Course ID
BLOCKCHAIN
Course Duration
1 day

Course Title
Blockchain Technologies

Aimed At

Executives, managers, and professionals who need to understand the technology and potential of Blockchain and related technologies such as Bitcoin and Ethereum.

Prerequisites

General familiarity with the Internet, Information Technology, or Telecom. (Engineering background not required.)

Course in a Nutshell

Blockchain, the Distributed Ledger Technology behind Bitcoin, has attracted interest across a wide range of industries including financial services, legal, real estate, digital rights, identity management, healthcare, asset tracking, supply chain management, and the Internet of Things (IoT). A disruptive technology, it has the potential to transform the way many transactions are conducted.

Blockchain Technologies, a 1-day course, provides a comprehensive introduction to this subject including the key concepts, technology drivers, enabling technologies, architecture and operation, design principles, security issues, current and future applications, challenges and opportunities, business landscape, and long-term impact on the business world and society.

Customize It!

We can tailor this course to your team's background and learning objectives by making it more or less technical, shortening or lengthening the course, and by adding or omitting topics as needed.

Course Outline

- What is Blockchain?
  - What are the central goals of Blockchain?
  - Blockchain is a type of Distributed Ledger Technology
  - Distributed Ledger Technology explained
  - Why Blockchain is needed
  - Why it's important
  - Important terms and trends
- What's Driving Blockchain?
  - Save time
  - Lower costs
  - Reduce risks
  - Enables new business models
- Enabling Technologies
  - Modern networks

  - Cryptography and digital signatures
  - PKI
  - New protocols
- Blockchain: The Technology that Underlies Bitcoin
  - How Bitcoin works
  - How Bitcoin appears to the user
  - Operation at network level: Blocks (of data) and chain, synchronization
  - Alternative Blockchains (Alt-chains)
- How Blockchain Works in General
  - No central clearinghouse: Cut out the middleman (including the Government)
  - Peer-to-Peer (P2P) networks
  - Distributed but synchronized data base: The shared ledger
  - Public Key (PK) cryptography and digital signatures
  - Special protocols
  - "Mining" and consensus
- Blockchain Architecture
  - Key architectural principles
  - Permissionless and Permissioned architectures
  - Implementation platforms
  - Security issues
- Blockchain: Examples and Case Studies
  - Cryptocurrencies
  - Financial transactions
  - Asset movement
  - Securities trading and management
  - Trade finance
  - Retail banking
  - Public records
  - Interbank settlements
- Blockchain and Related Technologies
  - Cloud
  - Virtualization
  - Smart Systems
  - IoT
- Business of Blockchain
  - Business models
  - Commercial offerings
- Challenges and Opportunities
  - Technology and standards issues
  - Legal and regulatory framework

    - Need for significant collaborations between incumbents, innovators and regulators
- Blockchain's Impact
    - The way we live our lives
    - Organization of the society
- Wrap-up: Course Recap, Discussion, and Evaluation

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