

Cryptocurrencies and Security on the Blockchain

Spring 2020, CS 185c

Instructor Information

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Course Description

In this course, we will review popular cryptocurrencies such as Bitcoin and Ethereum, and learn about the technologies they build upon. After completing this course, students will be equipped with the skills they need to become successful blockchain engineers.



In this course, students will:

- Build a cryptocurrency with a central clearinghouse.
- Build a cryptocurrency with distributed consensus.
- Design and implement a proof-of-work blockchain.
- Design and implement a proof-of-stake blockchain.
- Use mnemonics to save and reconstruct a cryptocurrency wallet.
- Apply the blockchain outside of a cryptocurrency setting.



There will be a final group project involving small teams of students. In this project, students will design their own blockchain-based cryptocurrency borrowing concepts from other cryptocurrencies.