

Tamkang University Academic Year 114, 2nd 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	<ul style="list-style-type: none"> ◆ 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		
Departmental Aim of Education			
Our mission is to educate and train library and information professionals.			
Subject Departmental core competences			
A. To understand concepts relating to library and information science and to grasp the relevant trends.(ratio:5.00) B. To acquire professional abilities to develop, organize, preserve and integrate all sorts of information resources.(ratio:15.00) C. To understand concepts relating to information technology and systems, and be able to put them in use.(ratio:30.00) D. To acquire communication and coordination skills required for the information services. (ratio:20.00) E. To acquire management skills required by different types of libraries and information organizations.(ratio:10.00) F. To acquire professional skills to manage electronic documents and archives.(ratio:10.00) G. To acquire integration ability of library services and traditional publishing.(ratio:5.00) H. To acquire integration ability of library services and digital publishing.(ratio:5.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:25.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:10.00) 5. Independent thinking. (ratio:20.00) 6. A cheerful attitude and healthy lifestyle. (ratio:5.00)			

7. A spirit of teamwork and dedication. (ratio:10.00)

8. A sense of aesthetic appreciation. (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	ABCDEFGH	126	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), classroom activity

2	CDEFGH	345	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online), Report(including oral and written)
3	ACDEFGH	1234578	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written), Activity Participation
4	ABCDF	1235	Lecture, Discussion	Study Assignments, Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	115/02/23 ~ 115/03/01	Intorduction	
2	115/03/02 ~ 115/03/08	Introduction to Big data	
3	115/03/09 ~ 115/03/15	Data and Exploration	
4	115/03/16 ~ 115/03/22	statistic and big data 1	(Online Asynchronous Instruction)
5	115/03/23 ~ 115/03/29	statistic and big data 2	(Online Asynchronous Instruction)
6	115/03/30 ~ 115/04/05	Teaching administration observation period (No class)	
7	115/04/06 ~ 115/04/12	Introduction to Weka and Classification Analysis 1	
8	115/04/13 ~ 115/04/19	Classification Analysis	
9	115/04/20 ~ 115/04/26	Personal report	
10	115/04/27 ~ 115/05/03	Cluster Analysis 1	
11	115/05/04 ~ 115/05/10	Cluster Analysis 2	
12	115/05/11 ~ 115/05/17	Time serial Analysis	(Online Asynchronous Instruction)
13	115/05/18 ~ 115/05/24	open databases and big data analysis	(Online Asynchronous Instruction)
14	115/05/25 ~ 115/05/31	Final group report 1	
15	115/06/01 ~ 115/06/07	Final group report 2	
16	115/06/08 ~ 115/06/14	Final group report 3	

17	115/06/15 ~ 115/06/21	Final Week of Diverse Assessments/Flexible Teaching Week for Teachers	
18	115/06/22 ~ 115/06/28	Flexible Teaching Week for Teachers	Be sure to confirm your grades for the entire semester
Key capabilities	Information Technology Problem solving		
Interdisciplinary			
Distinctive teaching			
Course Content	Logical Thinking		
Requirement	<p>1. Be sure to attend your first class. If you have any questions, please ask the question and discuss it with the teacher in the first class.</p> <p>2. If you do not attend the first class, please do not select this class.</p> <p>3. This is a bilingual course. The teaching method is Keywords are only taught in English. However, the entire lecture, including practical explanations and software, is only in Chinese. If you cannot accept it, please do not choose this course.</p> <p>4. The second class is classroom activities (data analysis and implementation), accounting for 30% of the entire semester, and must be completed even if you ask for leave (if you have any questions, you can discuss with the teacher)</p> <p>5. There will be no midterm or final exams, and the assessment method will be in the form of individual and group reports.</p>		
Textbooks and Teaching Materials	Self-made teaching materials: Handouts Using teaching materials from other writers: Handouts, Videos		
References			
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : % ◆ Midterm Exam : 30.0 % ◆ Final Exam : 30.0 % ◆ Other <classroom activity> : 30.0 %		

Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at https://web2.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php.</p> <p>※"Adhere to the concept of intellectual property rights" and "Do not illegally photocopy, download, or distribute." Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>
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