# 朝陽科技大學 099學年度第2學期教學大綱
# Data Structure 資料結構

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| **當期課號** | 3698 | **Course Number** | 3698 |
| **授課教師** | 江茂綸 | **Instructor** | CHIANG,MAO LUN |
| **中文課名** | 資料結構 | **Course Name** | Data Structure |
| **開課單位** | 資訊與通訊系(四進)二A | **Department** | |
| **修習別** | 必修 | **Required/Elective** | Required |
| **學分數** | 3 | **Credits** | 3 |
| **課程目標** | "本課程是訓練學生能夠了解程式語言中資料的處理及儲存方式。要達成這目標，學生將學習： 1. 針對資料的物件能動態的配置和清空計憶體。 2. 能夠使用指標或其它方式來建構陣列、堆疊、佇列、串列和樹的結構。 3. 能夠創造和維護陣列、堆疊、佇列、串列和樹。 4. 圖學理論中重要應用。 5. 能夠了解不一樣的排序方法並且互相比較。" | **Objectives** | "The goal of this course is to trains the students can understand how to store data with how to process data in programming languages. To achieve the goal, students will learn 1. To allocate and free memory dynamically for data objects. 2. To form the structure of arrays, stacks, queues, linked lists, and trees using pointers or other others. 3. To create and manipulate the structures of arrays, stacks, queues, linked lists, and trees. 4. Various important applications of graph theory 5. To understand the various sorting methods and to compare with others." |
| **教材** | 細談資料結構(第五版)謝樹明/F7801B | **Teaching Materials** | “Data Structure”Fifth Edition，謝樹明，EE006131。 |
| **成績評量方式** | 期中考 30%, 作業與小考 30%, 期末考 30%, 平時及出席成績 10% | **Grading** | mid-term exam 30%, home works and tests 30%, final exam 30%, Participation 10% |
| **教師網頁** | http://lms.ctl.cyut.edu.tw/2006013 | | |
| **教學內容** | 本課程主要介紹幾個重要的主題。其主要涵蓋的範圍有：<br>1. 基本概念 (Basic Concepts)<br>2. 陣列 (Arrays)<br>3. 堆疊與佇列 (Stacks and Queues)<br>4. 鏈結串列 (Linked Lists)<br>5. 遞迴 (Recursion)<br>6. 樹狀結構 (Trees)<br>7. 排序 (Sorting)<br>8. 搜尋 (Searching) | **Syllabus** | This course investigates several important topics. The covered issues in this course includes:<br>1. Introduction to Data Structure<br>2. Array<br>3. Stack and Queue<br>4. Linear List and Link-List<br>5. Recursion<br>6. Tree Structure<br>7. Sort<br>8. Search |