Project name	**[C2VN]: Cardano blockchain courseware in Universities**
Project ID	1200002
Link	https://projectcatalyst.io/funds/12/f12-cardano-open-ecosystem/c2vn-cardano-blockchain-courseware-in-universities

DETAILED OUTLINE

Introduction (written by Dr. Minh)

1. What is Blockchain?
2. The importance of blockchain in IT and other industries.
3. Learning goals and skills achieved.

Chapter 1: Basic knowledge (written by Dr.Du)

1.1. Encryption.
1.2. Hash function.
1.3. Digital signature.
1.4. Decentralized systems and distributed systems.
1.5. Peer-to-peer (P2P) network.

Chapter 2: Blockchain concepts (written by Dr. Chung)

2.1. Blockchain concept.
2.2. History of the birth of Blockchain.
2.3. Types of Blockchain networks.
2.4. Cryptocurrencies, tokens, NFTs and tokenomics
2.5. Wallet and address.
2.6. Distributed ledger.
2.7. Application fields.

Chapter 3: Some Blockchain platforms (written by Mr.Hieu)

3.1. Bitcoin: The first blockchain platform.
3.2. Ethereum: Smart Contracts and DApps.
3.3. Cardano and Solana: Next generation Blockchain.
3.4. Other platforms (BNB Chain, Polkadot, Avalanche).

Chapter 4: Blockchain consensus algorithms (written by Dr.Thong)

4.1. The role of consensus algorithms.
4.2. Main concepts: BFT, PoW, PoS.
4.3. Other algorithms: DPoS, PoH, PoA, PoC.
4.4. Advantages, disadvantages and applications of each algorithm.

Chapter 5: Challenges and new trends in Blockchain (written by Dr.Minh)

5.1. Current challenges:

- Extensibility.
- Energy costs.
- Security.

5.2. Blockchain 3.0:

- Green Blockchain.
- Zero-Knowledge Proof (ZKP).
- Layer 2 and Rollups.