

COURSE DESCRIPTION AND OUTLINE

Subject Information	
Nombre	FOUNDATIONS OF FINANCE
Titulación	Degree in Business Analytics, and Law (E-3 Analytics), Business Analytics and International Relations (E-6 Analytics) and Business Analytics and Business
Curso	2nd & 3rd
Cuatrimestre	1st & 2nd
Créditos ECTS	6
Carácter	Core
Departamento	Financial Management
Área	Finance
Horario	TBA in web
Coordinador	Carlos Bellón Núñez-Mera
Descriptor	Explains the concepts and financial theories for a practical and solid application of technological tools and analytical software, already learned in methodological subjects, in this field: Students will understand the critical factors that affect the risk-return of financial assets, and to the success or failure of financial investments. The modeling of financial assets is studied using the contents seen in the subject of financial mathematics and in the subject methods of data analysis.

Teacher information	
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DETAILED COURSE INFORMATION

The course in context

Contribution to employability

Foundations of Finance is a core semester-long subject. Taught on the third year of the Business Analytics degree.

Together with *Corporate Finance* course, they constitute the basis for the rest of core and optional course in the finance itinerary.

Familiarity with the concepts and methodologies introduced in *Foundations of Finance* is required of any student of Business Analytics, regardless of her future concentration. This knowledge will be important in her future professional endeavors, whether these take place in firms in the financial sector or elsewhere, including public administration or the NGO sector.

Re-requisites

To attend *Foundations of Finance* students must have knowledge imparted in the following subjects:

Introduction to Accounting, Financial Accounting for Decision Making, Financial Mathematics, Statistics and Probability, Introduction to Programming and *Introduction to Business Analytics*.

Competences - Objectives

Degree Specific competences

CG 1 – Ability to organize, plan, and identify problems in the context of big data.

CG 2 – Ability to analyze massive data from different types and sources: text, audio, numerical, image, ...

CG 4 – Ability to build up projects and reports in a written and oral manner, spreading ideas through digital channels.

CG 9 – Ethical commitment in the society of information

CG 11 – Ability to learn and work autonomously in the society of information

CG 12- Resilience in the professional workplace in the society of information

Course-Area Specific competences

CE 8. Understand the analytical and predictive ability of managerial accounting in decision making.

- RA1: Is able to quantify and analyze financial decisions from the point of view of value creation.

Understands the role of the finance director in light of this principle y and the adequate use of technology in this role.

- RA2: Uses data mining techniques to understand the relationship between risk and reward; is familiar with the investment analysis and selection methodology by modeling different financial scenarios; knows the methods for valuing financial assets; uses financial mathematics for modeling assets; and distinguishes different financing sources.

- RA3: Applies basic descriptive analysis and knows how to make inferences by using the appropriate software, employing modeling and simulation techniques on the accounting data.

- RA4: Understands and estimates the impact of business margins in managerial strategy and decision-making.

CE 11. Understands and analyzes, with the help of big data and data-intensive techniques, the interrelations between financial markets and the macroeconomy.

- RA1: Understands economic and financial theory that support international financial markets and its relationship.

PROGRAMME

Chapter 1: INTRODUCTION
1.1 Introduction 1.2 Underlying principles in corporate finance 1.3 The financial objective of the company: the value creation 1.4 The time value of money 1.5 Introduction to investment valuation methods: NPV and IRR
Chapter 2: FIXED INCOME VALUATION
2.1 Bond valuation 2.2 Interest rate risk 2.3 Duration and convexity 2.4 Characteristics of data on fixed income securities
Chapter 3: STOCK VALUATION
3.1 Basic concepts: market value, book value and intrinsic value 3.2 The Dividend Discount Model 3.3 Valuation via multiples 3.4 Fundamental and technical analysis 3.5 Dividend policy 3.6 Characteristics of data on stocks
Chapter 4: PORTFOLIO THEORY
4.1 Market efficiency 4.2 Diversification, risk and return 4.3 The efficient frontier 4.4 The capital market line 4.5 CAPM 4.6 Other methods of valuing financial assets
Chapter 5: OPTIONS, FUTURES AND OTHER DERIVATIVES
5.1 Derivative financial instruments 5.2 Futures and forwards 5.3 Financial options 5.4 Use of financial derivatives

TEACHING METHODS

Teaching methods inside the classroom	Competencias
<ol style="list-style-type: none"> Lectures and presentations. The professor will introduce key concepts and methods through lectures, small presentations, practical examples and student participation. In class resolution of problems. Solving basic problems in class to introduce methodologies and apply theoretical concepts. Professor and students will solve the problems cooperatively. Live coding sessions. Professor and students will write programs to apply the concepts learnt to real world problems. Office hours. Individually or in groups, to solve questions and doubts that students may have after introducing each chapter. As well as to guide students in their learning process. 	<p>CE 9, CE 10, CE 11, CG 9, CG 12</p> <p>CE 8, CE 9, CG 1</p> <p>CE 8, CE 9, CG 1</p>
Teaching methods outside the classroom	Competencias
<ol style="list-style-type: none"> Individual study of the material to be discussed in later classroom sessions. This activity is undertaken by the student individually by reading, analyzing, and interiorizing the information provided by the course and it will be discussed with peers and profesor in later classroom activities. Solving practical problems outside of class. Once the key concepts and methodologies have been introduced, the student will apply them to solve practical problems proposed by the professor. Group Project: Application to real world problems. An application of concepts and methods learnt in the course to real world data will be developed in teams. 	<p>CE 8, CE 9, CE 10, CE 11, CG 9, CG 12</p> <p>CE 8, CE 9, CE 10, CG 1, CG 2, CG 11</p> <p>CE 8, CE 9, CE 10, CG 1, CG 2, CG 4, CG 11</p>

ASSESSMENT AND EVALUATION CRITERIA

Activities	Weight
Final Exam	50%
Group Project	20%
Individual assignments and exams	20%
Classroom participation	10%
A detailed breakdown of activities will be provided at the start of the semester.	

In order to pass the course in the first sitting, students must obtain at least a 5.0 in the final exam on top of a total grade above 5.0. In the second and following sittings the course grade will be 100% the grade of the written final exam. This will also apply to students that have a formal exemption (of at least 50%) to attend class (including those who are on an exchange programme abroad).

According to the General Regulations of the University, art. 168.2.e: "carrying out actions tending to falsify or defraud the academic performance evaluation systems", the improper use of ChatGPT or another IAG will be considered a serious offense. The consequences of this will include "temporary expulsion of up to three months or the prohibition to take the exam in the next call to the imposition of the sanction, in one or several subjects in which the student is

enrolled, [...] apart from assuming the grade of fail (0) in the respective subject, [...] [and] the prohibition to take the exam in that subject in the next call." Specifically, in this subject, the teacher may allow the use of IAG for specific activities of the subject; where the student is obliged to do the following:

- That the student clearly indicates why he has used IAG (ChatGPT). All content created with generative AI must be labelled as such. All content that uses generative AI and is adapted, must be labelled in the same way as authors are cited.
- It includes as additional material (annexes) the complete prompt (questions and answers) of your conversation with IAG (ChatGPT) to generate the task.

In case of not complying with the above obligations, the use of IAG by the student will be considered improper use for the purposes mentioned above.

SUMMARY OF STUDENT WORK DISTRIBUTION			
Hours inside the classroom: 60			
Case and problem solving	Lessons	Seminars and workshops	Tutorials
30	30	16	4
Hours outside the classroom: 90			
Individual and group study	Tutorials		
86	4		
CRÉDITOS ECTS:			6

BIBLIOGRAPHY AND ADDITIONAL READINGS

Bibliography
Text books
ROSS, Stephen A.; WESTERFIELD, Randolph W.; JAFFE, Jeffrey and JORDAN, Bradford D. (2021): Core Principles and Applications of Corporate Finance: Global Edition, 6th edition. Ed. Mc Graw-Hill.
Articles and news
A variety of material will be handed out in the classroom or through the course webpage
Additional material
Slides on each chapter will be published in Moodle
Additional Reading List
Textbooks
<ul style="list-style-type: none"> ▪ DAMODARAN, A. (2014). <i>Applied Corporate Finance</i>. Ed. John Willey & sons (4th edition) ▪ BREALEY, Richard; MYERS, Stewart y ALLEN, Franklin (2014): <i>Principles of Corporate Finance</i>, 11th edition. Ed. Mc Graw-Hill. ▪ BREALEY, Richard; MYERS, Stewart y MARCUS, Alan (2012): <i>Fundamentals of Corporate Finance</i>, 7th edition. Ed. Mc Graw-Hill. ▪ HILPISCH, Yves (2014): <i>Python for Finance</i>. Ed. O'Reilly. Sebastopol, CA. ▪ ROSS, Stephen A.; WESTERFIELD, Randolph W. and JAFFE, Jeffrey (2012): <i>Finanzas Corporativas</i>, 9^a edición. Ed. Mc Graw-Hill. ▪ PRAT, Margarita (coord.) (2007): <i>Ejercicios resueltos de finanzas</i>. Ed. U.P.Comillas,