

Blockchain Developer Programme

Ethereum | Hyperledger



EDUCATION
MADE IN GERMANY

This course is designed for experienced programmers who want to acquire new skills in Blockchain technology, and aims to teach developers and software engineers about devising and developing Blockchain projects using the Ethereum and the Hyperledger platforms. From an implementation perspective, this includes writing smart contracts and decentralised applications (DApps). Further, from a conceptual perspective, we also provide an understanding of the variety of possible Blockchain use cases and business models. More and more Blockchain-based applications are being developed, and it is therefore key to have a profound knowledge of the underlying technologies (like Ethereum or Hyperledger).

Programme structure

The programme starts with 1 day combined. After that you will split into your respective elective: on either "Ethereum" or "Hyperledger"

Day	INTRODUCTION	
Monday 18 Sept.	Blockchain technology: impact, use cases and prototypes Potential impact on companies, organizations and industries; existing use cases; identification of new use cases; planning and budgeting prototypes	Blockchain basics Transactions; blocks; private, consortium, and public networks; smart contracts; consensus mechanisms; hash; public/private keys; Merkle tree; double-spend problem Cryptocurrencies and ICOs Analyzing important crypto currency frameworks; initial coin offerings (ICOs); financing projects
Day	ELECTIVE 1: DEVELOPING WITH ETHEREUM	
Tuesday 19 Sept.	Ethereum basics Setting up and running a node; using Ethereum clients; Ether as a currency; Mist browser; Parity; DApps	Use case "asset-backed securities" Presentation of use case and project work; sophisticated smart contract for asset-backed securities; smart contract backend system; interaction with frontend
Wednesday 20 Sept.	Ethereum environment Setup environment; introduction to Parity; sending coins; calling contracts; tour of the DApps; tooling and clients; keys and wallets	Solidity basics Contract classes; functions and conditionals; oracles; best practices; global variables; debugging; creation of a token
Thursday 21 Sept.	Solidity advanced Inheritance; abstract contracts; libraries; modifiers, security; best practices	Smart contracts deployment Compile and deploy contracts; testing and production environment; Parity client; account management; mining; interacting with contracts
Friday 22 Sept.	Web3 & Truffle basics Installation, setup, configuration and scripting; building an interface to interact with a smart contract; event-driven interfaces; functional tests	Web3 & Truffle interactions Communication with HTML websites; client side signing and remote nodes for light DApps; injection of blockchain libs
Day	ELECTIVE 2: DEVELOPING WITH HYPERLEDGER	
Tuesday 19 Sept.	Introduction to Hyperledger Introduction to Fabric 1.0; general architecture and tools	Analysis of Hyperledger Fabric In-depth analysis of membership services; consensus mechanisms and security
Wednesday 20 Sept.	Development of a Fabric application Setup development environment; explanation of different tools	Smart contracts Writing a smart contract; developing and testing smart contracts; running smart contracts on Fabric
Thursday 21 Sept.	Interaction with the blockchain Interact with smart contracts from other applications	Fabric Composer Working with the Fabric Composer; best practices; sharing experiences
Friday 22 Sept.	Project work Identification of a small use case and implementing it	The future of Hyperledger Deployment opportunities; Live implementations; future of Fabric

Main Lecturers



PROF. DR. PHILIPP SANDNER is head of the Frankfurt School Blockchain Center at the Frankfurt School of Finance & Management. The expertise of Prof. Sandner in particular includes blockchain technology and its application in various industries but also concerns digital transformation, entrepreneurship (e.g. corporate entrepreneurship, fintech startups) and innovation management. Prof. Sandner is a member of the FinTechRat of the Federal Ministry of Finance.



ANDREI MARTCHOUK is managing director at KI decentralized GmbH, a software development company and consultancy with a strong focus on the blockchain technology. Before KI decentralized in 2014–2016, Andrei was co-founder and CEO of Yacuna, a London and Zurich-based blockchain solutions provider and international trading platform for digital currencies. Prior, Andrei was Chief System Architect at ClickandBuy, one of the first German FinTech companies.



THOMAS MARCKX is co-founder of TheLedger.be, This is a service company with a strong focus on the Blockchain technology (e.g. Hyperledger, Ethereum, Multichain, Bigchaindb, colorcoin, NXT and many more). Our main activities are: advice, build, co-create, integrate and provide trainings. Before of that he worked as Blockchain Developer for a software company supporting organisations to achieve business excellence by engineering Optimal IT solutions.

Further lecturers involved: Vahe Andonians, Simon Dosch, Immo Garlichs, Thore Hildebrandt.

Discover Frankfurt School Blockchain Center

The Frankfurt School Blockchain Center is a think tank and research center which investigates implications of the blockchain technology for companies and their business models. Besides the development of prototypes, it serves as a platform for manager, start-ups, technology and industry experts to share knowledge and best practices. The Blockchain Center also provides new research impulses and develops trainings for students and executives. It focuses on banking, mobility, "Industrie 4.0" and the energy sector.

www.fs-blockchain.de



Administrative Details

Requirements

We recommend that participants have moderate development experience with regard to object-oriented programming. For detailed requirements, please see our website.

Tuition and accommodation expenses

The total fee is 4,300 € for the 5 days programme (Introduction plus one elective).

This fee includes all training material and full-board accommodation.

Dates

18–22 September 2017

Price

4,300 €

Training venues

Training Activities will take place at Frankfurt School's facilities.

Language

The language will be English.

Certificate

Participants will receive a certificate of attendance.

Registration

www.frankfurt-school.de/bcd

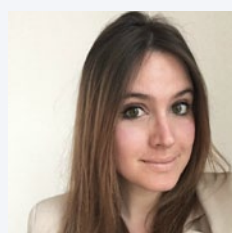
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For technical question

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