

Week 1 (Introduction to blockchain)

Lectures
☐ Introduction to Blockchain Technology: https://www.youtube.c
☐ Introduction to Smart Contracts: https://www.youtube.com/wa
Resources:
Slides: Introduction to Blockchain Technology
Reading: Bitcoin Whitepaper
Reading: Ethereum Whitepaper
Slides: Introduction to Smart Contracts
Reading: Introduction to Smart Contracts (Solidity Documenta
Reading: Solidity by Example
Reading: Comparison of the four major EVM programming lang
and Yul.
Reading: Send 1 DAI

Practical tasks

https://ctf6.statemind.io/level/0xD8EF1cE7e2aDBc413979e3B
https://ctf6.statemind.io/level/0x9F94f2BC44545CAA7935a4
Week 2 (DeFi primitives 1)
Lectures
☐ Introduction and Overview of DeFi: https://youtu.be/gX3mc83
DEX: https://youtu.be/pRO5YW5qb-k
Resources:
Slides: Introduction and Overview of DeFi
Reading: CeFi vs. DeFi
Reading: DeFi SoK
Reading: Schär, F., 2021
Slides: DEX
Slides: (Guest speaker Dan Robinson (Paradigm) [Uniswap case
Reading: StableSwap
Reading: DEX with AMM Protocols Hardcore Math:)
Reading: Uniswap v3 Core Whitepaper
Watching: Impermanent Loss
Reading: Impermanent Loss
Practical tasks
☐ https://ctf6.statemind.io/level/0xD03a35651b395337b0a635[
https://ctf6.statemind.io/level/0x5a5aA7fBcA90Df200123d928

Week 3 (DeFi primitives 2)

Lectures
☐ Decentralized Lending: https://www.youtube.com/watch?v=dk
Stablecoins: https://www.youtube.com/playlist?list=PLS01nW3
Oracles: https://youtu.be/vFcW18ZpPZ4
Resources
Slides: Decentralized Lending
Reading: A Study of DeFi Liquidations
Reading: Attacking DeFi with Flash Loans
Reading: DeFi Protocols for Loanable Funds
Reading: Liquidations
Reading: The Decentralized Financial Crisis
Slides: Oracles
Slides: Stablecoins I
Reading: (In)Stability for the Blockchain
Reading: Stablecoins 2.0
Reading: Search for Stability in Crypto Assets
Reading: Chainlink 2.0
Practical tasks
https://ctf6.statemind.io/level/0x114EDc927783ba409cC9b66
☐ Hmm, if you solved all tasks you can always try to fight harder
Week 4 (DeFi security)
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Lectures
☐ DeFi Security I: https://youtu.be/pJKy5HWuFK8
☐ DeFi Security II: https://voutu.be/GIHa2GQ.IY1k

☐ Bridges: Watching: Types of bridge
☐ Layer 2: Watching: Layer 2 Scaling
Resources
Slides: Practical Smart Contract Security
Slides: Smart Contract Security
Reading: Flash Boys
Reading: Stack Too Deep
Reading: Bridges
Reading: Based Rollups
Reading: Based Rollups and DVT
Reading: Detecting and Quantifying Wash Trading (optional)
Reading: High Frequency Trading (optional)
Reading: Profit-Generating Transactions (optional)
Reading: Quantifying Blockchain Abstractable Value (optiona
Practical tasks
https://ctf6.statemind.io/level/0xf8C9Fb693d7c318C19ae00/
https://ctf6.statemind.io/level/0x0f0EEb4D9eE54759Ce92c9
https://ctf6.statemind.io/level/0xA226349Aa75dc2DAD7821E

https://ctf6.statemind.io/level/0x4E13F02D4ABC166C5bF906

https://ctf6.statemind.io/level/0x4634cb56c111ed577c40B212