朝陽科技大學 095學年度第2學期教學大綱
Introduction to Algorithm 演算法概論

當期課號	3751	Course Number	3751
授課教師	曾顯文	Instructor	TSENG,HSIEN WEN
中文課名	演算法概論	Course Name	Introduction to Algorithm
開課單位	資訊管理系(二進)四A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	演算法概論主要探討排序、遞迴、動態規劃、貪婪演算法、... 等等問題，同時也延續資料結構的課程，探討運作於平衡樹及圖等進階資料結構的演算法，如尋訪、最短路徑等等。教學內容包括 1. 演算法概論 2. Divide-and-Conquer 3. 動態規劃 4. 貪婪演算法 5. 回溯 6. Branch-and-Bound 7. 複雜度計算 8. NP Theory。	Objectives	In this course, we study methods for sorting, recursion,dynamic programming, greedy algorithms, ...etc. In continuation of the data structures course, we also study algorithms for balanced trees and graphs. The contents of the course are as follows: 1.Introduction 2.Divide-and-Conquer 3.Dynamic Programming 4.Greedy Algorithm 5.Backtracking 6.Branch-and-Bound 7.Complexity Computation 8.NP Theory.
教材	1. Foundations of Algorithms Using Java Pseudocode, by Neapolitan and Naimpour. (Jones and Bartlett) 2. Introduction to the Design and Analysis of Algorithms, by Lee, Tseng, Chang, and Tsai. (McGraw-Hill) 3. Introduction to Algorithms, by Cormen, Leiserson, Rivest, and Stein. (MIT)	Teaching Materials	1. Foundations of Algorithms Using Java Pseudocode, by Neapolitan and Naimpour. (Jones and Bartlett) 2. Introduction to the Design and Analysis of Algorithms, by Lee, Tseng, Chang, and Tsai. (McGraw-Hill) 3. Introduction to Algorithms, by Cormen, Leiserson, Rivest, and Stein. (MIT)
成績評量方式	期中考 25%, 期末考 25%, 小考 30%, 作業及平時成績 20%.	Grading	Mid-term exam 25%, Final exam 25%, Tests in class 30%, Homeworks and class participation 20%.
教師網頁	http://www.cyut.edu.tw/~hwtseng/		
教學內容	教學內容包括 1.演算法概論 2.Divide-and-Conquer 3.動態規劃 4.貪婪演算法 5.回溯 6.Branch-and-Bound 7.複雜度計算 8.NP Theory	Syllabus	1.Introduction 2.Divide-and-Conquer 3.Dynamic Programming 4.Greedy Algorithm 5.Backtracking 6.Branch-and-Bound 7.Complexity Computation 8.NP Theory