Enterprise Computing Solutions - Education Services

# TRAINING OFFERING

**You can reach us at:**

Arrow Enterprise Computing Solutions Ltd, Part 1st Floor, Suite 1D/1, Central House, Otley Road, Harrogate, HG3 1UG

Email: education.ecs.baltic@arrow.com
Phone: 0870 251 1000

# Bitcoin+ Developer™

| CODE: | LENGTH: | PRICE: |
|---|---|---|
| AIC_BC-200 | 30 Hours | €249.00 |

## Description

**Navigate the depth of development with Bitcoin**

- **Foundational Learning**: Covers Bitcoin scripting, blockchain tech, and security practices
- **Advanced Builds**: Learn Layer 2 scaling, SDK/API integration, and real-world use cases
- **Hands-On Projects**: Complete practical work with a capstone project
- **Future-Ready**: Understand trends and secure coding in decentralized apps

**At a Glance: Course + Exam Overview**

- **Included:** Self-paced course + Official exam + Digital badge
- **Delivery:** Projects & case studies
- **Outcome:** Industry-recognized credential + hands-on experience

**The following tools will be explored in this course:**

- Bitcoin Core
- Electrum
- BitcoinJS
- Umbrel

**What's Included (One-Year Subscription + All Updates):**

- High-Quality Videos, E-book (PDF & Audio), and Podcasts
- AI Mentor for Personalized Guidance
- Quizzes, Assessments, and Course Resources
- Online Proctored Exam with One Free Retake
- Comprehensive Exam Study Guide
- Access for Tablet & Phone

## Objectives

- Understanding Bitcoin and Blockchain Fundamentals
- Bitcoin Scripting Proficiency
- Layer 2 Scaling Solutions
- SDK/APIs and Deployment

## Audience

- **Blockchain Developers**: Master the integration of Bitcoin protocols into decentralized applications and platforms.
- **Cryptocurrency Enthusiasts:** Learn how to develop, trade, and manage Bitcoin-based assets and understand blockchain technology.
- **Software Engineers:** Gain expertise in incorporating Bitcoin's blockchain into software applications for secure and efficient transactions.
- **Financial Analysts**: Explore the potential of Bitcoin in financial markets and use blockchain technology for secure financial

solutions.
- **Tech Innovators:** Dive into Bitcoin development to stay at the forefront of cryptocurrency and blockchain innovation.

## 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.

## Programme

**Course Introduction**
**Module 1: Introduction to Bitcoin and Blockchain**
1.1 Overview of Bitcoin Technology
1.2 Overview of Blockchain Technology

**Module 2: Bitcoin Scripting Language**
2.1 Fundamentals of Bitcoin Scripting Language
2.2 Components of Scripting Language Basics
2.3 Uses of Bitcoin Scripts
2.4 Execution Condition of Scripts
2.5 Security and Vulnerabilities in the Scripts

**Module 3: Building on Bitcoin Script**
3.1 Standard Transactions
3.2 Trade and DeFi
3.3 Smart Contracts
3.4 Asset Definition

**Module 4: Layer 2 Scaling Solutions**
4.1 Basics of Layer 2
4.2 Different Layer 2 Projects

**Module 5: Use Cases and Projects using Layer 2**
5.1 Payments Use Cases
5.2 Assets and DeFi
5.3 Industry Use Cases
5.4 Integration with Other Tech – IoT

**Module 6: Security and Best Practices**
6.1 For Scripting Apps
6.2 General Security Practices
6.3 Keys and Smart Contracts
6.4 Off the Chain
6.5 Layer 2

**Module 7: Integration (SDK/APIs) and Deployment**
7.1 Basic Overview of SDK & APIs
7.2 BitcoinJS
7.3 BitcoinJ
7.4 Bitcoinlib
7.5 Bitcoin RPC Client (Python)
7.6 Deployment Strategies

**Module 8: Future Trends and Innovations**
8.1 Innovation in Bitcoin Applications
8.2 Innovation in Bitcoin Layer 2
8.3 Innovation in Asset Definition
8.4 Innovation in Bitcoin Interoperability
8.5 Innovation in Bitcoin Identity and Users
8.6 Innovation in Bitcoin Dev Tools

**Module 9: Capstone Project**

1. Capstone Project

## Follow on courses

**Recommended Certifications:**
Bitcoin+ Executive™ (BC-100) - Empowering Executives with Bitcoin Innovation
Blockchain+ Executive™ (BL-100) - Lead confidently in the Blockchain executive sphere
Bitcoin+ Everyone™ (BC-900) -Demystify Bitcoin: Simple, Accessible, Essential for All

## Test and Certification

**Exam Details**

- Duration: 90 minutes
- Passing Score: 70%
- Format: 50 multiple-choice/multiple-response questions
- Delivery Method: Online via proctored exam platform (flexible scheduling)

**Exam Blueprint**

- Introduction to Bitcoin and Blockchain - 5%
- Bitcoin Scripting Language - 10%
- Building on Bitcoin Script - 20%
- Layer 2 Scaling Solutions - 10%
- Use Cases and Projects using Layer 2 - 15%
- Security and Best Practices - 5%
- Integration (SDK/APIs) and Deployment - 20%
- Future Trends and Innovations - 5%
- Project Work and Capstone - 10%

## Session Dates

| Date | Location | Time Zone | Language | Type | Guaranteed | PRICE |
|---|---|---|---|---|---|---|
| 01 Jan 0001 | | | English | Self Paced Training | | €249.00 |

## Additional Information

This training is also available as onsite training. Please contact us to find out more.