

Bitcoin+ Developer™

Duration: 40 hours

Course Overview

Bitcoin+ Developer™ certification program offers comprehensive training, covering fundamentals of Bitcoin and the underlying Blockchain technology, fundamentals of bitcoin scripting, building applications using bitcoin scripts, Layer 2 scaling solutions, real-world use cases, security best practices, integration with SDK/APIs, and insights into future trends. The program culminates with a hands-on project work for practical application and a capstone project.

Course Prerequisites

- Familiarity with general programming concepts like data structures, algorithms and networks
- Understanding of at least one legacy programming stack (e.g. Python, JavaScript, Java or similar)
- Fundamental knowledge to use command line consoles on any operating system
- Ability to understand developer concepts like SDKs, APIs, application development tools etc.
- Experience with building end to end tiered applications

Course Agenda

Module 1: Introduction to Bitcoin and Blockchain

- Overview of Bitcoin Technology
- Overview of Blockchain Technology

Module 2: Bitcoin Scripting Language

- Fundamentals of Bitcoin Scripting Language
- Components of Scripting Language Basics
- Uses of the Bitcoin Scripts
- Execution Condition of Scripts
- Security and Vulnerabilities in the Scripts

Module 3: Building on Bitcoin Script

- Standard Transactions
- Trade and DeFi

- Smart Contracts
- Asset Definition

Module 4: Layer 2 Scaling Solutions

- Basic of Layer 2
- Different Layer 2 Projects

Module 5: Use Cases and Projects using Layer 2

- Payments Use Cases
- Assets and Defi
- Industry Use Cases
- Integration with Other Tech- IoT

Module 6: Security and Best Practices

- For Scripting Apps
- General Security Practices
- Keys and Smart Contracts
- Off the Chain
- Layer 2

Module 7: Integration (SDK/APIs) and Deployment

- Basic Overview of SDK & APIs
- BitcoinJS
- BitcoinJ
- Bitcoinlib
- Bitcoin RPC Client (Python)
- Deployment Strategies

Module 8: Future Trends and Innovations

- Innovation in Bitcoin Applications
- Innovation in Bitcoin Layer 2

- Innovation in Asset Definition
- Innovation in Bitcoin Interoperability
- Innovation in Bitcoin Identity and Users
- Innovation in Bitcoin Dev Tools

Module 9: Capstone Project

- Capstone Project