Denominazione	BLOCKCHAIN ECONOMICS
Moduli componenti	-
Settore scientifico-disciplinare	SECS P/07
Anno di corso e semestre di erogazione	1° anno, 2° semestre
Lingua di insegnamento	-
Carico didattico in crediti formativi universitari	8
Numero di ore di attività didattica frontale	48
Docente	Teaching responsible: Paolo Tasca Teachers: Paolo Tasca Alessandro Recchia Riccardo Piselli
Risultati di apprendimento specifici	The course explores the field of blockchain economics from a technical, economic and legal perspective. In detail, the course aims to transfer specific knowledge and design thinking to the students through the use of business, technical and legal blockchain analysis tools and models. Another goal is to provide a unified view of the main characteristics of the blockchain technology. At the end of the course, the student will be able to understand and evaluate from business and technological point of view a blockchain-based project. The student will also be able to assess the impact of the blockchain technology on an entire business sector.
Programma	The course is divided into three main parts. After an introduction, the technical module will deal with the basic functioning of blockchain systems; the legal part will then deal with the main critical normative issues that arise from the theory of blockchain economics; the economic and business part will finally describe the business cases and possible uses of this technology. **Introduction** • What is a DLT/Blockchain? • Origins of blockchain technology • Cryptocurrencies as an application of blockchain technologies • Public keys as identity and featuring in transactions • Asset registry technologies • Asset-centric technologies • Application stacks as an application of blockchain technology **Technology** • Taxonomy element by element • Hands-on exercise on general applications or real use cases **Legal and regulatory issues** • Normative issues of DLT: a general overview • DLT and smart contracts (what they are, how they work and their positives and negatives) • DLT and DAOs: decentralization and organization theory • DLT and Financial Markets • DLT and AML • DLT and IP: IP as a business strategy • DLT, data protection and cyber-security **Business and economics** • Blockchain Investment • Blockchain Ecosystem • Blockchain Governance in Business • Blockchain and the Internet • Enterprise Blockchains • Blockchain Economics

	• Token business models • Business opportunities for Cryptocurrencies • Smart Contracts Applications in Business • Dapps in Business • Blockchain and Sustainability • ICOs & IEOs for Capital Raising • Innovation, Disruption and Adoption Principles Applied to Blockchain • DeFi
Tipologie di attività didattiche previste e relative modalità di svolgimento	The teaching activities will take place online either pre-recorded or live lectures. The teaching method is based on the combination of theoretical arguments with exercises and case studies in order to obtain a full understanding of the topics covered by this course.
Metodi e criteri di valutazione dell'apprendimento	The final evaluation will be a written assignment. Students will have to answer to 6 open questions and 4 multiple choice questions. The 6 open questions will cover the three main areas of the course: technology, legal and business aspects. The 4 multiple choice questions will evaluate more general aspects on blockchain technology which will be treated during the course: impact on existing business sectors, history and future challenges of the blockchain technology. During the course, group of students will have the opportunity to present a case study about a real case of blockchain application. 4 hours of the course will be dedicated to the project development and supervision and 2 – 3 hours to present the business case to the class.
Criteri di misurazione dell'apprendimento e di attribuzione del voto finale	The overall mark goes from 0 to a maximum of 30. The sum total points of the exam will be 32 so students can gain the distinction. The group project count for up to 4 extra points to be added to the final mark of the written assignment.
Propedeuticità	No computer science background is needed even if a general knowledge on distributed ledger systems is recommended.
Materiale didattico utilizzato e materiale didattico consigliato	Teaching material: ✓ P.Tasca, et al., Blockchain Economics: Implications of Distributed Ledgers, World Scientific, 2019 ✓ P. De Filippi, A. Wright, Blockchain and the Law, Harvard University Press, 2017. ✓ A. Antonopulos, Mastering Bitcoin, O'Reilly, 2014 ✓ P. Tasca, Digital Currencies: Principles, Trends, Opportunities, and Risks, 2015 ✓ Integrative teaching materials (readings and cases available on the e-learning platform)