# 朝陽科技大學 093學年度第1學期教學大綱
# Air Pollution Experiments 空氣污染實驗

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| **當期課號** | 2023 | **Course Number** | 2023 |
| **授課教師** | 楊錫賢 | **Instructor** | YANG,HSI HSIEN |
| **中文課名** | 空氣污染實驗 | **Course Name** | Air Pollution Experiments |
| **開課單位** | 環境工程與管理系(四日)二A | **Department** | |
| **修習別** | 必修 | **Required/Elective** | Required |
| **學分數** | 1 | **Credits** | 1 |
| **課程目標** | 本課程目標在於使學生生瞭解並實際參與空氣污染物之採樣與檢測、使學生具備分析及解釋空氣污染物檢測數據之能力。內容包括採樣及分析方法概論、品保品管、定量化學分析、目測判煙管制技術、不透光率檢測、TSP與落塵測定、滴定分析、硫化物、惡臭物質、PSI量測與計算、碳氫化合物、臭氧、一氧化氮。 | **Objectives** | The goals of this course is to train to sample and analyze air pollutants actually and be able to analyze and explain the data. The contents include the introduction of sampling and analysis of air pollutants, QA/QC, quantitative analysis, opacity, TSP and dust, PM10, sulfate, odor, PSI calculation, HCs, O3, CO. |
| **教材** | 自編教材<br>參 考 資 料<br>1.陳王琨，空氣污染分析 (檢驗監測原理) (淑馨出版社)<br>2.環保署環境檢驗所 (NIEA)，空氣檢測方法。<br>3.APHA, “Methods of Air Sampling and Analysis”. | **Teaching Materials** | |
| **成績評量方式** | 1.平時成績 30% (出席率, 課堂表現, 實驗態度)<br>2.實驗報告40%<br>3.課堂小考及期中考30% | **Grading** | Class participation<br>Experiment report<br>Quiz, midterm and final exam. |
| **教師網頁** | | | |
| **教學內容** | 第一部分、概論實驗室安全與衛生、空氣污染分析之重要性、採樣及分析方法概論、品保品管、定量化學分析<br>第二部分目測判煙管制技術、不透光率檢測、TSP與落塵測定、懸浮微粒粒徑分析、PSI量測與計算、碳氫化合物、洩露源偵測、酸雨、大氣NH3採樣 | **Syllabus** | Part I: Safety and hygiene of laboratory, Introduction to air pollutants sampling and analysis, Quality assurance and control, Quantataive analysis.<br>Part II: Opacity, TSP and dustfall, Analysis of particulate size distribution, Pollutant standard index, Hydrocarbons, Acid rain, Sampling of NH3. |

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