

COURSE DESCRIPTION AND OUTLINE

Subject Information	
Nombre	FUNDAMENTAL OF FINANCE
Titulación	Degree in Business Analytics, and Law (E-3 Analytics), and Business Analytics and Business Administration (ADE Analytics)
Curso	2º & 3º
Cuatrimestre	1º & 2º
Créditos ECTS	6
Carácter	Core
Departamento	Financial Management
Área	FINANCE
Horario	To be announced through the web page
Profesores	Carlos Bellón
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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Despacho	TBA

DETAILED COURSE INFORMATION

The course in context

Contribution to employability

Fundamental 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 *Fundamental 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 *Fundamental 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

Competencias Genéricas del título-curso

- CG 1 - Capacidad de organización y planificación en la identificación de problemas en el contexto de datos masivos
- CG 2 - Capacidad de análisis de datos masivos procedentes de diversas fuentes: texto, audio, numérica e imagen
- CG 4 – Capacidad para elaborar proyectos e informes de manera oral y escrita, difundiendo estas ideas a través de canales digitales
- CG 9 - Compromiso ético en la sociedad de la información
- CG 11. Capacidad para aprender y trabajar autónomamente en la sociedad de la información
- CG 12 - Capacidad de adaptación y flexibilidad al entorno profesional en la sociedad de la información

Competencias Específicas del área-asignatura

CE 8. Conocer y comprender la contabilidad de gestión en su versión analítica y predictiva para la toma de decisiones de gestión

- RA3: Aplica el análisis descriptivo básico y sabe realizar inferencias con el software adecuado para tratar, modelizar y hacer simulaciones de los datos de la contabilidad de gestión.
- RA4: Entiende y estima el impacto en los márgenes empresariales de las decisiones y estrategias de gestión.

CE 9. Conocer y comprender las teorías financieras en un marco de gestión analítica y de utilización intensiva de nuevas tecnologías.

- RA1: El alumno es capaz de cuantificar y analizar cualquier decisión financiera desde el punto de vista de creación de valor. Comprende la labor del director financiero a la luz de este principio y el uso adecuado a esta función de las herramientas tecnológicas.
- RA2: El alumno hace uso de las técnicas de *Data Mining* para la comprensión de la relación entre rentabilidad y riesgo, conoce la metodología de análisis y selección de inversiones modelizando diferentes escenarios financieros, domina las técnicas de valoración de activos y hace uso de las matemáticas financieras para su modelización, y distingue las diversas fuentes de financiación.

- RA3: Es capaz de identificar los datos financieros relevantes, y de utilizar la inferencia estadística como soporte para tomar decisiones tanto de inversión como de financiación, diseñando e implantando técnicas analíticas y financieras de gestión avanzada de la empresa.
- RA4: Comprende la problemática financiera de las empresas y del sector público y entiende la influencia del entorno digital.

CE 10. Conocer y comprender los mercados financieros y el uso de Big Data en un contexto financiero nacional e internacional.

- RA1: Identifica los mecanismos de funcionamiento de los mercados financieros internacionales y conoce los datos financieros disponibles en estos mercados.
- RA2: Comprende la transformación a la que están expuestos los mercados financieros con la era digital.
- RA3: Sabe utilizar técnicas estadísticas, econométricas y de simulación a los datos de productos financieros producidos en los mercados para estimar sus perfiles de riesgo-rentabilidad.
- RA4: Conoce y valora los riesgos de los mercados financieros y es capaz de hacer predicciones utilizando datos masivos.

CE 11. Conocer y analizar, con el uso de Big Data y tecnologías intensivas en datos, las interrelaciones entre la macroeconomía y los mercados financieros.

- RA1: Conoce la teoría económica y financiera que da soporte a estos mercados y a su relación

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
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
Chapter 5: COST OF CAPITAL
5.1 Concept of capital cost 5.2 Elements that determine the weighted average of cost capital (WACC) 5.3 The cost of equity 5.4 The cost of debt
Chapter 6: OPTIONS, FUTURES AND RISK MANAGEMENT

6.1 Derivative financial instruments

6.2 Futures and forwards

6.3 Financial options

6.4 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>

ASSESMENT 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 4.0 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).

SUMMARY OF STUDENT WORK DISTRIBUTION			
Hours inside the classroom: 60			
Lessons	Case and problem solving	Seminars and workshops	Tutorials
30	10	16	4
Hours outside the classroom: 90			
Individual and group study	Case and problem solving		Tutorials
72	14		4
CRÉDITOS ECTS:			6

BIBLIOGRAPHY AND ADDITIONAL READINGS

Bibliography
Text books
ROSS, Stephen A.; WESTERFIELD, Randolph W.; JAFFE, Jeffrey and JORDAN, Bradford D. (2018): Core Principles and Applications of Corporate Finance: Global Edition, 5th 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. ▪ 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,