朝陽科技大學 097學年度第2學期教學大綱
Air Pollution Analysis 空氣污染特論

當期課號	7709	Course Number	7709
授課教師	楊錫賢	Instructor	YANG,HSI HSIEN
中文課名	空氣污染特論	Course Name	Air Pollution Analysis
開課單位	環境工程與管理系碩士在職專班二A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	本課程主要介紹氣膠與氣態污染物於空氣中之形成與反應以及目前台灣與全世界空氣污染研究之趨勢與重心。氣膠化學部分先介紹微粒之分類、形成機制、粒徑分佈，然後討論其於大氣中之傳輸現象與傳輸過程中所發生之化學反應，接著介紹其量測方法，最後則討論其控制與減量技術。氣態污染化學則由光化學談起，導入大氣中化學反應之理論，最後討論光化學反應及各種氣態污染物於大氣中之形成與傳輸。	Objectives	This course introduces the formation mechanisms, measurements, and control technologies of aerosol and gaseous pollutants. The important air pollution problems in Taiwan and in the world would also be mentioned. The contents of this course comprise the classification of particulate, formation, mechanisms, and size distribution. Besides, the reaction chemistry occurred in the transportation/transformation process would be discussed.
教材	教 材 自編教材 參 考 資 料 Parker C. Reist, “Aerosol Science and Technology” (2nd ed), McGraw-Hill, Inc., ISBN 0-07-112849-2.John H. Seinfeld, ”Atmospheric Chemistry and Physics of Air Pollution”, Aaa Wiley-Interscience publication”, ISBN 0-471-82857-2. 江金龍，洪培元，陳維新，”空氣污染與控制”，高立圖書。Wark K., Cecil F.W., Davis W.T., “Air Pollution – Its Origin and Control”, Addison Wesley.	Teaching Materials	Parker C. Reist, “Aerosol Science and Technology” (2nd ed), McGraw-Hill, Inc., ISBN 0-07-112849-2.John H. Seinfeld, ”Atmospheric Chemistry and Physics of Air Pollution”, Aaa Wiley-Interscience publication”, ISBN 0-471-82857-2. Wark K., Cecil F.W., Davis W.T., “Air Pollution – Its Origin and Control”, Addison Wesley.
成績評量方式	1.平時成績 30% (習題, 出席率, 小考, 課堂表現)2.期中考35%3.期末考35%	Grading	1.Class participation 30% 2.Midterm 35%3.Final 35%
教師網頁	_		
教學內容	本課程主要介紹懸浮微粒與氣態污染物於大氣中之形成與反應。懸浮微粒部分介紹微粒之分類、形成機制、粒徑分佈，接著討論其於大氣中之傳輸現象與傳輸過程中所發生之化學反應，再介紹其量測方法，最後則討論其控制與減量技術。氣態污染化學則由光化學談起，導入大氣中化學反應之理論，最後討論光化學反應及各種氣態污染物於大氣中之形成與傳輸。	Syllabus	Formation mechanism of particle Particle size distribution Transportation of particulate in the atmosphere Chemical reactions during transportation Measurements of particulate Control technology of particulate Gaseous air pollutants Photochemical reactions Photochemical smog Formation of gaseous air pollutants Transformation of gaseous air pollutants Measurements of gaseous air pollutants Control technology of gas air plooutants

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