

Tamkang University Academic Year 110, 1st Semester Course Syllabus

Course Title	INTRODUCTION AND APPLICATION TO BIG DATA ANALYSIS	Instructor	CHIA-LING CHANG
Course Class	TABXB3P DEPARTMENT OF INFORMATION AND LIBRARY SCIENCE, 3P	Details	◆ Blended Course ◆ Selective ◆ One Semester ◆ 2 Credits
Relevance to SDGs	SDG5 Gender equality SDG8 Decent work and economic growth SDG9 Industry, Innovation, and Infrastructure SDG10 Reducing inequalities		
D e p a r t m e n t a l A i m o f E d u c a t i o n			
Our mission is to educate and train library and information professionals.			
Subject Departmental core competences			
C. To understand concepts relating to information technology and systems, and be able to put them in use.(ratio:50.00) H. To acquire integration ability of library services and digital publishing.(ratio:50.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:50.00) 5. Independent thinking. (ratio:10.00)			
Course Introduction	The purpose of this course is to guide students to construct big data thinking brains and interpret big data through the introduction and application of big data, and teach practical big data analysis, so that students can understand data through data analysis.		

The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

No.	Teaching Objectives	objective methods
1	Students will understand and be able to construct big data thinking	Cognitive
2	Students will understand and be able to apply the big data mining methods of Classification	Cognitive
3	Students will understand and be able to apply the big data mining methods of Cluster Analysis.	Cognitive
4	Students will understand and be able to apply the big data mining methods of Association Analysis	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	C	1235	Lecture	Discussion(including classroom and online), Report(including oral and written), classroom activity
2	C	125	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online), Report(including oral and written)
3	CH	1235	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), Activity Participation
4	CH	1235	Lecture, Discussion	Study Assignments, Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Note for Blended Course : When utilizing weekly digital instruction, please fill in "Online Asynchronous Instruction".

Week	Date	Course Contents	Note

1	110/09/22 ~ 110/09/28	Intorduction	
2	110/09/29 ~ 110/10/05	Intorduction big data	
3	110/10/06 ~ 110/10/12	Data and Exploration	(Online Asynchronous Instruction)
4	110/10/13 ~ 110/10/19	Intorduction weka	
5	110/10/20 ~ 110/10/26	statistic and big data 1	(Online Asynchronous Instruction)
6	110/10/27 ~ 110/11/02	statistic and big data 2	(Online Asynchronous Instruction)
7	110/11/03 ~ 110/11/09	Classification Analysis 1	
8	110/11/10 ~ 110/11/16	Midterm report	
9	110/11/17 ~ 110/11/23	Midterm Exam Week	
10	110/11/24 ~ 110/11/30	Classification Analysis + data analysis with weka 1	
11	110/12/01 ~ 110/12/07	Classification Analysis + data analysis with weka 2	
12	110/12/08 ~ 110/12/14	Cluster Analysis+ data analysis with weka	
13	110/12/15 ~ 110/12/21	Final report team analysis and discussion	
14	110/12/22 ~ 110/12/28	Final group report 1	
15	110/12/29 ~ 111/01/04	Final group report 2	
16	111/01/05 ~ 111/01/11	Comprehensive discussion on big data analysis and application	
17	111/01/12 ~ 111/01/18	Final Exam Week	
18	111/01/19 ~ 111/01/25		
Requirement		1. Be sure to attend the first class. If you have any questions, please make a request in the first class. 2. If you did not attend the first class, please do not choose this class. 3. The teaching method is English textbooks, keywords are only spoken in English, but the entire lecture, including practical explanations, is only spoken in Chinese. 4. The second class is a classroom activity (data analysis and implementation), which accounts for 30% of the entire semester, and it must be completed even if you ask for leave (if you have any questions, you can discuss with the teacher.) 5. There are no mid-term and final exams, and the assessment will be conducted in a group report.	

Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	Pang-Ning Tan, Michael Steinbach and Vipin Kumar (2006). Introduction to Data Mining, Addison Wesley
References	
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : % ◆ Midterm Exam : 20.0 % ◆ Final Exam : 40.0 % ◆ Other <classroom activity> : 30.0 %
Note	1. This syllabus may be uploaded at the website of the Course Syllabus Management System at https://info.ais.tku.edu.tw/csp or through the link of the Course Syllabus Upload posted on the home page of the TKU Office of Academic Affairs http://www.acad.tku.edu.tw/CS/main.php 2. According to the Implementation regulations of distance education for junior college and above are prescribed pursuant to Article 2, "The distance learning course referred to in these Measures refers to more than one-half of the teaching hours in each subject." 3. According to the regulations of Tamkang University Enforcement Rules for digital teaching, Paragraph 2 and Article 3, the distance learning course of our school must be "The course of digital teaching with distance learning platform or synchronous video system in our school. Teaching Hours include course lectures, teacher-student interaction discussions, quizzes and other learning activities." 4. If there are any temporary course changes (including time changes and classroom changes of distance learning courses, blended courses), please make out an application according to regulations to the Office of Academic Affairs. ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.