

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：戴 龔

Instructor:Yian Tai

課程名稱：真空薄膜工程

Course Title : Vacuum and Thin Film
Technology

2026/6/22

課程代號： CH5402701 Course Code	必選修：選修/半學年 Required/Electve:Elective/Half Yr.
學分數： 3 Credits	先修課程： Prerequisites
節次教室： M6(IB-512) M7(IB-512) M8(IB-512) Time/Location	
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	Thin film is one of the most important fields in the scientific and engineering domains; from corrosion prevention to the most advanced semiconductor devices. Therefore, this course aims to introduce the basic principles, material, processes, and applications of thin films, enabling students to gain a considerable understanding of the field.
課程大綱： Outline of Lectures	WK 1, 2 Introduction of Thin Films WK 3, 4, 6 Vacuum Technology WK 8, 9 Fabrication of Thin Films (I) WK 10 Midterm Exam WK 11, 12 Fabrication of Thin Films (II) WK 13, 14 Characterization of Thin Films WK 15 Application of Thin Film Technologies WK 16 Final Exam
授課方式： Method of Instruction	講授 Lecture : 85% 分組討論 Group discussion : 0% 案例研討 Case study : 15% 操做練習 Practical exercises : 0% 講授 Lecture : %
教科書： Textbooks	
參考書目： References	1. Methods of surface analysis / A. W. Czanderna 2. Introduction to Surface Physical Chemistry / K. Christmann 3. Introduction to surface and thin film processes / J. A. Venables 4. Electron spectroscopy for surface analysis / H. Ibach 5. Thin film process / J. L. Vossen 6. Handbook of Thin Film Deposition 2nd Edition / K. Seshan 7. Handbook of Sputtering Technology / K. Wasa
修課須知： Notice	
評量方式： Grading	Quiz (in class) + attendance 20% Mid-term 40% Final-term 40%

備註說明：
Notes