

Tamkang University Academic Year 112, 2nd Semester Course Syllabus

Course Title	DATA MINING	Instructor	LIAO SHU-HSIEN
Course Class	TLGBM1A MASTER'S PROGRAM IN BUSINESS AND MANAGEMENT, DEPARTMENT OF MANAGEMENT SCIENCES (ENGLISH-TAUGHT PROGRAM), 1A	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Selective ◆ One Semester
Relevance to SDGs	SDG1 No poverty SDG8 Decent work and economic growth SDG9 Industry, Innovation, and Infrastructure		
Departmental Aim of Education			
I. Develop a business and management perspective for students. II. Train the professionals in the integrated fields of business and management. III. Cultivate the talents with both theory and practices in business and management.			
Subject Departmental core competences			
A. Provide the basic knowledge of both theory and practices.(ratio:25.00) B. Enhance the practical training for the current trends.(ratio:25.00) C. Cultivate the ethics in business and management.(ratio:25.00) D. Obtain the ability of analyzing industrial and business problems.(ratio:25.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:10.00) 5. Independent thinking. (ratio:10.00) 6. A cheerful attitude and healthy lifestyle. (ratio:10.00) 7. A spirit of teamwork and dedication. (ratio:10.00) 8. A sense of aesthetic appreciation. (ratio:10.00)			

Course Introduction	Data mining is not only an approach but also a methodology to investigate databases as the problem domain of the big data. Thus, this course aims at several issues, including data and database, database model, big data, data mining functions, data mining approaches and the design of business intelligence architecture. In these regards, this course provides students with a horizon to big data analysis technology.
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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 learn how to see and report, organize data and database. Student learns how to implement data mining approaches on the database. Student learns the concept of business intelligence	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCD	12345678	Lecture, Discussion	Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	113/02/19 ~ 113/02/25	Course introduction and evaluation	
2	113/02/26 ~ 113/03/03	National holiday	Day off
3	113/03/04 ~ 113/03/10	Basic concept of business intelligence	
4	113/03/11 ~ 113/03/17	Relational database development – ER model	

5	113/03/18 ~ 113/03/24	Relational database development – enhanced ER model	
6	113/03/25 ~ 113/03/31	Relational database development – Logical ER model	
7	113/04/01 ~ 113/04/07	Administrative use day	Day off
8	113/04/08 ~ 113/04/14	Data Warehousing	
9	113/04/15 ~ 113/04/21	Midterm Exam Week	Report writing
10	113/04/22 ~ 113/04/28	Introduction on data mining	
11	113/04/29 ~ 113/05/05	Data mining approaches	
12	113/05/06 ~ 113/05/12	Report presentation – session 1	
13	113/05/13 ~ 113/05/19	Report presentation – session 2	
14	113/05/20 ~ 113/05/26	Report presentation – session 3	
15	113/05/27 ~ 113/06/02	Report presentation – session 4	
16	113/06/03 ~ 113/06/09	Report presentation – session 5	
17	113/06/10 ~ 113/06/16	Final Exam Week	
18	113/06/17 ~ 113/06/23	Open discussion for data mining	
Key capabilities	self-directed learning Information Technology Problem solving		
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)		
Distinctive teaching	Special/Problem-Based(PBL) Courses		
Course Content	Logical Thinking Sustainability issue		
Requirement	1. Attendance 2. Presentation skill and content 3. Final report		

Textbooks and Teaching Materials	Using teaching materials from other writers:Textbooks Name of teaching materials: Mark Hall; Ian Witten; and Eibe Frank; Data Mining: Practical Machine Learning Tools and Textbook(s) Techniques, third edition, (2013). Morgan Kaufmann Publishers (ISBN: 978-0-12-374856-0).
References	
Grading Policy	◆ Attendance : 30.0 % ◆ Mark of Usual : 10.0 % ◆ Midterm Exam : 20.0 % ◆ Final Exam : % ◆ Other 〈Final presentation〉 : 40.0 %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.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 . ※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.