

FIN385 Blockchain Technology and Smart Contract for Finance

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JAN

Synopsis:

This course gives an overview of the origins of blockchain technology and its evolution. Students will learn how blockchain and smart contracts may enable efficiencies in multiple markets including FinTech, RegTech and LegalTech, and how it can also be a disruptive force in those industries. Topics covered will include the history of digital money, the creation of bitcoin, technical aspects of Ethereum blockchain, private blockchains, consensus mechanisms, smart contracts, and the applications that can be created with blockchain and smart contracts.

Topics:

- History of digital currencies
- Bitcoin's emergence and the original blockchain
- The evolution of blockchains and their applications
- Consensus mechanisms
- Scalability challenges and potential solutions
- Private blockchains
- Smart Contracts
- DAPPS, DAO'S and Applications
- Zero Knowledge Proofs
- Regulatory Challenges
- Open source programming on blockchain platforms
- Building a blockchain project

Textbooks:

Andreas M. Antonopoulos, Gavin Wood: Mastering Ethereum 2018 O'Reilly Media
ISBN-13: 9781491971949

Learning Outcome:

- Show an understanding of the development of cryptocurrencies and blockchain
- Compare different types of consensus mechanisms and their role in blockchains
- Discuss the alternative applications of blockchain technology and smart contracts
- Analyse the various risks and security issues involved with the blockchain technology
- Examine the role of regulation and the development of various blockchains
- Appraise the economic incentive structure of the networks
- Distinguish how blockchain could be implemented in various industries
- Demonstrate the essential knowledge and interpersonal skills to exchange ideas about blockchains and smart contracts effectively in a team
- Demonstrate proficiency in writing on issues in blockchains and smart contracts coherently
- Create a DAO/DAPP for a specific application

Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	TUTOR-MARKED ASSIGNMENT 1	40
	PARTICIPATION 1	10
Overall Examinable Components	ECA-REPORT	32.5
	ECA-VIDEO	12.5
	ECA-POWERPOINT	5
Total		100