

**kaina**-COM



ACADEMY

**PILAT** EUROPE  
Leading a new era of human resources

# Boost Program

SUMMER EDITION 2020

## Cyber Security Package: **BC**

- ✔ Introduction to Blockchain: concept and technologies

# KAÏNA-COM TRAINING CATALOGUE

## Introduction to Blockchain

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KAÏNA-COM France  
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## KSE008 – Introduction to Blockchain

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**Reference** KSE008

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**Experience**

- Beginner
- Intermediate
- Advanced

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**Duration** Training Program:

- 8 hours (4hours/day)

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**Training Method**

- I: i-learning, individual training (web-based training)
- V: v-learning, virtual class
- C: c-learning, classroom training

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**Prerequisite** None

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**Audience** The seminar is build for technically oriented participants, Engineers, architects, IT professionals, IT leaders & Managers, R&D managers, CIOs who are interested in a functional/technical snapshot into the Blockchain and cryptographic currency world.

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## KSE008 – Introduction to Blockchain, Continued

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### **Objective**

Blockchain is not a technology story, it is a psychology story. But in order to really understand what it is and what it is capable of doing in the areas of finance and politics, we first need understand the Block chain structure and Bitcoin protocol – where did it come from, what set of problems was it trying to solve, and how does it actually work. Furthermore, we will explore the Blockchain ecosystem as a whole, getting to know its main actors, challenges and threats.

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## KSE008 – Introduction to Blockchain, Continued

### Course Contents

#### Course Contents :

Table 1: KSE007 - Course Contents

Chapter	Description
<b>The history of Bitcoin</b>	<ul style="list-style-type: none"> <li>• The Cypherpunks movement</li> <li>• Satoshi Nakamoto, The white paper, Bitcoin v0.1 release</li> <li>• The double-spend problem</li> <li>• Centralization vs Decentralization</li> <li>• Blockchain vs Bitcoin</li> <li>• Applications of Blockchain Technology</li> </ul>
<b>Bitcoin building blocks</b>	<ul style="list-style-type: none"> <li>• Cryptographic hash functions</li> <li>• Digital Signatures (public-key cryptography)</li> <li>• Transactions, The Script Language</li> <li>• Merkle-trees</li> <li>• Coinbase transaction (block reward)</li> <li>• The chain of blocks (aka blockchain)</li> <li>• The P2P protocol</li> </ul>
<b>Distributed Consensus</b>	<ul style="list-style-type: none"> <li>• Incentives and Proof-of-Work</li> <li>• Mining</li> <li>• Block time / Difficulty level</li> <li>• Soft forks, Hard forks</li> <li>• Immutability, number of confirmations</li> </ul>
<b>Power Struggles</b>	<ul style="list-style-type: none"> <li>• 51% attack</li> <li>• Who controls Bitcoin</li> <li>• What sets the price of bitcoin</li> <li>• Geopolitics and state-sponsored attacks</li> <li>• Government intervention, Regulation</li> <li>• The block size debate</li> <li>• The War Against ASICs</li> <li>• Permissioned vs Permissionless Blockchain</li> </ul>

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## KSE008 – Introduction to Blockchain, Continued

### Course Contents, continued

Chapter	Description
<b>Using Bitcoin</b>	<ul style="list-style-type: none"><li>• Wallet technology overview</li><li>• Hot vs Cold storage</li><li>• Transaction Fees</li><li>• Online Wallets and Exchanges</li><li>• Centralized vs Decentralized Exchanges Part</li></ul>
<b>Altcoins and the Cryptocurrency Ecosystems</b>	<ul style="list-style-type: none"><li>• Side Chains</li><li>• 2nd-Layer Solutions</li><li>• Intrinsic vs Extrinsic assets</li><li>• Litecoin</li><li>• Ethereum</li><li>• ERC20 Tokens</li><li>• Ethereum Classic</li><li>• Monero</li><li>• Ripple</li><li>• Stable coins</li><li>• DAG coins</li></ul>
<b>The End</b>	<ul style="list-style-type: none"><li>• Q&amp;A</li><li>• Course's Evaluation</li></ul>

