

國立台灣科技大學 114學年 第2學期 課程大綱

Spring 2026 NTUST Course Outline

授課教師：何嘉浚

Instructor: Chia-Chun Ho

課程名稱：環境工程

Course Title : Environmental Engineering

2026/5/6

<p>課程代號：CT3703701 Course Code 學分數：3 Credits</p>	<p>必選修：選修/半學年 Required/Elective: Elective/Half Yr. 先修課程： Prerequisites</p>
<p>節次教室：F1(IB-510-2) R8(IB-510-2) R9(IB-510-2) Time/Location</p>	
<p>專業核心能力： Core Professional Competencies</p> <ol style="list-style-type: none"> <li>1.具有設計與執行實驗以及解讀實驗結果之能力。</li> <li>2.具有管理與執行工程實務以及使用現代化科技之能力。</li> <li>3.具有永續工程及生態環境保護之認知。</li> </ol> <p>1.an ability to design and to conduct experiments, as well as to analyze and interpret the resulting data;</p> <p>2.an ability to use techniques and skills to manage or execute engineering projects and to efficiently use modern tools and technologies;</p> <p>3.an awareness of sustainable development; a knowledge of contemporary issues; an understanding of the impact of engineering solutions in a global, economic, environmental, and societal context; and an ability to engage life-long learning.</p>	
<p>課程網址：無(Non) Course Website</p>	
<p>課程宗旨： Course Objectives</p> <p>環境問題是一全球共通的議題同時也是土木工程相關科系學生的基礎學科之一，本課程的宗旨為提供學生對於環境工程有一廣泛的認識，並且培養學生對於環境議題的認知與重視，進而達到環境保護的目的。</p> <p>Environment is a global concern issue and the environmental engineering is one of the basic courses for civil engineering students. This course provides an understanding of the environmental engineering as applied to water quality, water quality modeling and water and wastewater treatment.</p>	
<p>課程大綱： Outline of Lectures</p> <p>單元一：課程簡介及課程大綱介紹 單元二：水污染與水質分析 單元三：給水工程 單元四：固體廢棄物處理 單元五：有害廢棄物 單元六：土壤污染處理 單元七：污水工程 單元八：空氣污染防治</p> <p>Unit 1: Introduction Unit 2: Water Pollution &amp; Measurement of Water Quality Unit 3: Water Supply Unit 4: Solid Waste Disposal Unit 5: Hazardous Waste Unit 6: Soil Pollution Treatment Unit 7: Wastewater Treatment Unit 8: Air Pollution Control</p>	
<p>授課方式： Method of Instruction</p> <p>講授 Lecture：60% 分組討論 Group discussion：10% 案例研討 Case study：15%</p>	

	<p>操做練習 Practical exercises : 15%</p> <p>講授 Lecture : %</p>
教科書： Textbooks	Mackenzie L. Davis, David A. Cornwell著，顧洋、曾迪華譯，「環境工程概論」，第四版，東華書局發行。
參考書目： References	<p>1. G. M. Masters and W. P. Ela, Introduction to Environmental Engineering and Science, 3e, McGraw-Hill, 2007.</p> <p>2. R. F. Weiner and R. A. Matthews, Environmental Engineering, 4e, Butterworth-Heinemann, 2003.</p> <p>3. P. A. Vesilind, J. J. Peirce, R. F. Weiner, Environmental Engineering, 3e, Butterworth-Heinemann, 1994 / 環境工程，第三版，李公哲譯，茂昌圖書有限公司，民國87年。</p>
修課須知： Notice	無(Non)
評量方式： Grading	<p>1. 平常出席及作業成績/ Attendance and Assignments (30%)</p> <p>2. 參訪報告/Report of field trip (10%)</p> <p>3. 期中考/ Midterm exam (30%)</p> <p>期末考/ Final exam (30%)</p>
備註說明： Notes	無(Non)