



Course Syllabus

Course Code	Course Title	ECTS Credits
BLOC-515DL	Blockchain and Entrepreneurship Management	10
Prerequisites	Department	Semester
N/A	Digital Innovation	Fall/Spring
Type of Course	Field	Language of Instruction
Required	Management	English
Level of Course	Lecturer(s)	Year of Study
2 nd Cycle	Dr. Marinos Themistocleous Dr. Maria Michailidis	1 st
Mode of Delivery	Work Placement	Corequisites
Distance Learning	N/A	BLOC-511DL

Course Objectives:

This course seeks to analyse Blockchain entrepreneurship and innovation management. The course evolves with a series of lectures and case studies of successful business ideas, but emphasis focuses on the practical application of theory through the parallel engagement of students in the project of the course. The project concerns the identification and development of a blockchain-based business idea and its transformation into a business plan.

The course is structured around three areas:

- Disruptive Innovation management
- Entrepreneurship management
- Blockchain innovation and management

The main objectives of the course are to:

- Guide students to recognize a business opportunity, to design and develop new blockchain-enabled services and to set up and grow a successful business
- Help students develop ideas and innovation strategies
- Assist the students in developing business models that aligned with the principles of the digital currencies, decentralization and the rise of peer-to-peer transactional relationships between producers and consumers
- Introduce students to business plan development, project management and financing
- Demonstrate an overview of concepts on managing innovative issues related to human

resources within an organization

- Discuss the importance of ways of improving the organization's marketplace position from a human resources perspective using disruptive technologies

Learning Outcomes:

After completion of the course students are expected to be able to:

- Understand the basic concepts of entrepreneurship and innovation
- Understand the emerging opportunities and threats for existing and new businesses that technologies, such as cryptocurrencies and blockchain technology, have brought and may bring
- Identify business ideas and develop them into products/services following the lean startup approach
- Conduct market and competition analyses
- Develop business models with respect to the principles of the decentralized economy
- Develop business plans and identify financing options for their business ventures
- Understand smart contracts innovation
- Understand the disruptive nature of Initial Coin Offerings, Security Tokens Offering, Initial Exchange Offering as an emerging crowdfunding method.
- Understand the disruptive nature of Distributed Autonomous Organizations
- Select and apply project management approaches and techniques
- Create challenging strategic recruitment/selection policies and practices
- Perform an effective job analysis by the use of disruptive technologies

Course Content:

1. **Explaining the importance of innovation**
 - What is innovation?
 - Why does it matter?
 - Innovation as a Process
 - 4P's + 1P of innovation
2. **Understanding the disruptive nature of digital currencies / blockchain / DLT**
 - An overview of blockchain technology and digital currencies
 - Digital currencies and money from the internet
 - Machine to machine payments
 - Disintermediation
 - Disruptive Blockchain use cases (e.g. CDBC, land registry, energy, healthcare)

3. **Learning how to manage and diffuse blockchain innovation**
 - Contingency Model of the Innovation Process
 - Factors that influence the process of innovation in organizations
 - Innovation management
 - Define routines and explore their role in innovation management
 - Successful innovation management
4. **Transforming a blockchain idea into a business plan**
 - Executive summary
 - Strategic overview
 - Competitive analysis
 - Management team
 - Marketing plan
 - Operations plan
 - Financial overview
5. **Applying design thinking and blue ocean strategy in blockchain projects**
 - Stages in the Design Thinking Process (Empathise, Define, Ideate, Prototype, Test)
 - Principles for Service Design Thinking
 - Design Thinking Method
 - Lean Vs Agile Vs Design Thinking
 - Blue Ocean Strategy (create uncontested market space, make the competition irrelevant, create and capture new demand, break the value-cost trade off, align the whole system of activities in pursuit of differentiation and low cost).
6. **Utilizing business model canvas in blockchain projects**
 - Constructs of business model canvas (key partners, key activities, key resources, value proposition, customer relationship, channels, customer segments, cost structure, revenue streams)
 - Business model canvas tools
 - Business model canvas and blockchain
7. **Identifying, analysing and managing blockchain related risks**
 - Identify the threats
 - Assess the vulnerability
 - Estimate the expected likelihood and consequences
 - Identify strategies to reduce risks
 - Avoidance (eliminate, withdraw from or not become involved)
 - Reduction (optimize – mitigate)
 - Sharing (transfer – outsource or insure)
 - Retention (accept and budget)
 - Prioritize risk reduction measures
8. **Raising funds for the blockchain project**
 - Initial Public Offering (IPO)
 - Initial Coin Offering (ICO)
 - Security Tokens Offering (STO)
 - Create your token
 - Initial Exchange Offering (IEO)

9. **Explaining smart contracts and algorithmic governance**
 - Smart contracts and algorithmic governance
 - Innovation disruption through smart contracts
 - Smart contract life cycle
 - Issues related with smart contracts (e.g. contract law)
 - Example of successful smart contracts applications
10. **Exploring Decentralized Autonomous Organizations (DAOs)**
 - From smart contracts to DAOs
 - How does a DAOs work?
 - DAOs and decentralized economy
 - DAOs and legal liability
 - DAOs and security
 - DAOs and shareholders participation
 - Can we manage DAOs?
11. **Understanding issues related to blockchain human resource management - part I**
 - Human Resources challenges: themes, concepts and issues, and the human resource challenges facing organizations today.
 - Blockchain capabilities and their potential in revolutionizing HR activities: Distribution, Decentralization, Encryption, Immutability, Tokenism
 - Legal Environment: the legislative 'minefield' impacting the effective management of people in the workplace.
 - Targeting data protection, fraud prevention and cyber security
 - Entrusted Interaction: The ways Blockchain enables trusted interaction, communication, authorization and transparency along the chain
12. **Understanding issues related to blockchain human resource management - part II**
 - Managing and improving talent and talent sourcing with the use of innovative technologies.
 - The enhancement of HR's ability to match people's knowledge, skills and performance with jobs
 - Creating the option of eliminating numerous third party and back office elements of recruitment
 - Employee relations
 - Managing employee life cycle
 - Planning
 - Recruitment and Selection Verifying digital identities

Learning Activities and Teaching Methods:

Lectures, Seminars, Assignments, Live Discussions, Forum Discussions, Practical Projects

Assessment Methods:

Assignments, Final Exam

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
"Managing Innovation: Integrating Technological, Market and Organizational Change", 5th edition	Tidd, J. and Bessant, J.	Wiley	2013	978-1-118-53859-3
"Mastering Ethereum: building smart contracts and dapps"	Antonopoulos, A., and Wood, G.	O'Reilly Media	2018	
"HR Disrupted: It is time for something Different"	Adams, L.	Great Britain: Practical Inspiration	2017	978-1-9100-5650-9
"New World of HR and Employment: How AI and Process Redesign is driving Dramatic Change"	Miller, T.	Business Expert Press, LLC	2018	978-1-94944302-8

Selected Online Readings

- ConsenSys, 90+ **Ethereum Apps You Can Use Right Now**
- <https://media.consenSys.net/40-ethereum-apps-you-can-use-right-now-d643333769f7>
- Mohan, C. "Blockchains and databases: A new era in distributed computing." In 2018 IEEE 34th International Conference on Data Engineering (ICDE), pp. 1739-1740. IEEE, 2018.

- **ConsenSys, Decentralized Storage: The Backbone of the Third Web.** <https://media.consensys.net/decentralized-storage-the-backbone-of-the-third-web-d4bc54e79700>

Note: an updated list of readings is provided at the end of each lecture given the fact that Digital Currency and Blockchain Technologies constitute recent and rapidly evolving disciplines.