

國立台灣科技大學 114學年 第2學期 課程大綱

Spring 2026 NTUST Course Outline

授課教師：周詩梵

Instructor:Chou, Shih-Fan

課程名稱：區塊鏈的介紹及其應用

Course Title : Introduction to Blockchain and Its Applications

2026/6/22

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| 課程代號： CS5138701 Course Code | 必選修：選修/半學年 Required/Elective: Elective/Half Yr. |
| 學分數： 3 Credits | 先修課程： Prerequisites |
| 節次教室： T2(LB-001) T3(LB-001) T4(LB-001) Time/Location | |
| 專業核心能力： 1 具備活用技術應用於產業之能力 Core Professional Competencies 2 具備跨領域整合和創新之能力 | |
| 課程網址： Course Website | |
| 課程宗旨： This course is focusing on the introduction of both Bitcoin and Blockchain techniques. The applications based on these newly created techniques are then included. The students can get the knowledge about how to set up a global financial technology center in Taiwan. Course Objectives | |
| 課程大綱： 1. Cryptography and Blockchain Technology Outline of Lectures 2. Bitcoin Mining and Python Programming Demonstration 3. Consensus for Blockchain and Distributed Ledger Technologies 4. Token Economics and Valuation 5. Cryptocurrency as an Alternative Investment Class 6. A Look at Security and Privacy: Bitcoin, Cryptocurrencies and Blockchain Networks 7. Introduction to Blockchain Smart Contracts and Programming with Solidity for Ethereum 8. Architecting and Designing Your Own Blockchain Solution | |
| 授課方式： 講授 Lecture：60% Method of Instruction 分組討論 Group discussion：10% 案例研討 Case study：10% 操做練習 Practical exercises：20% 講授 Lecture：% | |
| 教科書： Blockchain and Smart Contracts: Design Thinking and Programming for Fintech, Lo, Swee Wo, Wang, Yu, Lee, David, 2021, 978-9-811-22368-6, World Scientific. Textbooks | |
| 參考書目： Blockchain and Distributed Ledgers: Mathematics, Technology, and Economics, Alexander Lipton, Adrien Treccani, 978-9-811-22152-1, World Scientific. References | |
| 修課須知： Notice | |
| 評量方式： Grading | |

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| Grading | |
| - Midterm Exam | 25% |
| - Final Exam | 25% |
| - Programming Practices | 20% |
| - Paper Presentation & Report | 20% |
| - Case Study | 10% |

備註說明： Method of Instruction：
Notes - Lecture： 60 %
- Group discussion： 40 %