

朝陽科技大學 099學年度第2學期教學大綱  
Error Control Coding 錯誤更正碼

當期課號	7448	Course Number	7448
授課教師	梁新穎	Instructor	LIANG,HSIN YING
中文課名	錯誤更正碼	Course Name	Error Control Coding
開課單位	資訊與通訊系碩士班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	"本課程目標在於使學生了解錯誤更正碼的相關理論及其應用, 並提供學習者未來修習其他高等通訊課程之理論基礎課程內容包含: 1.Introduction to Algebraic codes 2.Mathematical foundations 3.Introduction to BCH codes and Finite Fields 4.Finite Fields 5.Cyclic codes 6.BCH, RS codes and their decodings 7.Convolutional codes and Viterbi decoding 8.Reed Muller codes and Reed decoding "	Objectives	1.Introduction to Algebraic codes 2.Mathematical foundations 3.Introduction to BCH codes and Finite Fields 4.Finite Fields 5.Cyclic codes 6.BCH, RS codes and their decodings 7.Convolutional codes and Viterbi decoding 8.Reed Muller codes and Reed decoding
教材	1. 課程投影片 2. 教科書：	Teaching Materials	1. Lecture notes 2. Main Textbook:
成績評量方式	期中考(30%), 期末報告(30%), 作業(30%), 出席率(10%)	Grading	Midterm Exam (30%), Final Project (30%), Homework (30%), Attendance (10%).
教師網頁	<a href="http://www.cyut.edu.tw/~hyliang/">http://www.cyut.edu.tw/~hyliang/</a>		
教學內容	Chapter 1: Introduction to Algebraic codes Chapter 2: Mathematical foundations Chapter 3: Introduction to BCH codes and Finite Fields Chapter 4: Finite Fields Chapter 5: Cyclic codes Chapter 6: BCH, RS codes and their decodings Chapter 7: Convolutional codes and Viterbi decoding Chapter 8: Reed Muller codes and Reed decoding	Syllabus	Chapter 1: Introduction to Algebraic codes Chapter 2: Mathematical foundations Chapter 3: Introduction to BCH codes and Finite Fields Chapter 4: Finite Fields Chapter 5: Cyclic codes Chapter 6: BCH, RS codes and their decodings Chapter 7: Convolutional codes and Viterbi decoding Chapter 8: Reed Muller codes and Reed decoding

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