Tamkang University Academic Year 112, 1st Semester Course Syllabus

Course Title	ARTIFICIAL INTELLIGENCE	Instructor	TSENG, TZU-LAN
Course Class	TLGBM1A MASTER'S PROGRAM IN BUSINESS AND MANAGEMENT, DEPARTMENT OF MANAGEMENT SCIENCES (ENGLISH-TAUGHT PROGRAM), 1A	Details	◆ Blended Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	SDG4 Quality education		

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:30.00)

B. Enhance the practical training for the current trends.(ratio:30.00)

C. Cultivate the ethics in business and management.(ratio:15.00)

D. Obtain the ability of analyzing industrial and business problems.(ratio:25.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:25.00)

2. Information literacy. (ratio:25.00)

3. A vision for the future. (ratio:15.00)

4. Moral integrity. (ratio:5.00)

5. Independent thinking. (ratio:15.00)

6. A cheerful attitude and healthy lifestyle. (ratio:5.00)

7. A spirit of teamwork and dedication. (ratio:5.00)

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	This course is a design thinking and problem-oriented application of artificial intelligence technology. Students will learn valuable application topics found in life and confirm their value through classroom discussion and sharing. This class will teach students the concepts of artificial intelligence technology, such as data mining and natural language processing, and their industrial practical applications. It will also analyze the latest issues and future trends of popular technologies such as natural language processing, image recognition, machine learning, and deep learning.

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	Help students understand the artificial intelligence concept and industrial practical application.	Cognitive
2	Proposing and/or conducing independent artificial intelligence research.	Cognitive
3	Help students understand the artificial intelligence practical application of a management issue.	Psychomotor

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	C	4	Lecture, Discussion	Study Assignments, Discussion(including classroom and online), Activity Participation
2	A	6	Lecture, Discussion, Report	Study Assignments, Discussion(including classroom and online), Report(including oral and written)

3	BD	123578	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	112/09/11 ~ 112/09/17	Introduction of Artificial Intelligence (AI) and Course Announcements	This schedule will be rearranged if need be.
2	112/09/18 ~ 112/09/24	AI Concept and its Applications	The contents of this course will be adjusted if need be.
3	112/09/25 ~ 112/10/01	Data Mining: Preprocess and Article Discussion	
4	112/10/02 ~ 112/10/08	Data Mining: Classification and Article Discussion	
5	112/10/09 ~ 112/10/15	Data Mining: Clustering and Article Discussion	
6	112/10/16 ~ 112/10/22	Generative AI	Online Asynchronous Instruction
7	112/10/23 ~ 112/10/29	Data Mining: Association Rules and Article Discussion	Online Asynchronous Instruction
8	112/10/30 ~ 112/11/05	Invite industry experts to give lectures and seminars	
9	112/11/06 ~ 112/11/12	Data Mining: Visualization and Article Discussion	
10	112/11/13 ~ 112/11/19	Midterm Exam Week (Individual Report)	
11	112/11/20 ~ 112/11/26	Bayes Net and Article Discussion	
12	112/11/27 ~ 112/12/03	Neural Network and Article Discussion	Online Asynchronous Instruction
13	112/12/04 ~ 112/12/10	Text classification and Article Discussion	Online Asynchronous Instruction
14	112/12/11 ~ 112/12/17	Time Series and Article Discussion	
15	112/12/18 ~ 112/12/24	Knowledge Flow	
16	112/12/25 ~ 112/12/31	Final Projects Report	
17	113/01/01 ~ 113/01/07	Midterm Exam Week	
18	113/01/08 ~ 113/01/14	Final Exam Week (Future AI Innovation)	

Key capabilities	self-directed learning Information Technology
Interdisciplinary	
Distinctive teaching	
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) Logical Thinking AI application
Requirement	Including but not limited to research papers and academic journals.
Textbooks and Teaching Materials	Self-made teaching materials:Presentations
References	S. Russell and P. Norvig. (2021). Artificial Intelligence: A Modern Approach (The forth edition), Prentice Hall. G. Luger. (2015). Artificial Intelligence: Structures and Strategies for Complex Problem Solving, Addison-Wesley.
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：30.0 % ◆ Midterm Exam： % ◆ Final Exam： % ◆ Other〈Midterm/Final Report〉：60.0 %
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.**