# ②國玄東華大學

# 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese				學年/學期 Academic Year/Se		113/1	
課程名稱(英文) Course Name in English	Big Data Information Processing						
科目代碼 Course Code	EEM0180	系級 Department & Year		開課單位 Course-Offering Department			
修別 Type	El ecti ve	學分數/時間 Credit(s)/Hour(s)		3.0/3.0			
授課教師 Instructor	/						
先修課程 Prerequisite							

#### 課程描述 Course Description

Students will obtain a basic understanding of computer science principles and how to use various data analysis packages. Improve students' data-oriented programming skills and allow them to use data structures to create data analysis methods. Teach and train students on the essential practical abilities of machine learning and data mining.

## 課程目標 Course Objectives

Students will obtain a basic understanding of computer science principles and how to use various data analysis packages. Improve students' data-oriented programming skills and allow them to use data structures to create data analysis methods. Teach and train students on the essential practical abilities of machine learning and data mining.

		課程目標與系專業能 力相關性			
	系專業能力 	Correlation between			
		Course Objectives			
	Basic Learning Outcomes	and Dept.'s			
		Education			
		Objectives			
Α	To cultivate the research and				
	developing ability of electrical, electronics and information engineering				
В	To cultivate the advanced ability of				
	analysis, verification and implementation of systems				
С	To train the auxiliary ability between				
	the utilization of software tool and the verification of the hardware practice				
l D	To train the integrate ability				
	between professional EECS knowledge and engineering practice				
E	To fulfill the research ability in				
	thesis by group discussion and teamwork cooperation				
F	To fulfill the ability of question				
	finding, logical analyzing, bottleneck overcoming and continuous learning				
	To obtain				
G	the ability of multi-specialization and to meet the industry demand as well as to have the ability of academic ethics and concept of intellectual property				
	To understand the				
l H	change of global market and to have the ability of reading, conversation and				
'''	technical writing in English				
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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	The definition, purpose, and importance of Big Data							
2	data and data prepare(I)							
3	data and data prepare(II)							
4	Introduction of python							
5	Visualization with Matplotlib							
6	Scikit-Learn libraries tools(I)							
7	Scikit-Learn libraries tools(II)							
8	Association rule learning							
9	Mdterm Exam							
10	Linear Regression, Principal Component Analysis, Logistic Regression							
11	Deci si on Tree							
12	Support Vector mNachine							
13	k-nearest neighbors algorithm, K-means Clustering							
14	Introduction Artificial Neural Network							
15	Deep Neural Network							
16	Final Report(I)							
17	Final Report(II)							
18	Fl exi bl e Learni ng							
	教學策略 Teaching Strategies							
	Lecture Group Discussion Fi	ield Trip						
IMI	SCELL di leous.							
	教學創新自評Teaching Self-Evaluation							
(	I nnovati ve Teachi ng)							
	(PBL) (TBL)	(SBL)						
	Flipped Classroom Mocs							
(	Social Responsibility)							
	Community Practice Industy-Academia Cooperation	on						
(	Transdi sci pl i nary Proj ects)							
	Transdi sci pl i nary Teachi ng Inter-col l egi ate Teachi ng							
	Courses Co-taught with Industry Practitioners							
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1								

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例	多元評量方式 Assessments							
Items	Percentage	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
( ) General Performance (Attendance Record)	10%			<b>~</b>					
Midterm Exam	30%				~				
Fi nal Exam	30%				~				
Homework and/or Assignments	30%		<b>~</b>						
Miscel I aneous									

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.)

"Python Data Science Handbook" as the textbook.

### 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)