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(一)			學年/學期 Academic Year/Semester	115/1
課程名稱(英文) Course Name in English	Introduction to Computer Programming(I)				
科目代碼 Course Code	DMSI10010	系級 Department & Year	學一	開課單位 Course-Offering Department	數位行銷與服務創新國際學士班
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/張烜瀚				
先修課程 Prerequisite					

課程描述 Course Description

This course is an introductory course to programming. It aims to establish a strong base in essential programming concepts and techniques, enhancing students' problem-solving and critical thinking skills through interactive lessons, projects, and exercises. Conducted in English, the course prepares students for the global programming community. By the end, students will understand programming principles well and be equipped with practical coding skills. These skills are vital for pursuing advanced courses in programming, algorithms, data structures, data analysis, machine learning, and solving real-world problems.

課程目標 Course Objectives

This course aims to provide students with a solid foundation in computer programming using the C and Python languages. Students will learn how to write clear codes through a hands-on learning approach. This course is designed for individuals with little to no programming experience. Students will also gain practical programming experience and develop problem-solving skills through small projects and exercises. By the end of the course, students will be able to perform basic programming tasks and have a solid foundation for further exploration of advanced topics.

	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	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	●
B	具備邏輯思考、問題分析與解決之能力	●
C	具備溝通協調與團隊合作之能力	○
D	具備創新思維之能力	○
E	具備國際視野及外語溝通之能力	○

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	User Input, Variables and Simple Data Types - I	

3	User Input, Variables and Simple Data Types - II Implementation Project	
4	Selections - I Introduction to if and if...else statements	
5	Selections - II Project: Implementing Selection Statements	
6	Mathematical Functions, Strings, and Objects	
7	Loops Introduction to for and while statements	
8	Loops Project: Implementing Loops	
9	Midterm Exam	Midterm Exam
10	Functions Project: Implementing Functions	
11	Lists	
12	Project: Implementing Functions and Lists	
13	Multidimensional Lists Project: Working with Multidimensional Lists	
14	Tuples, Sets, and Dictionaries Project: Working with Tuples, Sets, and Dictionaries	
15	Pandas and DataFrames	
16	Project: Working with Pandas and DataFrames	
17	期末考試週 Final Exam	Final Exam

彈性 教學 規劃 Flexible Teaching Plan	請勾選(至少需勾選1 個項目): Please tick the box(es). (At least one item is required.): ☑ 問題討論 Problem-based Discussion ☐ 翻轉教學 Flipped Classroom ☐ 展演實作 Performance / Practical Presentation ☐ 校外參訪Off-campus Visit ☐ 講座活動 Lecture / Seminar ☑ 線上作業 Online Assignments ☑ 自主學習 Self-directed Learning ☑ 課業輔導Academic Support ☐ 實驗操作 Experiment Operation ☐ 遠距教學(同步) Distance Learning (Synchronous) ☐ 遠距教學(非同步) Distance Learning (Asynchronous) ☐ 其他(請填寫) Others (Please specify.): 備註: 本校學期週數自115 學年度起調整為17 週，為符合1學分18 小時之原則，請教師規劃安排彈性教學。 Note: From the 115th academic year, the semester will be 17 weeks. Please include flexible teaching activities to meet the required 18 hours per credit.

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: 使用Kahoot!即時反饋系統輔助課堂講授

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(含出缺席) General Performance (Attendance Record)	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.)

Introduction to Python Programming (Taiwan Edition),Y Daniel Liang, Pearson FT Press, ISBN:9813351934
Python Crash Course, 3rd Edition: A Hands-On, Project-Based Introduction to Programming、Eric Matthes、No Starch Press. ISBN: 1718502702

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)