

朝陽科技大學 099學年度第2學期教學大綱  
Digital Communication Techniques 數位通訊技術

當期課號	2539	Course Number	2539
授課教師	沈文和	Instructor	SHEEN,WERN HO
中文課名	數位通訊技術	Course Name	Digital Communication Techniques
開課單位	資訊與通訊系(四日)三A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程旨在介紹數位通訊的基本理論。以「通訊系統」課程所學為基礎，訓練學生熟悉基頻及載波數位通訊的工作原理以及品質分析方法，課程內容將特別強調實際系統的設計考量以及在頻寬、功率與品質間的取捨設計。	Objectives	"The objective of this course is to introduce students the fundamentals of digital communications. Based on what was learned from the course of Communication Systems, this course will introduce students the working principles and performance analysis of base-band and pass-band digital communications, with emphases on the practical applications and tradeoff among bandwidth, power and performance. "
教材	J.G. Proakis and M. Salehi, Essentials of Communication Systems Engineering, Pearson Education, 2005.	Teaching Materials	J.G. Proakis and M. Salehi, Essentials of Communication Systems Engineering, Pearson Education, 2005.
成績評量方式	1. 作業 (15%) 2. 期中考 (40%) 3. 期末考 (45%)	Grading	1. Homeworks (15%) 2. Midterm (40%) 3. Final (45%)
教師網頁	-		
教學內容	1. 機率與隨機過程理論 2. 高斯雜訊環境下之數位調變技術 3. 有限頻寬環境下之數位傳輸技術 4. 載波數位調變技術	Syllabus	1. Probability and Random Processes 2. Digital Modulation in Additive White Gaussian Noise (AWGN) Channels 3. Digital Transmission Through Bandlimited AWGN Channels 4. Carrier Modulation

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