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|-------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------|
| Course Code ? | Course Title Introduction to Cryptocurrencies and Blockchains | ECTS Credits 6 |
| Prerequisites None | Department Management & MIS | Semester Fall |
| Type of Course Elective | Field Business/MIS | Language of Instruction English |
| Level of Course 1 st cycle | Lecturer(s) Mr. Andreas Vlachos | Year of Study 3 rd or 4 th |
| Mode of Delivery DL/ Face to Face | Work Placement N/A | Co-requisites N/A |

Objectives of the Course:

The main objectives of the course are to:

- Provide an overview of blockchain technology as the backbone of decentralized digital currencies (cryptocurrencies), such as Bitcoin.
- Examine the theory and principles by which Blockchains operate
- Provide practical examples of basic cryptocurrency transactions
- Introduce smart contracts over blockchains.

Learning Outcomes:

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

1. Demonstrate how blockchain technology works.
2. Discuss and place cryptocurrencies and Blockchain activities, within an appropriate technical, currency, regulatory, legal and monetary context.
3. Master basic usage skills around Bitcoin.
4. Discuss how the innovative nature and usability of smart contracts.

Course Contents:

1. History of Money
2. Introduction to CryptoCurrencies
3. Become a Cryptocurrency user
4. Exploring Bitcoin transactions
5. Cryptocurrency Wallet Protection
6. Cryptocurrencies beyond Bitcoin
7. Introduction to Blockchains
8. Public Vs Private Blockchains
9. Smart Contract Fundamentals
10. Ethereum Smart Contracts
11. Blockchain Applications I
12. Blockchain Applications II

Learning Activities and Teaching Methods:

Lectures, Practical Assignments, Theoretical Assignments

Assessment Methods:

- Assignment: 20%
- Mid-Term Examination: 20%
- Final Examination: 60%

Required Textbooks / Reading:

| Title | Author(s) | Publisher | Year |
|----------------------------------------------------------------------------------------------------|------------------------------------|----------------------------|-------------|
| Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction | Arvind Narayanan, Steven Goldfeder | Princeton University Press | 2016, |
| Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business and the World | Don Tapscott, Alex Tapscott | Penguin Books Limited | 2016 |

Recommended Textbooks / Reading:

| Title | Author(s) | Publisher | Year |
|-------------------|----------------------|---------------------|-------------|
| Mastering Bitcoin | Andreas Antonopoulos | O'Reilly Publishing | 2014 |