

Tamkang University Academic Year 106, 1st Semester Course Syllabus

Course Title	GLOBAL ROBOT INDUSTRY TREND ANALYSIS AND PRACTICUM	Instructor	FU-YUEN HSIAO
Course Class	TNUZB0A GLOBAL TECHNOLOGY REVOLUTION, 0A	Details	◆ Required ◆ One Semester ◆ 2 Credits
Academic Aim of Education			
Students will understand recent development of modern science and technology and its impact on human society and global environment. Through the design of course students will also be familiar with broadly-based fundamental technical knowledge and improve.			
Schoolwide essential virtues			
A. A global perspective. B. Information literacy. C. A vision for the future. D. Moral integrity. E. Independent thinking. F. A cheerful attitude and healthy lifestyle. G. A spirit of teamwork and dedication. H. A sense of aesthetic appreciation.			
Course Introduction	To roughly understand the development of robots and robotic industries. Hopefully students will combine their specialty and knowledge from this course for further applications.		

The Relevance among Teaching Objectives, Objective Levels and Schoolwide essential virtues

I.Objective Levels (select applicable ones) :

- (i) Cognitive Domain : C1-Remembering, C2-Understanding, C3-Applying,
C4-Analyzing, C5-Evaluating, C6-Creating
- (ii) Psychomotor Domain : P1-Imitation, P2-Mechanism, P3-Independent Operation,
P4-Linked Operation, P5-Automation, P6-Origination
- (iii) Affective Domain : A1-Receiving, A2-Responding, A3-Valuing,
A4-Organizing, A5-Characterizing, A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Schoolwide essential virtues :

- (i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.
- (ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3,C5,and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)
- (iii) Determine the Schoolwide essential virtues that correspond to each teaching objective. Each objective may correspond to one or more Schoolwide essential virtues at a time. (For example, if one objective corresponds to three Schoolwide essential virtues: A,AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Schoolwide essential virtues
1	To roughly understand the development of robots and robotic industries. Hopefully students will combine their specialty and knowledge from this course for further applications.	C3	ABC

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	To roughly understand the development of robots and robotic industries. Hopefully students will combine their specialty and knowledge from this course for further applications.	Lecture, Appreciation, Simulation, Visit	Written test, Participation

Course Schedule

Week	Date	Subject/Topics	Note
1	106/09/18 ~ 106/09/24	Syllabus	
2	106/09/25 ~ 106/10/01	History of Robot Development	
3	106/10/02 ~ 106/10/08	Introduction to Robots	
4	106/10/09 ~ 106/10/15	Introduction to Artificial Intelligence (AI)	
5	106/10/16 ~ 106/10/22	Introduction to Natural Language Processing (NLP)	

6	106/10/23 ~ 106/10/29	Introduction to Image Processing and Computer Vision	
7	106/10/30 ~ 106/11/05	Sensors and Actuators	
8	106/11/06 ~ 106/11/12	Domestic Robots	
9	106/11/13 ~ 106/11/19	Autonomous Car	
10	106/11/20 ~ 106/11/26	Midterm Exam Week	
11	106/11/27 ~ 106/12/03	Unmanned Aerial Vehicles (Drones)	
12	106/12/04 ~ 106/12/10	Visit of Robot and UAV Laboratories	
13	106/12/11 ~ 106/12/17	Robots and Culture Impact (I)	
14	106/12/18 ~ 106/12/24	Robots and Culture Impact (II)	
15	106/12/25 ~ 106/12/31	Should Machine Think?	
16	107/01/01 ~ 107/01/07	Current State of AI	
17	107/01/08 ~ 107/01/14	Future of the Robots	
18	107/01/15 ~ 107/01/21	Final Exam Week	
Requirement			
Teaching Facility		Computer, Projector	
Textbook(s)		In-class videos, handouts, and slides.	
Reference(s)			
Number of Assignment(s)		(Filled in by assignment instructor only)	
Grading Policy		◆ Attendance : 30.0 % ◆ Mark of Usual : % ◆ Midterm Exam : 35.0 % ◆ Final Exam : 35.0 % ◆ Other < > : %	
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.	