朝陽科技大學 091學年度第1學期教學大綱
Environmental Mathematical Models 環境數學模式

當期課號	7782	Course Number	7782
授課教師	林宏嶽	Instructor	LIN,HUNG YUEH
中文課名	環境數學模式	Course Name	Environmental Mathematical Models
開課單位	環境工程與管理系碩士在職專班一A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程檢視並試作模擬五個重要的環境問題。學生必須積極參與模擬，以達成"作中學"的效果。 1. 經濟發展環境保護兼籌並顧。（Week 1~3） 2. 企業面對的環境管理問題。（Week 4~5） 3. 環境管理工具的發展。（Week 6~8） 4. 資訊的不對稱問題。（Week 9~11） 5. Physical modelling。（Week 12~14） 此外，使用數量方法作環境資料分析。（Week 15~17）	Objectives	The course is to expolre and model 5 "good" problems in environment and economics.It is expected that students are required to take part in modelling. It is a course for students to learn by doing. These five problems are: 1. Balancing the economics development with environmentaal protection. (week 1~3) 2. Environmental management problems facing business enterprises. (week 4~5) 3. Deriving pollution control strategies. (week 6~8) 4. Information problems in pollution control.(week 9~11) 5. Physical modelling. (week 12~14) Environmental data analysis will be an added topic for the course. (week 15~17)
教材	講授、演練與報告	Teaching Materials	teaching, practice and presentation.
成績評量方式	期中考：35%，期末考：35%，報告：30%	Grading	Exams: midterm 35%, final 35%, term project: 30%
教師網頁	_		
教學內容	教導學生藉由環境相關之數學模式與工具，瞭解環境問題的分析與評估方法，並做出決策所需之參考資訊。主要的工具可包括： 1. 線性規劃 2. 模糊理論與啓發式解法	Syllabus	Enhaced with the following mathematical models and tools, the students should be capable of analysing and assessing of environmental problems. Furthermore, to offer decision making information. The main tools include: 1. linear/integer programming. 2. fuzzy and grey programming.

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