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國立東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	應用統計分析方法			學年/學期 Academic Year/Semester	114/2
課程名稱(英文) Course Name in English	Applied Statistic analysis				
科目代碼 Course Code	NRESM0440	系級 Department & Year	碩士	開課單位 Course-Offering Department	自然資源與環境學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/李俊鴻				
先修課程 Prerequisite					

課程描述 Course Description

Applied Statistical Methods covers the fundamental understanding of statistical methods necessary to deal with a wide variety of practical problems. We focusing on presents the topics covered in a manner that stresses clarity of understanding, interpretation, and method of application.

This is an introductory course for students in NRES and CES. In this course the students will learn the principles and methods of statistical analysis, but will also put them into practice using a range of real-world data sets. The objective is to provide a basic understanding of data analysis using statistics and to use computational tools on problems of applied nature. Moreover, we also can use this method to analyze the research questions on ecotourism, tourist attractions, environmental education, protected area management, human-wildlife conflicts, and the endangered species conservation et al.

課程目標 Course Objectives

This is an introductory course for students in NRES and CES. In this course the students will learn the principles and methods of statistical analysis, but will also put them into practice using a range of real-world data sets. The objective is to provide a basic understanding of data analysis using statistics and to use computational tools on problems of applied nature. Moreover, we also can use this method to analyze the research questions on ecotourism, tourist attractions, environmental education, protected area management, human-wildlife conflicts, and the endangered species conservation et al.

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	Introduction to applied statistical method	
2	Introduction to statistical/data analysis software, Data definition Descriptive statistics and Correlation	SPSS & LIMDEP
3	Individual report I- Data definition, Descriptive statistics and Correlation	
4	Hypothesis test and One-way ANOVA	
5	Individual report II-Hypothesis test and One-way ANOVA	
6	Multiple Regression Analysis (1) Logistic Regression: Regression with a Binary Dependent Variable(1)	
7	Multiple Regression Analysis (2) Logistic Regression: Regression with a Binary Dependent Variable(2)	

8	Individual report III-Regression with a Binary Dependent Variable	
9	Exploratory Factor Analysis Cluster analysis, Cross table & Chi-square test	
10	Individual report IV Exploratory Factor Analysis Cluster analysis, Cross table & Chi-square test	
11	Conjoint Analysis Structural Equations Modeling Overview Importance-Performance Analysis	
12	Individual report V Importance-Performance Analysis	
13	Contingent valuation and Choice Experiment 1	
14	Contingent valuation and Choice Experiment 2	
15	Individual report VI Choice Experiment	
16	Overall discussion	
17	Final Report 1	
18	Final Report 2	

教 學 策 略 Teaching Strategies

- [x] 課堂講授 Lecture
- [x] 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)

- [x] 問題導向學習(PBL)
- [ ] 團體合作學習(TBL)
- [x] 解決導向學習(SBL)
- [ ] 翻轉教室 Flipped Classroom
- [ ] 磨課師 Moocs

社會責任(Social Responsibility)

- [x] 在地實踐Community Practice
- [ ] 產學合作 Industy-Academia Cooperation

跨域合作(Transdisciplinary Projects)

- [x] 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									
期末考成績 Final Exam	20%		✓	✓	✓				
作業成績 Homework and/or Assignments	60%		✓	✓					
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.)

Joseph F. Hair Jr. William C. Black Barry J. Babin Rolph E. Anderson, 2014, “Multivariate Data Analysis, “ 7th ed., Prentice-Hall

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.)

https://scholar.google.com/citations?user=N3A3en0AAAAJ&hl=en

其他補充說明 (Supplemental instructions)