

# Syllabus

## *Course Description*

Course Title	Introduction to Block Chain
Course Code	27519
Course Title Additional	
Scientific-Disciplinary Sector	SECS-P/07
Language	English
Degree Course	Master in Data Analytics for Economics and Management
Other Degree Courses (Loaned)	
Lecturers	dr. Sara Longo, Sara.Longo@unibz.it <a href="https://www.unibz.it/en/faculties/economics-management/academic-staff/person/41344">https://www.unibz.it/en/faculties/economics-management/academic-staff/person/41344</a>
Teaching Assistant	
Semester	Second semester
Course Year/s	2
CP	6
Teaching Hours	36
Lab Hours	-
Individual Study Hours	-
Planned Office Hours	18
Contents Summary	This course introduces students to the fundamentals of blockchain technology, covering key concepts, terminology, and mechanisms, and explores its potential applications in real-world contexts. Students will acquire a foundational understanding that enables them to discover how blockchain innovations work and their implications.
Course Topics	What is Blockchain (BC) and how it works. Concepts of centralized and distributed systems, integrity, trust, ownership, anonymity. Introduction to cryptography and hashing protocols. Smart contracts. Potential applications of BC in supply chain, finance and

	accounting, limits and issues.
<b>Keywords</b>	Blockchain technology, Cryptography, Hashing protocols
<b>Recommended Prerequisites</b>	No prior experience or prerequisite academic background is necessary to do well in the course. Undergraduate introductory courses in accounting, finance and statistics will be beneficial.
<b>Propaedeutic Courses</b>	
<b>Teaching Format</b>	This course will use a combination of lectures, practical assignments, scientific articles, case discussions, assignments, professional expert presentations and online reading. Class participation and active discussion is both expected and encouraged to apply theoretical concepts to realistic business-related situations. Students are expected to have thoroughly read all the assigned material in advance of the class to ensure a meaningful class participation. Homework may be assigned.
<b>Mandatory Attendance</b>	Recommended, but not required.
<b>Specific Educational Objectives and Learning Outcomes</b>	<p>Knowledge and understanding:</p> <p>The student acquires specific knowledge of the economic and business domains of his/her interest and necessary to address decision-making and management issues in public and private organisations with an interdisciplinary perspective. In the Data Analytics for Economics pathway, knowledge will be oriented towards economic theory, economic analysis and econometrics through the development of micro- and macroeconomics, decision theory under conditions of uncertainty, time series analysis and forecasting techniques, methods for causal inference from both administrative and experimental data. Knowledge will also be oriented towards data analysis. In the Business Analytics track, the knowledge acquired will concern the tools necessary for analysing and interpreting business and organisational data, as well as business economic measurements, business models and their evolution, tools and techniques to support decision-making, performance measurement systems consistent with digitisation and sustainability processes, the governance of marketing processes, with particular regard to digital and interactive marketing and the impact of digitisation on marketing activities.</p> <p>Applying knowledge and understanding:</p> <p>Ability to analyse business issues that characterise data-driven</p>

	<p>decision support through the application of statistical and computational models.</p> <p>Ability to use and apply models for market analysis and economic policy formulation.</p> <p>Making judgements:</p> <p>Master's graduates will have the ability to apply the acquired knowledge to interpret data in order to make directional and operational decisions in an economic-business context.</p> <p>Master graduates will have the ability to apply the acquired knowledge to support processes related to production, management and risk promotion activities and investment choices through the organisation, analysis and interpretation of complex databases.</p> <p>Communication skills:</p> <p>Master's graduates will be able to communicate effectively in oral and written form the specialised contents of the individual disciplines, using different registers, depending on the recipients and the communicative and didactic purposes, and to evaluate the formative effects of their communication.</p> <p>Learning skills:</p> <p>MSc graduates should be familiar with the tools of scientific research. They will also be able to make autonomous use of information technologies to carry out bibliographic research and investigations both for their own training and for further education. In addition, through the curricular teaching and the activities related to the preparation of the final thesis, they will be able to acquire the ability</p> <ul style="list-style-type: none"> <li>- to identify thematic connections and to establish relationships between methods of analysis and application contexts;</li> <li>- to frame a new problem in a systematic manner and to implement appropriate analysis solutions;</li> <li>- to formulate general statistical-econometric models from the phenomena studied.</li> </ul>
<b>Specific Educational Objectives and Learning Outcomes (additional info.)</b>	

<b>Assessment</b>	<p>For attending students: final grade will be a mixture of participation in case study discussions/presentations and mid-term assignments, practical assessments and exam(s). For non-attending students: written final exam (100%).</p> <p>Detailed point breakdown for individual assignments etc will be provided in the first lecture.</p> <p>NOTE: final exams for attending and non-attending students may vary. The modality of the final exam (e.g. written/oral/take-home/open book) will be communicated in the due course.</p>
<b>Evaluation Criteria</b>	Detailed grading rubric will be provided during the course prior to the assignments.
<b>Required Readings</b>	Drescher, D., Blockchain Basics: A Non-Technical Introduction in 25 Steps (available online; <i>please confirm with instructor before purchasing</i> )
<b>Supplementary Readings</b>	Course materials will consist of three areas: (i) a textbook; (ii) lecture slides, to be provided by your instructor; and (iii) readings from weblinks and scientific articles, will be provided by instructor during the course.
<b>Further Information</b>	
<b>Sustainable Development Goals (SDGs)</b>	Industry, innovation and infrastructure