

朝陽科技大學 098學年度第1學期教學大綱
Introduction to Digital Communications 數位通訊原理

當期課號	2868	Course Number	2868
授課教師	陳培文	Instructor	Chen,Pei Wen
中文課名	數位通訊原理	Course Name	Introduction to Digital Communications
開課單位	資訊工程系(四日)四A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程主要講述數位通訊的基本原理。課程內容包括-數位通訊專有名詞及數位通訊的基本原理。學生在完成本課程後，將可了解以下之數位通訊基本原理：1. 帶通數位傳輸、2. 展頻調變、3. 多使用者輻射通訊、4. 消息理論、5. 改錯碼。	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	數位通訊 李世鴻 譯 五南圖書出版股份公司出版 << 本書內附數位教材 >>	Teaching Materials	Digital Communications Andy Bateman
成績評量方式	期中考:30% 期末考:30% 平時成績:40%, 包含: 1. 小考 2. 作業 3. 出席率	Grading	midterm examination:30% final examination:30% others:40%, include: 1. quiz 2.homework 3.attendance
教師網頁	http://el.nkc.edu.tw/allpass		
教學內容	<p>本課程為初級數位通訊的理論課程，目的為訓練學生能在後續研讀數位通訊的理論，統計等層面上能具有充分的基本能力。本課程給予學生結構性的數位通訊觀念，強調調變器/解調器的設計，績效間的效益交換關係，關鍵的限制因素以及實際應用的議題等，是一門以實用技術為考量的課程。</p> <p>本課程提供資訊工程系的學生輕鬆學習資訊傳輸硬體上所需的觀念，及特性分析。熟悉本書的內容有助於提升資訊傳輸系統的了解以及運用能力。</p>	Syllabus	<p>This book provides a framework for understanding and evaluating the key design topics and choices involved in developing a data communications link.</p> <p>It has been devised specifically to serve as a first stage text for undergraduate students (probably in their second year of study), such that they are fully equipped to study the more theoretical, statistical aspects of digital communications in later years, and will do so fully conversant with the context in which this analysis and rigour will be applied.</p> <p>By bringing to the fore the design choices facing communications engineers, within an intuitive framework, the book also fulfils the role of a Getting Started plus Frequently Asked Questions manual in digital communications for practising engineers and managers. It will allow them to home in rapidly on the design parameters that are pertinent to their particular application and specification, and so better focus engineering resource within their organizations.</p>

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