

FI 8462 – Blockchain and Business Disruption

Course Syllabus – Fall 2020

(Draft – Subject to Change)

- Instructor:** Yang, B.
- Class Schedule:** Alternating Thursdays, 6:00p – 9:00p
- Classroom:** 413 Buckhead Center | At distance through Robinson Anywhere
- Office Hours:** By appointment
- Course Description:** Blockchain is a transformative technology in finance and other businesses, including banking, payments, financing, securities exchanges, real estate, insurance, supply chains, healthcare, media, and other industries. This graduate course provides an introduction to blockchain technology and its disruptive roles in business. Students will have hands-on and problem solving experiences that can be useful in blockchain applications and innovation. Topics may include but are not limited to: fundamentals of blockchain technology, applications and use cases of blockchain technologies in different industries, implications of blockchain on business practice and regulation, blockchain and cryptocurrencies, initial coin offerings, blockchain platforms (Ethereum, Hyperledger, Quorum, Corda, etc.), smart contracts, and web-based decentralized applications.
- Course Objectives:** After successfully completing this course, students will be able to:
- Understand recent developments in blockchain technologies and their impact on different industries
 - Describe the technologies underlying cryptocurrencies and blockchains
 - Learn to work with different blockchain platforms
 - Design smart contracts and decentralized applications
 - Engage in the process of blockchain innovation
- Contributing Texts:** (Note: We will depend heavily on class slides, notes, and reading materials, but the following textbooks are recommended.)
- Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction. by Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller, Steven Goldfeder, Princeton University Press, ISBN-13: 978-0691171692.
- Blockchain Applications: A Hands-on Approach. by Arshdeep Bahga and Vijay Madiseti, Vpt, ISBN-13: 978-0996025560.

Class Schedule and Activities:

CLASS	TOPIC AND COURSE CONTENT
Class 1	Introduction to Blockchain Technology Blockchain Disruption, Cryptographic Hash Functions, Digital Signature, Public and Private Keys, Blockchains, Consensus Mechanisms, Proof of Work, Proof of Stake
Class 2	Blockchain Business Disruption Benefits and costs of blockchain solutions, disruptive innovation, Use cases in Retail, Government, Real Estate, Finance, and other industries, Implications of blockchain technology Student Presentations Guest Speech
Class 3	Cryptocurrencies and ICOs Cryptocurrencies, ICOs vs Venture Capital, Ecosystem, Regulation, Scaling, Sidechains, Cross-chain transactions, Cryptoeconomics Student Presentations
Class 4	Ethereum and Smart Contracts Ethereum platform and Smart Contracts, Decentralized Applications, DAOs, Other Blockchains for Smart Contracts, Basics of Solidity Language, Lab Time Student Presentations
Class 5	Ethereum Programming More Solidity Language, Geth Client, Lab Time Student Presentations
Class 6	Smart Contracts and Decentralized Applications Design of smart contracts and applications, Javascript, HTML, Lab Time Student Presentations
Class 7	Decentralized Applications, Other Blockchain Platforms More Javascript tools, Corda, Hyperledger Fabric, Quorum, etc. Lab Time Student Presentations
Class 8	Guest Speech Presentation of Final Projects