you are looking for an education embodying such characteristics, we are sure that the Ph.D. in Economics is an excellent choice.

Executive Board

Universidade de Coimbra   *Universidade do Minho*

Paulino Teixeira (Head)   Rosa Branca Esteves (Head)
Tiago Sequeira   Miguel Portela

1.2 Partner Institutions: FEUC and EEG-UM

Th Faculty of Economics of the University of Coimbra (FEUC) and the School of Economics and Management of the University of Minho (EEG-UM) and together have more than 60 researchers holding a PhD, who work in a large spectrum of areas of Economics.

In Coimbra, most faculty members undertake their research activities in the Center for Business and Economics Research (CeBER-UC). At the University of Minho (U Minho), scientific research is developed within the framework of the Economic Policy Research Unit (NIPE-UM). Both research units were awarded a grade of Very Good in the last evaluation by the Foundation for Science and Technology (FCT). Should you require further information, please visit the following websites:

CeBER - http://www.uc.pt/en/uid/ceber

NIPE - https://www.eeg.uminho.pt/pt/investigar/nipe

The international training of FEUC and EEG-UM faculty is reflected in a large number of joint projects with foreign scholars, in publications in international journals with peer review, in seminars with the participation of both national and international scholars and in the success of the Spring/Summer schools that have been attracting researchers and doctoral students from other institutions.

Both institutions have excellent research facilities and conditions, including laboratories for PhD students, and provide access to a wide range of databases and software. For detailed information, we suggest that you search the web of the data laboratory of CeBER and of the Research Support Office of EEG-UM.

2. Doctoral Programme

2.1   Study Plan

Course Unit			ECTS
1st Year			**60**
Advanced Econometrics I	1st Sem.	Compulsory	7,5
Advanced Macroeconomics I	1st Sem.	Compulsory	7,5
Advanced Microeconomics I	1st Sem.	Compulsory	7,5
Mathematical Economics	1st Sem.	Compulsory	7,5
Advanced Econometrics II	2nd Sem.	Elective	7,5
Advanced Macroeconomics II	2nd Sem.	Elective	7,5
Advanced Microeconomics II	2nd Sem.	Elective	7,5
Computational Methods Applied to Economics	2nd Sem.	Elective	7,5
Advanced Option in Economics I	2nd Sem.	Elective	
Advanced Option in Economics II	2nd Sem.	Elective	
2nd Year			**60**
Thesis Project	1st Sem.	Compulsory	15
Thesis	1st Sem.		15
Thesis	2nd Sem.		30
3rd Year			**60**
Thesis			60
4th Year			**60**
Thesis			60

The Programme includes attendance of classes and seminars, as well as writing and defending a final dissertation. The taught part is composed of mandatory (30 ECTS) and optional (30 ECTS) units of study, in which the first semester of the first year consists only of mandatory units of study. The dissertation project will be submitted in the 3rd semester and the following semesters will be dedicated to writing a doctoral dissertation.

2.2 Course Unit's Syllabus and Learning Outcomes

Course Units – 1st Year

COURSE UNIT: **MATHEMATICAL ECONOMICS**

Semester: 1st   TIPOLOGY: Compulsory

Professor Cristina Amado (U Minho)

Professor Pedro Cerqueira (U Coimbra)

Syllabus:

1. Topics in linear álgebra
2. The Rn Space and Multivariable Calculus
    a. Topology in Rn space
    b. Multivariable Calculus
    c. Static Optimization
    d. Correspondences and Fixed Point Theorems
3. Differential and Difference Equations and Systems
4. Dynamic optimization
    a. Calculus of Variations
    b. Control Theory
    c. Dynamic Programming

Learning Outcomes:

1. Calculate determinants, determine eigenvalues, evaluate the properties of matrices, and interpret the meaning of the possible results.
2. Calculate limits and describe the properties of successions. Describe and evaluate the properties of sets. Apply differential calculus to the study of real functions. Demonstrate particularly important theorems.
3. Solve optimization problems. Discriminate and relate several optimizations methods. Integrate concepts of linear algebra in the resolution of optimization problems. Plan and justify the choice of optimization methods for the resolution of concrete problems.
4. Examine discrete and continuous dynamic systems, relating them with concepts of linear algebra and real calculus. Analyse the properties of systems selecting the adequate methods of analysis.
5. Describe and apply techniques of dynamic programming in the resolution of problems of dynamic optimization. Evaluate their use in the resolution of economic problems.

Semester: 1st   TIPOLOGY: Compulsory

Professor Odd Rune Straume (U Minho)

Professor Paulino Teixeira (U Coimbra)

Syllabus:

1. Consumer theory: preferences, indirect utility and expenditure functions; Marshallian and Hicksian demand functions; duality; revealed preferences
2. Producer theory: technology; production and cost functions; duality
3. Partial equilibrium
4. General equilibrium. Walras' Law
5. Welfare theorems. Pareto efficiency. Edgeworth diagrams. Social welfare functions
6. Externalities and public goods. The Coase theorem. Pigouvian taxes
7. Choice under uncertainty
8. Economics of information: adverse selection and moral hazard

Learning Outcomes:

1. Understand the modern microeconomic literature.
2. Perform either empirical or theoretical analysis in either a professional or academic environment

COURSE UNIT: **ADVANCED ECONOMETRICS I**

Semester: 1st   TIPOLOGY: Compulsory

Professor Miguel Portela (U Minho)

Professor Pedro Cerqueira (U Coimbra)

Syllabus:

1. Ordinary Least Squares (OLS):
    a. Numerical properties
    b. Statistical Properties.
    c. Heteroskedasticity and Autocorrelation.
    d. Hypothesis testing
    e. Asymptotic results
2. Endogeneity, instrumental variables and generalized method of moments
3. Maximum likelihood estimation
4. Panel data models

Learning Outcomes:

1. To name the main assumptions of each estimation method. To describe the main properties of each method.
2. To prove the main properties and theorems.
3. To identify the correct econometric approach to the different empirical economic analyses.

4. To develop strategies that can adjust the theoretical models to real data applications.
5. To apply econometric methods to economic data.

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Semester: 1st   TIPOLOGY: Compulsory

Professors Francisco José Veiga and Luis Aguiar-Conraria (U Minho)

Professors Tiago Sequeira and Pedro Bação (U Coimbra)

Syllabus:

1. Neoclassical theory of economic growth: the Solow model
2. The Ramsey-Cass-Koopmans model
3. Diamond overlapping-generations model
4. Real business cycle models
5. Traditional Keynesian theories of fluctuations
6. Microeconomic foundations of nominal rigidity
7. Inflation and monetary policy
8. Budget deficits and fiscal policy.

Learning Outcomes:

1. Describe Solow's economic growth model and evaluate its capacity to answer central issues of economic growth analysis.
2. Evaluate the implications of endogenizing savings decisions, namely the effects of changes in the savings rate, to economic policy in Ramsey-Cass-Koopmans' and Diamond's models.
3. Identify and describe the main forms of nominal and real rigidity which are the source of gradual price and wage adjustment, and their role in the explanation of economic fluctuations and stabilization policies.
4. Describe the relation between money supply, inflation and interest rates, and identify the causes and effects of budget deficits.
5. Characterize the main monetary policy strategies, evaluating the implications of the rational expectations hypothesis and the conditions under which there may be problems of dynamic inconsistency.
6. Compare and criticize the models studied and select those that are best suited to the issues analyzed.

COURSE UNIT: **ADVANCED ECONOMETRICS II**
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Semester: 2nd   TIPOLOGY: Compulsory

Professor Pedro Cerqueira (U Coimbra)

Professors Miguel Portela, Cristina Amado and Natália Monteiro (U Minho)

Syllabus:

1. Non-linear regression model
   a. The method of moments (MM)
   b. MM versus non-linear least squares (NLS)
   c. The Gauss-Newton-Regression (GNR)
   d. Inference

2. Maximum likelihood estimation
   a. Basic concepts
   b. Estimators properties
   c. Asymptotic distributions
   d. Testing

3. Discrete and limited dependent variables
   a. Binary choice models
   b. Models for count data
   c. Models for censored and truncated data
   d. Estimation and inference

4. Methods for time-series data
   a. Stationary versus non-stationary time series
   b. Unit root tests
   c. Cointegration
   d. Cointegration tests

5. Bayesian Econometrics
   a. Bayesian estimation methods
   b. State-space models
   c. Simulation methods

Learning Outcomes:

1. To master a set of theoretical results related to the models and estimation methods used in Econometrics, and be able to adapt those to the problem in hand.
2. To identify, interpret and discuss the main characteristics of Time Series Analysis.
3. To identify, interpret and discuss the main characteristics of Dynamic Panel Data modelling.

COURSE UNIT: ADVANCED MACROECONOMICS II

Semester: 2nd   TIPOLOGY: Compulsory

Professor Tiago Sequeira, Pedro Bação, Bruno Albuquerque (U Coimbra)

Professors Fernando Alexandre and Luís Aguiar-Conraria (U Minho)

Syllabus:

1. Savings and the current account
2. Small open economy models
3. The life-cycle model, taxes and the current account
4. Models of money
5. DSGE models of equilibrium indeterminacy
6. Crisis and the great recession

Learning Outcomes:

1. Build and analyse open economy models;
   a. Analyze and discuss the results of those models concerning the gains of openness;
   b. Identify the implications of different hypothesis concerning the dimension of the economy under analysis;
   c. Analyze and discuss the consequences of government interventions in those models;
   d. Analyze open economy models with financial assets under uncertainty.
2. Build and analyse DSGE models of with equilibrium indeterminacy
3. Build and analyse business cycles models

COURSE UNIT: ADVANCED MICROECONOMICS II

Semester: 2nd   TIPOLOGY: Compulsory

Professor Carlos Carreira (U Coimbra)

Professor Odd Straume (U Minho)

Syllabus:

1. Static games with complete information
   a. Normal form games
   b. Nash equilibrium
   c. Mixed strategies
2. Dynamic games with complete information
   a. Backwards induction
   b. Subgame perfection
   c. Repeated games
3. Static games of incomplete information
   a. Bayesian games
   b. Bayesian Nash equilibrium
4. Dynamic games with incomplete information
   a. Perfect Bayesian equilibrium
   b. Signaling games
5. Topics in contract theory
   a. The principal-agent model
      i. Adverse selection
      ii. Moral hazard
   b. Incomplete contracts

Learning Outcomes:

1. To interpret and apply in different settings the several definitions and refinements of equilibrium in Game Theory.
2. To apply game theory in models of imperfect competition.
3. Interpret the recent developments on the theory of the firm, markets and contracts.

Semester: 2nd   TIPOLOGY: Compulsory

Professor Carlos Carreira (U Coimbra)

Professor Nuno Azevedo (U Minho)

Syllabus:

1. Quantitative macroeconomics
   a. Real Business Cycles (RBC) models.
   b. Rational expectations.
   c. Analysis of Dynamic Stochastic General Equilibrium (DSGE) models.
2. Microeconomic dynamic models.
   a. Models of industrial dynamics.
   b. Agent Computational Economics (ACE) models.
   c. Nelson-Winter model.

Learning Outcomes:

1. Identify economic problems whose resolution involves the use of numerical methods.
2. Computationally implement economic models.
3. Apply some classical numerical methods.
4. Simulate and evaluate results.

Thesis Project

The thesis project shall be coordinated by:

Paulino Teixeira (FEUC)

Rosa Branca Esteves (EEG-UM).

At the end of the third semester, students are expected to establish in their thesis proposal the research guidelines they will pursue in their doctoral dissertation.

The proposal may be written in Portuguese or English and it must have a maximum length of 15 pages, including references.

As an indication, the proposal should include the following elements:
- Title,
- Summary of 250 words,
- Introduction and motivation (3 pages),
- Literature review (3 pages),
- Proposal development (5 pages),

- Expected results (1 page),

- References (3 pages).

The deadline to deliver the proposal is April 8, 2024.

The oral presentation of the proposal must not exceed 20 minutes. The presentation is followed by a 10-minute-length discussion, maximum. Students must also deliver the supervisors' statement, stating that they are co-responsible for the development of the research work.

The presentation/discussion of the proposal will take place on April 18, 2024. The jury may approve the Thesis Project, suggest changes or reject it, inviting the candidate to reformulate it.

2.3. Faculty

Professor	PhD	Affiliation	Area of specialisation
Faculty of Economics - University of Coimbra			
Ana Margarida Monteiro	University of Coimbra, Portugal	CeBER-UC	Mathematical Finance
António Alberto Santos	University of Warwick, U.K.	CeBER-UC	Dynamic Bayesian analysis applied to financial theory
António Portugal Duarte	University of Coimbra, Portugal	CeBER-UC	International macroeconomics
Bruno Albuquerque	Ghent University, Belgium	CeBER-UC	Macroeconomics and monetary policy
Carlos Carreira	University of Coimbra, Portugal	CeBER-UC	Industrial dynamics; productivity
Eduardo Barata	Keele University, U.K.	CeBER-UC	Ecological economics; input-output analysis
Hélder Sebastião	Lancaster University, U.K.	CeBER-UC	Financial futures and options
José Fuinhas	Universidade da Beira Interior, Portugal	NECE-UBI	Energy economics, monetary economics; financial economics
José Murteira	University of Coimbra,	CeBER-UC,	Econometrics

	Portugal	CEMAPRE-UTL	
Luís Cruz	Keele University, U.K.	CeBER-UC	Ecological economics; input-output analysis
Maria Rita Martins	University of Coimbra, Portugal	CeBER-UC	Industrial economics; regulation
Marta Simões	University of Coimbra, Portugal	CeBER-UC	Economic growth; human capital
Nuno Silva	NOVA School of Business and Economics, Portugal	CeBER-UC	Financial markets and optimal asset allocation
Óscar Lourenço	University of Coimbra, Portugal	CeBER-UC, CEIS-UC	Health economics; applied microeconometrics
Paulino Teixeira	University of South Carolina, U.S.A.	CeBER-UC, IZA	Labour economics
Pedro Bação	Birkbeck College, University of London, U.K.	CeBER-UC	Macroeconomics
Pedro Cerqueira	European University Institute, Italy	CeBER-UC	International Macroeconomics and Business Cycles
Pedro Godinho	University of Coimbra, Portugal	CeBER-UC	Real options analysis, project analysis and evaluation
Pedro Nogueira Ramos	University of Coimbra, Portugal	CeBER-UC	Regional Economics; Input-output models
Rodrigo Martins	University of Coimbra, Portugal	CeBER-UC	Business Cycles; Political Cycles; Electoral behaviour
Tiago Neves Sequeira	NOVA School of Business and Economics, Portugal	CeBER-UC	Economic growth; Business cycles

Professor	PhD	Affiliation	Area of specialization
School of Economics and Management – University of Minho			
Ana Paula Faria	University of Nottingham, UK	NIPE-UM	Economics of innovation
Carla Sá	Tinbergen Institute/ Vrije Universiteit, Holanda	NIPE-UM	Labour Economics Economics of Education
Carlos Costa	University of Orleans, France		Banking Economics
Cristina Amado	Stockholm School of Economics, Sweden	NIPE-UM	Economic Statistics
Cristina Matos	EEG, University of Minho, Portugal		Welfare State, Inequalities and Inclusive Societies
Ermelinda Lopes	EEG, University of Minho, Portugal		Macroeconomics
Fernando Alexandre	Birkbeck College, University of London, UK	NIPE-UM	Macroeconomis. Portuguese Economy, Monetary and Financial Economics, Social Security
Francisco Cruz	Oxford University, UK	NIPE-UM	Transport Economics Regional Economics
Francisco Veiga	University of South Carolina, USA	NIPE-UM	International Monetary Economics Economic Growth Political Economy
Isabel Correia Dias	EEG, University of Minho, Portugal		Industrial Economics Health Economics
João Cerejeira	European University Institute, Italy	NIPE-UM	Regional Economics Labour Economics
Jorge Cerdeira	University of Porto, Portugal	NIPE-UM	Microeconomics,Industrial Organization, Econometrics and International Trade
José Cadima Ribeiro	University of Minho	NIPE-UM	Regional Economics Tourism Economics
Lígia Pinto	University of South Carolina, USA	NIPE-UM	Environmental Economics
Linda G. Veiga	University of South Carolina, USA	NIPE-UM	Political Economy Public Economics / Public Finance
Luís Aguiar-Conraria	Cornell University, EUA	NIPE-UM	Political Economy Wavelet Analysis Business Cycle Analysis
Manuel C. Cabral	University of Nottingham, UK	NIPE-UM	International Economics
Maria Cristina Moreira	University of Navarra, Spain		History Economics
Maria Helena Guimarães	University of Cincinatti, USA		International Economics

Maria João Thompson	University of Warwick, UK	NIPE-UM	Economic Growth Macroeconomics
Maria Lurdes Martins	EEG, University of Minho, Portugal		Information Economics Applied Microeconomics
Margarida Proença	University of South Carolina, USA		Industrial Economics
Marieta Valente	University College of London, UK		Experimental Economics Environmental Economics
Miguel Portela	Tinbergen Institute/ U Amsterdam, Netherlands	NIPE-UM	Labour Economics Econometrics
Natália Barbosa	University of Manchester, UK	NIPE-UM	Industrial Economics Economics of the Firm
Natália Monteiro	University of Warwick, UK	NIPE-UM	Labour Economics
Odd Rune Straume	University of Bergen, Norway	NIPE-UM	Industrial Economics
Orlando Petiz	University of Santiago de Compostela, Spain		Economics of Innovation Social Economics
Paula Veiga Benesch	University of South Carolina, USA	NIPE-UM	Health Economics Applied Microeconomics
Paulo Mourão	University of Minho	NIPE-UM	Sports Economics Social Economics
Priscila Ferreira	University of Essex, UK		Labour Economics Microeconometrics Applied Microeconomics
Ricardo Santos Sousa	London School of Economics and Political Science, UK	NIPE-UM	Monetary and Financial Economics Empirical Finance and Asset Pricing Monetary and Fiscal Policy Political Economy
Rita Sousa	NOVA School of Business and Economics, Portugal	NIPE-UM	Energy and Climate Change Economics
Rosa Branca Esteves	Oxford University, UK	NIPE-UM	Industrial Economics Competition Police and Game Theory
Silvia Sousa	European University Institute, Italy	NIPE-UM	Labour Economics

2.4   Thesis Supervision

The doctoral thesis is to be supervised by a professor at FEUC or at the Department of Economics, EEG-UM.

In duly justified cases, co-supervision of the thesis may be admitted. However one of the co-supervisors should be a teacher or researcher (holder of a PhD degree) at FEUC or at the Department of Economics, EEG-UM.

Within 30 days after obtaining approval in all course units of the first three semesters, the applicant must request the Scientific Council approval of her/his thesis project and approval of the supervisor. The application must also deliver a statement issued by the Programme Executive Board approving the thesis proposal and a statement of the supervisor confirming that he/she accepts to supervise the thesis.

Once the supervisor has been appointed, the applicant should proceed to the registration of the subject of the thesis, as well as of the thesis provisional plan.

Students will then be evaluated annually by the Executive Board of the programme, on the basis of their supervisor, or co-supervisors, evaluation.

2.5   Thesis and Doctoral Degree Defense

The thesis can be written in Portuguese or in English.

The doctoral thesis must be presented in accordance with the legislation and regulations in force in each one of the participating institutions.

The jury of the doctorate final examination is proposed by the Executive Board of the Programme to the Rector, in accordance with the regulations and laws in force.

Candidates who complete the Doctoral Programme, will be awarded a Doctoral Degree Diploma.

2.6   Ph.D. Student Workshop

Every year, a Ph.D. students workshop is organized. The workshop is open to students from Portuguese and foreign universities, and consists of presentations of papers by Ph.D. students followed by a discussion, also by Ph.D. students. The language of work is English and sessions take place at the School of Economics and Management of the University of Minho.

Participating in the workshop is important for receiving comments and suggestions to the research being implemented, improving students' presentation and reviewing skills, and for networking. Each year, students are also invited to participate in the event's organizing committee.

3. Functioning

3.1   Venues

During the first year of the programme, a school semester takes place at the University of Minho and the other one at the University of Coimbra. In 2019/20, the first semester will be offered at the University of Minho and the second at the University of Coimbra.

The third semester is offered in an articulated regime at the two universities.

3.2 Calendar and timetable

First Semester - University of Minho (Braga)

15/09/2023	22/09/2023	29/09/2023	06/10/2023	13/10/2023	20/10/2023	27/10/2023
Lesson 1 *Advanced Microeconomics I* 10h30-12h30 13h15-14h45	Lesson 2 *Advanced Microeconomics I* 10h30-12h30 13h15-14h45	Lesson 3 *Advanced Microeconomics I* 10h30-12h30 13h15-14h45	Lesson 4 *Advanced Microeconomics I* 10h30-12h30 13h15-14h45	Lesson 5 *Advanced Microeconomics I* 10h30-12h30 13h15-14h45	Lesson 6 *Advanced Microeconomics I* 10h30-12h30 13h15-14h45	**Final Test** *Advanced Microeconomics I* 14h-17h
Lesson 1 *Mathematical Economics* 14h45-18h15	Lesson 2 *Mathematical Economics* 14h45-18h15	Lesson 3 *Mathematical Economics* 14h45-18h15	Lecture 4 *Mathematical Economics* 14h45-18h15	Lesson 5 *Mathematical Economics* 14h45-18h15	**Final Test** *Mathematical Economics* 15h30-18h30	

03/11/2023	10/11/2023	17/11/2023	24/11/2023	15/12/2023	05/01/2024	12/01/2024	19/01/2024
Lesson 1 *Advanced Econometrics I* 10h30-12h30 *13h15-14h45*	Lesson 2 *Advanced Econometrics I* 10h30-12h30 *13h15-14h45*	Lesson 3 *Advanced Econometrics I* 10h30-12h30 *13h15-14h45*	Lesson 4 *Advanced Econometrics I* 10h30-12h30 *13h15-14h45*	Lesson 5 *Advanced Econometrics I* 10h30-12h30 *13h15-14h45*	Lesson 6 *Advanced Econometrics I* 10h30-12h30 *13h15-14h45*	**Final Test** *Advanced Econometrics I* 14h-17h	**Final Test** *Advanced Macroeconomics I* 14h-17h
Lesson 1 *Advanced Macroeconomics I* 14h45-18h15	Lesson 2 *Advanced Macroeconomics I* 14h45-18h15	Lesson 3 *Advanced Macroeconomics I* 14h45-18h15	Lesson 4 *Advanced Macroeconomics I* 14h45-18h15	Lesson 5 *Advanced Macroeconomics I* 14h45-18h15	Lesson 6 *Advanced Macroeconomics I* 14h45-18h15		

26/01/2024	02/02/2024	09/02/2024	10/02/2024
Exam *Mathematical Economics* 14h-17h	**Exam** *Advanced Econometrics I* 14h-17h	**Exam** *Advanced Microeconomics I* 14h-17h	**Exam** *Advanced Macroeconomics I* 14h-17h

Second Semester - University of Coimbra (Coimbra)

23/02/2024	01/03/2024	08/03/2024	15/03/2024	22/03/2024	05/04/2024	19/04/2024	26/04/2024	03/05/2024
Lesson 1 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 2 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 3 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 4 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 5 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 6 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 7 *Advanced Microeconomics II* 11h-12h30 13h15-14h45	Lesson 8 *Advanced Microeconomics II* 11h-12h30	**Final Test** *Advanced Microeconomics II* 14h-17h
Lesson 1 *Computational Methods* 14h45-18h	Lesson 2 *Computational Methods* 14h45-18h	Lesson 3 *Computational Methods* 14h45-18h	Lecture 4 *Computational Methods* 14h45-18h	Lesson 5 *Computational Methods* 14h45-18h	Lesson 6 *Computational Methods* 14h45-18h	Lesson 7 *Computational Methods* 14h45-17h45	**Final Test** *Computational Methods* 14h-17h	

10/05/2024	17/05/2024	24/05/2024	31/05/2024	14/06/2024	21/06/2024	28/06/2024	05/07/2024	12/07/2024
Lesson 1 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 2 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 3 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 4 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 5 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 6 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 7 *Advanced Macroeconomics II* 11h-12h30 13h15-14h45	Lesson 8 *Advanced Macroeconomics II* 11h-12h30	**Final Test** *Advanced Macroeconomics II* 14-17h
Lesson 1 *Advanced Econometrics II* 14h45-18h00	Lesson 2 *Advanced Econometrics II* 14h45-18h00	Lesson 3 *Advanced Econometrics II* 14h45-18h00	Lesson 4 *Advanced Econometrics II* 14h45-18h00	Lesson 5 *Advanced Econometrics II* 14h45-18h00	Lesson 6 *Advanced Econometrics II* 14h45-18h00	Lesson 7 *Advanced Econometrics II* 14h45-17h45	**Final Test** *Advanced Econometrics II* 14h-17h	

18/07/2024	19/07/2024	25/07/2024	26/07/2024
Exam *Computational Methods* 14h-17h	**Exam** *Advanced Econometrics II* 14h-17h	**Exam** *Advanced Microeconomics II* 14h-17h	**Exam** *Advanced Macroeconomics II* 14h-17h

3.3 Language of Instruction

Portuguese and English.

Unless all students are fluent in Portuguese, the language of instruction will be English. Students whose mother tongue is Portuguese can do exams in Portuguese. All faculty members are fluent in Portuguese and in English.

3.4 E-learning Platforms

Information circulates through the e-learning platforms of both Universities. Regardless of where the student enrolls, they will have access to platforms headquartered in both institutions.

At the University of Coimbra, the access is made through the site https://inforestudante.uc.pt/nonio/security/init.do).

At the University of Minho, the access is made through the site (https://elearning.uminho.pt/webapps/login/), using the student number.

3.5 Libraries, Databases and Software

Students will have access to the libraries, software and databases subscribed by both universities.

At the Faculty of Economics of the University of Coimbra, students will receive administrative support from the School of Advanced Studies (Escola de Estudos Avançados, http://www.uc.pt/feuc/eea, eea@fe.uc.pt) and from CeBER (http://www.uc.pt/en/uid/ceber, ceber@uc.pt). Databases are housed in CeBER and in FEUC's library (http://www.uc.pt/feuc/biblioteca). Through the University of Coimbra's network, students can access a wide range of digital resources (http://www.uc.pt/sibuc).

At U Minho, the Research Support Office (GAI) is the umbrella for all the EEG-UM's Research Units. Hence, it seeks to ensure the following activities:

- The coordination of research activities in order to foster interdisciplinary research initiatives and to apply for external funding of infrastructure or large interdisciplinary programs;

- The institutional representation of the School's Research Units;

- Databases management;

In the GAI's website students may find all the scientific publications produced by the school's researchers as well as have access to all the databases available: https://www.eeg.uminho.pt/

The University Library provides excellent access to bibliographic databases and data, as well as to books adopted as bibliography for the different course units. The library provides for individual and group study rooms.

Students can access to much of the Library digital resources consulting the catalog and making books' reservations at http://www.sdum.uminho.pt/.

3.6   Study Rooms and Computer Labs

In Coimbra, PhD students have exclusive access to a dedicated room located on level 4 of the Research Building (*Sala de Doutorandos*). This large room has two divisions, one equipped with computers, the other providing desk space for students wishing to read, write or use their laptops.

PhD Students have a room at the EEG-UM – Room 1.34 (*Sala de Doutorandos*).

The Economics Department of the EEG-UM has a computer lab headquartered. Please ask for the key to Susana Figueiredo (GAI). The UM has two major computer labs, one in the Pedagogical Complex I (*Complexo Pedagógico I*) whose working hours are from 08:00 to 22:00 and another in the Pedagogical Complex II (*Complexo Pedagógico II*) from 08:00 to 23:30.

3.7 Administrative Services Contacts

UNIVERSIDADE DE COIMBRA
Alexandra Sousa
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3004-512 COIMBRA
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UNIVERSIDADE DO MINHO
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Conselho Pedagógico
Campus de Gualtar
4710-057 Braga

Portugal
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E-mail:doutoramentos@eeg.uminho.pt

3.8 Merit Awards and Opportunities for collaboration at FEUC and EEG-UM

In the context of the activities developed at FEUC and EEG-UM, and their research units (CeBER and NIPE), there are opportunities for collaboration for PhD students. Students may also be invited for teaching activities.

Should there be available financial funds, the Executive Board of the Doctoral Programme will support the participation of students who are working on their thesis, in prestigious international conferences and in advanced courses of short duration.

3.9 Scholarships and Prizes Awarded by Other Institutions

The FCT opens an annual contest for the award of Ph.D. scholarships. The deadline for submitting applications is usually in February /March.

Further information can be found at https://www.fct.pt.

The *Ordem dos Economistas* (Portuguese professional association of economists) awards, annually, a prize for the best Ph.D. thesis (Prize António Simões Lopes).

The Prize Mendes Pinto is awarded annually by the Association of Portuguese Speaking Universities (AULP). It distinguishes a master or doctoral thesis that contributes to the approximation of Portuguese speaking communities.

CRUP's Integrated Actions are joint programs for enhancing scientific cooperation, through the exchange of faculty and researchers, between Portugal and other countries.

3.10 Internationalisation

Students are strongly encouraged to study at least one academic semester in a foreign University.

The University of Coimbra has student exchange protocols in the area of Economics with about one hundred universities around the world (Europe, America, Africa and Asia). There are, in particular, very close links within the Coimbra Group, a long-established network of highly ranked European Universities, and also within the "Grupo de Coimbra de Universidades Brasileiras", a partnership between the University of Coimbra and the most prestigious Brazilian public universities. The latter has enabled FEUC to receive foreign doctoral students for a period of typically one year (or one semester). There are also foreign students enrolled in the PhD program who have scholarships funded through ERASMUS mundus consortiums, mostly from Argentina and Chile. The Administrative Head Office of the Internationalisation Mobility and Exchange Programmes is Margarida Isabel Santos (intfeuc@fe.uc.pt; phone: 351 239 790 506/516; http://www.uc.pt/feuc/internacionalizacao/).

For its part, the EEG-UM holds a wide range of student exchange agreements with foreign institutions. The International Relations Office (www.gri.uminho.pt) of the University of Minho concentrates and provides all the necessary information to students who wish to study abroad. You can also look for information in the Office for International Mobilty Programmes (PMI) headquartered at the EEG-UM and contact Estela Vieira estelav@eeg.uminho.pt | Office EEG -1.06 | Telephone: 253 601 904.

3.11   Accommodation

Students enrolled at FEUC can apply for accommodation at the Welfare Services of the University of Coimbra (SASUC) directly (gabadmin@sas.uc.pt). UC provide accommodation in university residences located in the three university campuses, nearby the Faculties, Research Centres and other study facilities. The residences are furnished and equipped; there is weekly laundry service of bed clothing and bathroom towels, offering students great comfort and safety. Learn more at https://apps.uc.pt/accommodation?locale=en.

Students enrolled at U Minho can apply for accommodation at the Halls of Residence. They should contact the Social Services (alojamento@sas.uminho.pt) directly. In Braga, the Halls of Residence offer single and double rooms. Apart from university housing, Braga has an extensive private accommodation offer. Upon arrival at U Minho, a list of rooms/apartments available can be obtained at the Students' Support Office (Gabinete de Apoio ao Aluno).

3.12   Tuition Fees

The attendance of the Doctoral Programme is subject to the payment of tuition fees and the amount shall be equal in both institutions and established by mutual agreement.

During the course work of the Doctoral Programme, students may enroll in any of the universities (University of Coimbra or University of Minho).

After the approval of the thesis project, each student will register in the respective Advisor's University.

3.13   Other Information

Should you require more information, please do resort to the websites http://www.uc.pt/feuc/ https://www.eeg.uminho.pt, or contact us by email (eea@fe.uc.pt and PhD-econ@eeg.uminho.pt).