



COURSE 02

Bitcoin Essentials

Course description

Course 02 - Bitcoin between technology, security, and freedom

Course 02

Bitcoin Essentials: the pillars of Bitcoin between technology, security, and freedom

Description

Bitcoin represents the genesis of blockchain technology and is by far the most capitalized cryptocurrency on the entire market, given its level of decentralization, which is unmatched by any other blockchain. The course aims to illustrate in a practical and concrete way the functioning of the Bitcoin protocol, through an understanding of its origins and the pillars of its operation, as well as its social role in terms of privacy protection, social role, and potential developments.

Target participants

- Financial Advisors
- Asset Managers
- Financial professionals

Speaker

Dr. Marco Caldana

Materials

- Course presentation
- Summary sheets
- Access to selected Route Crypto Training resources

Contents

Introduction and basic concepts

- What is Bitcoin
- Money and Bitcoin
- History and context of Bitcoin

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The Bitcoin protocol

- Blockchain and distributed ledgers
- The consensus mechanism (Proof of Work)
- Difficulty, Reward, Halving, UTXO model
- Mining and network security

Bitcoin in practice

- How to obtain Bitcoin
- How to store Bitcoin
- How to send and receive Bitcoin

Self-Custody and Security

- Private and public keys
- Seed phrases
- Types of wallets (hot, cold, hardware, multisig)
- Backup and protection strategies
- Common attacks and how to defend against them

Privacy and scalability

- How does privacy work in Bitcoin?
- The Bitcoin node network
- CoinJoin and transaction obfuscation techniques
- Lightning Network and scalability solutions
- Anonymizing Networks and Additional Tools

Economic and social aspects

- Bitcoin as a store of value
- Bitcoin and the traditional financial system
- Social and geopolitical impact of Bitcoin

Development and Future of Bitcoin

- The Bitcoin Development Process
- Soft Forks and Hard Forks: Evolution of Consensus
- Recent and Future Updates