

Lab Session: Token Analysis

BSc Blockchain, Crypto Economy & NFTs

Course Instructor

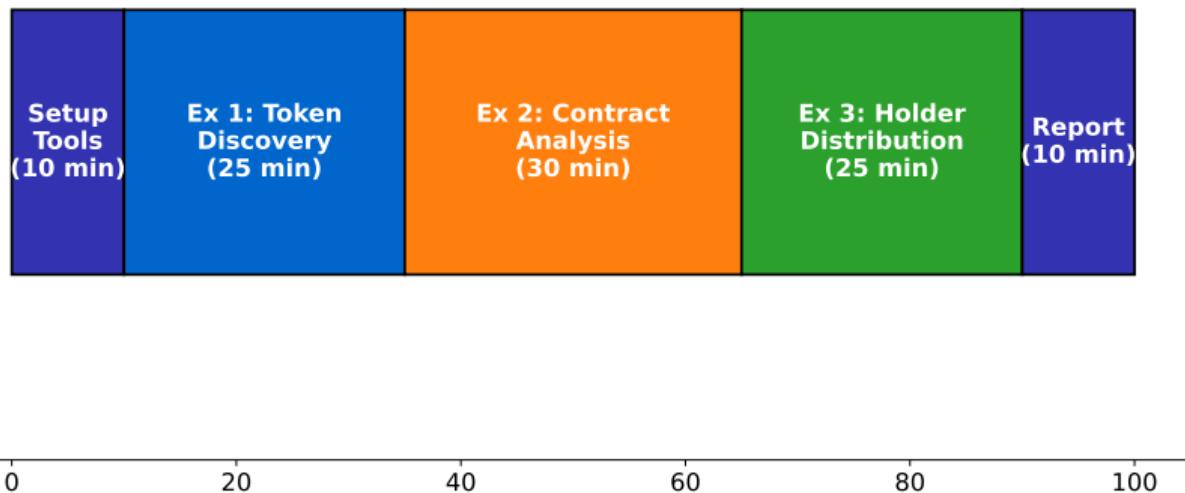
Module B: Ethereum & Smart Contracts

By the end of this lab session, you will be able to:

- Discover and research ERC-20 tokens on Etherscan
- Analyze token contract source code
- Evaluate holder distribution and concentration
- Identify potential red flags in token design
- Use DeFi analytics tools for research

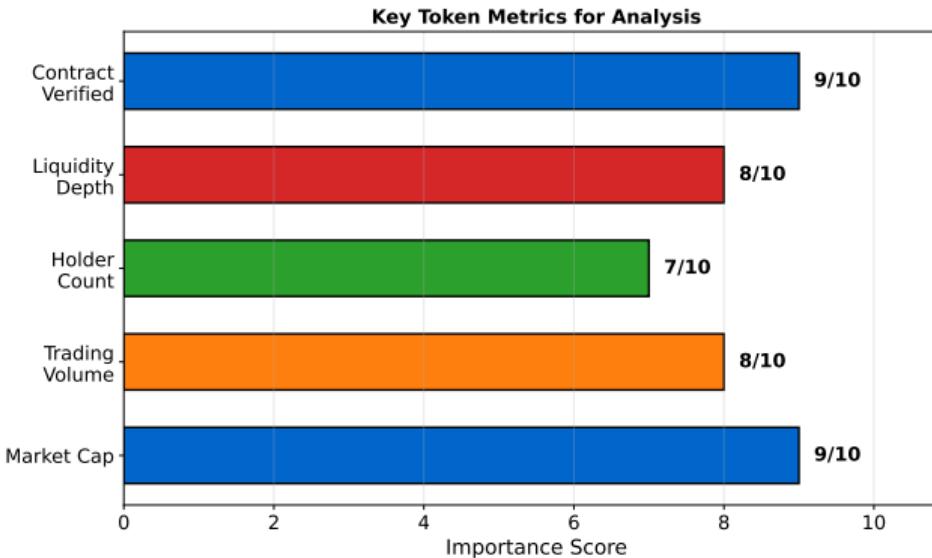
Lab Session Structure

Token Analysis Lab: 100 Minutes



Focus on due diligence skills for token evaluation

Key Token Metrics



Contract verification is essential - never interact with unverified contracts

Exercise 1: Token Discovery

Tools:

- Etherscan Token Tracker: <https://etherscan.io/tokens>
- CoinGecko: <https://coingecko.com>
- DeFiLlama: <https://defillama.com>

Tasks:

- ① Browse top ERC-20 tokens by market cap
- ② Select a token for analysis (e.g., LINK, UNI, AAVE)
- ③ Note: contract address, total supply, decimals
- ④ Check if contract is verified

Exercise 2: Contract Analysis

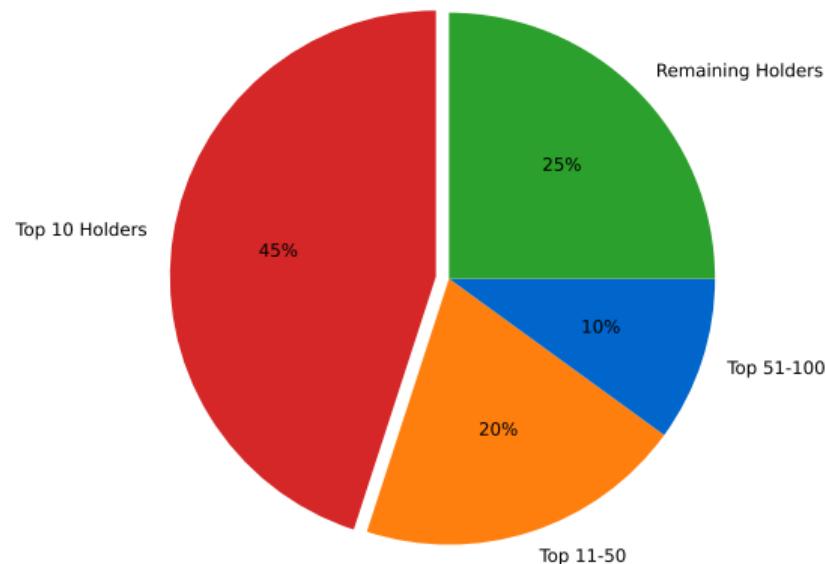
Key Elements to Check:

- **Standard Compliance:** Does it implement ERC-20 correctly?
- **Owner Functions:** Can owner mint, pause, blacklist?
- **Transfer Restrictions:** Any hidden fees or taxes?
- **Proxy Pattern:** Is it upgradeable?

Red Flags:

- Unverified source code
- Owner can mint unlimited tokens
- Hidden transfer fees
- Blacklist functionality without governance

Typical Token Holder Distribution



Warning: High concentration (>50% in top 10) = centralization risk

High concentration in top holders indicates centralization risk

Exercise 3: Holder Distribution

Etherscan Holder Analysis:

- ① Go to token page -> Holders tab
- ② Note top 10 holders and their percentages
- ③ Identify: exchanges, team wallets, contracts
- ④ Calculate concentration ratio

Healthy Distribution Indicators:

- No single holder > 10% (except exchanges)
- Team tokens locked or vesting
- Wide distribution (1000+ unique holders)
- Active trading volume

Submit:

① Token Analysis Report (2-3 pages):

- Token name, contract address, basic metrics
- Contract analysis findings
- Holder distribution summary
- Risk assessment (Low/Medium/High)

② Screenshots:

- Token overview page
- Contract code snippet
- Holder distribution

Key Takeaways

- Always verify contract source code before interacting
- Check holder distribution for concentration risk
- Look for red flags: hidden fees, owner privileges
- Use multiple tools for comprehensive analysis
- High market cap does not guarantee safety