

Week 1: Blockchain Fundamentals

Introduction to blockchain technology and its applications
Understanding consensus algorithms (Proof of Work, Proof of Stake)
Public vs. Private blockchains
Cryptography basics and the role it plays in blockchain security
Introduction to smart contracts and decentralized applications (dApps)

Week 2-3: Solidity

Introduction to Solidity programming language
Solidity syntax, variables, and data types
Writing and deploying your first smart contract on Ethereum
Understanding the role of gas in smart contract execution
Common smart contract vulnerabilities and how to avoid them

Week 4: NFTs

Introduction to Non-Fungible Tokens (NFTs)
Creating, minting, and selling NFTs on Ethereum
Understanding ERC-721 and ERC-1155 NFT standards
NFT marketplaces and their role in the NFT ecosystem
NFT use cases beyond digital art, such as gaming and real estate

Week 5-6: DeFi

Introduction to Decentralized Finance (DeFi)
DeFi protocols and applications on Ethereum (UniSwap, Aave, Compound, etc.)
Yield farming, staking, and liquidity mining
Flash loans and their impact on DeFi
Risks and challenges in DeFi and how to mitigate them

Week 7: DAOs

Introduction to Decentralized Autonomous Organizations (DAOs) and their role in governance
Building a DAO and deploying it on Ethereum
Exploring real-world use cases of DAOs on Ethereum.

Week 8: Metaverse and Gamification

Exploring the Metaverse and its potential impact on the future of work, social interaction, and entertainment
Gamification and incentivization in blockchain applications
Real-world use cases of gamification on Ethereum
Final project: building a decentralized application (dApp) that utilizes one or more of the concepts covered in the bootcamp