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：蔡欣君

Instructor:Lucky Tsaih

課程名稱：環境控制系統(一)

Course Title：Environmental Control System (1)

2026/11/3

課程代號： AD2602303 Course Code 學分數： 3 Credits	必選修：必修/半學年 Required/Electve:Required/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	W6(TR-613) W7(TR-613) W8(TR-613)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	https://moodle2.ntust.edu.tw/
課程宗旨： Course Objectives	課Introduces theoretical and practical relationships between people, building systems, and the natural environment; including climate analysis, thermal comfort, light, daylighting, and acoustics. 本課程的主要內容為介紹建築物理環境的特性-即人，建築系統和自然環境之間的理論和實踐的關係。課程內容包括自然氣候和分析、室內環境需求和熱舒適性、熱傳導與隔熱、誘導式熱環境控制、通風與遮陽、光與自然光源、採光、電光與照明器具、照明設計、建材聲學性能、室內聲學、隔音與機械振噪隔絕。
課程大綱： Outline of Lectures	One major term project will be assigned during the semester in addition to the final exam and eight regular short homework assignments. The project will explore room acoustics design. Issues include developing a design concept appropriate to the selected space of the design project and conducting a quantitative analysis of reverberation time control through appropriate room volume and materials used in the space, while also controlling potential noise in the building. 學期中除了期末考和8個小作業，同學將完成一個劇場最佳聲環境設計案。各位同學需先針對擇定的空間提出聲環境的設計目標和對應的設計概念，尤以控制廳堂內部的殘響值和噪音為主要方向。
授課方式： Method of Instruction	講授 Lecture：30% 分組討論 Group discussion：20% 案例研討 Case study：10% 操做練習 Practical exercises：30% 講授 Lecture：%
教科書： Textbooks	Lecture Slides - can be downloaded from Moodle2.
參考書目： References	建築物理，周鼎金，ISBN:9579966664 建築物理，江哲銘，ISBN:9571424005 Mechanical & Electrical Equipment for Buildings 13th Ed. by Walter T. Grondzik, Alison G. Kwok. ISBN: 978-1-119-49263-4
修課須知： Notice	

	Academic and Professional Ethics(學術與職業道德) Students in the architecture program often face significant pressures and time constraints, which can be overwhelming. However, it’s crucial to maintain academic integrity and honesty despite these challenges. Use this time to develop and uphold strong ethical standards. Any work submitted that is found not to be the sole work of the author will result in a failing grade for the course.
評量方式： Grading	Grading (評量方式): Student grades will be based on the following components: Final Exam (期末考)(歷年建築師考試試題) - 30% Term Project - 30% Assignments and Quizzes (小作業和小考) - 30% Attendance and Participation (出席和課堂參與發言) - 10% Taiwan Tech Grading Policy(台科大成績規範) For information on Taiwan Tech’s grading policy, please refer to the following link: https://www.academic.ntust.edu.tw/var/file/48/1048/img/2870/438980838.pdf 台科大成績規範資訊可以在上面網路連結找到。
備註說明： Notes	Students with Special Needs(特殊需求) Students with special physical needs who require classroom accommodations must first register with the Student Affairs Office. The office will provide documentation, which the student must then present to the instructor when requesting accommodations. We are committed to making every effort to ensure an equal learning environment for all students. 為提供一個平等的學習環境，對課堂上有特殊需求的學生，請學生先到註冊組與學生事務處申請，之後將學生事務處提供的文件給課堂老師。