COURSE SYLLABUS (Summer 2019)

BLOCKCHAIN FUNDAMENTALS

Content

1 Introduction

Course name:	Blockchain Fundamentals
Lecturer:	Chhay Lin Lim
Total ECTS:	5
Course level:	Introductory: accessible for students from any background who would like build a strong foundational knowledge of Blockchain

1.1 Introduction to the course

During the course, you will learn more about the history, the most important blockchain concepts, the philosophy of decentralization behind blockchain, and the main discussions happening within the blockchain environment. In addition, you will learn about (potential) applications of blockchain and the impact it could have on the business world.

During the course, you will also do a group project in which you create a website for your fictional startup and conduct an Initial Coin Offering (ICO). This means that you will learn how to create your own crypto tokens. Don't worry if you don't have any coding experience. The course will be accessible enough that even those without a technical background in IT will be able to create a website, issue their own tokens, and conduct an ICO. We will also hold a competition in which we invest in each other's' projects with "European Summer School (ESS)" crypto tokens. The project with the most ESS tokens at the end of the course wins.

1.2 Introduction to the lecturer

Chhay Lin Lim is a Blockchain and Financial Technology lecturer/researcher at Saxion University in the Netherlands. Next to that, he is the co-founder of Serey.io – a blockchain project that includes a social media platform, a decentralized cryptocurrency exchange, and an online market place.

1.3 Work forms

The learning goals of the Blockchain Fundamentals course consists of knowledge and practical skills components. We will work according to a 'Flipped Learning' methodology. This means that we will create a learning environment in which you, together with your peers, can actively develop your knowledge and skills. You will be put in charge of your own learning progress.

2 Learning goals

With regards to Blockchain…

- The student will be able to comfortably discuss and describe the history, technology, and applications of Blockchain (1)
- The student will be able to assess Blockchain applications in a structured manner (2)
- The student will be able to present Blockchain concepts clearly and persuasively (3)
- The student will be able to create an own Crypto token (4)

- The student will be able to create an own Initial Coin Offering (ICO) (5)
- The student will be able to use cryptocurrency exchanges and wallets safely (6)
- The student will gain familiarity with investing in Blockchain startups (7)

3 Assessment

3.1 Grading

The overall grading consists of:
- Group presentations with respect to pre-determined topics (50%)
- Final presentation of a business project website that includes an ICO (50%)

3.2 Practical skills

Some of the learning goals is to gain practical skills. All practical assignments must be fulfilled as a prerequisite to pass the course.

4 Blockchain topics and practical assignments

Topics	Content
Blockchain introduction	- Practical assignment 1: creating wallets and sending cryptocurrency - Practical assignment 2: starting a Wordpress website - Introductory video: Banking on Bitcoin
Blockchain basics and the role of money	- Practical assignment 3: blockchain explorer - Introduction to bitcoin (history, distributed P2P network, immutable ledger, forks and Byzantine Fault Tolerance - History and the role of money
Blockchain philosophy and cryptonomics	- Practical assignment 4: create your own cryptocurrency - Crypto-anarchism and Cypherpunks - Hash cryptography, mining and consensus - Proof-of-Work consensus
Applications and Exchanges	- Practical assignment 5: tokenization and trading cryptocurrencies - Practical assignment 6: start your own ICO - Exchanges - ICO en STO - Smart contracts and dApps
Towards a decentralized society	- A decentralized society - The current state of the Blockchain landscape - Business applications and assessing blockchain projects

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5 Literature

Required reading material will be provided during the course.

If you would like to have an introductory and accessible reading before the start of the course, the following books are recommended:
- Andreas Antonopoulos, *The internet of money*, 2016
- Paul Vigna & Michael J. Casey, *The age of cryptocurrency*, 2015

6 Lecturer

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