

Tamkang University Academic Year 113, 1st Semester Course Syllabus

Course Title	ARTIFICIAL INTELLIGENCE	Instructor	TRAN, HUU KHOA
Course Class	TLMXB4P DEPARTMENT OF INFORMATION MANAGEMENT, 4P	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	<p>SDG3 Good health and well-being for people</p> <p>SDG8 Decent work and economic growth</p> <p>SDG9 Industry, Innovation, and Infrastructure</p>		
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			
<p>I . Refining information management skills.</p> <p>II. Enhancing information technology capabilities.</p> <p>III. Thinking independently with logic analysis.</p> <p>IV. Reinforcing team-working spirit.</p> <p>V . Valuing business and information ethics.</p> <p>VI. Cultivating global view.</p>			
Subject Departmental core competences			
<p>A. Problem analysis and critical thinking.(ratio:5.00)</p> <p>B. Functional business Areas and business practices.(ratio:5.00)</p> <p>C. Applications of information systems.(ratio:50.00)</p> <p>D. Computer programming.(ratio:20.00)</p> <p>E. Network system planning.(ratio:5.00)</p> <p>F. Database design and management.(ratio:5.00)</p> <p>G. Analysis, design and integration of information system.(ratio:5.00)</p> <p>H. Project management.(ratio:5.00)</p>			
Subject Schoolwide essential virtues			
<p>1. A global perspective. (ratio:15.00)</p> <p>2. Information literacy. (ratio:30.00)</p> <p>3. A vision for the future. (ratio:30.00)</p> <p>4. Moral integrity. (ratio:5.00)</p>			

- 5. Independent thinking. (ratio:5.00)
- 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 class aims to provide an introduction to efforts from a wide range of artificial intelligence researches, including Machine Learning, artificial neural networks and Computer Vision. This course will also touch the social impact of AI.

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	Introduce a wide range of artificial intelligence researches to students	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	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 AI	

2	113/09/16 ~ 113/09/22	History of AI	
3	113/09/23 ~ 113/09/29	AI Games	
4	113/09/30 ~ 113/10/06	Unsupervised Learning	
5	113/10/07 ~ 113/10/13	Supervised Learning I	
6	113/10/14 ~ 113/10/20	Supervised Learning II	
7	113/10/21 ~ 113/10/27	Supervised Learning III	
8	113/10/28 ~ 113/11/03	Artificial Neuron Networks	
9	113/11/04 ~ 113/11/10	Midterm Exam Week	
10	113/11/11 ~ 113/11/17	Computer Vision I	
11	113/11/18 ~ 113/11/24	Computer Vision II	
12	113/11/25 ~ 113/12/01	Computer Vision III	
13	113/12/02 ~ 113/12/08	Hot topics I	
14	113/12/09 ~ 113/12/15	Hot topics II	
15	113/12/16 ~ 113/12/22	Project presentation	
16	113/12/23 ~ 113/12/29	Project presentation	
17	113/12/30 ~ 114/01/05	Final Exam Week	
18	114/01/06 ~ 114/01/12	Flex week, learning activities should be arranged.	
Key capabilities	self-directed learning Information Technology Problem solving Interdisciplinary		
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)		
Distinctive teaching	Industry-university collaboration courses Project implementation course		

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:Handouts Using teaching materials from other writers:Handouts
References	
Grading Policy	<ul style="list-style-type: none"> ◆ Attendance : 10.0 % ◆ Mark of Usual : % ◆ Midterm Exam : 5.0 % ◆ Final Exam : 5.0 % ◆ Other 〈Final Presentation〉 : 80.0 %
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>