# 朝陽科技大學 095學年度第2學期教學大綱
# Error Control Coding 錯誤更正碼

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| 當期課號 | 7417 | Course Number | 7417 |
| 授課教師 | 楊政穎 | Instructor | YANG,CHENG YING |
| 中文課名 | 錯誤更正碼 | Course Name | Error Control Coding |
| 開課單位 | 網路與通訊研究所碩士班二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 | Error Control Coding Fundamental and Applications by Shu Lin and Daniel J. Costello, Jr., Prentice Hall, 2004. | Teaching Materials | Error Control Coding Fundamental and Applications by Shu Lin and Daniel J. Costello, Jr., Prentice Hall, 2004. |
| 成績評量方式 | Participation and Homework 15%<br>Project 15%<br>Midterm 30%<br>Final 40% | Grading | Participation and Homework 15%<br>Project 15%<br>Midterm 30%<br>Final 40% |
| 教師網頁 | http://www.cyut.edu.tw/~cyang | | |
| 教學內容 | The goal of this course is to help students stared in the practice of ingformation Engineering. It concludes the fundamental information theory such as source coding and channel coding. In the source coding part, the concept of source entropy, channel capacity and Markov process are included. Forward Error Control (FEC) coding is given as the channel coding part. | Syllabus | The goal of this course is to help students stared in the practice of ingformation Engineering. It concludes the fundamental information theory such as source coding and channel coding. In the source coding part, the concept of source entropy, channel capacity and Markov process are included. Forward Error Control (FEC) coding is given as the channel coding part. |