國立陽明交通大學遠距教學課程－教學計畫大綱

The Teaching Plan for Distance Learning Courses of NYCU

填表說明：
Description:

1.開授遠距教學課程，應由開課單位擬具教學計畫，依課程規劃及研議程序辦理，經教務相關之校級會議通過後實施；本教學計畫大綱會上傳至教育部「大學校院課程網」。
The teaching plan for a distance learning course should be made by the course provider, based on the curriculum plan and study procedures, and then be submitted to a university-level meeting related to academic affairs for approval before the course can be conducted. It will be uploaded to the "University Curriculum Website" of the Ministry of Education.

2.同一教師不得針對課程名稱或性質相近之課程再次申請授課時數加計。
Teachers are not allowed to apply for additional teaching hours again using their courses with similar titles or natures.

開課期間：__113__學年度 第__1__學期
Course Period: _____Semester of Academic Year _____

一、首次開設之「遠距課程」：☐是(請續下題1或題2打■)　■否(以下免勾選)
Offering the "Distance course" for the first time:
☐**Yes (please check the boxes in Table 1 or 2 below)**　☐**No (no need to check the following boxes)**

二、請教師先確認本次申請加計1.5倍之課程 ☐是　☐否 為「課程名稱」或「性質相近」之課程
(不申請加計1.5倍者免填)
Please confirm that the course for which you are applying for 1.5 times teaching hours this time is a course of the same "course name" or of "similar nature" (☐yes or ☐no)
(if not applicable, there's no need to check the boxes below)

　1.此為上或下學期首次開設遠距課程，是否要申請加計授課時數1.5倍：☐要申請 ☐不申請
　This is the first time you're offering a distance course in the first or second semester. Do you need to apply for 1.5 times teaching hours: ☐Yes ☐No

　2.此為暑期首次開設遠距課程，是否要申請加計授課時數1.5倍：(非暑期課程免填)
　This is the first time you're offering a distance course in the summer term. Do you need to apply for 1.5 times teaching hours: (if not applicable, there's no need to check a box below)
　☐要申請(不支領暑期授課鐘點費，改列計為次學年授課時數加計1.5倍)
　　☐**Yes (I don't want to get paid for the summer course. Instead, I'd like to have it credited to the teaching hours in the following academic year.)**
　☐不申請
　　☐**No**

壹、課程基本資料 (有包含者請於☐打■)
1. Basic information (Check a box if applicable)

1	課程名稱 Course name	巨量資料分析
2	課程英文名稱 Course name in English	Big Data Analytics
3	永久課號 Permanent Course ID	MGMT30081
4	當期課號 Course Number	557806
5	教學型態 Teaching style *本校遠距教學課程定義： *NYCU's definition of a distance learning course:	■非同步遠距課程 Asynchronous distance course ■同步遠距課程 Synchronous distance course 請填列本校課程主播而外校收播之校名與系所：(無則免填) If the course is broadcast by NYCU while received by other university, please fill in its name and department: (if not

	(1)係指本校修課學生皆以遠距線上方式進行學習之課程。 A courses that is delivered remotely, meaning that students receive instruction online. (2)遠距(同步及非同步)授課時數超過總授課時數二分之一。 A course in which distance learning sessions (synchronous and asynchronous) account for more than half of its total teaching hours.	applicable, leave it blank) 外校名稱：_____ 外校系所：_____ Name of the other university:_____ Name of the department:_____ *與國外學校有合作遠距課程，請填列（無則免填）： Please list the cooperative distance courses you're having with a foreign university (if not applicable, leave it blank): 國外合作學校與系所名稱：_____ Name of the foreign university and its department： _____ ☐國內主播 Course offered and broadcast by NYCU ☐境外專班 Overseas Master Degree Program offered by NYCU ☐雙聯學制 Dual Degree Program ☐其他 Others
6	授課教師姓名及職稱 Name and position of the teacher	(1)姓名 Name：陳姵樺 (2)職稱 Position：副教授
7	開課單位名稱 Name of the course provider (or the college and department)	主開系所 Main department offering the course： 科管專班 輔開系所 Department(s) offering assistance：

8	課程學制
	Course structure
		☐學士班 Bachelor's Degree Program
		☐碩士班 Master's Degree Program
		■碩士在職專班 In-service Master's Program
		☐博士班 PhD Program
		☐學位學程（☐四年制 ☐碩士班 ☐博士班）
		  Degree program
		  (☐4-year program ☐Master's program ☐PhD Program)
		☐學分學程 Credit program

9	科目類別 Subject Type	☐共同科目 Common Subject ☐通識科目 General Education Subject ☐校定科目 NYCU-determined Subject ■專業科目 Professional Subject ☐教育科目 Educational Subject ☐其他 Others
10	選課別 Course Type	☐必修 Required　■選修 Elective　☐其他 Others
11	學分數 No. of Credits	3
12	每週上課時數 No. of teaching hours per week	3 *每週上課時數：同步遠距課程請填入每週「面授」及「同步」之合計上課時數。若無法界定每週時數，填入每週平均時數（即學期總「面授」＋「同步」時數除以總課程週數）；非同步遠距教學，請填平均每週非同步授課時數。 *Teaching hours per week: For synchronous distance learning, please fill in the total hours of "face-to-face" and "synchronous" teaching sessions per week. If the teaching hours cannot be calculated, just fill in the average number of hours per week (total hours of "face-to-face" + "synchronous" sessions divided by the total number of the course weeks); for asynchronous distance learning, please fill in the hours of asynchronous teaching sessions per week.
13	開課班級數 No. of classes	1
14	預計總修課人數 Expected No. of students taking the course	15
15	全英語教學 Course taught in English only	☐是 Yes　■否 No
16	課程平臺網址（非同步教學必	■ E3非同步遠距教學 E3 Asynchronous distance learning course

填） Course platform website (required for asynchronous teaching)	☐ E3同步遠距教學 E3 Synchronous distance learning course ☐ E3&CS100教室(同步)E3 & CS100 classroom (synchronous) ■ 其他 Others： ___Microsoft Teams___

貳、課程教學計畫
2. The Teaching Plan

1	教學目標 Teaching objectives	本課程介紹各種統計/機器學習分析方法，並學習使用 Python 軟體進行資料分析與判讀結果。
2	適合修習對象 Target students	修過統計學之商管碩士班或在職專班學生，曾學過 Python 或願意自學為佳。

| 3 | 課程內容大綱
Course outline | （請填寫每週次的授課內容及授課方式；授課方式請填時數）
(please fill in course contents and teaching method for each week; fill in number of teaching hours for the teaching methods) |

週次 Week	授課內容 Contents of the course	面授 Face-to-face teaching	遠距教學 Distance learning	
			非同步 Asynchronous	同步 Synchronous
1	簡介			3
2	統計學習演算法			3
3	Python 語言簡介		3	
4	資料圖形化		3	
5	線性迴歸分析			3
6	線性迴歸分析			3
7	羅吉式迴歸			3
8	再抽樣方法			3
9	判別分析			3
10	判別分析			3
11	期中考			3
12	決策樹			3
13	隨機森林			3
14	主成份分析			3
15	集群分析			3
16	期末文章報告			3
17	自主學習			3
18	自主學習			3

授課方式及時數
Teaching methods and hours
(請填時數，無則免填)
(fill in the number of hours, leave it blank if you don't have anything to include)

4	教學方式 Teaching methods	（有包含者請打■，可複選） (Check a box if applicable; select one or more answer choices) ☐(1) 提供線上課程主要及補充教材 　　Main and supplementary teaching materials are provided for online courses ■(2) 有線上教師或線上助教 　　Online teachers or teaching assistants are available. ■(3)提供線上非同步教學，次數：__2__次，總時數：__6__小時 　　Online asynchronous teaching sessions are provided: ____time(s), with a

		total of ____ hours
		□(4)提供面授教學，次數：____次，總時數：____小時 Face-to-face teaching is provided: __time(s), with a total of ____hours ■(5)提供線上同步教學，次數：__16__次，總時數：__48__小時 Online synchronous teaching sessions are provided: ____time(s), with a total of ____ hours □(6) 其它：（請說明）Other options (Details here):
5	教科書及參考書資料 Textbooks and reference materials	1.教科書 Textbooks：James, G., Witten, D., Hastie, T. & Tibshirani, R. (2021) *An introduction to Statistical Learning with Applications in R* (2nd Edition). Springer 2.講義 Handouts： 3.參考資料 Reference materials: 4.相關網站 Related websites：
6	於 E3系統所提供的學習活動 Learning activities offered by the E3 system	以下會使用之 E3功能請打■ Please check the E3 features that you will use ■最新消息發佈、瀏覽 Releasing and browsing the latest news ■教材內容設計、觀看、下載 Designing, viewing or downloading the contents of teaching materials □成績系統管理及查詢 Managing and inquiring the system that keeps track of student grades □進行線上測驗、發佈 Conducting or releasing an online test ■學習資訊 Gaining access to learning information □互動式學習設計(聊天室或討論區)Designing interactive learning (through a chat room or discussion forum) □各種教學活動之功能呈現 Presenting the benefits of all teaching activities □其他相關功能（請說明）Other features (Details here)
7	師生互動討論方式 How teacher–student discussion is conducted	■線上討論 Online discussion： □面談 Face-to-face discussion： □其他 Others：
8	作業繳交方式 How assignments are submitted	（有包含者請打■，可複選） (Check a box if applicable; select one or more answer choices) ■(1)提供線上說明作業內容 Offering online instructions on how assignments should be done □(2)線上即時作業填答 Allowing students to complete online assignments in real time ■(3)作業檔案上傳及下載 Allowing students to upload and download assignments □(4)線上測驗 Providing online tests □(5)成績查詢 Allowing grade inquiry □(6)其他做法（請說明）Others (Details here)：
9	成績評量方式 How performance is evaluated	(1) 考試方式 How tests are conducted：考試一次,作業 課堂參與及文章報告 (2) 考評項目其所佔總分比率 Evaluation items, with their percentage of the total score：作業50%,考試20%,課堂參與10%,期末期刊文章報告與心得20%
10	上課注意事項 Other classroom rules	

申請教師簽章：_____
Signature of applicant:

開課單位主管簽章：_____
Signature of head of course provider:

申請教師簽章：_____
Signature of applicant:

開課單位主管簽章：_____
Signature of head of course provider: