

# Electronics & ICT Academy

## IIT Roorkee

Short Course/ FDP

on

"Blockchain Technology"

Recognized by AICTE at par with QIP  
for recognition/credits



In Association with

Chitkara University, Himachal Pradesh



April 09-17, 2020

Experts from Academia/Industry

Mr. Revanth Kumar  
(Devarty  
Technologies)

Guest Lecture  
IIT Roorkee

Certificates to participants by E&ICT  
Academy IIT Roorkee

Supported by

Ministry of Electronics & Information Technology  
Government of India



Venue

Classes will be held through online  
platform

## Why Blockchain?

A blockchain is, in the simplest of terms, a time-stamped series of immutable record of data that is managed by cluster of computers not owned by any single entity. Each of these blocks of data (i.e. block) are secured and bound to each other using cryptographic principles (i.e. chain). The blockchain network has no central authority. It is the very definition of a democratized system. Since it is a shared and immutable ledger, the information in it is open for anyone and everyone to see. Hence, anything that is built on the blockchain is by its very nature transparent and everyone involved is accountable for their actions.

### Objective of the Course

- Introduction to the concepts of blockchain and its platforms as bitcoin, ethereum, hyperledger and multiChain.
- Overview of the structure and mechanism of blockchain.
- Learn about how smart contracts are developed using solidity.
- Learn about how to deploy a business network using hyperledger compose.

### Benefits and Outcomes of the Course

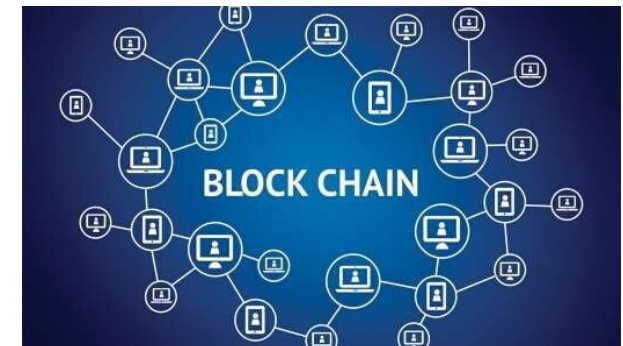
- Understand the structure of a blockchain and why/when it is better than a simple.
- Distributed database, analyze the incentive structure in a blockchain based system.
- Evaluate the setting where a blockchain based structure may be applied.

## Focus Areas

- Blockchain technology mechanisms & networks, blockchain users And adoption, hash pointers and data structures.
- Alternative blockchains/altchains, ethereum consensus mechanisms, ethereum virtual machine (EVM)
- Solidity-language of smart contracts, installing solidity & ethereum wallet
- The lottery contract, lottery design, starting the lottery contract

### Program Features

- The program is split into lectures and labs/hands-on sessions.
- Hands-on experience on basic and advanced-level topics.
- Interaction & learning with experts from academia & industry.
- Certificates to participants by E&ICT Academy IIT Roorkee.



### Coordinators

IIT Roorkee

- Dr. Sanjeev Manhas, PI, E & ICT Academy  
Chitkara University, Himchal Pradesh
- Mr. Chetan Sharma, Asst. Registrar