

朝陽科技大學 099學年度第2學期教學大綱  
Introduction to Algorithm 演算法概論

當期課號	3676	Course Number	3676
授課教師	吳世弘	Instructor	WU,SHIH HUNG
中文課名	演算法概論	Course Name	Introduction to Algorithm
開課單位	資訊工程系(四進)四A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	<p>本課程主要介紹演算法的設計與觀念，學生在完成本課程後，將可了解關於演算法的設計理念，其主要涵蓋的範圍有：</p> <ol style="list-style-type: none"> <li>1. 演算法的複雜度與計算下限的方法</li> <li>2. NP-Complete的問題</li> <li>3. 貪婪方法的介紹</li> <li>4. Divide-and-conquer的方法</li> <li>5. 搜尋的方法</li> <li>6. Prune-and-search的策略</li> <li>7. 動態規劃</li> </ol>	Objectives	<p>The goal of this course is to provide the students with a basic knowledge of computer algorithm. The students will realize the following important algorithm topics after finishing this course:</p> <ol style="list-style-type: none"> <li>1. Complexity of algorithms and lower bounds of problems</li> <li>2. NP-complete</li> <li>3. Greedy method</li> <li>4. Divide-and-conquer</li> <li>5. Tree searching strategies</li> <li>6. Prune-and-search strategy</li> <li>7. Dynamic programming</li> </ol>
教材	<p>Text book Algorithms Design: Foundations, Analysis, and Internet Examples by M.T. Goodrich, R. Tamassia 全華圖書代理 ISBN: 0-471-38365-1</p> <p>Reference T.H.Cormen,C.E.Leiserson,R.L.Rivest and C.Stein, Introduction to Algorithms, 2nd edition, 開發圖書代理.</p>	Teaching Materials	<p>Text book Algorithms Design: Foundations, Analysis, and Internet Examples by M.T. Goodrich, R. Tamassia 全華圖書代理 ISBN: 0-471-38365-1</p> <p>Reference T.H.Cormen,C.E.Leiserson,R.L.Rivest and C.Stein, Introduction to Algorithms, 2nd edition, 開發圖書代理.</p>
成績評量方式	期中考30%，期末考30%，平時作業40%	Grading	Midterm exam 30%, Final exam 30%, exercise 40%
教師網頁	<a href="http://www.csie.cyut.edu.tw/~shwu">http://www.csie.cyut.edu.tw/~shwu</a>		
教學內容	<p>本課程主要介紹演算法的設計與觀念，主要涵蓋的範圍有：</p> <ul style="list-style-type: none"> <li>— 演算法的複雜度與計算下限的方法</li> <li>— NP-Complete的問題</li> <li>— 貪婪方法的介紹</li> <li>— Divide-and-conquer的方法</li> <li>— 搜尋的方法</li> <li>— Prune-and-search的策略</li> <li>— 動態規劃</li> <li>— 逼近演算法</li> </ul>	Syllabus	<p>This course investigates several important algorithm topics. The covered issues in this course includes</p> <ul style="list-style-type: none"> <li>— Complexity of algorithms and lower bounds of problems</li> <li>— NP-complete</li> <li>— Greedy method</li> <li>— Divide-and-conquer</li> <li>— Tree searching strategies</li> <li>— Prune-and-search strategy</li> <li>— Dynamic programming</li> </ul>

尊重智慧財產權，請勿非法影印。