

Tamkang University Academic Year 113, 1st Semester Course Syllabus

Course Title		Instructor	CHII-JEN CHEN
Course Class	TEIEM1A MASTER'S PROGRAM IN INTELLIGENT COMPUTING AND APPLICATION, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	ENGINEERING, 1A SDG4 Quality education		
Departmental Aim of Education			
<ul style="list-style-type: none"> I. Cultivate the ability to conduct independent research and problem solving. II. Strengthen creativity and research capacity. III. Build profound professional knowledge in networking and communication. IV. Engage in self-directed lifelong learning. 			
Subject Departmental core competences			
<ul style="list-style-type: none"> A. Independent problem solving ability.(ratio:20.00) B. Independent innovative thinking ability.(ratio:20.00) C. Research paper writing and presentation ability.(ratio:10.00) D. Research &development (R&D) ability in networking and communication.(ratio:20.00) E. Project execution and control ability.(ratio:10.00) F. Lifelong self-directed learning ability.(ratio:20.00) 			
Subject Schoolwide essential virtues			
<ul style="list-style-type: none"> 1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:20.00) 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:10.00) 7. A spirit of teamwork and dedication. (ratio:10.00) 8. A sense of aesthetic appreciation. (ratio:10.00) 			

Course Introduction	<ol style="list-style-type: none"> 1. Explore the basic concepts and analysis techniques of multimedia data. 2. Introduce fundamental methods and applications of multimedia information retrieval. 3. Learn about the latest technologies and trends in multimedia processing.
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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	The ability to know the techniques of multimedia data.	Cognitive
2	The ability to know how to implement the multimedia.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDEF	12345678	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online), Practicum, Report(including oral and written)
2	ABCDEF	12345678	Lecture, Discussion, Practicum	Study Assignments, Discussion(including classroom and online), Practicum, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	113/09/09 ~ 113/09/15	Introduction to Multimedia Information	

2	113/09/16 ~ 113/09/22	Basics of Image Processing	
3	113/09/23 ~ 113/09/29	Audio Processing Techniques	
4	113/09/30 ~ 113/10/06	Video Processing Methods	
5	113/10/07 ~ 113/10/13	Feature Extraction of Multimedia Data	
6	113/10/14 ~ 113/10/20	Application of Machine Learning in Multimedia Analysis	
7	113/10/21 ~ 113/10/27	Multimedia Information Retrieval Techniques	
8	113/10/28 ~ 113/11/03	Multimedia Database Systems	
9	113/11/04 ~ 113/11/10	Midterm reports	
10	113/11/11 ~ 113/11/17	Multimedia Data Compression Techniques	
11	113/11/18 ~ 113/11/24	Multimedia Content Identification and Annotation	
12	113/11/25 ~ 113/12/01	Design of Multimedia Content Retrieval Systems	
13	113/12/02 ~ 113/12/08	Application of Deep Learning in Multimedia Analysis	
14	113/12/09 ~ 113/12/15	Multimedia Recommendation Systems	
15	113/12/16 ~ 113/12/22	Case Studies of Multimedia Applications	
16	113/12/23 ~ 113/12/29	Final oral presentation	
17	113/12/30 ~ 114/01/05	Final oral presentation	
18	114/01/06 ~ 114/01/12	Final oral presentation	
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, Handouts
References	
Grading Policy	<p>◆ Attendance : % ◆ Mark of Usual : 40.0 % ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : 30.0 %</p> <p>◆ Other () : %</p>
Note	<p>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 .</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>