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		113/1
課程名稱(英文) Course Name in English	Introduction to Computer Programming (I)					
科目代碼 Course Code	DS__10000	系級 Department & Year	學一	開課單位 Course-Offering Department		大數據科學國際學士班
修別 Type	學程 Program	學分數/時間 Credit(s)/Hour(s)		3.0/3.0		
授課教師 Instructor	/楊舜博					
先修課程 Prerequisite						

課程描述　Course Description

透過 C 語言學習基礎的程式設計，在課程中你會學到什麼是程式，什麼是程式語言，什麼是程式設計，也會學到一個程式語言該包含的要素有哪些。
實作的部分會透過 C 語言來講解。

課程目標　Course Objectives

介紹程式設計基本觀念、方法與程式發展技術。
In this course, the teacher will introduce the basic concepts and methods of programming and its development techniques.

	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	具備基本資料科學知識及邏輯推理能力。have well-founded background in data science and logical reasoning,	●
B	具備機率、統計、資料科學及相關領域的知識與應用能力。have the knowledge of probability , statistics , data science and the related fields, and their applications,	●
C	具備資料科學應用技能與團隊合作，解決問題能力。be able to utilize data scientific skills for problem solving through cooperation and teamworking.	○

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	Course rule introduce What is program, what is programming, what is programming language Core concept of a programming language Compiler and IDE introduce	
2	Variable Type of variable Size of variable Declare a variable Operation of variable Input/ Output introduce	
3	Flow control if if......else	

4	Flow control switch......case ?:	
5	Flow control for while	
6	Flow control do......while break continue	
7	Array Access element in an array Traverse an array	
8	Character array String	
9	期中考試週 Midterm Exam	
10	Multidimensional array	
11	Pointer Pointer and array	
12	Function Parameter of function Return value of function Function pointer	
13	Recursive function	
14	Pre-process Include a library Define a library by our self	
15	Structure Pointer and structure	
16	File handling	
17	Implementing a small game	
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:

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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%		✓						Attendance, course participate
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）