



## Study Plan

**School:** Institute for Advanced Studies and Research

**Degree:** Doctorate

**Course:** Management (cód. 691)

### 1st Year - 1st Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
GES12555D	Analitical Models	Management	9	Semester	234
GES12557D	Research Methods I	Management	9	Semester	234

### Group of Options

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
GES12556D	Decision Models	Management	6	Semester	156
MAT12612D	Methods of Multivariate Statistics	Mathematics	6	Semester	156
GES12559D	Topics in Strategic Management	Management	6	Semester	156
GES12560D	Entrepreneurship and Innovation	Management	6	Semester	156
GES12561D	Markets and Prices	Management	6	Semester	156
GES12562D	Topics in Organizational Behaviour	Management	6	Semester	156
GES12670D	Advanced Topics in Marketing Research	Management	6	Semester	156
GES12563D	Tópicos in Corporate Finance	Management	6	Semester	156
GES12564D	Tópicos in Investments	Management	6	Semester	156
GES12565D	Topics of Organization and Information Systems	Management	6	Semester	156
GES12566D	Advanced Topics in Accounting	Management	6	Semester	156
GES12669D	Topics of Logistic and Operations Management	Management	6	Semester	156

### 1st Year - 2nd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
ECN12558D	Research Methods II	Economy	9	Semester	234
GES12554D	Fundamental Theories of Management and their Application	Management	9	Semester	234



### 1st Year - 2nd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
<b>Group of Options</b>					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
GES12556D	Decision Models	Management	6	Semester	156
MAT12612D	Methods of Multivariate Statistics	Mathematics	6	Semester	156
GES12559D	Topics in Strategic Management	Management	6	Semester	156
GES12560D	Entrepreneurship and Innovation	Management	6	Semester	156
GES12561D	Markets and Prices	Management	6	Semester	156
GES12562D	Topics in Organizational Behaviour	Management	6	Semester	156
GES12670D	Advanced Topics in Marketing Research	Management	6	Semester	156
GES12563D	Tópicos in Corporate Finance	Management	6	Semester	156
GES12564D	Tópicos in Investments	Management	6	Semester	156
GES12565D	Topics of Organization and Information Systems	Management	6	Semester	156
GES12566D	Advanced Topics in Accounting	Management	6	Semester	156
GES12669D	Topics of Logistic and Operations Management	Management	6	Semester	156

### 2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
GES9795D	Development and Discussion of the Thesis Project	Management	30	Semester	780

### 2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Thesis				

### 3rd Year - 5th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
GES12610D	Research Seminars I	Management	6	Year	156
	Thesis				

### 3rd Year - 6th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
	Thesis				

### 4th Year - 7th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
GES12611D	Research Seminars II	Management	6	Year	156



#### 4th Year - 7th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
Thesis					

#### 4th Year - 8th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
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#### Conditions for obtaining the Degree:

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Para aprovação na componente curricular é necessário a aprovação (através de avaliação ou creditação) das seguintes unidades curriculares:

1º Ano

{\ }newline

1º Semestre

{\ }newline

2 UC obrigatórias num total de 18 Ects {\ }newline

2 UC optativa num total de 12 ECTS conforme quadro de optativas {\ }newline

{\ }newline

2º Semestre:

{\ }newline

2 UC obrigatórias num total de 8 Ects {\ }newline

2 UC optativa num total de 12 ECTS conforme quadro de optativas

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Para obtenção do grau necessita de obter ainda aprovação a:

2º Ano {\ }newline

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3º Semestre: {\ }newline

1 UC obrigatória num total de 30 ECTS

3º Ano {\ }newline

{\ }newline

5º Semestre: {\ }newline

1 UC obrigatória num total de 6 ECTS

4º Ano {\ }newline

{\ }newline

{\ }newline

7.º Semestre: {\ }newline

1 UC obrigatória num total de 6 ECTS {\ }newline

{\ }newline

e aprovação nas provas públicas de defesa da Tese com inscrição na mesma a partir do 2º ano {\ }newline

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## Program Contents



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### **Analitical Models (GES12555D)**

#### 1. Individual decision making under uncertainty

Elements in a decision problem

Decision criteria without probabilities

Expected value and expected utility theory

Behavioral aspects in decision making

Utility extraction methods

Sequential decision making

#### 2. Linear Programming models

Formalization and models

Linear programming – Graphical solution

The logic of the Simplex algorithm

Sensitivity analysis and dual interpretation

#### 3. Optimization

Derivatives

The chain rule and the implicit function theorem

Optimization

Constrained optimization with equality constraints

Constrained optimization with inequality constraints

#### 4. Decision in situations of strategic interdependence

Formalization of a game

Static games of complete information

Dynamic games of complete information

Static games of incomplete information

Dynamic games of incomplete information



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### **Research Methods I (GES12557D)**

- 1 - Quantitative research methods
  - Quantitative research designs
  - Structured interviews and questionnaires
  - Structured observation
  - Secondary data
  - Introduction measurement theory
  - Psychometric scales: reliability analysis and exploratory, factor analysis
  - Cluster and Discriminant Analysis
- 2 – Qualitative research methods
  - Qualitative research designs
  - Data sources
  - Data collection instruments
  - Data processing qualitative research
  - Qualitative data analysis software
  - Validity and transferability qualitative research
  - Scientific writing
- 3. Literature reviews
  - Introduction: concept, objectives and current relevance
  - Systematic, integrative, narrative and reviews of literature
  - Meta-analyzes
- 4. World scientific community
  - World Organization of Knowledge Production
  - Identification of researchers and authorship
  - Scientific production
  - Databases and their Worldwide Organization
  - Scientific communication
  - Scientific metrics

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### **Decision Models (GES12556D)**

- 1 - Decision Theories in context of risk, uncertainty and ambiguity
  - 1.1 Behavioural aspects of decision making
  - 1.2 Expected Utility Theory
  - 1.3 Prospect Theory
  - 1.4 Alternative decision theories in risk context
  - 1.5 Methods of eliciting utility
- 2 - Optimization models
  - 2.1 Specific models of Linear Programming
  - 2.2 Multi-objective, Dynamic and Integer Programming Models
  - 2.4 Data Envelopment Analysis (DEA)

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### **Methods of Multivariate Statistics (MAT12612D)**

- 1. Multivariate Statistical Methods: an introduction. Concepts.
- 2. Multivariate data examination.
- 3. Multivariate dependence techniques (multiple linear regression, discriminant analysis, multivariate variance analysis and other topics) and multivariate interdependence techniques (Cluster analysis, exploratory factor analysis, confirmatory factor analysis and other topics).
- 4. An introduction to structural equation modeling (SEM).



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### **Topics in Strategic Management (GES12559D)**

- 1 – Strategic theory and practice: from intentionality to emergency;
- 2 – Concepts, tools, approaches and application contexts: from the market-based view to the resource-based view;
- 3 – Think and act strategically for competent management: “co-opetitive” dynamics, innovation and internationalization;
- 4 – The global approach to strategic planning: from classic to modern;
- 5 – Strategy research.

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### **Entrepreneurship and Innovation (GES12560D)**

Part I

- 1.1 Entrepreneurship Characterization
- 1.2 Comparison and Analysis (Macro) of Entrepreneurship
- 1.3 The entrepreneurial process
- 1.4 Intra-entrepreneurship or corporate entrepreneurship
- 1.5 Understanding innovation and connection with entrepreneurship

Part II

- 2.1 Dynamics of Innovation: Technology as innovation agent
- 2.2 Dynamics of Innovation: The innovator´s dilemma
- 2.3 Dynamics of innovation: Dominant design
- 2.4 Dynamics of innovation: An integrated model
- 2.5 Diffusion of Innovation



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### **Markets and Prices (GES12561D)**

#### 1. Markets and Market Structure

Revision of the perfect competition and monopoly models

Monopolistic Competition

Market definition and concentration measures

#### 2. Topics on Monopoly theory

Price discrimination

Multiproduct monopoly

Quality and Advertising

#### 3. Oligopoly Models

Cournot Model

Bertrand Model

Stackelberg Model

Solutions to Bertrand paradox

Price competition with capacity constraints

#### 4. Product Differentiation

Horizontal differentiation models

Vertical differentiation models

Switching costs and imperfect information

Advertising

#### 5. Repeated Interaction and Collusion

Non sustainability of collusion in the short-run

Conditions for collusion to be sustainable

Collusion with demand fluctuations

Collusion with non-observable prices

#### 6. Strategic behaviour, entry, exit and accommodation

Blocked entry, deterred entry and accommodated entry

Taxonomy of firm strategies

Strategic behaviour and incomplete information

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### **Topics in Organizational Behaviour (GES12562D)**

Module 1 - Trends in Organizational Behavior models - Confluence of Perspectives and Models

Module 2 - Structure, Culture and Organizational Leadership - Relationships, Interactions and Contradictions

Module 3 - Social and Organizational Impacts of Technology - From Taylorism to Modern Post-Taylorism

Module 4 - Innovation, Creativity and Organizational Change - The Responsibility to Reinvent Organizations

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### **Advanced Topics in Marketing Research (GES12670D)**

Module 1- Green Marketing

Module 2 – Neuromarketing

Module 3- Social Networking Marketing

Module 4 – Social Marketing

Module 5- Marketing on-line e Mobile Marketing

Module 6 – Experiential Marketing



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### **Tópicos in Corporate Finance (GES12563D)**

Understand the role of financial theory and evidence.

Risk, return and Markets Efficiency.

Advanced topics about capital budgeting and investment decision.

Informational asymmetries and capital structure.

Dividend policy: empirical evidence and applications.

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### **Tópicos in Investments (GES12564D)**

1 Basic notions of stochastic calculus

2 Basic notions of arbitrage based valuation applied to dynamic financial models

a) Pricing e Hedging

b) Fundamental theorem of asset valuation

c) Derivatives valuation (European and American type)

d) Cox, Ross, and Rubinstein binomial model (discrete time)

d) Deduction of Black-Scholes formula

d) Complete versus incomplete markets

3 Interest rate models

a) Models for short term interest rates

b) Models for the Forward interest rate

4 Optimization problems

a) Portfolio optimization

b) Risk minimization

c) Valuation in incomplete markets

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### **Topics of Organization and Information Systems (GES12565D)**

Module 1 - Basic concepts. Information Society and Knowledge Society.

Module 2 - Strategy, IS/ICT and Management Model.

Module 3 - Activities of Management of Information Systems.

Module 4 - New developments on Information Systems.

Module 5 – Benefits Management on Investments on IS/IT.

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### **Advanced Topics in Accounting (GES12566D)**

Issues on Financial Accounting

1. Conceptual framework

2. Financial accounting research

3. Emergent issues on financial accounting

Issues on Management Accounting

4. Conceptual framework

5. Management accounting research

6. Emergent issues in management accounting





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### **Topics of Logistic and Operations Management (GES12669D)**

Module 1 – Logistics and supply chain management

- Logistics and management of logistics chains
- Logistics chains strategies
- Decisions under risk and uncertainty in logistics chains

Module 2 – Flows management in logistics chains

- Aggregated planning and transports management
- Inventory management and demand forecast
- Information management in logistics chains
- Marketing and e-commerce in logistics chains management

Module 3 – Planning logistics chains

- The design of new logistics chains
- Schedule of logistics projects and networks
- Schedule of logistics services

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### **Research Methods II (ECN12558D)**

1. Sampling methods
2. Estimation and statistical inference
3. Linear Regression Model: estimation; specification, models with qualitative explanatory variables; endogeneity.
4. Discrete and limited variable models.
5. Introduction to time series models.
6. Introduction to panel data models
7. Introduction to Structural equation modeling

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### **Fundamental Theories of Management and their Application (GES12554D)**

Part 1- Overview of management thought

- A brief history of management thought
- Emergence of marketing as a research área
- The Japanese revolution
- Competitive advantage
- The military theorists

Part 2- Some importante theoretical lenses

- agency theory
- transaction cost analysis
- resource based view (RBV)
- contingency theory.

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### **Development and Discussion of the Thesis Project (GES9795D)**

This item is not relevant for this curricular unit. However, it is important to mention that students follow a guide in the preparation of the thesis project that is inspired by the forms used in the FCT PhD grant applications. The form imposes word limits in each of the fields and forces the student to be very succinct and direct. The fields are as follows: {\}newline  
Abstract (max. 150 words) Literature review (max. 500 words) Objectives (max. 300 words); Detailed description (max. 1000 words) and References (maximum 30). The guide also draws attention to the fact that the literature review should be a critical review and that the detailed description should indicate the contributions of project to the literature, the methodologies used and the expected results of the project.



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**Research Seminars I (GES12610D)**

This item is not relevant for this curricular unit.

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**Research Seminars II (GES12611D)**

This item is not relevant for this curricular unit.