國立屏東大學　111學年度第2學期　教學課程綱要

※為保護智慧財產權，請勿非法影印教科書。

課程學分數：1.00(2.00小時)

授課老師：蕭文峰(219006)　　必選修：必

開課序號	0501
科目名稱	資訊管理專題研討(二)(AWBZ007)
科目英文名稱	Special Topics in MIS Ⅱ
授課語言	英語/全外語授課
主要教學型態	課堂教學
教學目標	This course provides an introduction to data mining and big data analytics, covering topics such as data visualization, clustering and classification, evaluation and interpretation, web crawling, and text and image clustering and classification. The course will utilize the Orange and Weka tools and the Python programming language.
每週課程內容及教學方法	Following the school policy, distance teaching will be implemented on the 17th and 18th weeks, using software: Microsoft Teams. The course channel is listed below (copy and paste it into the address bar and hit enter, then open it with the application): https://teams.microsoft.com/l/team/19%3afYWrVR6IFuB3kFl6Z3EjyeJrduUzgpq-hi-xUJfBYBo1%40thread.tacv2/conversations?groupId=de6b67f1-c874-42f3-aea7-29724c03ceac&tenantId=b467d443-c70e-463e-88bd-991067d94fbb Week　Course Content Week 1　Course Arrangements and Classroom English I Week 2　Classroom English II Week 3　Hierarchical Clustering Week 4　Partitional Clustering Week 5　Clustering Explained and Silhouette Week 6　Classification: Logistic Regression, RandomForrest, XGBoost Week 7　Making Predictions: Model Evaluation and Scoring Week 8　Principal Component Analysis Week 9　Mid-term: project proposal presentations and discussion Week 10　Big Data Analytics: Web Crawling and Text Preprocessing Week 11　Big Data Analytics: Document Embeddings Week 12　Big Data Analytics: Text Clustering Week 13　Big Data Analytics: Text Classification Week 14　Big Data Analytics: Text Documents Importation Week 15　Big Data Analytics: Multivariate Projection - Freeviz Week 16　Big Data Analytics: Twitter Data Analysis Week 17　Big Data Analytics: Sentiment Analysis Week 18　Final: term project demonstration and presentations *Note: The teaching method for mid-term and final is "presentation and discussion"　for the other weeks, "lecture and discussion".

核心能力	1.進階資訊技術與管理分析能力 20% 2.系統分析、開發與整合能力 20% 3.瞭解國內外資訊產業趨勢能力 20% 4.資管領域專題研究及論文撰寫之能力 0% 5.創新思考及應用資訊技術解決問題之能力 20% 6.優良之溝通與表達能力 10% 7.優良之協調與團隊合作能力 0% 8.資訊倫理及公民素養之能力 10% 9.國際觀與終身學習能力 0%
預期學習成果	At the end of this course, students should be able to: 1. Use data mining tools like Orange and Weka to visualize, identify patterns in, evaluate, and interpret data. 2. Read, understand, and use Python programs for big data analytics. 3. Collaborate effectively with others through team projects. 4. Enhance their multicultural thinking and global perspective through English communication and reading.
與預期學習成果搭配的多元評量	The assessments for the ILOs are listed as follows: ILO 1: Homework (60%), Project report (20%), Oral Presentation (20%) ILO 2: Project’s functionalities and quality (80%), Oral presentation (20%) ILO 3: Self and peer assessment of teamwork contribution (100%) ILO 4: Class Participation (60%), Project report (20%), Oral Presentation (20%)
主要讀本	1. course website: http://einstein.npic.edu.tw:9212/sources/seminar/ 2. https://orangedatamining.com/ 3. https://waikato.github.io/weka-wiki/ 4. https://scikit-learn.org/stable/
參考書目	classroom english: https://7esl.com/classroom-english-teachers/
其他事項	