

# Hands on Training Course on Blockchain Technology & Application Development

Blockchain is the most Emerging Technology in the decentralized information system. It is the distributed ledger and shared ledger used by multi parties to established trust between each other, It enables (i) Trust in data / Asset transfers, (ii) Immutable Transactions logs for auditing purposes, and (iii) Authentication & Authorization.

It improves the transaction networks such as Government, Supply Chain, Banking, Healthcare, etc. which makes the process more feasible for trading the digital world reliable and securely. Blockchain Technology also enables a new way of developing and enhancing the applications across a network of participants.



## Course Objectives

Objective of the course is to build expertise in analyzing the feasibility of enabling Blockchain in their organization / department applications. Overview of Blockchain Technology, architecture and other required background will be discussed in detail during the course. It also covers Cryptography essentials and how these are implemented in Blockchain platforms. Course includes Hands-on sessions on Ethereum Blockchain platforms, end-to-end application development using these platforms and introduction to various case studies based on these platforms.

## Course Highlights

- ✓ Insights on Blockchain enablement in the applications of Government and other domains.
- ✓ Sessions delivered by Expert members from NIELIT Kolkata.
- ✓ Practical exposure to popular Blockchain platforms: Ethereum.
- ✓ Case studies on Blockchain platforms and application development.

## Course Syllabus

- ✓ Background & Introduction to Blockchain Technology
- ✓ Types of Blockchain Technology
- ✓ Overview of Bitcoin, Mining & Crypto wallets
- ✓ Ethereum Platform
- ✓ Overview of Consensus Algorithms & How they are realized in Blockchain Technology
  - Introduction to Ethereum Blockchain Platform
  - Basics of Solidity programming & its tools
  - Writing Ethereum Smart Contracts
- ✓ Challenges in Blockchain Technology (Scalability, Interoperability and other challenges such as Regulation & governance, Security & Privacy)
- ✓ Different Use Cases: Blockchain in Education System, Supply Chain Management, Financial Service, Health Care, etc.

## Target Audience

- IT / ITeS Central / State Government Departments
- PSUs and Autonomous organizations
- Government Colleges / Universities / Research Organization etc.

## Prerequisites

- Familiarity with web application development and architecture
- Basic of Object Oriented Programming Language
- Fundamental of Networking

## Course Duration

10 days, 2 sessions per day

## Course Completion Certificate

Completion Certificate will be issued to the participants who score 50% and above in the assessment

## Registration & Fee

- Submit the filled, signed and sealed nomination forms to [nielit.online.course@gmail.com](mailto:nielit.online.course@gmail.com) for confirming the registration
- Course is being offered for free of cost

## Course Details

For further clarifications and details, please contact us at [nielit.online.course@gmail.com](mailto:nielit.online.course@gmail.com)



Annexure- I

**Nomination form- Government Officials Training Programme**

**Training Programme Details**

Name of Training Programme	Faculty Development Training Program offered to Govt. Officers under Future Skills PRIME-Programme for Re-skilling/Up-skilling of IT Manpower
Name of Technology	Blockchain Technology
Resource Centre Name	NIELIT Kolkata
Date of Training	<b>3<sup>rd</sup> week of April'2021</b>

**Personal Information**

NAME Prof./Dr./Mr./Ms.			
DESIGNATION:		ORGANISATION:	
DATE OF BIRTH		GENDER(M/F)	
AADHAR No.			
CONTACT NUMBER & E- MAIL			
NAME OF THE ORGANISATION/DEPAR TMENT			
COMPLETE ADDRESS / CONTACT NUMBERS / E- MAIL OF THE INSTITUTE			

**Educational / Professional Qualifications**

EDUCATIONAL / PROFESSIONAL QUALIFICATIONS (GRADUATION ONWARDS)			
SL. No.	YEAR	DEGREE	UNIVERSITY/INSTITUTE

RESEARCH / TECHNICAL EXPERIENCE			
SL.NO.	YEAR	AREA OF EXPERTISE	CENTRE

*Signature of the Official*

**Recommended/Not Recommended  
(By the Head of the Institute)**

**(SIGNATURE OF HEAD OF INSTITUTION)**