



**Course Title:** Introduction to Cryptocurrency and Decentralized Finance: Bitcoin, Ethereum, NFTs, DeFi, and More

**Course Code:** TECH 03

**Course Dates:** July 19 - August 16

**Instructor:** Ahmed Banafa (Professor of Engineering, San Jose State University)

### **Class Sessions and Recording**

Meeting days and times: Tuesdays, 7:00-8:50 p.m. (PT)

Meeting location: Zoom

The class sessions will be recorded

### **Course Summary:**

Cryptocurrency created to remove the middle entity when people send/receive money and designed for the “unbanked” people to gain access to the financial systems; there are almost a billion people, who lack access to banking systems. In this course, you will understand the dynamics of Cryptocurrency including the leading crypto coins Bitcoin, and Ethereum. You will be studying the benefits and risks of using cryptocurrency. NFT (Non-Fungible Token) will be discussed as a concept and as a business vehicle. The course also illustrates how NFTs can be used to represent easily reproducible items such as photos, videos, audio, and other types of digital files as unique items, and use Blockchain technology to establish a verified and public proof of ownership. Another topic covered is DeFi (Decentralized finance) which is a Blockchain-based form of finance that does not rely on central financial intermediaries such as brokerages, exchanges, or banks to offer traditional financial instruments, and instead utilizes Blockchains, making it more secure. In addition, the course also explains Blockchain Technology and its applications beside the financial sector and covers Metaverse & Blockchain. Industry experts will be invited to talk about such technologies. By the end of this course, students will gain better understanding of Cryptocurrency, NFT, DeFi and Blockchain Technology and the impact such technologies on society and business. *No prerequisites or coding experience required.*

**Instructor Bio:** Prof. Ahmed Banafa, **Professor of Engineering, San Jose State**

Ahmed Banafa’s work focuses on blockchain, Internet of Things, and artificial intelligence. He is the author of 3 books, Secure and Smart IoT Using Blockchain AI, Blockchain Technology and Applications and Quantum Computing, which is forthcoming. Banafa studied electrical engineering at Lehigh

*\*Please see course page for full description and additional details.*

## Grade Options and Requirements:

- No Grade Requested (NGR)
  - This is the default option. No work will be required; no credit shall be received; no proof of attendance can be provided.
- Credit/No Credit (CR/NC)
  - Students must attend at least 80% of class sessions.
- Letter Grade (A, B, C, D, No Pass)
  - Students must attend at least 80% of class sessions and complete a piece of written work (to be discussed further in class).

*\*Please Note: If you require proof that you completed a Continuing Studies course for any reason (for example, employer reimbursement), you must choose either the Letter*

*Grade or Credit/No Credit option. Courses taken for NGR will not appear on official transcripts or grade reports.*

## Tentative Weekly Outline:

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### Week1 July 19<sup>th</sup>

Introduction and class policies  
What is Blockchain?  
Applications of Blockchain Technology  
Advantages and Challenges of Blockchain Technology  
Blockchain and the Metaverse  
Class Discussions

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### Week2 July 26<sup>th</sup>

What is Cryptocurrency?  
Types, Advantages and Challenges of Cryptocurrency  
Bitcoin, Ethereum, and other Cryptocurrencies  
Cryptocurrency and the Metaverse  
Class Discussions

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### Week 3 August 2<sup>nd</sup>

What is NFT?  
Types of NFT  
Advantages and Challenges of NFTs  
NFTs and the Metaverse  
Class Discussions

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**Week4 August 9<sup>th</sup>**

What is DeFi

Applications of DeFi

Advantages and Challenges of DeFi

DeFi and FinTech

Class Discussions

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**Week 5 August 16<sup>th</sup>**

Future of Blockchain

Future of Crypto Industry

Future of NFTs, DeFi, and the Metaverse

(Guest Speaker from the industry)

Class Discussions

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