朝陽科技大學 091學年度第1學期教學大綱
Design of Environmental Engineering System 環境工程系統設計

當期課號	7320	Course Number	7320
授課教師	江舟峰	Instructor	CHIANG,CHOW FENG
中文課名	環境工程系統設計	Course Name	Design of Environmental Engineering System
開課單位	環境工程與管理系碩士班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	環境工程的最佳化設計，都必需運用數學規劃來建立模式，以求得最佳解，本課程將探討包括：線性規劃、非線性規劃、動態規劃，整數及混合整數規劃、多目標規劃、模糊控制理論及各種柔性計算之數學方法。並在考慮輸入資料的隨機特性下，安排數個案例研討，以求實用。	Objectives	The optimal design of environmental engineering need to apply mathematical programming in building model to pursue its optimal solutions.This course will be studied programs in linear programming, non-linear programming, dynamic programming, integer and mixed integer programming, ulti-objective programming, fuzzy control theory, and various mathematical methods of soft computing. Under the consideration of input data of random characteristic, it also arranges some concrete cases to discuss their practical using.
教材	l課堂教學 2小組討論 3戶外教學 4電腦教室 5專題討論 6外賓演講	Teaching Materials	l.Oral presentation with visual aidsl 2.Group discussionsl 3.Site visitingl 4.Computer laboratoryl 5.Special topicl 6.Final report
成績評量方式	l平時成績 (出席率、課堂討論、作業) 30% 2期中考 30% 3期末考/期末報告 40%	Grading	l.Regular class (attendance, class discussion、homework) 30% 2.Midterm examination 30%l Final examination/final report 40% 3.Final examination/final report 40%
教師網頁	_		
教學內容	l系統分析的原理 2功能計算與單位換算 3化學平衡系統 4傳輸與反應 5完全混合流 (CMF)、柱狀流 (PF)、擴散柱狀流 (PDF) 6案例分析與電腦程式	Syllabus	1.Principle of system analysisl 2.Functional design and unit conversionl 3.Chemical equilibrium systeml 4.Reactions and transportsl Complete mixing flow (reactor system, lake system), plug flow system (stream), plug flow with dispersion (air dispersion)l 5.Cases study and computer practice