

## Financial Technology and digital innovation to modeRnise and develop cUrricula of VietnameSe and Philippines UniversiTies

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# MASTER IN FINTECH AND DIGITAL INNOVATION - Module Syllabus -





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## MASTER IN FINTECH AND DIGITAL INNOVATION - MODULE SYLLABUS -

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#### 1. Module details

Module Title	BLOCKCHAIN AND APPLICATIONS
Credits	3 Vietnamese Credit Unit (5 ECTS approximately)
Hours	150
N° of hours in presence	37.5
N° of hours in distance learning	At least 15
Name of the leading institution	Ho Chi Minh City Open University

#### 2. Module description

As an emerging technology platform, blockchain is wisely employed in events/transactions/data generated with the resistance and verifiability manners to the public. Through this module, you will gain an understanding of the core value proposition of blockchain technology and how its etymology drives the new zeitgeist.

You will also learn the canonical technology (Bitcoin & Ethereum), their challenges along with current thinking about how to overcome them, while also gaining insight on raising capital from and valuing the token-based economy.

#### 3. Learning Outcomes

The course overall learning outcomes are:

Knowledge and Understanding:

- a. Demonstrates a critical understanding of technology-based banking concepts (e.g. digital banking, open banking, etc.);
- b. Demonstrates a critical understanding of the range of digital solutions in monetary systems (e.g. digital finance, InsurTech, etc.);
- c. Demonstrates understanding and awareness of emerging technological enablers in banking and finance;
- d. Demonstrates a critical awareness of current, emerging and future issues for FinTech.



Application and Problem-Solving Abilities:

- a. Applies a significant range of specialist database and software operating, programming and other FinTech relevant skills;
- b. Applies an integrated understanding of entrepreneurial dynamics, project and innovation management in the context of technology-based finance and banking (e.g.

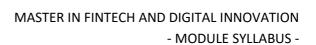
#### 4. Module knowledge, skills and competencies (EQF\*)

development of innovative products/ solutions?) could be research projects); Moreover, at the end of this course, the student will be able to

- Understand the Blockchain technology and its applications.
- Present Blockchain concepts clearly and persuasively.
- Explain the crypto token in a professional manner and pursue it in their professional purpose.

#### 5. Module lessons

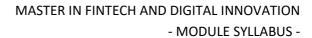
Lesson N.	1
Lesson title	Blockchain technology- an introduction
Duration	28 hours (7 contact hours approximately)
Specific objectives	+ Understand the ideas behind the blockchain. + Explain cryptographic concepts.
Topics	<ul> <li>+ Decentralised ladger system</li> <li>+ Blockchain: definition and a solution for a decentralized system.</li> <li>+ Cryptographic concepts.</li> </ul>
In presence activity	Instructor explains the historical ideas of blockchain technology.  Students discuss the use of blockchain in the banking -finance sector.  Students debate the barriers and opportunities of using blockchain.





Distance learning type of learning object /task	<ul> <li>A short video on blockchain</li> <li>Virtual classroom/ web-streaming conference</li> <li>Lecture note</li> <li>Self-evaluation test</li> </ul>
Other supporting material	Mark Gates (2017). Blockchain: Ultimate guide to understanding blockchain, bitcoin, cryptocurrencies, smart contracts and the future of money. Wise Fox Publishing. Chapter 1, 2, 3, 4, and 5.
	Mohiuddin Ahmed (2020). Blockchain in data analytics. Cambridge Scholars Publishing. ISBN (13): 978-1-5275-4429-1. Chapter 1, 2,3 and 4.
	Niaz Chowdhury (2020). Inside Blockchain, Bitcoin and Cryptocurrencies. Taylor & Francis Group ISBN: 978-1-138-61815-2; Chapter 1, 2 (2.1 and 2.2 page 27-40).

Lesson N.	2
Lesson title	Blockchain platform
Duration	60 hours (15 contact hours approximately)
Specific objectives	<ul><li>+ Understand the classification of blockchain.</li><li>+ Explain the cryptocurrency.</li><li>+ Distinguish the specifications of blockchain.</li></ul>
Topics	<ul><li>+ Blockchain philosophy.</li><li>+ Blockchain platforms.</li><li>+ Cryptocurrency (Ethereum and bitcoin).</li></ul>
In presence activity	+ Instructor explains and supervises students to discuss the concepts/definitions of blockchain platforms and the cryptocurrency.





	+ Students prepare a presentation to introduce bitcoin (history, distributed P2P network, immutable ledger, forks and the role of money).  + Students work in groups to discuss: Ethereum's role in the Fintech ecosystem; and tokenizing share and Fund Raising.
Distance learning type of learning object /task	<ul><li>Audio/Video Lesson</li><li>Lecture note</li><li>Group assignments</li></ul>
Other supporting material	Tiana Laurence (2017) Blockchain for dummies. John Wiley & Son Inc. ISBN 978-1-119-36560-0. Chapter 2, 3, 4 and 5.  Niaz Chowdhury (2020). Inside Blockchain, Bitcoin and Cryptocurrencies. Taylor & Francis Group ISBN: 978-1-138-61815-2; Chapter 2 (2.3, 2.4, 2.5 and 2.6 page36 -48), chapter 3, 4, 6, 12, 13, 14, 15, 16  Mark Gates (2017). Blockchain: Ultimate guide to understanding blockchain, bitcoin, cryptocurrencies, smart contracts and the future of money. Wise Fox Publishing (Chapter 8).

Lesson N.	3
Lesson title	Blockchain applications
Duration	62 hours (15,5 contact hours approximately)
Specific objectives	<ul> <li>+ Classify the criteria for Blockchain application</li> <li>+ Apply the blockchain for firm activities.</li> <li>+ Verify the limitation, challenges and opportunities of blockchain</li> <li>+ Understand the requirements for the regulation for blockchain.</li> </ul>



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Topics	+ Criteria for blockchain application.
	+ Blockchain and firms.
	+ Cases with Blockchain
	+ Risk and limitation of blockchain.
	+ Challenges and Opportunities of blockchain.
	+ Legal issues and regulation for blockchain.
In presence activity	+ Instructor explains the criteria to blockchain application. Besides that instructor provides topics, cases and supervises students to discuss.  + Students discuss cases and risks/issues of blockchain.
Distance learning type of learning object /task	<ul> <li>Audio/Video Lesson</li> <li>Virtual classroom/ web-streaming conference</li> <li>Lecture note</li> <li>Group assignments/presentations.</li> </ul>
Other supporting material	Mohiuddin Ahmed (2020). Blockchain in data analytics. Cambridge Scholars Publishing. ISBN (13): 978-1-5275-4429-1. Chapter 5, 6,7, 9
	Niaz Chowdhury (2020). Inside Blockchain, Bitcoin and Cryptocurrencies. Taylor & Francis Group ISBN: 978-1-138-61815-2; Chapter 8, 9, 10, 11
	Mark Gates (2017). Blockchain: Ultimate guide to understanding blockchain, bitcoin, cryptocurrencies, smart contracts and the future of money. Wise Fox Publishing. Chapter 6, 7, 8 and 10.