

Tamkang University Academic Year 114, 1st Semester Course Syllabus

Course Title	DIGITAL TECHNOLOGY AND AI APPLICATION	Instructor	YING-HUA CHANG
Course Class	TLMXB1C DEPARTMENT OF INFORMATION MANAGEMENT, 1C	Details	◆ General Course ◆ Required ◆ 1st Semester ◆ 2 Credits
Relevance to SDGs	SDG4 Quality education		
D e p a r t m e n t a l A i m o f E d u c a t i o n			
I . Acquisition of professional knowledge. II . Learning effective self-planning. III . Theoretical application of practical matters. IV . Interpersonal communication and teamwork. V . Analysis of problems and recommendations. VI . Awareness of Ethics as a global citizen.			
Subject Departmental core competences			
A. Students can demonstrate that they have program basic knowledge of business and management.(ratio:10.00) B. Students can demonstrate that they have capability in professional knowledge expression. (ratio:10.00) C. Students can demonstrate that they have capability in using information technology. (ratio:70.00) D. Students can demonstrate that they are critical thinkers.(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:5.00) 4. Moral integrity. (ratio:15.00) 5. Independent thinking. (ratio:25.00) 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 aims to develop students' understanding of computer hardware, software, and networks while also covering data analysis, databases, multimedia applications, and system analysis and design and programming languages. It introduces artificial intelligence and its applications, e-commerce, cloud services, information security, and information ethics and law. The goal is to provide students with the skills needed to explore advanced techniques and apply their knowledge practically in daily life.			
<p>The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.</p> <p>Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.</p> <p>I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.</p> <p>II.Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.</p> <p>III.Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.</p>				
No.	Teaching Objectives			objective methods
1	This course aims to cultivate students' foundational knowledge in information technology and artificial intelligence, enhance their IT application skills, and establish a strong sense of information ethics.			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, Practicum	Testing, Study Assignments, Discussion(including classroom and online)
Course Schedule				
Week	Date	Course Contents		Note
1	114/09/15 ~ 114/09/21	Course Introduction and Final Learning Assessment Methods Description		
2	114/09/22 ~ 114/09/28	Basic Computer Hardware Architecture(1)		

3	114/09/29 ~ 114/10/05	Basic Computer Hardware Architecture(2)	
4	114/10/06 ~ 114/10/12	Digital Number Systems and Data Representation(1)	
5	114/10/13 ~ 114/10/19	Digital Number Systems and Data Representation(2)	
6	114/10/20 ~ 114/10/26	Digital Number Systems and Data Representation(3)	
7	114/10/27 ~ 114/11/02	Introduction to Operating Systems	
8	114/11/03 ~ 114/11/09	Fundamentals of the Internet	
9	114/11/10 ~ 114/11/16	Midterm Examination	
10	114/11/17 ~ 114/11/23	Business Applications of the Internet	
11	114/11/24 ~ 114/11/30	Database Management	
12	114/12/01 ~ 114/12/07	Introduction to Artificial Intelligence	
13	114/12/08 ~ 114/12/14	Applications of Artificial Intelligence	
14	114/12/15 ~ 114/12/21	Systems Analysis and Design	
15	114/12/22 ~ 114/12/28	Management Information Systems	
16	114/12/29 ~ 115/01/04	Final Examination	
17	115/01/05 ~ 115/01/11	Final Examination/Flexible Teaching Week	
18	115/01/12 ~ 115/01/18	Online Final Review	
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		Learning technologies (such as AR/VR,etc.) incorporated to physical courses	
Course Content		Logical Thinking	

Requirement	
Textbooks and Teaching Materials	Using teaching materials from other writers:Textbooks
References	計算機概論 - 一手掌握科技新知 · 全華研究室, 王麗琴, 郭欣怡 著 · 全華圖書股份有限公司 · 2023
Grading Policy	<p>◆ Attendance : % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : 30.0 %</p> <p>◆ Other 〈 Internship Grade 〉 : 20.0 %</p>
Note	<p>This syllabus may be uploaded at the website of Course Syllabus Management System at https://web2.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>※"Adhere to the concept of intellectual property rights" and "Do not illegally photocopy, download, or distribute." Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>