



# RKDF University

## Value-Added courses imparting transferable and life skills

**Course Name: Blockchain Technology**

### About The Course:

Blockchain is an emerging platform for developing decentralized applications and data storage, over and beyond its role as a platform for cryptocurrencies. From the industry and academic research perspective it is essential for the faculty and students to have an exposure into the technology. This FDP course will cover complete understanding of Block chain concepts with theory & hands on session. Industrial experts will handle various sessions of FDP.

### COURSE OBJECTIVES

**By the end of the course, students will be able to**

- Understand how blockchain systems (mainly Bitcoin and Ethereum) work,
- To securely interact with them,
- Design, build, and deploy smart contracts and distributed applications,
- Integrate ideas from blockchain technology into their own projects.

### COURSE OUTCOMES

1. Explain design principles of Bitcoin and Ethereum.
2. Explain Nakamoto consensus.
3. Explain the Simplified Payment Verification protocol.
4. List and describe differences between proof-of-work and proof-of-stake consensus.
5. Interact with a blockchain system by sending and reading transactions.
6. Design, build, and deploy a distributed application.
7. Evaluate security, privacy, and efficiency of a given blockchain system

## **COURSE CONTENTS**

- Overview of the Blockchain Mechanisms
- Blockchain Users and Adoption.
- Ethereum Virtual Machine (EVM), Ethereum's Ecosystem and DApps
- Blockchain based smart contract using Solidity.
- Hands-on session using Ethereum
- Business network using Hyper ledger
- Behind the Scenes of Deployment.
- Research Challenges and problem in Blockchain