COURSE DETAIL

BLOCKCHAIN & CRYPTOCURRENCIES
Country Italy
Host Institution University of Bologna
Program(s) University of Bologna
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 184
UCEAP Course Suffix
UCEAP Official Title BLOCKCHAIN & CRYPTOCURRENCIES
UCEAP Transcript Title BLOCKCHAIN&CRYPTO
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

This is a graduate level course that is part of the Laurea Magistrale program. The course is intended for advanced level students only. Enrollment is by consent of the instructor. The course focuses on the relevant themes related to blockchain technologies, cryptocurrencies, smart contracts, and novel applications that can be built over the blockchain. Students in the course develop simple smart contracts that can be deployed on a blockchain. Bitcoin and novel cryptocurrencies gathered momentum in the last months. More and more investors look with interest at these technologies, while others label them as a dangerous speculative bubble. The truth is that the blockchain, and the alternative implementations of a distributed ledger, represent very interesting technologies, that can be exploited to build novel distributed applications. The underlying building blocks are related to many concepts and research areas of computer science in general. This course illustrates the main principles and conceptual foundations of the blockchain and the Bitcoin network. The course discusses topics including introduction to peer-to-peer systems, overlay topologies and decentralization, introduction to Crypto and Cryptocurrencies, the blockchain: how to achieve decentralization, transactions and transaction scripting languages, mining, attacks to the blockchain, anonymity, and smart contracts.

Language(s) of Instruction
English

Host Institution Course Number
90748

Host Institution Course Title
BLOCKCHAIN AND CRYPTOCURRENCIES (LM)

Host Institution Course Details
https://www.unibo.it/en/teaching/course-unit-catalogue/course-unit/2021/461739

Host Institution Campus
BOLOGNA

Host Institution Faculty
COMPUTER SCIENCE

Host Institution Degree
LM degree in Computer Science

Host Institution Department
COMPUTER SCIENCE

Course Last Reviewed
2021-2022

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