



Statistical Consulting Unit

Workshops/Training courses

Spring 2023

Title: Blockchain Technology

Requirements: None

Instructor: Dr. Gurdal Ertek

Target Group: Any participant junior (3rd year undergraduate) and above (including Master's and Doctorate levels)

Date: February 27- March 5, 2023

Period: 2 days, 4 hours/session, 8 hours total

Platform: Face to face Meeting, with interactive session; participants must bring laptops.

Inclusive of Scientific Materials: PowerPoint Slide Presentations, Practice-Oriented Research Papers, Sample Data, and E-Certificate

Description:

This training provides a comprehensive overview of blockchain technology, as well as cryptocurrencies as tokens of value on blockchain networks. The workshop covers key topics from the state of the blockchain industry to Web 3.0 dApps, including lessons learned from Web 3.0 projects. Attendees will be given hands-on learning through comprehensive demos. The workshop furthermore explores roles and careers in blockchain, as well as understand the risks associated with blockchains. Moreover, participants will be able to access numerous learning sources to gain further insight into the world of blockchain.

Topics Covered:

Day 1, Lecture 1: 4 hours

"Introduction to Blockchain Technology"

Definitions

- Asset, Digital Asset
- Single-, double-, and triple-entry accounting
- Blockchain
- Cryptocurrency
- Decentralized Finance (DeFi)
- Blockchain Real-World Use Cases
- Tokenomics



Hands-on Learning

- Create your own blockchain, on paper

Demo

- Be your own bank
- Open your bank & account
- Receive/send digital currencies
- Exchange between digital currencies
- Earn passive income
- Become a VC
- Establish e-commerce store

State of Blockchain Industry

Roles & Careers in Blockchain

Risks of Blockchain

Learning Sources

1. Glossaries
2. Tutorials
3. Investing & insights
4. Trading & Technical Analysis
5. Technology Leaders
6. Finance Professionals
7. Blockchain Programming
8. Daily news

Day 2, Lecture 2: 4 hours

"Introduction to Web 3.0 Decentralized Apps (dApps)"

Definitions

- Web 3.0 dApp



- Web 2.0 vs. Web 3.0
- Web 3.0 dApp Architecture
- Web 3.0 Technology Stack
- Hackathon
- Why Web 3.0 / blockchain hackathons?

Sample Web 3.0 dApps

- Blockchain Analytics
- GameFi [Gaming+Finance]
- Video Streaming on Blockchain
- DataFi [Data+Finance]
- Social Good

Lessons Learned from Web 3.0 Projects

Learning Sources