朝陽科技大學 097學年度第2學期教學大綱
Environmental Biokinetic Mechanics 環境生物動力學

當期課號	7703	Course Number	7703
授課教師	白子易	Instructor	PAI,TZU YI
中文課名	環境生物動力學	Course Name	Environmental Biokinetic Mechanics
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	本課程探討環境科學各種不同領域的生物動力學，包括：生物動力型式、酵素動力學、活性污泥微生物族群動力學、生物膜動力學、傳輸動力、河川生物動力學、厭氧生物動力學、生物動力模式、空氣生物濾床以及土壤地下水生物動力等。本課程不僅探討生物動力學的各種領域，亦包括基本數學技巧及相關演算方法。	Objectives	The course investigates various fields in environmental biokinetic mechanics, including types of biokinetics, enzyme kinetics, activated sludge population dynamics, biofilm kinetics, transportation dynamics, river biokinetics, anaerobic biokinetics, biokinetic model, air biofilter, and biokinetics in soil. The course not only introduces the principle of each field of biokinetics, also the basic mathematical technique and calculated method.
教材	Henze M., Gujer W., Mino T. and van Loosdrecht M.C.M. (2000). Activated sludge models: ASM1, ASM2, ASM2d and ASM3, IWA, London.	Teaching Materials	Henze M., Gujer W., Mino T. and van Loosdrecht M.C.M. (2000). Activated sludge models: ASM1, ASM2, ASM2d and ASM3, IWA, London.
成績評量方式	1.平時成績(出席率、課堂討論)50% 2.研究報告(含報告內容及口頭報告)50%,	Grading	1.Class participation and discussion, 50%; 2.Research report and oral presentation
教師網頁	http://www.cyut.edu.tw/~typai/		
教學內容	本課程探討環境科學各種不同領域的生物動力學，包括：生物動力型式、酵素動力學、活性污泥微生物族群動力學、生物膜動力學、傳輸動力、河川生物動力學、厭氧生物動力學、生物動力模式、空氣生物濾床以及土壤地下水生物動力等。本課程不僅探討生物動力學的各種領域，亦包括基本數學技巧及相關演算方法。	Syllabus	The course investigates various fields in environmental biokinetic mechanics, including types of biokinetics, enzyme kinetics, activated sludge population dynamics, biofilm kinetics, transportation dynamics, river biokinetics, anaerobic biokinetics, biokinetic model, air biofilter, and biokinetics in soil. The course not only introduces the principle of each field of biokinetics, also the basic mathematical technique and calculated method.

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