Tamkang University Academic Year 113, 2nd Semester Course Syllabus

Course Title	EMERGING TECHNOLOGIES AND HUMAN-COMPUTER INTERACTION	Instructor	PEI-YU CHENG
Course Class	TLMXM1A MASTER'S PROGRAM, DEPARTMENT OF INFORMATION MANAGEMENT, 1A	Details	◆ General Course ◆ Selective ◆ One Semester ◆ 2 Credits
Relevance to SDGs	SDG4 Quality education		

Departmental Aim of Education

Devoting to the integration and research of information technology and business management knowledge, and cultivating, for the society, middle and higher level managers with both information capabilities and modern management skills.

Subject Departmental core competences

A. Use of modern management knowledge.(ratio:15.00)

B. Logical thinking.(ratio:10.00)

C. Critical analysis.(ratio:10.00)

D. Integration of information technology and business management.(ratio:10.00)

E. Research and innovation.(ratio:30.00)

F. Theory and applications of data analysis.(ratio:10.00)

G. Information and communication security management.(ratio:5.00)

H. Verbal and Writing Communication skills.(ratio:10.00)

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:5.00)

5. Independent thinking. (ratio:20.00)

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

7. A spirit of teamwork and dedication. (ratio:15.00)

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

Course Introduction	This course aims to delve deeply into the exploration of current and future emerging technologies, analyzing how these technologies integrate with human-computer interaction, thereby impacting our ways of living, working, and socializing. Students will learn about the latest trends in technology, including artificial intelligence, virtual reality, augmented reality, machine learning, the Internet of Things, etc., and will explore the application of these technologies in various fields.

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	Emerging technologies	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEFGH	12345678	Lecture, Discussion, Publication, Experience	Study Assignments, Discussion(including classroom and online), Report(including oral and written), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	114/02/17 ~ 114/02/23	Course Introduction and Overview	
2	114/02/24 ~ 114/03/02	Human-Computer Interaction	
3	114/03/03 ~ 114/03/09	Fundamentals of Artificial Intelligence	
4	114/03/10 ~ 114/03/16	Machine Learning and Data Analysis	

5	114/03/17 ~ 114/03/23	Virtual and Augmented Reality	
6	114/03/24 ~ 114/03/30	Principles of Human-Computer Interaction Design	
7	114/03/31 ~ 114/04/06	Internet of Things (IoT) Technologies	
8	114/04/07 ~ 114/04/13	Sustainable Development Goals	
9	114/04/14 ~ 114/04/20	Biocomputing and Wearable Technologies	
10	114/04/21 ~ 114/04/27	Mid-Term Review and Group Discussion	
11	114/04/28 ~ 114/05/04	Voice and Natural Language Processing	
12	114/05/05 ~ 114/05/11	Interactive Art and Creative Expression	
13	114/05/12 ~ 114/05/18	Robotics and Automation	
14	114/05/19 ~ 114/05/25	Generative Artificial Intelligence	
15	114/05/26 ~ 114/06/01	Future Technology Trends and Ethical Considerations	
16	114/06/02 ~ 114/06/08	Student Project Presentation	
17	114/06/09 ~ 114/06/15	Student Project Presentation	
18	114/06/16 ~ 114/06/22	Student Project Presentation and Course Conclusion	

Key capabilities	
Interdisciplinary	
Distinctive teaching	
Course Content	Computer programming or Computer language (students have hands-on experience in related projects) AI application
Requirement	

Textbooks and Teaching Materials	Self-made teaching materials:Presentations
References	
Grading Policy	◆ Attendance： 20.0 % ◆ Mark of Usual：30.0 % ◆ Midterm Exam： % ◆ Final Exam： % ◆ Other〈Presentation〉：50.0 %
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.**