

# Blockchain, Cryptocurrencies & Digital Tokens Demystified

A Summit by “Advanced Projects and Applied Research in Fintech” at Columbia Business School  
March 5-6, 2018 / visit [fintech.gsb.columbia.edu](http://fintech.gsb.columbia.edu) to register

## Overview

This two-day educational Summit offers a comprehensive, “gentle guide and deep dive” introductory primer to blockchain, cryptocurrencies and digital tokens, intended for participants with limited/no technical background or prior knowledge. Designed and organized by R.A. Farrokhnia, Executive Director of “Advanced Projects and Applied Research in Fintech” and a recipient of Dean’s Award for Teaching Excellence, the Summit will have an accessible and sequential curriculum, comprised of six modules (see the Summary Agenda below for details).

Day 1, primarily taught by R.A. Farrokhnia, will begin by laying the necessary foundation of network systems (distributed + centralized) and security, including the enabling innovations and scientific advancements. We will then dive into all the components that collectively makeup blockchain and distributed ledgers. With an understanding of how blockchain works, we will then be able to cover Bitcoin as a prominent example of a digital currency, with all its unique features. Subsequently, we will learn about some of the latest inventive tools and use-cases of other cryptocurrencies such as Ethereum, Golem, and Filecoin. Lastly, we will bring all of the Summit’s learning together and discuss applications in a variety of industries, Initial Coin Offerings (ICOs), types of digital tokens and their functions, and methodologies to assess potential for corporate strategy and investment purposes. Prominent guest-lecturers from Columbia Business School, top venture capital firms, and industry entrepreneurs and professionals (Day 2) will share specialized knowledge and viewpoints.

The participants shall leave the event with a top-down understanding of the topics covered and the relevant technical elements. Subsequently, reading industry literature, formulating corporate strategy, and engaging with practitioners and entrepreneurs alike will be significantly more productive and fruitful. Executive CxOs, corporate strategists, institutional and retail investors, bankers, consultants, lawyers, entrepreneurs, and board members will particularly benefit from the Summit. For questions, write to [fintech@gsb.columbia.edu](mailto:fintech@gsb.columbia.edu).

## Summary Agenda & Course Curriculum

### Day 1

**Module 1** - a foundational intro on how communication & data exchange networks operate (centralized and decentralized), with a focus on points of failure

**Module 2** - cryptography, encryption and their applications in digital age, in particular pertaining to blockchain and digital assets (incl. tokens and coins) - BONUS: a guide on personal cybersecurity

**Module 3A** - Blockchain: the theory and protocol implementation, main interoperable components, and enabling technologies

### Day 2

**Module 3B** - Blockchain: the ecosystem and uses-cases in cryptocurrencies, digital assets & financial instruments

**Module 4** - Bitcoin: a high-level overview of what it is and how it works

**Module 5** - Other cryptocurrencies and tokens, coins vs. tokens, Ethereum & smart contracts, and applications in financial services ... and beyond

**Module 6** - investments and corporate strategy considerations, risks and opportunities, regulation, and what is on the horizon

**Summit Conclusion**