🎓 國立東華大學

教學計劃表　Syllabus

課程名稱(中文) Course Name in Chinese	程式設計（二）			學年/學期 Academic Year/Semester		112/2
課程名稱(英文) Course Name in English	Introduction to Computer Programming(II)					
科目代碼 Course Code	ACIM10060	系級 Department & Year	學一	開課單位 Course-Offering Department	會計與資訊管理國際學士班	
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		3.0/3.0		
授課教師 Instructor	/張漢利					
先修課程 Prerequisite						

課程描述　Course Description

This course is an intermediate course designed to build upon foundational programming skills learned in the previous course, "Introduction to Programming (I)", with a special focus on Python. The course begins with a thorough orientation to prepare students for advanced concepts. It provides a comprehensive review of Python to ensure all students are on the same level of understanding. Key files-and-exceptions, and object-oriented programming concepts are covered to deepen programming skills. Students then learn to enhance their problem-solving abilities through efficient search and sorting algorithms. The course also dives into General Data Acquisition, teaching methods to collect data from various sources. A significant portion is dedicated to Data Acquisition Features, including the utilization of Web APIs and scraping techniques, followed by managing data using SQL Databases and essential Data Cleaning techniques. Data Visualization and report creation are also integral parts of the curriculum, leading to a final presentation that encapsulates all the learned skills. Consultation weeks are provided for personalized guidance and doubt resolution, ensuring every student is prepared for the final assessment.

課程目標　Course Objectives

This programming course is designed to provide students with a strong foundation in programming concepts and techniques. Throughout the course, students will learn the fundamentals of programming, object-oriented programming principles, and advanced topics like recursion, searching, sorting, algorithm analysis (Big O notation), array-oriented programming, and an introduction to machine learning. By the end of the course, students will be equipped with the skills necessary to write efficient and organized code and to understand basic machine learning concepts.

	系專業能力 Basic Learning Outcomes	課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	兼具會計資訊理論與實務操作及專業知識，具備跨領域解決問題能力	●
B	具有良好之會計資訊理論基礎與分析能力，具備相關領域升學或就業之知識與能力	●
C	具備以資訊技術協助企業運作與商業管理之知識與應用能力	●
D	具有會計資訊、風險控管、電腦審計與稅務整合能力	○
E	具備超然獨立並嚴格遵守會計資訊專業倫理的道德勇氣	○
F	具備團隊合作、國際視野、創造性思考及良好的外語能力	●

圖示說明Illustration ：● 高度相關 Highly correlated ○中度相關 Moderately correlated

授 課 進 度 表 Teaching Schedule & Content		
週次Week	內容 Subject/Topics	備註Remarks
1	Orientation	
2	Python review	
3	Object-oriented programming	
4	Search, Sorting, Recursive	
5	Web Scraping	
6	Python API	
7	Mid term practice	
8	Holiday	
9	期中考試週 Midterm Exam	
10	Mid term exam (coding)	
11	Database	
12	Advanced Python topics	
13	Data visualization	
14	Consultation week	
15	Consultation week	
16	Final presentation	
17	Holiday	
18	期末考試週 Final Exam	

教 學 策 略 Teaching Strategies

☑ 課堂講授 Lecture   ☑ 分組討論Group Discussion   ☐ 參觀實習 Field Trip

☐ 其他Miscellaneous:

教 學 創 新 自 評 Teaching Self-Evaluation

創新教學(Innovative Teaching)

☐ 問題導向學習(PBL)   ☐ 團體合作學習(TBL)   ☐ 解決導向學習(SBL)

☐ 翻轉教室 Flipped Classroom   ☐ 磨課師 Moocs

社會責任(Social Responsibility)

☐ 在地實踐Community Practice   ☐ 產學合作 Industy-Academia Cooperation

跨域合作(Transdisciplinary Projects)

☐ 跨界教學Transdisciplinary Teaching   ☐ 跨院系教學Inter-collegiate Teaching

☐ 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments									
配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績 General Performance	20%								
期中考成績 Midterm Exam	30%								
期末考成績 Final Exam	30%								
作業成績 Homework and/or Assignments	20%								
其他 Miscellaneous (_____)									

評量方式補充說明
Grading & Assessments Supplemental instructions

教科書與參考書目（書名、作者、書局、代理商、說明）
Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址)
Teaching Aids & Teacher's Website(Including online teaching information.
Personal website can be listed here.)

其他補充說明 (Supplemental instructions)