Tel +44 20 4571 2395
info@siliconbeachtraining.co.uk

The Ethereum Developer Certification Course provides a thorough understanding of Ethereum and underlying concepts of the Blockchain technology. The delegates will learn how to use Remix IDE and Solidity for developing custom smart contracts and deploy them on blockchain network. The course enables the delegates to develop decentralised applications on the Ethereum platform. The course familiarises delegates to the Ethereum platform, Web3 and Truffle framework, Solidity (programming language) and lastly how to integrate everything together. By the completion of the course, the delegates will be able to develop, deploy and test a fully functioning decentralised application. The training program will be conducted by leading industry experts.

Ethereum is a blockchain-based distributed computing platform that runs smart contracts without any possibility of fraud, third-party interference or downtime. The Blockchain Technology can be applied to various fields such as insurance, banking, healthcare, retail, life science, e commerce, media and entertainment sector. The Ethereum Developer Certification will be greatly fruitful in securing the best job opportunities. The course is beneficial for Software Engineers, Programmers, Cryptocurrency Enthusiasts, Developers and individual who uses Ethereum in their daily lives. Master the concepts of an Ethereum Blockchain and Ethereum Programming with Silicon Beach Training's two days Ethereum Developer Certification Course.

During the training program, the delegates will learn about the Centralized, Decentralized and Distributed Systems, blockchain data structure, Ethereum framework and how it creates a vast variety of decentralized applications by making use of blockchain technology. The delegates will also be exposed to the concepts of Solidity and Advanced Solidity including event handling, importing libraries, modifiers and much more. After the end of the training program, the delegates will be able to develop a DApp service, use Web3.js to communicate between HTML pages and smart contracts and use Truffle for running Contracts, running Migrations and writing test cases.

Prerequisites

The prerequisites of the course include:

- JavaScript Training
- js Fundamentals
- Linux Fundamentals
- Java Essentials (or OOPs concepts)

Course Objectives

- Understand the underlying technology of Blockchain and cryptocurrencies
- Get insights into Ethereum Ecosystem and how it differs from Bitcoin
- Learn how smart contracts and HTML pages communicate with each other

Tel +44 20 4571 2395
info@siliconbeachtraining.co.uk

- Gain thorough understanding of Public/Private key Cryptography and Hash Functions
- Use Solidity to develop Smart Contracts on RemixIDE
- Use frameworks like web3.js and Truffle for deploying your private blockchain service

Introduction to Blockchain 101

- Define Distributed, Centralized and Decentralized Systems
- What is Blockchain?
- Transactions initiated in a network
- Blockchain working
- Difference between Blockchain and Traditional Databases
- Public/Private Key Cryptography
- Overview of Hash Functions and Merkle trees
- Cryptocurrency Mining
- Cryptocurrency wallet
- Proof of Work/ Consensus
- Introduction to Ethereum
- Ethereum vs Bitcoin
- Ethereum use cases

Introduction to Ethereum

- Overview of Ethereum
- The Ethereum Blockchain
- Ethereum Virtual Machine
- Smart Contracts
- Ether and Ether Mining
- Gas - Price and Limit
- Ethereum tools – Mist, Swarm and Whisper
- Ethereum Framework – Web3.js, eth.js
- Ethereum in today’s world (DAOs and DApps)
- Development Environment – Embark, Solidity IDE and Truffle
- Ethereum Networks – Koven, Ropsten, Rinkeby
- Webpack and Browserify

Solidity

- Introduction to Solidity
- Basics (version pragma and comments)
- Keywords
- Structure of a contract
- Data Types (signed and unsigned int, boolean, address, strings)
- Data Structures (Structs, Arrays, Mapping)
- Looping and Conditional Statements
- Inheritance
- Polymorphism

Tel +44 20 4571 2395
info@siliconbeachtraining.co.uk

- Creating and deploying your own tokens
- Extended String Functionality and Bytes
- Custom Modifiers and Error Handling
- Event logging, handling
- Parameter Mapping
- Returning multiple variables
- State Modifiers (Pure/View/Constant/Payable)
- Transferring Ether between contracts (ERC20 and ERC223)
- Deployment
- Contract ABI
- Overview of the Truffle Framework
- Use web3.js and Metamask to communicate between smart contracts and HTML pages
- Setting up event-driven Interfaces
- Client-side signing and remotes nodes for DApps

Developing a DApp using Truffle

- Creating a project structure on Truffle
- Writing the smart contract
- Compiling and migrating the smart contract
- Publishing the DApp
- Working of web3.js and truffle with ReactJS
- Deploying smart contract services on the test Blockchain network
- Running the DApp on the Ethereum node using Metamask

The Ethereum Developer Certification Course provides a thorough understanding of Ethereum and underlying concepts of the Blockchain technology. The delegates will learn how to use Remix IDE and Solidity for developing custom smart contracts and deploy them on blockchain network.