Syllabus

Descrizione corso

Titolo insegnamento	Big data e blockchain
Codice insegnamento	25418
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	IINF-05/A
Lingua	Inglese
Corso di Studio	Corso di laurea magistrale in Accounting e Finanza
Altri Corsi di Studio (mutuati)	
Docenti	dr. Paolo Coletti, Paolo.Coletti@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/6359
Assistente	
Semestre	Secondo semestre
Anno/i di corso	1
CFU	3
Ore didattica frontale	24
Ore di laboratorio	-
Ore di studio individuale	-
Ore di ricevimento previste	9
Sintesi contenuti	The course focuses on: - basic Python - using an LLM for automatically writing Python programs - major quantitative analysis of financial data - Python representations of data to correct and improve LLM-generated Python scripts - basic cryptocurrencies and blockchain technology
Argomenti dell'insegnamento	- basic Python - using an LLM for automatically writing Python programs

	- major quantitative analysis of financial data - Python representations of data to correct and improve LLM-generated Python scripts - basic cryptocurrencies and blockchain technology
Parole chiave	Python, financial analysis, LLM code generation, blockchain, cryptocurrencies
Prerequisiti	
Insegnamenti propedeutici	
Modalità di insegnamento	3-4 hours on cryptocurrencies as a traditional frontal lecture with examples. 2 hours on basic Python as an exercise lesson with examples that students must replicate. Rest of the course on generating code with LLM as laboratory course, where each student experiments on her own computer the effects of commands given to the LLM.
Obbligo di frequenza	Regular attendance is suggested, but not required
Obiettivi formativi specifici e risultati di apprendimento attesi	ILO (Intended Learning Outcomes) ILO 1 – Knowledge and Understanding ILO 1.1 Knowledge of economic-financial communication to stakeholders at national and international level. ILO 1.2 Knowledge of business-economic models and performance measurement for planning and management control, including internal and external auditing methods. ILO 1.3 Knowledge of economic-financial planning and evaluation of new investments. ILO 1.4 Knowledge of corporate finance fundamentals for the correct application of decision-making models, data management, and financial risk management in treasury operations ILO 1.5 Knowledge of business-economic models and tools for managing companies, whether family-owned, small-sized, or international ILO 1.6 Knowledge of the design and management of institutional and organizational structures related to corporate governance systems ILO 1.7 Knowledge of business tools and processes developed to recognize, understand, and guide change, and to manage the impact of transitions on organizations

	ILO 1.8 Knowledge of strategies for efficient communication within organizations and toward various stakeholders ILO 1.9 Knowledge of management topics that characterize the professions of financial analyst, portfolio manager, risk manager, and consultant ILO 1.10 Knowledge of basic forecasting models for conducting integrated economic and financial analyses, including econometric methodologies for time series and multivariate analysis ILO 1.11 Knowledge of Big Data analysis techniques to support and integrate corporate decision-making processes ILO 2 – Applying Knowledge and Understanding ILO 2.1 Ability to develop and integrate the results of economic-financial communication into corporate decision-making models ILO 2.2 Ability to design and manage corporate restructurings and other extraordinary operations ILO 2.3 Ability to identify, evaluate, and manage investments in financial markets ILO 2.4 Ability to set coherent financial management strategies in companies or financial intermediaries, competently applying knowledge of risk management techniques, asset valuation, and derivatives handling ILO 3 – Making Judgments ILO 3.1 Ability to relate models and empirical evidence in the study of companies, intermediaries, and financial markets ILO 4 – Communication Skills ILO 4 Ability to communicate effectively, both orally and in writing, the specialized content of individual disciplines, using different registers depending on the recipients and communicative or educational purposes, and to evaluate the formative effects of communication ILO 5 – Learning Skills ILO 5.1 Ability to identify thematic connections and establish relationships between different cases and contexts of analysis ILO 5.2 Ability to develop general models starting from the phenomena studied
Obiettivi formativi specifici e risultati di apprendimento	

attesi (ulteriori info.)	
Modalità di esame	Acquired knowledge on blockchain and basic cryptocurrencies is evaluated through a written test. Acquired skills on the rest are tested through a practical exam on a real case. ILO assessed 1-5
Criteri di valutazione	15% of the grade comes from the written test. Particular emphasis is done on the explanation skills of the students and the knowledge of the topics. 85% of the grade come from the practical test. The outcome of this test depends on the obtained results and, in particular, on the methodology used and the ability of the student to choose the right tools and to check the partial results produced by the computer.
Bibliografia obbligatoria	Videos are provided for each lesson. No further reading is necessary.
Bibliografia facoltativa	
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Innovazione e infrastrutture