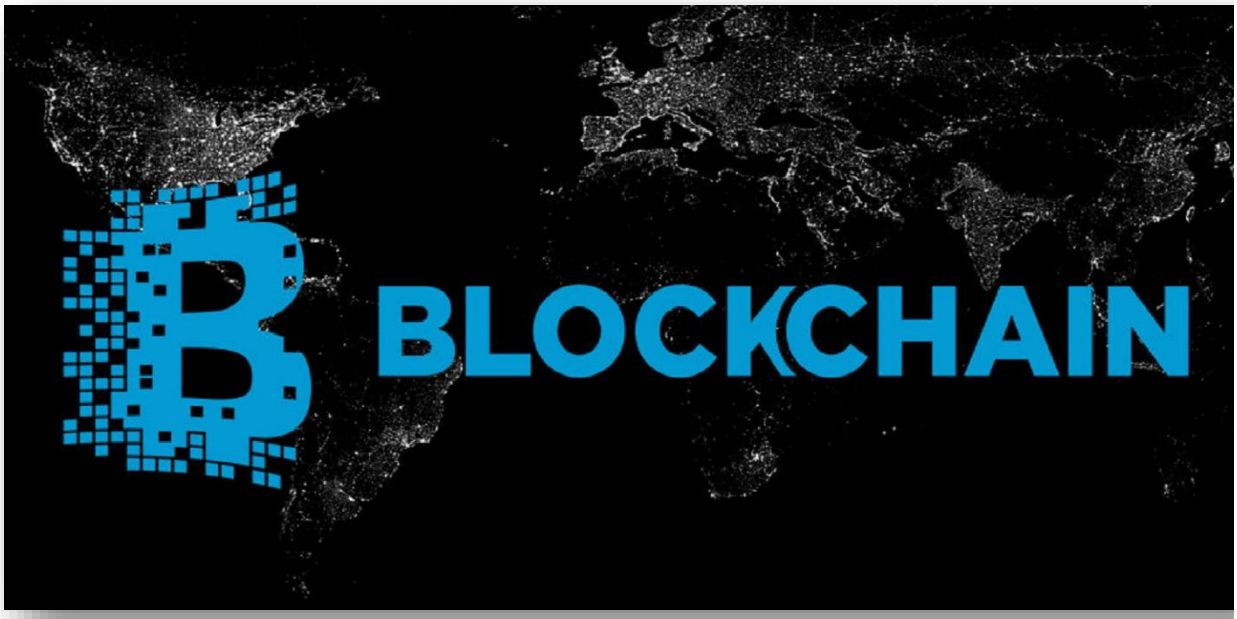

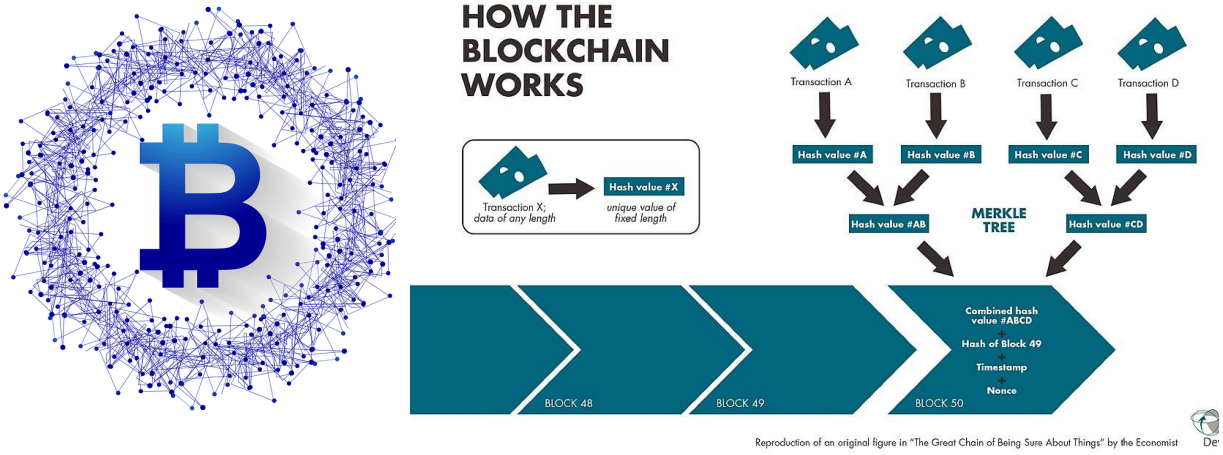

Block Chain Course Curriculum

Module # 1: Cryptocurrency & Blockchain:

- **Objective:**
  - Understand the drawbacks in current Financial System
  - Infer how spectrum of finance can be secured using Distributed System
  - Induce the key concepts which constitutes the Distributed System
  - Infer various types of Cryptocurrencies
  - Deduce various uses of Cryptocurrencies
- **Topics:**
  - Transformation in trading units
  - Cryptography and Crypto-Currency
  - Anonymity and Pseudonymity in Cryptocurrencies
  - Digital Signatures
  - Cryptocurrency Hash Codes
  - Distributed Networks
- **Skills:**
  - Cryptography Concepts
  - Cryptocurrencies
  - Distributed Ledger – Concepts

Module # 2: Delving into Blockchain:

- **Objective:**
  - Explain blockchain and its uses
  - Grasp the components of a blockchain ecosystem
  - Induce the structure and mechanisms of a blockchain
  - Fathom different types of blockchain
  - Infer various types of blockchain platforms
- **Topics:**
  - Introduction to Blockchain
  - Why Blockchain is crucial?
  - Key vocabulary while discussing Blockchain
  - Distinction between databases and blockchain
  - Explaining Distributed Ledger
  - Blockchain ecosystem
  - Blockchain structure
  - Working of blockchain technology
  - Permissioned and permission-less blockchain
- **Skills:**
  - Cryptography concepts
  - Cryptocurrencies (Bitcoin)
  - Distributed Ledger – Concepts
  - Consensus Methods
- **Hands On:**

- Show how a blockchain works

Module # 3: Cryptocurrency and Blockchain:

- **Objective:**
  - Infer cryptocurrency and its uses
  - Deduce, how to store, buy and sell different cryptocurrency
  - Setup your own different cryptocurrency wallet
  - Explain the working of different cryptocurrency transaction system.
  - Perceive the scripting language
  - Deduce nodes and network
  - Comprehend various roles a person can play in Bitcoin ecosystem
- **Topics**
  - Cryptocurrency and its History
  - Why use cryptocurrency?
  - Where and how to buy cryptocurrency?
  - How to store cryptocurrency?
  - How and where to spend cryptocurrency?
  - Selling different cryptocurrency
- **Skills:**
  - Cryptocurrencies (Bitcoin)
- **Hands On:**
  - Setting up wallet
  - Creating a paper wallet
  - Transaction tracking

Module # 4: Cryptocurrency Mining:

- **Objective:**
  - Deduce the purpose of mining
  - Comprehend bitcoin mining
  - Perceive the importance of mining pools
  - Infer bitcoin security
- **Topics**
  - Purpose of Mining
  - Algorithm used in mining
  - Mining hardware
- **Skills:**
  - Cryptocurrencies
  - Mining Bitcoins
- **Hands On:**
  - Installing bitcoin mining software

- Mining bitcoin on your PC

Module # 5: Consues Mechanism:

- **Objective:**
  - Understand diffferent consensus mechanism
- **Topics:**
  - POW
  - POS
  - DpoS
  - BFT
- **Skills:**
  - Learn differnt consues mechanism
  - Difference between consues mechanism

Module # 5: Advance Concept:

- **Objective:**
  - Understand ICO
  - How ICO are conducted
- **Topics:**
  - ICO
  - Liqidity roviders
  - IPFS

Module # 6: Prospects of Blockchain:

- **Objective:**
  - Understand various practical uses of blockchain
  - Infer the Impact of blockchain on our world
  - Explain blockchain using real case scenarios
  - Infer a blockchain application platform
- **Topics:**
  - Blockchain prospering our world
  - Blockchain transforming business and professionalism
  - Discussing practical use-cases of blockchain
  - How can we take Aadhaar Card on blockchain?
  - How blockchain can be used to remove corruption
  - Real case scenarios of Blockchain
  - Blockchain in Banking System
  - Blockchain in Land Registry
  - Blockchain in Capital Market
  - Use cases for government
  - Summary of the course
- **Skills:**
  - Blockchain frameworks and business applications