朝陽科技大學 096學年度第2學期教學大綱
Algorithms 演算法

當期課號	7769	Course Number	7769
授課教師	洪若偉	Instructor	HUNG,RUO WEI
中文課名	演算法	Course Name	Algorithms
開課單位	資訊工程系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程主要介紹演算法的基本設計與觀念，學生在完成本課程後，將可了解關於演算法的基本設計理念，其主要涵蓋的範圍有： 1. 演算法的複雜度與計算下限的方法 2. NP-Complete的問題 3. 貪婪方法的介紹 4. Divide-and-conquer的方法 5. 搜尋的方法 6. Prune-and-search的策略 7. 動態規劃	Objectives	The goal of this course is to provide the students with a basic knowledge of computer algorithm. The covered issues in this course includes 1. Complexity of algorithms and lower bounds of problems 2. NP-complete 3. Greedy method 4. Divide-and-conquer 5. Tree searching strategies 6. Prune-and-search strategy 7. Dynamic programming .
教材	R.C.T. Lee,R.C. Chang, S.S. Tseng, Y.T.Tsai, Introduction to the Design and Analysis of Algorithms: A strategic approach, McGraw Hill, 2005. (旗標圖書代理)	Teaching Materials	R.C.T. Lee,R.C. Chang, S.S. Tseng, Y.T.Tsai, Introduction to the Design and Analysis of Algorithms: A strategic approach, McGraw Hill, 2005. (旗標圖書代理)
成績評量方式	1. 4次期中考(Midterm Exam): 100% 2. 期末報告(Final Report): 10% 5. 課程參與(Participation): 5%	Grading	1. Midterm Exam of 4 times: 100% 2. Final Report: 10% 5. Participation: 5%
教師網頁	http://www.csie.cyut.edu.tw/~rwhung		
教學內容	本課程主要目標爲學習設計有效率演算法及瞭解設計好的演算法來解決問題的困難處. 此課程的內容包括: (1) 演算法簡介 (2) 演算法的複雜度及問題的下限 (3) 貪婪方法 (4) 各個擊破法的策略 (5) 樹狀搜尋策略 (6) 修整搜尋策略 (7) 動態規劃 (8) NP-complete理論 (9) 近似演算法 (10)分期償還分析	Syllabus	The main goals of the course are to learn strategies to design efficient algorithms and to understand the difficulty of designing good algorithms for some problems, namely NP-complete problems. The contents of this course include: (1) Introduction to Algorithm (2) The Complexity of Algorithms and Lower Bounds of Problems (3) The Greedy Method (4) The Divide-and-conquer Strategy (5) Tree Searching Strategies (6) Prune-and-Search Strategy (7) Dynamic Programming (8) The Theory of NP-complete (9) Approximation Algorithms (10)Amortized analysis

尊重智慧財產權，請勿非法影印。