האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

The ledger is open: on Blockchain and Cryptocurrencies - 55979

Last update 11-03-2023

HU Credits: *3*

Degree/Cycle: *2nd degree (Master)*

Responsible Department: *Business Administration*

Academic year: *0*

Semester: *2nd Semester*

Teaching Languages: *Hebrew*

Campus: *Mt. Scopus*

Course/Module Coordinator: *Dr. Liad Blumrosen*

Coordinator Email: *Liad.Blumrosen@huji.ac.il*

Coordinator Office Hours: *By mail*

Teaching Staff:
Dr. Liad Blumrosen

Course/Module description:
We will learn the basic concepts, technologies, and the leading business applications related to cryto currencies and blockchain. We will discuss real-world problems that such technologies could solve. We will learn the details of the blockchain technology, including the surrounding business environment and its various applications.

Course/Module aims:
Students will understand the potential of the blockchain technology and crytpo currencies, and their implications on the modern financial world.

Learning outcomes - On successful completion of this module, students should be able to:
Students will understand the limits of these technologies, and the solutions offered in the industry and in the academy for those limits. Students will learn how ideas from the theory of finance, distributed computing, economics and game theory can help developing real blockchain based systems.
Students will understand the difference between Fiat money, distributed cash and the macro-economic implications of crypto currencies.

Attendance requirements(%):
80%

Teaching arrangement and method of instruction: Frontal teaching, with problem sets and projects.

Course/Module Content:
Intro to payment systems.

Intro to crypto.

Intro to distributed computing.

Bitcoin.

Etherum and smart contracts.

proof of work vs. proof of stake

Scalable currencies and blockchains.

Additional applications.

Blockchain - the user's angle.

Case studies.

Visiting lecturers.

Required Reading:

- *"Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction", By Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, Steven Goldfeder. Princeton University Press.*

- *"Bitcoin, Blockchain, and Cryptoassets", by Fabian Schar. MIT Press.*

Additional Reading Material:

Articles, case studies and news article will be discussed.

Grading Scheme:

Additional information:

Details may change. Final details will be presented in the first class and on the course web page.