

朝陽科技大學 095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	7214	Course Number	7214
授課教師	張棟江	Instructor	CHANG,DONG JANG
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二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, multi-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	一、經濟部工業局，廢水處理單元設計及異常對策 二、歐陽嶠暉，下水道工程學 三、Metcalf & Eddy, Wastewater Engineering Treatment and Reuse 四、Hammer, Water and Wastewater Technology	Teaching Materials	1.IDBM of Economic Affairs,Wastewater Unit Processes Design and Operation 2.C.F. Ouyang, Sewage Engineering 3.Metcalf & Eddy, Wastewater Engineering Treatment and Reuse 4.Hammer, Water and Wastewater Technology
成績評量方式	一、筆試 50% 二、作業 30% 三、口頭報告 20%	Grading	1.Examination 50% 2.Assignment 30% 3.Presentation 20%
教師網頁	-		
教學內容	一、抽水站設計 二、物理處理單元設計 三、化學處理單元設計 四、生物處理單元設計 五、污泥處理系統設計 六、處理單元程序之選擇與設計及實例介紹	Syllabus	1.Pumping Stations Design 2.Physical Unit Processes Design 3.Chemical Unit Processes Design 4.Biological Unit Processes Design 5.Sludge Treatment System Design 6.Treatment Unit Processes Selection and Design and Case Study

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