朝陽科技大學 098學年度第2學期教學大綱
Introduction to Digital Communcations 數位通訊概論

當期課號	2900	Course Number	2900
授課教師	沈文和	Instructor	SHEEN,WERN HO
中文課名	數位通訊概論	Course Name	Introduction to Digital Communcations
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	本課程提供了大致上的概念關於通訊理論以及這個領域的基礎觀念。在復習過訊號與系統的表示之後，分析不同的連續與數位調變機制。並且提及到展頻系統與它的應用到多使用者通訊上。	Objectives	The goal of this course is to provide the students with a basic knowledge of digital communications. The main topics include terminology of digital communications and the concept of digital communication basics. The students will realize the following digital communication basics after finishing this course: 1. the functions and operation of passband digital transmission, 2. the spread-spectrum modulation, 3. the multiuser radio communications, 4. the fundamental limits in information theory, and 5. error-control coding.
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. 頻率與相位調變技術 2. 機率與隨機過程理論 3. 高斯雜訊環境下之數位調變技術 4. 有限頻寬環境下之數位傳輸技術 5. 載波數位調變技術	Syllabus	1. Frequency and Angle Modulations 2. Probability and Random Processes 3. Digital Modulation in Additive White Gaussian Noise (AWGN) Channels 4. Digital Transmission Through Bandlimited AWGN Channels 5. Carrier Modulation

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