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：何建韋

Instructor:HO, CHIEN-WEI

課程名稱：大數據分析

Course Title：Big Data Analysis

2026/11/3

課程代號： MA5101701 Course Code 學分數： 3 Credits	必選修：選修/半學年 Required/Electve:Elective/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	F2(TR-509) F3(TR-509) F4(TR-509)
專業核心能力： Core Professional Competencies	具備解決問題的能力
課程網址： Course Website	
課程宗旨： Course Objectives	This course is designed for graduate students with little or no programming background who want to develop practical data analytics skills using Python and SQL. Students will learn fundamental programming logic, data manipulation, exploratory data analysis (EDA), visualization, and basic modeling.
課程大綱： Outline of Lectures	Introduction Fundamental Basic data type (Boolean, integer, floating, string) Data framework (list, tuple, dict, and set) Data structure (control flow, such as if-else) Data structure (function) Module and package (ex. tkinter to build the GUI; graphical user interface) Data processing and data analysis Pandas Numpy scipy.stats sklearn.linera_model scikit-learn Data visualization Matplotlib Databased (DB) SQL(structured query language)
授課方式： Method of Instruction	講授 Lecture：55% 分組討論 Group discussion：15% 案例研討 Case study：10% 操做練習 Practical exercises：20% 講授 Lecture：%
教科書： Textbooks	
參考書目： References	Learning Python, O’Reilly Python for Data Analysis, O’Reilly

修課須知： Notice	
評量方式： Grading	Mid-term exam (25%) Final group project (40%) Assignment or quiz (10%) Normal grades - homework, class performance and attendance record (25%)
備註說明： Notes	