Blockchain Certification Training Course

About Intellipaat

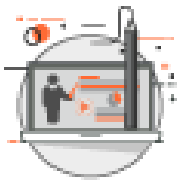
Intellipaat is a fast-growing professional training provider that is offering training in over 150 most sought-after tools and technologies. We have a learner base of 600,000 in over 32 countries and growing. For job assistance and placement we have direct tie-ups with 80+ MNCs.

Key Features of Intellipaat Training:

Instructor Led Training 32 Hrs of highly interactive instructor led training	**Self-Paced Training** 32 Hrs of Self-Paced sessions with Lifetime access	**Exercise and project work** 40 Hrs of real-time projects after every module	**Lifetime Access** Lifetime access and free upgrade to latest version
Support Lifetime 24*7 technical support and query resolution	**Get Certified** Get global industry recognized certifications	**Job Assistance** Job assistance through 80+ corporate tie-ups	**Flexi Scheduling** Attend multiple batches for lifetime & stay updated.

About the Course

The Intellipaat blockchain online instructor-led training will help you, master & learn blockchain technology, the driving force behind the cryptocurrency Bitcoin. You will learn the various aspects of structure, mechanism, advantages of blockchain technology, designing of a blockchain network, deploying it for real-world applications and more in this blockchain certification training.

Instructor Led **Duration – 32 Hrs** **Weekend Batch –3 Hrs/Session**	 **Self Paced** **Duration – 32 Hrs**

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Why take this Course?

Blockchain has been ushered in as one of the revolutionary technologies that can herald the advent of the fourth industrial revolution. It is a decentralized, peer-to-peer network which is the underlying infrastructure for bitcoin which is now finding increased applications across industrial sectors the prominent among them being banking and financial services. Taking the Intellipaat self-paced or instructor-led blockchain training course can help individuals to make the best use of utmost scarcity of skilled & certified blockchain professionals and command big salaries. You can also be a part of the blockchain hyper ledger community upon completion of the blockchain technology course.

Blockchain technology today is very robust and there are a lot of aspects like Solidity programming language, distributed ledger cloud platform, ethereum & bitcoin cryptocurrency. Taking the industry-designed Intellipaat blockchain training can help to master all these technologies and more. You will get the Intellipaat blockchain certification upon successful completion of the training.

Course Content

Module /Topic
Introduction to Blockchain ❖ Introduction to Blockchain, the technology of Blockchain ❖ Network and mechanism, history of the blockchain ❖ The benefits of Blockchain ❖ Blocks and transactions ❖ Peer to Peer systems, the block structure in the blockchain ❖ What is Dynamic shared ledger? ❖ Digital signatures ❖ How to build a blockchain solution? ❖ Hashes as addresses, Using a key as identity ❖ Ways of storing Bitcoin Keys ❖ Trade and transact with Bitcoins ❖ Global Blockchain Ecosystem Core ❖ Layers Of A Blockchain ❖ Data Layer, Network Layer, Consensus Layer
Detailed study of Blockchain ❖ Understanding what is bitcoin ❖ The network of bitcoins

- How to mine a bitcoin?
- The various bitcoin wallets
- What are the alternative blockchains available?
- What is a smart contract?
- What are a public network and a private consortium?
- Ethereum Virtual Machine, the Merkle Tree
- The Ethereum environment
- DApps, Decentralized Autonomous Organizations (DAO)
- The problem of double-spend
- How blockchain impacts cryptocurrencies?
- Mechanics Of Bitcoin, Transcriptions, Scripts, Blocks
- Peer-to-peer network
- Security Measures

Blockchain and Bitcoin

- Identify Bitcoin and its Era Understand Where & How to Get Bitcoins
- Identify Bitcoin Wallets
- Identify Jaxx Wallet
- Define Selling Bitcoins
- Compare Bitcoin Blockchain
- Transaction & Transaction Script Describe Various Transaction Forms in Bitcoin
- Define Scripts in Bitcoin, List Nodes in Bitcoin Network

Bitcoin Mining

- Understand Economics of Bitcoin
- Define Bitcoin Mining
- Describe Fabrication of a Block Header
- Define Mining
- Identify Successful
- Mining List Difficulties in Solo Mining
- Understand Mining: By pool of Miners
- Mining and consensus, autonomous verification of mining
- Independent verification of mining
- Checklist for verification of mining
- Combining transactions into blocks, combination of verified transactions, combining transactions into blocks
- Portrayal of difficulty, condition of difficulty
- Creation of block header, main chain, orphan block, creation of new block,

independent validation of new block

- The race for bitcoin mining and hash race
- Difficulty rising with the hashing power of the miners, solo mining
- Difficulty of solo mining
- Benefits of pooled mining, types of mining pools

Ethereum and working with Smart Contracts

- Understand Ethereum
- Define Smart Contracts
- Identify Cryptocurrency used in Ethereum
- Describe Transactions in Ethereum
- Define Consensus Mechanism in Ethereum
- List Development Technologies
- Identify Ethereum Clients
- Define Platform Functions
- Understand Solidity
- Describe Solidity Operators and Functions, setting up Metamask
- How to interface with ethereum network, first smart contract
- Ethereum accounts and how to receive ether
- Structuring a contract, declaring a function
- Deploying and redeploying of a contract
- Comparing Wei & Ether
- What is a gas transaction?
- Remix testing

Setting up a private Blockchain environment

- Understand Creating Smart Contracts on Ethereum Remix Browser
- Define MetaMask
- Describe Installing Blockchain
- Perform Go lang Installation
- Explain Creating Blockchain – Genesis Block List Genesis.json File Parameters
- Explain Making rules for our Blockchain
- Perform Mining Blockchain
- Contract Deployment for Blockchain Environment, Boilerplate Requirements
- Project File Walkthrough, Syntax Highlighters, Compiling Solidity
- The Compile Script, Testing Architecture, Running Windows
- Installing Modules, Web3 Versioning, Web3 Providers,
- Refactor to Async/Await
- Deployment with Web3, Web3 Version Fix

- Verifying the Initial Message, Testing Message Updates
- Deployed Contracts in Remix, Complete Example: Crowd Funding
- Smart Contract, Complete Example: Voting Ballot Smart Contract
- Ethereum Application Architecture, Application Overview
- Getting Started with Create-React-App, Multiple Web3 Instances, Web3 Setup

Hyperledger

- Define Hyperledger Blockchain,
- Understand Hyperledger Consensus Algorithm
- Explain Hyperledger Iroha
- Identify Hyperledger Components
- Describe Setting up Channels, Policies, and Chain codes
- List Hyperledger Explorer Components
- Define Hyperledger Composer
- Introduction to Hyperledger
- What is Hyperledger?
- Distributed Ledger Technology & its Challenges
- Hyperledger & Distributed Ledger Technology
- Setting up the Hyperledger Fabric Developer Environment Tools
- Linux/Ubuntu & AWS: Setup of Fabric Development on Local & Cloud VM
- Mac OS: Setup of Fabric Development Environment
- Windows: Fabric development environment setup
- How to use the Dev Tools, Development Environment Topology, Fabric Under the Hood (Concepts & Terminology), Ledger Implementation
- Dev Environment Walkthrough: Peer & CouchDB setup, Ledger Implementation
- Peers Nodes: Anchors and Endorsers, Anchor Peers & Endorsing Peers
- Clients Node: Endorsement Policies, Client Peer & Endorsing Policies, Orderer Nodes
- Membership Service Provider & Certification Authority
- Dev Environment Walkthrough: Orderer and CA Server, Chaincode Development

Hyperledger Composer

- What is hyperledger composer?
- Benefits of hyperledger composer, conceptual components, and structure
- Example business network car auction market
- Conceptual components and structures

- The model, ACL, script file, metadata, the archive, open development toolset
- Modeling business networks, testing business networks
- Hyperledger composer playground
- Developing application using Hyperledger composer

Creating private Blockchain with Multichain

- Define Multichain
- Describe MultiChain Streams
- Create & deploy private blockchain
- Explain Connecting to a Blockchain
- Identify Multichain Interactive Mode
- List Native assets
- Define Transaction Metadata
- Explain Streams Explain Mining
- Bitcoin to private blockchain
- Aim of multichain, hand-shake process, multi-chain use cases, multichain permission
- Multichain assets and multichain streams
- Basics of retrieving from streams
- Consensus model
- Multichain flexibility
- Deployment options
- Speed and scalability of multichain
- Downloading and installing multichain
- Initializing blockchain
- Connecting to blockchain
- Connecting from second server
- Permission for connection
- Multichain interactive mode
- Creating new address, connected peers, native assets
- Permission to create assets, new assets
- Verifying transactions
- Checking asset balance, resending assets, transaction metadata

Blockchain Use Cases

- Selected potential Use Cases in Blockchain
- Proof of existence, Record keeping, Identity management
- UPROOV – Mobile Trust Machine, Log operational maintenance data
- Car leasing and Sales – DocuSign,

- Forecasting – Augur, Online music problem solution
- Cloud storage, STORJ – Decentralized cloud storage
- Retail – OpenBazaar
- Ascribe – Secure your work, Ride sharing, supply chain management
- Blockchain and IoT
- Autonomous Decentralized Peer to Peer Telemetry
- ADEPT, IBM Watson IoT
- IOTA, Freight Transportation
- Banking industry projects – Payments, KYC, Trading platform
- Fraud reduction, Loan Management Process, Capital Market System
- Government – Online Voting, Capital Markets, Real Estate, Devising Public Policy
- Georgia – Blockchain Land Registry
- Estonia – Identity management and e-voting, Delaware
- USA – Smart contracts, Public Policy
- Dubai – Digital passports

Project Work

Project 1: Securing the Supply Chain System

Industry: Logistics

Problem Statement: To see there are no loopholes or fraud occurrence between the manufacturer and the end consumer.

Topics: This project gives you hands-on experience in Blockchain technology as deployed for supply chain management. You will work on recording transaction every time the product changes hands. This project includes learning how blockchain is implemented in recording, tracking, assigning, and linking the supply chain tasks. Finally, learn how blockchain is all set to become a universal supply chain operating system.

Highlights:

- Recording transaction with the hash key
- Monitoring the process through the distributed application
- Creating new blocks & transmitting the process

Project 2: Auctioning of Rare Artifacts

Industry: Online Marketplace

Problem Statement: How to bring transparency, immutability, and decentralization to online auctions

Topics: This blockchain project tells you how the distributed, immutable technology is deployed in the rare artifacts auctions domain. Blockchain creates a network of participants, records the type of asset that is being auctioned, its veracity and authenticity, monitoring the transactions, evaluating the bids and other such tasks.

Highlights:

- Bringing credibility to artifact through the blockchain
- Relaying the auction process to participants
- Securing the bids and assigning values to bidders

Project 3: Voting with Ethereum blockchain

Industry: Government

Problem Statement: To ensure there is no vote rigging in a democratic election and there is complete transparency.

Topics: This project includes deploying the Ethereum blockchain for building a secure voting system to elect a democratic government. You will learn how the Ethereum blockchain ensures confidentiality. Some of the aspects of this project include learning how to secure and validate the voting process, understanding how blockchain overcomes vote rigging, guarantees immutability and more.

Highlights:

- Building a decentralized blockchain network
- Issuing digital tokens to all eligible voters
- Recording the votes with Ethereum blockchain
- Announcing the winner in a swift manner

Intellipaat Job Assistance Program

Intellipaat is offering comprehensive job assistance to all the learners who have successfully completed the training. A learner will be considered to have successfully completed the training if he/she finishes all the exercises, case studies, projects and gets a minimum of 60% marks in the Intellipaat qualifying exam.

Intellipaat has exclusive tie-ups with over 80 MNCs for placement. All the resumes of eligible candidates will be forwarded to the Intellipaat job assistance partners. Once there is a relevant opening in any of the companies, you will get a call directly for the job interview from that particular company.

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Frequently Asked Questions:

Q 1. What is the criterion for availing the Intellipaat job assistance program?

Ans. All Intellipaat learners who have successfully completed the training post April 2017 are directly eligible for the Intellipaat job assistance program.

Q 2. Which are the companies that I can get placed in?

Ans. We have exclusive tie-ups with MNCs like **Ericsson, Cisco, Cognizant, Sony, Mu Sigma, Saint-Gobain, Standard Chartered, TCS, Genpact, Hexaware**, and more. So you have the opportunity to get placed in these top global companies.

Q 3. Does Intellipaat help learners to crack the job interviews?

Ans. Intellipaat has an exclusive section which includes the top interview questions asked in top MNCs for most of the technologies and tools for which we provide training. Other than that our support and technical team can also help you in this regard.

Q 4. Do I need to have prior industry experience for getting an interview call?

Ans. There is no need to have any prior industry experience for getting an interview call. In fact, the successful completion of the Intellipaat certification training is equivalent to six months of industry experience. This is definitely an added advantage when you are attending an interview.

Q 5. What is the job location that I will get?

Ans. Intellipaat will try to get you a job in your same location provided such a vacancy exists in that location.

Q 6. Which is the domain that I will get placed in?

Ans. Depending on the Intellipaat certification training you have successfully completed, you will be placed in the same domain.

Q 7. Is there any fee for the Intellipaat placement assistance?

Ans. Intellipaat does not charge any fees as part of the placement assistance program.

Q 8. If I don't get a job in the first attempt, can I get another chance?

Ans. Definitely, yes. Your resume will be in our database and we will circulate it to our MNC partners until you get a job. So there is no upper limit to the number of job interviews you can attend.

Q 9. Does Intellipaat guarantee a job through its job assistance program?

Ans. Intellipaat does not guarantee any job through the job assistance program. However, we will definitely offer you full assistance by circulating your resume among our affiliate partners.

Q 10. What is the salary that I will be getting once I get the job?

Ans. Your salary will be directly commensurate with your abilities and the prevailing industry standards.

What makes us who we are?

"Very informative course, very well-produced content. Enjoyable and well segmented."

-Anjali Srivastava

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"Thanks for providing this awesome course. Clear explanations, good examples, good coverage..."

-David Juvan