

Tamkang University Academic Year 111, 2nd Semester Course Syllabus

Course Title	INTRODUCTION TO MACHINE LEARNING	Instructor	TRAN, HUU KHOA
Course Class	TLMXB4P DEPARTMENT OF INFORMATION MANAGEMENT, 4P	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Selective ◆ One Semester
Relevance to SDGs	SDG4 Quality education		
Departmental Aim of Education			
<ul style="list-style-type: none"> I. Refining information management skills. II. Enhancing information technology capabilities. III. Thinking independently with logic analysis. IV. Reinforcing team-working spirit. V. Valuing business and information ethics. VI. Cultivating global view. 			
Subject Departmental core competences			
<ul style="list-style-type: none"> A. Problem analysis and critical thinking.(ratio:15.00) B. Functional business Areas and business practices.(ratio:5.00) C. Applications of information systems.(ratio:45.00) D. Computer programming.(ratio:15.00) E. Network system planning.(ratio:5.00) F. Database design and management.(ratio:5.00) G. Analysis, design and integration of information system.(ratio:5.00) H. Project management.(ratio:5.00) 			
Subject Schoolwide essential virtues			
<ul style="list-style-type: none"> 1. A global perspective. (ratio:5.00) 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:20.00)
- 8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction

This course introduce various learning algorithms which apply to different fields. Python programming is apply and evaluate these algorithms on real datasets.

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	Cognitive	Cognitive
2	Affective	Affective
3	Psychomotor	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	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)

2	ACDGH	1257	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)
3	CEFGH	12345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	112/02/13 ~ 112/02/19	Introduction to Machine Learning	
2	112/02/20 ~ 112/02/26	Getting started with WEKA	
3	112/02/27 ~ 112/03/05	Supervised Learning	
4	112/03/06 ~ 112/03/12	Regression I	
5	112/03/13 ~ 112/03/19	Regression II	
6	112/03/20 ~ 112/03/26	Regression III	
7	112/03/27 ~ 112/04/02	Classification I	
8	112/04/03 ~ 112/04/09	Classification II	
9	112/04/10 ~ 112/04/16	Classification III	
10	112/04/17 ~ 112/04/23	Midterm Exam Week	
11	112/04/24 ~ 112/04/30	Special Topics	
12	112/05/01 ~ 112/05/07	Special Topics	
13	112/05/08 ~ 112/05/14	Project presentation	
14	112/05/15 ~ 112/05/21	Project presentation	
15	112/05/22 ~ 112/05/28	Graduate Exam Week	
16	112/05/29 ~ 112/06/04	---	
17	112/06/05 ~ 112/06/11	---	
18	112/06/12 ~ 112/06/18	---	

Requirement	
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	-Handouts.
References	
Number of Assignment(s)	2 (Filled in by assignment instructor only)
Grading Policy	<p>◆ Attendance : 10.0 % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : %</p> <p>◆ Final Exam : %</p> <p>◆ Other (Project Presentation) : 70.0 %</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>