朝陽科技大學 094學年度第1學期教學大綱
Discrete Mathematics 離散數學

當期課號	2428	Course Number	2428
授課教師	王能中	Instructor	WANG,NENG CHUNG
中文課名	離散數學	Course Name	Discrete Mathematics
開課單位	資訊工程系(四日)三A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	"離散數學是所有數位資訊處理的基礎. 學生在修習完此課程後, 將可瞭解以下知識: (1)讓學生更精明; (2)解決某些有趣的問題; (3)提昇學生的邏輯及思考能力. 學生在修習完此課程後, 將可瞭解以下主題: 計數的基本原則, 邏輯的基礎, 集合理論, 數學歸納法, 關係與函數, 有限狀態機語言, 包含與排除的原則, 生成函數, 遞迴關係, 圖形理論的介紹, 樹, 與最佳化和配對. "	Objectives	Discrete Mathematics is the basis of all of “digital” information processing. After completing this course, students will realize the following: (1) Make students smarter; (2) Solve interesting problem; (3) Promote the logic and thinking capabilities of the students. After completing this course, students will realize the following topics: Fundamental Principles of Counting, Fundamentals of Logic, Set Theory, Mathematical Induction, Relations and Functions, Languages: Finite State Machines, The Principle of Inclusion and Exclusion, Generating Functions, Recurrence Relations, An Introduction to Graph Theory, Trees, and Optimization and Matching.
教材	Ralph P. Grimaldi, "Discrete and Combinatorial Mathematics", Fifth Edition, Addison Wesley, 2004 (東華代理, ISBN: 0-201-72634-3)	Teaching Materials	
成績評量方式	Homework and Quiz (40%), Midterm Exam (30%), Final Exam (30%)	Grading	Homework and Quiz (40%), Midterm Exam (30%), Final Exam (30%)
教師網頁	http://www.csie.cyut.edu.tw/~ncwang		
教學內容	This course is aimed at introducing the concepts of discrete mathematics. The following topics will be covered in this class. 1. Fundamental principles of Counting, Fundamentals of Logic 2. Set Theory, Mathematical Induction 3. Relations and Functions, Finite State Machines 4. The Principle of Inclusion and Exclusion 5. Generating Functions, Recurrence Relations 6. Graph Theory and Applications	Syllabus	This course is aimed at introducing the concepts of discrete mathematics. The following topics will be covered in this class. 1. Fundamental principles of Counting, Fundamentals of Logic 2. Set Theory, Mathematical Induction 3. Relations and Functions, Finite State Machines 4. The Principle of Inclusion and Exclusion 5. Generating Functions, Recurrence Relations 6. Graph Theory and Applications

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