

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

2026/6/22

<p>課程代號： MA5101701 Course Code</p> <p>學分數： 3 Credits</p>	<p>必選修：選修/半學年 Required/Elective:Elective/Half Yr.</p> <p>先修課程： Prerequisites</p>
<p>節次教室： F2(TR-509) F3(TR-509) F4(TR-509) Time/Location</p>	
<p>專業核心能力： 具備解決問題的能力 Core Professional Competencies</p>	
<p>課程網址： Course Website</p>	
<p>課程宗旨： 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. Course Objectives Students will learn fundamental programming logic, data manipulation, exploratory data analysis (EDA), visualization, and basic modeling.</p>	
<p>課程大綱： Introduction Outline of Fundamental Lectures</p> <ul style="list-style-type: none"> <li>Basic data type (Boolean, integer, floating, string)</li> <li>Data framework (list, tuple, dict, and set)</li> <li>Data structure (control flow, such as if-else)</li> <li>Data structure (function)</li> <li>Module and package (ex. tkinter to build the GUI; graphical user interface)</li> <li>Data processing and data analysis             <ul style="list-style-type: none"> <li>Pandas</li> <li>Numpy</li> <li>scipy.stats</li> <li>sklearn.linear_model</li> <li>scikit-learn</li> </ul> </li> <li>Data visualization             <ul style="list-style-type: none"> <li>Matplotlib</li> </ul> </li> <li>Databased (DB)             <ul style="list-style-type: none"> <li>SQL(structured query language)</li> </ul> </li> </ul>	
<p>授課方式： 講授 Lecture：55% Method of Instruction</p> <p>分組討論 Group discussion：15%</p> <p>案例研討 Case study：10%</p> <p>操做練習 Practical exercises：20%</p> <p>講授 Lecture：%</p>	
<p>教科書： Textbooks</p>	
<p>參考書目： Learning Python, O' Reilly References Python for Data Analysis, O' Reilly</p>	

修課須知：  
Notice

評量方式： Mid-term exam (25%)  
Grading Final group project (40%)  
Assignment or quiz (10%)  
Normal grades - homework, class performance and attendance record  
(25%)

備註說明：  
Notes