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：張孫堂

Instructor:Sun-Tang Chang

課程名稱：材料分析

Course Title：Characterization of Materials

2026/11/3

課程代號： TE3020301 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： T6(TR-512) T7(TR-512) W2(TR-512) Time/Location	
專業核心能力： Core Professional Competencies	□執行工程實務所需技術、技巧的能力。 □能發掘、分析、應用研究成果及因應複雜且整合性工程問題的能力。
課程網址： Course Website	
課程宗旨： Course Objectives	Introduction to the analysis principles and methods for material microstructure, physical properties and chemical properties is the main purpose of this lecture. In addition, the students will be arranged to visit the corresponding instruments of materials characterization (e.g. scanning electron microscopy, transmission electron microscopy), which will effectively deepen students' impression of these instruments.
課程大綱： Outline of Lectures	Week 1.Introduction Week 2~3.Optical analysis Week 4~7.Electrical Electrical and electrochemical analysis Week 8 Midterm exam Week 9~11. X-ray analysis Week 12~13. Thermal analysis & NDT analysis Week 14~16. Final report submission or final oral presentation
授課方式： Method of Instruction	講授 Lecture：0% 分組討論 Group discussion：0% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	
參考書目： References	
修課須知： Notice	Invited Talk by Industry Expert
評量方式： Grading	Attendance 15% Midterm report (or Homework) 15% Midterm exam 30% Final report (or Final presentation) 40%

備註說明：
Notes