

國立中正大學課程大綱

113 學年 1 學期

課程名稱(中文)	電腦網路結構
先修科目或先備能力	電腦網路概論
課程概述	介紹電腦網路原理及通訊協定 (protocol)
學習目標	讓學生熟悉電腦網路原理及通訊協定 (protocol)
教科書	1. Computer Networks- An open source approach, Ying Dar Lin, Ren-Hung Hwang, and Fred Baker. 2. Communication Networks-Fundamental Concepts and Key Architecture by Leon-Gacia and W. Jaja, McGraw-Hill. 3. Computer Networks-A Top Down Approach Featuring the Internet, 2nd Edition, by Kurose and Ross 4. Computer Networks- A System Approach 3rd Edition, By Peterson and Davie, 5. Computer Networks, 4th Edition, By Tanenbaun (請尊重智慧財產權，不得非法影印教師指定之教科書籍)

教學要點概述	
教材編選	☒ 自編教材 ☒ 教科書作者提供
教學方法	☒ 投影片講述 ☐ 板書講述
評量方法	☒ 上課點名 10% ☐ 小考 0% ☒ 作業 20% ☐ 程式實作 0% ☐ 實習報告 0% ☐ 專案 0% ☒ 期中考 20% ☒ 期末考 20% ☒ 期末報告 30% ☐ 其它 0%
教學資源	☒ 課程網站 ☐ 教材電子檔供下載 ☐ 實習網站
教學相關配合事項	

課程進度	
Chap 1. Fundamentals (1.1-1.5)	
1. Requirements for Computer Networking	
2. Underlying Principles	
3. The Internet Architecture	
4. Open Source Implementations	
5. Book Roadmap: A Packet's Life	
Chap 2. Physical Layer (2.1-2.5)	
1. General Issues	
2. Medium	
3. Information Coding and Baseband	
4. Digital Modulation and Multiplexing	
5. Advanced Topics	
Chap 3. Link Layer	
1. General Issues	
2. Point-to-Point Protocol	
3. Ethernet (IEEE 802.3)	
4. Wireless Links	
5. Bridging	
6. Device Drivers of a Network Interface	
Chap 4. Internet Protocol Layer	
1. General Issues	
2. Data-Plane Protocols: Internet Protocol	
3. Internet Protocol Version 6	
4. Control-Plane Protocols: Address	
5. Control Plane Protocols: Error Reporting	
6. Control Plane Protocols: Routing	
7. Multicast Routing	

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核心能力

- 1.1 學習電機 / 通訊工程相關領域之理論基礎
- 1.2 瞭解電機 / 通訊工程相關領域之實務技術
- 1.3 訓練專業論文寫作與簡報的能力
- 2.1 培養發掘與分析通訊工程特定領域專題研究之能力
- 4.1 瞭解國內外電機 / 通訊工程特定領域產業現況
- 4.3 培養良好的國際觀
- 4.4 培養科技英文能力