Tamkang University Academic Year 110, 2nd Semester Course Syllabus

Course Title	DATA MINING	Instructor	CHEN, DUEN-KAI
Course Class	TEIDB4P DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 4P	Details	◆ Blended Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	SDG4 Quality education		

Departmental Aim of Education

Ⅰ. Comprehend professional knowledge.

Ⅱ. Acquire mastery of Practical Skills.

Ⅲ. Establish creative achievement.

Subject Departmental core competences

E. Professional skills for information technology (IT) industry.(ratio:100.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:100.00)

Course Introduction	Data mining is the automated extraction of patterns representing knowledge implicitly stored in massive data repositories. This course explores the concepts and techniques of Data Mining.

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 learn the concepts and techniques of data mining, and should be able to perform basic data analysis.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	E	2	Lecture, Discussion, Practicum, Experience	Study Assignments, Discussion(including classroom and online), Practicum, Report(including oral and written), Activity Participation

Course Schedule

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

Week	Date	Course Contents	Note
1	111/02/21 ~ 111/02/25	Course Overview and Introduction	
2	111/02/28 ~ 111/03/04	Review of Database system and DBMS	
3	111/03/07 ~ 111/03/11	Introduction to Data Mining	
4	111/03/14 ~ 111/03/18	Introduction to Data Mining	Online Asynchronous Instruction
5	111/03/21 ~ 111/03/25	Data Preprocessing	
6	111/03/28 ~ 111/04/01	Data Preprocessing	Online Asynchronous Instruction
7	111/04/04 ~ 111/04/08	Example application and case study	
8	111/04/11 ~ 111/04/15	Example application and case study	
9	111/04/18 ~ 111/04/22	Data Mining Software	

10	111/04/25~ 111/04/29	Midterm Exam Week	
11	111/05/02~ 111/05/06	Mining Frequent Patterns, Associations, and Correlations	
12	111/05/09~ 111/05/13	Mining Frequent Patterns, Associations, and Correlations	Online Asynchronous Instruction
13	111/05/16~ 111/05/20	Classification and Prediction	Online Asynchronous Instruction
14	111/05/23~ 111/05/27	Classification and Prediction	
15	111/05/30~ 111/06/03	Graduate Exam Week	
16	111/06/06~ 111/06/10	---	
17	111/06/13~ 111/06/17	---	
18	111/06/20~ 111/06/24	---	

Requirement	
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	Jiawei Han, Micheline Kamber,Jian Pei, Data Mining – Concepts and Techniques, 3rd edition, Morgan Kaufmann Pulishers
References	Kelleher, J. D., Mac Namee, B., & D'arcy, A. (2020). Fundamentals of machine learning for predictive data analytics: algorithms, worked examples, and case studies. MIT press.
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： % ◆ Mark of Usual：40.0 % ◆ Midterm Exam： 15.0 % ◆ Final Exam： 5.0 % ◆ Other〈Course project〉：40.0 %

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.**