MODULE 1

Blockchain Technology and Crypto-Assets

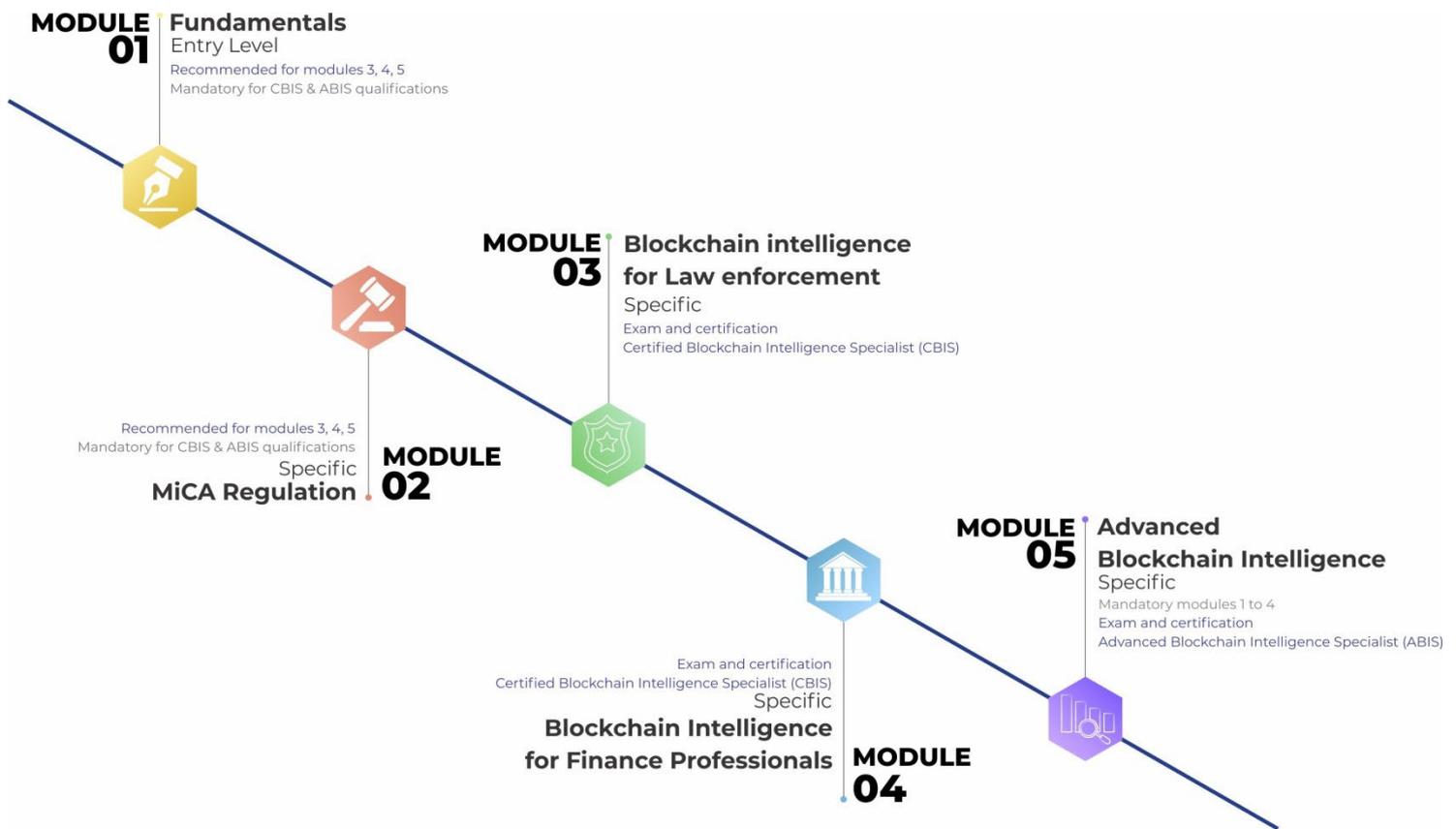# Module 1:

Blockchain Technology and Crypto-Assets:

Introductory course in blockchain technology and crypto-assets for non-technical professionals

This introductory course is one of five general training modules within the 'Blockchain Intelligence' specialization and targets non-technical participants interested in acquiring foundational knowledge of blockchain technology and exploring the economic impact of crypto-assets in the context of digital transformation.

The program blends clear, accessible theoretical concepts with hands-on examples, straightforward case studies, and real-world industry scenarios. Participants will develop foundational skills in how blockchain technology works, how digital assets are used, and their impact across sectors such as finance, logistics, administration, and law.

The course is interactive, delivered in English for an international audience, and integrates theoretical aspects such as blockchain technology, crypto-asset classification, and regulatory principles with practical components using a blockchain analytics platform.Participants will be guided step by step through compliance examples, case studies, and discussions on the challenges and opportunities this technology presents.

All trainees will have access to the blockchain intelligence software provided by ChainArgos during the course and up to 15 days after course completion, enabling them to consolidate their knowledge and deepen the practical applicability.

MODULE 01 — Fundamentals
Entry Level
Recommended for modules 3, 4, 5
Mandatory for CBIS & ABIS qualifications

MODULE 02 — MiCA Regulation
Specific
Recommended for modules 3, 4, 5
Mandatory for CBIS & ABIS qualifications

MODULE 03 — Blockchain intelligence for Law enforcement
Specific
Exam and certification
Certified Blockchain Intelligence Specialist (CBIS)

MODULE 04 — Blockchain Intelligence for Finance Professionals
Specific
Exam and certification
Certified Blockchain Intelligence Specialist (CBIS)

MODULE 05 — Advanced Blockchain Intelligence
Specific
Mandatory modules 1 to 4
Exam and certification
Advanced Blockchain Intelligence Specialist (ABIS)

We recommend attending the first two training modules of the Blockchain Intelligence Academy to facilitate the understanding of basic concepts and passing the exam required to obtain the "Blockchain Intelligence Specialist" certification. We also recommend attending all 5 training modules, which grants the "Advanced Blockchain Intelligence Specialist" certification.

COURSE OBJECTIVES

This course aims to provide participants with the following outcomes:

1. **Improving conceptual understanding skills** – Participants will build a solid foundational knowledge of blockchain technology and crypto-assets, without needing prior technical expertise.
2. **Understanding practical applicability** – Trainees will learn how blockchain technology and crypto-assets work and how they can be used in real-world contexts.
3. **Guidance through concrete examples** – Through simple and easy-to-understand case studies, participants will understand how these technologies are applied in various industries.
4. **Understanding regulation** – Basic concepts regarding crypto-asset regulation will be introduced, including references to the MiCA Regulation (Markets in Crypto-Assets).
5. **Exploring future perspectives** – The course will encourage participants to analyze emerging trends (Web3, smart contracts) and the socio-economic implications of blockchain technology.

TARGET GROUP

The "Blockchain Technology and Crypto-Assets" course is aimed at professionals from various fields who wish to understand the fundamentals of blockchain technology and the role of crypto-assets in a clear and accessible manner, without requiring prior technical knowledge. Specifically, the course is relevant for public officials and employees from local or central administrations involved in digitization, transparency, and modernization of public services; for notaries, lawyers, and legal consultants who wish to understand the operating principles of blockchain and crypto-assets in order to provide specialized consulting on regulation and compliance; for professionals in the banking and financial sectors who want to understand the implications of these technologies on financial products and services, as well as for entrepreneurs and managers interested in the business applicability of blockchain technology, such as traceability, security, or operational efficiency.

The course is also suitable for students and academics in fields such as economics, law, political science, or public administration, as well as the general public interested in innovation, digital transformation, and the impact of emerging technologies on the economy.

COURSE CONTENT

1. Fundamentals of blockchain technology

- Introduction to blockchain technology and its core principles (What is blockchain? Definitions and basic principles. How does blockchain work? Decentralization and distribution.)
- Consensus mechanisms and blockchain security (Proof of Work (PoW), Proof of Stake (PoS), and other mechanisms. Cryptography and data security in blockchain.)
- Blockchain structure and operation (Transaction recording and verification. Immutability and transparency of blockchain.)
- Applications of blockchain technology (beyond crypto-assets) (Applications in logistics, healthcare, governance. Introduction to smart contracts)

2. Crypto-assets – types, functionalities, and usage

- Types of crypto-assets – cryptocurrencies, stablecoins, tokens (Definitions and classification: cryptocurrencies, stablecoins, tokens. Examples of cryptocurrencies (Bitcoin, Ethereum).
- Functionality of crypto-assets (How crypto-assets work: digital wallets, transactions, mining. Stablecoins and tokens: stability and commercial uses)
- Risks and challenges in using crypto-assets (Volatility, security, fraud. Technological and economic risks.)
- The impact of crypto-assets on financial markets (The relationship between crypto-assets and traditional financial markets. Crypto-assets as investment and financing tools.)

3. Benefits and challenges of blockchain technology and crypto-assets

- Advantages of blockchain technology (Transparency, security, decentralization, and efficiency)
- Risks and limitations (Challenges related to scalability, energy consumption, and privacy.)
- Risk versus reward in crypto-assets (Analysis of benefits and risks associated with investments in crypto-assets)

4. Regulation and compliance

- Introduction to crypto-asset regulations (The importance of regulation and main legislative concerns in this field)
- The Markets in Crypto-Assets Regulation (MiCA) and its implications (Explaining the MiCA framework, applicability, and impact on the crypto-asset industry)
- Challenges of international regulation (An overview of different regulatory approaches in other jurisdictions and how they differ from MiCA).

5. Case studies and practical applications

- Blockchain in various industries (Exploring blockchain applications in areas such as finance, logistics, healthcare, and public administration)
- Practical scenarios for using crypto-assets (Discussion of real-world usage scenarios and simple case studies)
- Trends and future perspectives (Exploring emerging innovations in blockchain, such as smart contracts, Web 3.0, and potential development directions).
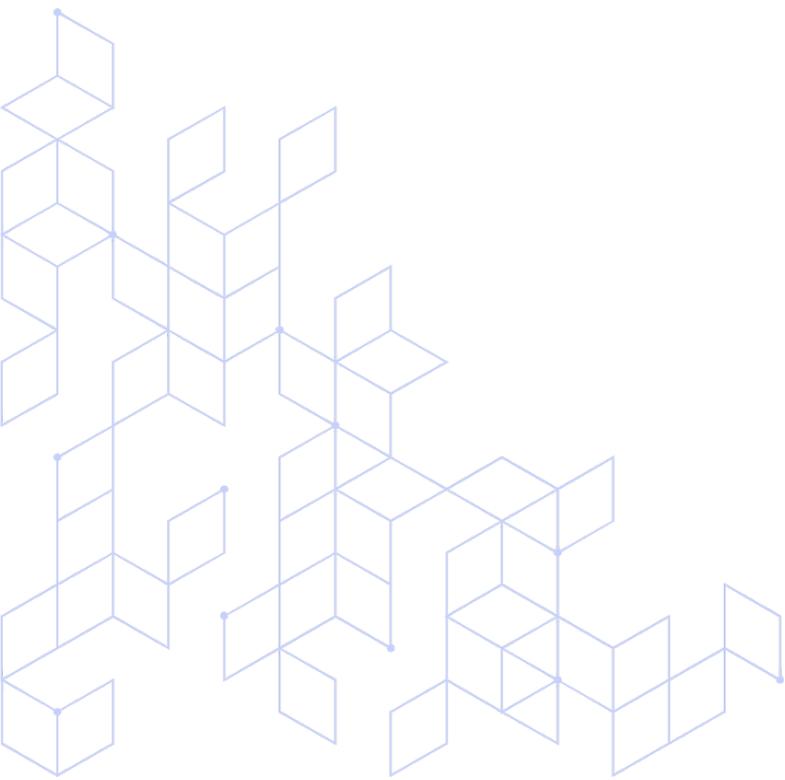
TRAINER

Cristina Carata

With 10 years of experience in the WEB3 field, Cristina is a PhD researcher at Imperial College London at the Centre for Cryptocurrency Research and Engineering. Her internationally recognized research has been published in academic journals and can be found in databases such as Springer-Nature, IEEE, or ACM, highlighting a strong contribution to the advancement of scientific knowledge in the field.

With extensive experience in analyzing the operating mechanisms of crypto markets and the related legislative implications, Cristina brings to the table a unique perspective at the intersection of technological innovation and emerging regulation. As a trainer, she combines a theoretical approach rooted in academic rigor with practical examples and relevant case studies.

Her expertise extends beyond academia, being recognized for her contributions at international conferences as well as for her consultancy work with organizations interested in adopting, implementing, and adapting blockchain solutions. With a dynamic and application-oriented teaching style, Cristina shares her knowledge and experience, training professionals capable of understanding and applying solid principles regarding crypto-assets and European regulations.

COURSE DURATION

The course will take place over one full training day (in-person, online or hybrid).

Registration is done by completing the registration form.

COMPETENCY DEVELOPMENT

Participants will receive a Certificate of Completion issued by ICI Bucharest, including CPD (Continuing Professional Development) credits and a descriptive supplement of the specific competencies acquired.

This training module is recommended for those who wish to subsequently participate in the practical course modules of the Blockchain Intelligence Academy, which grant the "Blockchain Intelligence Specialist" certification and, later, automatic membership in the Blockchain Intelligence Professionals Association (BIPA), whose goal is to develop an international community of blockchain intelligence professionals.

PARTICIPATION FEE

For course fees and further details, please contact us by email.

Details regarding the program's schedule and registration procedures can be obtained at the email address: office@ici.ro
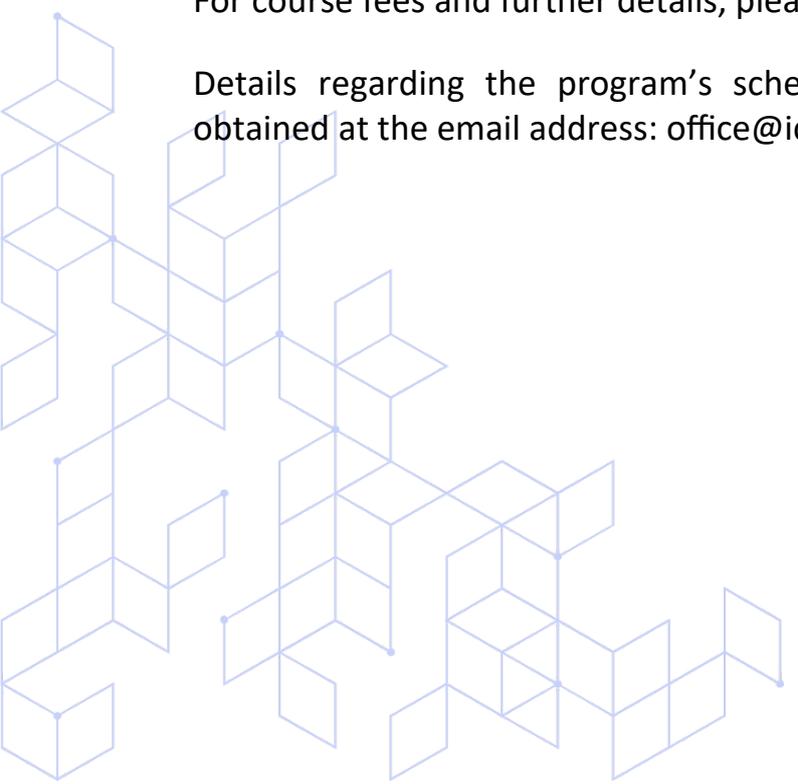
About ChainArgos' blockchain intelligence software

ChainArgos is a blockchain intelligence company known for uncovering the undercollateralization of $1.4 billion worth of stable crypto-assets (BUSD) on the Binance global platform.

ChainArgos offers advanced blockchain intelligence solutions focused on analyzing the financial details of transactions. These solutions facilitate investigations and economic analyses, providing an objective perspective on the reasoning behind complex transaction flows.

The company collaborates with financial institutions, regulatory authorities, law enforcement agencies, research institutes, universities, and crypto-asset service providers globally. ChainArgos also benefits from support by renowned media outlets such as Bloomberg, Wall Street Journal, Forbes, Fortune, Thomson Reuters, and South China Morning Post.

Participants in this training program will have access to the ChainArgos blockchain intelligence platform during the course and for up to 15 days after its completion.

ChainArgos.com

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