

# Introduction to Blockchain Technology

An IEEE eLearning Library Course Program

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## New! IEEE Introduction to Blockchain Technology

The distributed ledger technology known as blockchain is poised to be the greatest IT disrupter since the Internet. While synonymous with Bitcoin and financial services and banking, this technology is accelerating many breakthrough applications in other industries like supply chain management, academia, health care, and real estate.

In order for organizations to successfully implement these emerging uses for blockchain, it's imperative to gain technical insight into the basics of this technology. The place to start, logically enough, is with Bitcoin.

IEEE Guide to Blockchain Technology is a three-course program that covers foundational and practical applications of this revolutionary technology, including:

- In-depth case studies that demonstrate the abstract possibilities and limits of blockchain technology
- An overview of what Bitcoin is and how blockchain-based technology supports it
- Advanced insight into the possibilities of what blockchain technology can do for a number of industries
- The pros and cons of decentralization in blockchain technology



## IEEE Introduction to Blockchain Technology Quick Facts

Three one-hour courses designed for professionals who need to prepare for the development and implementation of blockchain technology

Courses developed and peer reviewed by experts in their fields, a process that guarantees the quality of technical content

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# Introduction to Blockchain Technology Course Program

## Course Listing

### Understanding Blockchain Technology: The Bitcoin Case Study

The term “blockchain” has an ever-changing meaning due to the potential applications for this invention. Bitcoin was the first blockchain-based technology created and made its debut in 2009. The system was rebuilt from scratch and provides a step-by-step guide to the fundamental components in a blockchain. The guide ends with a look at how these features interact to balance the economic incentives of network participants.

### Beyond Bitcoin: Abstracting the Blockchain

Currency was the first blockchain application, but most applications will evolve with more general-purpose design than Bitcoin. This course will abstract the functions of a blockchain by looking at how it serves as a method for decentralizing computation and data storage. It will explain how innovators are leveraging these features to turn blockchains into platforms for the execution of smart contracts, as well as examine new funding schemes that blockchain startups are using to raise money.

### The Limits of Blockchain Technology: The Costs and Benefits of Decentralization

Blockchain technology enables participants in a network to collaborate with each other. There can be decentralization with high costs because relationships between participants is irrelevant. Blockchains have high latencies, low throughput, and minimal storage. In the final course of this series, explore the costs of running a blockchain and how their performance compares to other technologies as well as avenues for improvement.

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