

TEACHING PLAN

MÁSTER UNIVERSITARIO EN ADMINISTRACIÓN Y DIRECCIÓN DE EMPRESAS

MBA FULL TIME

Course 2023-2025

SUBJECT

Name: Fintech, Cryptocurrencies and New Trends in Finance

Type of subject: elective

Quarter: third

Credits: 3 ECTS

Teaching language: English

Coordinator of the course: Luz Parrondo

Contact details: luz.parrondo@upf.edu

Teacher of the subject: Luz Parrondo and Francesco Spinioglio

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COURSE DESCRIPTION

Introduction

After the creation of Bitcoin and blockchain technology, we are experiencing a revolution in the way we store and transfer value over the internet. This technology is opening a new array of opportunities that allows us to carry out transactions in a more transparent and efficient way, without the need for so many intermediaries.

In this course, we will study the main elements of Bitcoin and blockchain technology, focusing on how this technology works, the new services that are currently being offered in a decentralized way and the different cryptoassets recognized in different jurisdictions.

Objectives

General objective: Recognize the importance of Bitcoin, the cryptoassets and the blockchain technology in the financial industry and the capital markets.

CE1. Identifying the main elements of the blockchain technology and getting a grasp of its inner workings.

CE2. Comparing the different types of cryptoassets and their main features.

CE3. Understanding smart contracts and their potential use cases.

CE4. Finding the main financial services that are currently being offered in a decentralized way thanks to the blockchain technology.

Methodology

There will be 4 sessions of four and a half hours (4,5) each. The course will combine lectures with case discussions, and presentation of reports about cases made by groups of students. During the discussion of some cases, the students will be divided in groups using the role-playing approach.

Evaluation criteria

Grading will be done through:

- Class participation and class exercises (20%)
- Final test (40%)
- Final report (40%)

Total course

Students need to obtain a minimum of 5 in the final test to pass the course. This condition applies to both the regular exam and the retake exam. The final course grade of students that do not obtain **a minimum of 5 in the test** will have a retake exam opportunity that will be programmed in accordance with the academic calendar. If a student needs to retake the exam, his **maximal grade for the course will be a 5**.

Students are required to **attend at least 80% of classes**. Failing to do so without justified reason will imply a Zero grade in the participation/attendance evaluation item and may lead to suspension from the program.

Plagiarism is to use another's work and to present it as one's own without acknowledging the sources in the correct way. All essays, reports or projects handed in by a student must be original work completed by the student. By enrolling at any UPF BSM Master of Science and signing the "Honor Code," students acknowledge that they understand the schools' policy on plagiarism and certify that all course assignments will be their own work, except where indicated by correct referencing. Failing to do so may result in automatic expulsion from the program."

Contents

Session 1: Bitcoin and the blockchain technology

- The origin of Bitcoin and blockchain
- Main elements of the blockchain technology
- How Bitcoin and blockchain work

Session 2: From Cryptocurrencies to Cryptoassets

- Payment tokens – Cryptocurrencies
- Utility tokens
- Security tokens

- Other cryptoassets

Session 3. Smart Contracts

- Introduction to smart contracts
- Examples of smart contracts
- Decentralized applications (DApps)

Session 4. Decentralized Finance (DeFi)

- Introduction to DeFi
- Decentralized exchanges
- Decentralized loans
- Other DeFi protocols

Reading Materials/ Bibliography/Resources

Main resources:

- The Bitcoin Whitepaper: <https://bitcoin.org/bitcoin.pdf>
- Bitcoin's website: <https://bitcoin.org/>
- List of main Bitcoin resources, by Jameson Lopp: <https://www.lope.net/bitcoin-information.html>

Books:

- Mastering Bitcoin, by Andreas Antonopoulos: <https://github.com/bitcoinbook/bitcoinbook>
- The Internet of Money, by Andreas Antonopoulos: <https://www.amazon.com/Internet-Money-Andreas-M-Antonopoulos/dp/1537000454>
- Cryptoassets, by Chris Burniske and Jack Tatar: <https://www.amazon.com/Cryptoassets-Innovative-Investors-Bitcoin-Beyond/dp/1260026671>
- How to DeFi, by CoinGecko: <https://www.amazon.com/How-DeFi-CoinGecko-ebook/dp/B0868N5GJ8>

Industry news:

- Cointelegraph: <https://cointelegraph.com/>
- Coindesk: <https://www.coindesk.com/>
- Bitcoin Magazine: <https://bitcoinmagazine.com/>

Industry statistics:

- Coinmetrics: <https://coinmetrics.io/>
- Dune Analytics: <https://duneanalytics.com/>
- CoinDance: <https://coin.dance/>

Industry research:

- Messari: <https://messari.io/>
- The Block: <https://www.theblockcrypto.com/>
- CryptoCompare: <https://www.cryptocompare.com/>

Cryptoassets prices:

- CoinGecko: <https://www.coingecko.com/>
- OnChainFX: <https://onchainfx.com/>
- Coinmarketcap: <https://coinmarketcap.com/>

Bio of Professor

Luz Parrondo Director of Master in Accounting and Financial Management and the former director of the Postgraduate in Blockchain and other DLTs. Lecturer at Universitat Pompeu Fabra. PhD in Economics, Finance and Management awarded by Pompeu Fabra University (UPF). As a researcher, she specializes in the study of financial management, with special emphasis on the impact of new technologies in the financial, accounting and auditing sector, in profit management, risk management and corporate social responsibility. Member of the Academic Advisory Body (AAB) of the International Association for Trusted Blockchain. Member of multidisciplinary academic working group on the DLT BAWG – Blockchain & Academia Working Group. Member of the CBCat Advisory Board. Since 2015, she coordinates the professional journal RCD. As a professional, Dr. Parrondo worked as Financial Controller and as a Financial Manager in several SMEs in Barcelona. Innovation must never stop.

Francesco Spinoglio. PhD from the University of Barcelona, involved in university education for more than ten years. Awarded as an Honorary Member in the European Higher Council of Doctors (2018). Master in Bitcoin, Smart Contract and Cryptoeconomics by the University of Alcalá. Specialized in Cryptocurrency Investment and founder of Formula Cripto.