

# Syllabus

## *Course Description*

Course Title	AI and Financial Decision Making (FIN III)
Course Code	25407
Course Title Additional	
Scientific-Disciplinary Sector	ECON-09/A
Language	Italian
Degree Course	Master in Accounting and Finance
Other Degree Courses (Loaned)	
Lecturers	Dott. Carlo Milani, Carlo.Milani@unibz.it <a href="https://www.unibz.it/en/faculties/economics-management/academic-staff/person/45265">https://www.unibz.it/en/faculties/economics-management/academic-staff/person/45265</a>
Teaching Assistant	
Semester	First semester
Course Year/s	2
CP	6
Teaching Hours	36 Online
Lab Hours	-
Individual Study Hours	-
Planned Office Hours	18 Online
Contents Summary	<ul style="list-style-type: none"> <li>- This course explores the application of artificial intelligence (AI) in financial decision-making processes.</li> <li>- Students learn machine learning techniques, using R software at an intermediate level.</li> <li>- The programme includes predictive models, classification, regression, neural networks, clustering and dimensionality reduction.</li> <li>- Teaching activities combine lectures, tutorials, practical projects and expert talks.</li> <li>- Assessment is based on written examination, presentation of a paper with generative AI support and development of a data</li> </ul>

	science project.
<b>Course Topics</b>	
<b>Keywords</b>	
<b>Recommended Prerequisites</b>	
<b>Propaedeutic Courses</b>	
<b>Teaching Format</b>	
<b>Mandatory Attendance</b>	The regular attendance of the lectures is strongly recommended
<b>Specific Educational Objectives and Learning Outcomes</b>	<p>Knowledge and understanding</p> <p>"Master's degree graduates should be able to acquire an advanced level of preparation that allows for an articulate and integrated view of the finance issues of companies, financial intermediaries, financial institutions and markets. These learning outcomes are achieved through an advanced knowledge and understanding</p> <ul style="list-style-type: none"> <li>- of the economic-financial planning and evaluation of new investments;</li> <li>- of the characteristics associated with extraordinary moments in corporate management, such as capital transactions, recourse to financial markets, mergers and acquisitions, corporate crisis and reorganisation;</li> <li>- the problems and techniques of the organisation and financial management of companies and financial intermediaries;</li> <li>- the fundamentals of corporate finance for the correct application of, for example, decision-making models and financial data and risk management to treasury management;</li> <li>- the management and economic models of the different types of intermediaries, market microstructure, the operational efficiency of financial markets and the impact of financial markets on the economic conditions of intermediaries;</li> <li>- a wide range of investment, financing and risk management instruments, starting with the fundamentals of portfolio diversification and classical asset pricing and risk measurement models;</li> <li>- of the specific finance issues that characterise the profession of Financial Analyst, Portfolio Manager, Chief Financial Officer (CFO), Chief Administrative Officer, Controller, Internal Auditor and business consultant."</li> </ul> <p>"Master's graduates should be able to acquire an advanced level of preparation that allows for an articulated and integrated view of</p>

	<p>business management issues and of economic-quantitative, financial and legal disciplines. These learning outcomes are achieved through an advanced knowledge and understanding</p> <ul style="list-style-type: none"> <li>- of the economic-business models and tools for the management of companies, whether family or small or of international dimension;</li> <li>- of the design and management of institutional and organisational structures inherent to corporate governance systems;</li> <li>- of business tools and processes developed to recognise, understand and guide change and manage the impact of a transition on the organisation;</li> <li>- of efficient communication strategies within the organisation and towards the various stakeholders.</li> <li>- Management issues that characterise the profession of financial analyst, portfolio manager, risk manager and consultant."</li> </ul> <p>Applying knowledge and understanding:</p> <p>Ability to apply knowledge in the area of Finance to be able to carry out analysis of complex problems in a national and international interdisciplinary context</p> <p>Ability to apply knowledge in the area of Finance for the design and implementation of corporate restructuring and other extraordinary transactions</p> <p>Ability to apply knowledge in the area of Finance for the identification, evaluation and management of investments in financial markets</p> <p>Ability to apply knowledge in the area of Finance for the design of coherent financial management strategies in companies or financial intermediaries, competently applying acquired knowledge in risk management techniques, asset valuation, treatment of derivatives</p> <p>Ability to apply knowledge in the area of Management for the critical analysis and formulation of solutions to complex problems in national and international interdisciplinary contexts in small or large organisations</p> <p>Ability to apply knowledge in the area of management to integrate the results of economic and financial communication and quantitative data analysis into business decision-making models</p> <p>Ability to apply knowledge in the area of Management to frame and evaluate organisational situations and problems in a multidisciplinary perspective, integrating business, economic, legal,</p>
--	---

	<p>financial and statistical-mathematical disciplines</p> <p>Ability to apply knowledge in the area of Management to be able to dialogue and interact with the managers of the various company functional areas, with financial markets and with corporate and tax law professionals</p> <p>Making judgements:</p> <p>Ability to apply the knowledge acquired to make managerial and operational decisions and to solve problems in the administration and finance of companies, intermediaries and financial markets, jointly taking into consideration multiple perspectives of analysis, from the economic to the legal, financial, strategic and managerial ones.</p> <p>Ability to select data and use appropriate information to describe a problem concerning the management of companies, intermediaries and financial markets.</p> <p>Ability to relate models and empirical evidence in the study of companies, intermediaries and financial markets.</p> <p>Communication skills:</p> <p>Ability to communicate effectively in oral and written form the specialised contents of the individual disciplines, using different registers according to the recipients and the communicative and didactic purposes, and to evaluate the formative effects of its communication</p> <p>Learning skills:</p> <p>a) ability to use information technology autonomously to carry out bibliographic research and investigations and for one's own training and updating</p> <p>b) ability to identify thematic links and establish relationships between different cases and contexts of analysis</p> <p>c) ability to frame a new problem systematically and to generate appropriate taxonomies</p> <p>d) ability to develop general models from the phenomena studied;'. </p>
<b>Specific Educational Objectives and Learning Outcomes (additional info.)</b>	
<b>Assessment</b>	

Evaluation Criteria	
Required Readings	
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	