Tamkang University Academic Year 103, 1st Semester Course Syllabus

Course Title	STATISTICS	Instructor	LEI YING-HUI
Course Class	TQIAB2A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY, 2A	Details	◆ Selective ◆ One Semester ◆ 3 Credits

Departmental Aim of Education

Cultivate professional talents in developing and applying information system in various fields.

Departmental core competences

A. Capability of computer program coding, process planning, and problem solving

B. Capability of applying basic mathematics and information technology related mathematics

C. Capability of applying knowledge of internet structure and protocol in communication system

D. Capability of developing information system

E. Capability of integrating information system

Course Introduction	This course is aimed to teach fundamental theories of statistics and the application of them.

The Relevance among Teaching Objectives, Objective Levels and Departmental core competences

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-Charaterizing, A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Departmental core competences :

(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 Departmental core competences that correspond to each teaching objective. Each objective may correspond to one or more Departmental core competences at a time. (For example, if one objective corresponds to three Departmental core competences: A,AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Departmental core competences
1	1. To make students learn the fundamental theories in both statistics and probability, and to make them comprehend the interaction between both fields. 2. To make students motivated effectively by seeking statistics at work in real problems, cases and term projects.	C3	B
2	1. To make students learn the fundamental theories in both statistics and probability, and to make them comprehend the interaction between both fields. 2. To make students motivated effectively by seeking statistics at work in real problems, cases and term projects.	C3	B
3	1. To make students learn the fundamental theories in both statistics and probability, and to make them comprehend the interaction between both fields. 2. To make students motivated effectively by seeking statistics at work in real problems, cases and term projects.	C3	B

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment

1	1. To make students learn the fundamental theories in both statistics and probability, and to make them comprehend the interaction between both fields. 2. To make students motivated effectively by seeking statistics at work in real problems, cases and term projects.	Lecture	.....
2	1. To make students learn the fundamental theories in both statistics and probability, and to make them comprehend the interaction between both fields. 2. To make students motivated effectively by seeking statistics at work in real problems, cases and term projects.	Lecture, Discussion	....
3	1. To make students learn the fundamental theories in both statistics and probability, and to make them comprehend the interaction between both fields. 2. To make students motivated effectively by seeking statistics at work in real problems, cases and term projects.	Lecture, Discussion	.....

This course has been designed to cultivate the following essential qualities in TKU students

Essential Qualities of TKU Students	Description
◆ A global perspective	Helping students develop a broader perspective from which to understand international affairs and global development.
◆ Information literacy	Becoming adept at using information technology and learning the proper way to process information.
◆ A vision for the future	Understanding self-growth, social change, and technological development so as to gain the skills necessary to bring about one's future vision.
◆ Moral integrity	Learning how to interact with others, practicing empathy and caring for others, and constructing moral principles with which to solve ethical problems.
◆ Independent thinking	Encouraging students to keenly observe and seek out the source of their problems, and to think logically and critically.
◆ A cheerful attitude and healthy lifestyle	Raising an awareness of the fine balance between one's body and soul and the environment; helping students live a meaningful life.
◆ A spirit of teamwork and dedication	Improving one's ability to communicate and cooperate so as to integrate resources, collaborate with others, and solve problems.
◆ A sense of aesthetic appreciation	Equipping students with the ability to sense and appreciate aesthetic beauty, to express themselves clearly, and to enjoy the creative process.

Course Schedule

Week	Date	Subject/Topics	Note
1	103/09/15 ~ 103/09/21	Introduction/Probability	
2	103/09/22 ~ 103/09/28	Introduction/Probability	
3	103/09/29 ~ 103/10/05	Random variables and probability distribution	
4	103/10/06 ~ 103/10/12	Random variables and probability distribution	
5	103/10/13 ~ 103/10/19	Mathematical expectation	
6	103/10/20 ~ 103/10/26	Mathematical expectation	
7	103/10/27 ~ 103/11/02	Some discrete probability distributions	
8	103/11/03 ~ 103/11/09	Some discrete probability distributions	
9	103/11/10 ~ 103/11/16	Some discrete probability distributions	
10	103/11/17 ~ 103/11/23	Midterm Exam Week	
11	103/11/24 ~ 103/11/30	Fundamental sampling distributions and data	
12	103/12/01 ~ 103/12/07	Fundamental sampling distributions and data	

13	103/12/08～ 103/12/14	Fundamental sampling distributions and data	
14	103/12/15～ 103/12/21	Fundamental sampling distributions and data	
15	103/12/22～ 103/12/28	Sample test of hypotheses	
16	103/12/29～ 104/01/04	Sample test of hypotheses	
17	104/01/05～ 104/01/11	Sample test of hypotheses	
18	104/01/12～ 104/01/18	Final Exam Week	

Requirement	
Teaching Facility	(None)
Textbook(s)	
Reference(s)	
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： % ◆ Mark of Usual： % ◆ Midterm Exam： % ◆ Final Exam： % ◆ Other〈.....〉：100.0 %
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.**