Tamkang University Academic Year 112, 2nd Semester Course Syllabus

Course Title	STATISTICS (II)	Instructor	MATEUS LEE
Course Class	TRDXB2A DEPARTMENT OF DIPLOMACY AND INTERNATIONAL RELATIONS (ENGLISH-TAUGHT PROGRAM), 2A	Details	◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG3 Good health and well-being for people SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure		

Departmental Aim of Education

To provide students with an understanding of the major theories in diplomacy & international relations and to equip students with practical skills and help them become outstanding members of the diplomatic and international relations community.

Subject Departmental core competences

A. Every student will process essential understanding of theories of international relations. (ratio:5.00)

B. Every student will have primary perception of current international issues.(ratio:5.00)

C. Every student will become capable of Independent thinking and information processing to further improve international relations.(ratio:40.00)

D. Every student will process essential knowledge of participation in governmental & non-governmental affairs.(ratio:10.00)

E. Every student will display high-level competence in English.(ratio:40.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:5.00)
2. Information literacy. (ratio:30.00)
3. A vision for the future. (ratio:5.00)
4. Moral integrity. (ratio:10.00)
5. Independent thinking. (ratio:30.00)
6. A cheerful attitude and healthy lifestyle. (ratio:10.00)
7. A spirit of teamwork and dedication. (ratio:5.00)
8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	The course introduces the basic concepts of statistics with practical applications. Popular statistical software (for example, the EXCEL) is also introduced to help students understanding how to apply statistics with software in their daily life. The course aims to establish fundamental capabilities for students in organizing, analyzing and interpreting data. As inferential statistics deals with the connection between sample and population which is critical in social sciences, we are going to learn inferential statistics this semester in order to know how to apply in our daily life.

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	Understand the basic concepts of statistics, especially the inferential statistics.	Cognitive
2	Help the students to acknowledge how to apply statistics in their daily life.	Cognitive
3	Strengthen the students' capabilities of independent thinking, analyzing and solving problems.	Cognitive

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	CDE	1235678	Lecture, Discussion, Practicum	Testing, Study Assignments, Discussion(including classroom and online), Activity Participation
2	AB	12348	Lecture, Discussion, Practicum	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written), Activity Participation

3	CE	25	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	113/02/19 ~ 113/02/25	Course Introduction and Chapter 7. Continuous Probability Distributions (I): Normal Distribution	In-class exercise
2	113/02/26 ~ 113/03/03	Chapter 7. Continuous Probability Distributions (II): Standard Normal Distribution	In-class exercise
3	113/03/04 ~ 113/03/10	Chapter 8. Sampling Distribution of Sample Mean: Sampling methods, sampling error and sampling distribution of the Sample Mean	In-class exercise
4	113/03/11 ~ 113/03/17	Chapter 9. Estimation and Confidence Intervals (I): Confidence Intervals for a "Population Mean"	In-class exercise
5	113/03/18 ~ 113/03/24	Chapter 9. Estimation and Confidence Intervals (II): Confidence Intervals for a "Population Proportion"	In-class exercise
6	113/03/25 ~ 113/03/31	Chapter 9. Estimation and Confidence Intervals (III): Choosing an Appropriate Sample Size	In-class exercise
7	113/04/01 ~ 113/04/07	Holiday (Day off)	
8	113/04/08 ~ 113/04/14	Chapter 10. One-Sample Tests of Hypothesis (I): Six-Step Procedure for Testing a Hypothesis	Kahoot
9	113/04/15 ~ 113/04/21	【Midterm Exam Week】Midterm exam on 18 Apr 2024	Midterm exam
10	113/04/22 ~ 113/04/28	Review of Midterm exam	Correction exercise
11	113/04/29 ~ 113/05/05	Chapter 10. One-Sample Tests of Hypothesis (II): Hypothesis Testing for a Population Mean with Known and Unknown Population Standard Deviation	In-class exercise
12	113/05/06 ~ 113/05/12	Chapter 10. One-Sample Tests of Hypothesis (III): p-value in hypothesis testing and Type II error	In-class exercise
13	113/05/13 ~ 113/05/19	Chapter 11. Two-sample Tests of Hypothesis (I): Independent samples	In-class exercise
14	113/05/20 ~ 113/05/26	Chapter 11. Two-sample Tests of Hypothesis (II): Dependent samples	In-class exercise
15	113/05/27 ~ 113/06/02	Chapter 13. Correlation and Linear Regression (I): The Correlation Coefficient	Kahoot

16	113/06/03～113/06/09	Chapter 13. Correlation and Linear Regression (II): The Least Squares Principle in Regression Analysis	In-class exercise
17	113/06/10～113/06/16	【Final Exam Week】Final exam on 13 Jun 2024	Final exam
18	113/06/17～113/06/23	Review of Final exam	Correction exercise

Key capabilities	self-directed learning
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)
Distinctive teaching	
Course Content	Logical Thinking
Requirement	(1) There are in-school written exams on 18 Apr 2024 and 13 Jun 2024. (2) There is a class after final exam on 20 Jun 2024. (3) No eating and talking in the class. (4) Behave well and do not use any 3C devices in the class unless it is required by the class. (5) Being in class on Time. (6) Asking question is a credit. (7) Lesson preview and lesson review are strongly recommended.
Textbooks and Teaching Materials	Self-made teaching materials:Presentations Using teaching materials from other writers:Textbooks Name of teaching materials: 【Textbook】Lind, D.A., Marchal, W.G., and Wathen, S.A. (2024). Statistical Techniques in Business & Economics (19th edition). McGraw Hill.【ISBN: 978-1-266-28353-6】
References	(1) Weiss, Neil A. (2017). Introductory Statistics (10e). Pearson. (2) Moore D., McCabe G.P. and Craig B.A. (2017). Introduction to the Practice of Statistics (9e). Macmillan Learning. (3) Lind D.A., Marchal W.G. and Wathen S.A. (2022). Basic Statistics for Business & Economics (10th edition). McGraw Hill.【ISBN: 978-1-260-59757-8
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：20.0 % ◆ Midterm Exam： 20.0 % ◆ Final Exam： 30.0 % ◆ Other〈In-class exercises〉：20.0 %
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.**