

Tamkang University Academic Year 113, 2nd Semester Course Syllabus

Course Title	STATISTICS	Instructor	MATEUS LEE
Course Class	TRBXB1A DEPARTMENT OF INTERNATIONAL TOURISM MANAGEMENT (ENGLISH-TAUGHT PROGRAM), 1A	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester ◆ 3 Credits
Relevance to SDGs	SDG4 Quality education SDG17 Partnerships for the goals		
Departmental Aim of Education			
To develop talented managers with international competitive advantage in the tourism industry.			
Subject Departmental core competences			
A. Ability to analyze and solve problems.(ratio:30.00) B. Ability to communicate in English.(ratio:10.00) C. Proper service and work attitude.(ratio:10.00) D. Tourism management knowledge.(ratio:30.00) E. Tourism management skills.(ratio:20.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:10.00) 2. Information literacy. (ratio:20.00) 3. A vision for the future. (ratio:10.00) 4. Moral integrity. (ratio:10.00) 5. Independent thinking. (ratio:30.00) 6. A cheerful attitude and healthy lifestyle. (ratio:5.00) 7. A spirit of teamwork and dedication. (ratio:10.00) 8. A sense of aesthetic appreciation. (ratio:5.00)			

Course Introduction	<p>The course introduces the basic concepts of statistics with practical applications. Popular statistical software "Excel" is also introduced in helping students to know how to apply statistics by software. Our goal is to establish the students' fundamental capability in organizing, analyzing and interpreting data.</p> <p>In this class, we will use AI for learning.</p>
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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	Understanding the basic concepts of statistics.	Cognitive
2	With generative AI, helping the students to acknowledge how to apply statistics.	Cognitive
3	Strengthening 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	ABCDE	12345	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Activity Participation
2	ABCDE	12345678	Lecture, Discussion, AI Learning	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written), Activity Participation

3	ABCDE	5678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written), Activity Participation
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Course Schedule

Week	Date	Course Contents	Note
1	114/02/17 ~ 114/02/23	Course Introduction and Chapter 1. What is Statistics	Data Experiment and Discussion
2	114/02/24 ~ 114/03/02	Chapter 2. Describing Data (I): Frequencies and Graphic Presentation	In-class exercise
3	114/03/03 ~ 114/03/09	Chapter 3. Describing Data (II): Measures of Location and Variation	
4	114/03/10 ~ 114/03/16	Chapter 4. Describing Data (IV): Measures of Position, Skewness and the Relationship Between Two Variables	
5	114/03/17 ~ 114/03/23	Learn how to use generative AI for a questionnaire & statistical software for Statistics	Practice class in computer room
6	114/03/24 ~ 114/03/30	Chapter 7. Continuous Probability Distribution: Normal and Standard Normal Distribution	In-class exercise
7	114/03/31 ~ 114/04/06	Holiday (Day off)	
8	114/04/07 ~ 114/04/13	Chapter 8. Sampling Distribution of Sample Mean: Sampling methods, sampling error and sampling distribution of the "Sample Mean"	In-class exercise
9	114/04/14 ~ 114/04/20	Midterm Exam on 17 April 2025	Midterm exam
10	114/04/21 ~ 114/04/27	Discussion and Commentary of the questionnaire created by AI	
11	114/04/28 ~ 114/05/04	Chapter 9. Estimation and Confidence Intervals: Confidence Intervals for a "Population Mean", "Population Proportion" and Choosing an Appropriate Sample Size	In-class exercise
12	114/05/05 ~ 114/05/11	Chapter 10. One-Sample Tests of Hypothesis (I): Hypothesis Testing for a Population Mean with "Known" and "Unknown" Population Standard Deviation	In-class exercise
13	114/05/12 ~ 114/05/18	Chapter 10. One-Sample Tests of Hypothesis (II): p-value in Hypothesis Testing and Type II error	In-class exercise
14	114/05/19 ~ 114/05/25	Chapter 11. Two-Sample Tests of Hypothesis: Independent samples vs. Dependent samples	Experiment

15	114/05/26~ 114/06/01	Chapter 13. Correlation and Linear Regression (I): Correlation Coefficient and Least Squares Principles in Regression	Kahoot
16	114/06/02~ 114/06/08	Chapter 13. Correlation and Linear Regression (II): Least Squares Principles in Regression and Testing the Significance of the Regression	In-class exercise
17	114/06/09~ 114/06/15	Final Exam on 12 June 2025	Final exam
18	114/06/16~ 114/06/22	Review of Final : Correction exercise with bonus	
Key capabilities	self-directed learning Information Technology		
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 exams on 17 April 2025 and 12 June 2025. (2) There are classes after final exam on 18 June 2025 and 19 June 2025. (3) A group term report with AI is required. You are required to use generative AI for the term report and submit it on 18 June 2025.		
Textbooks and Teaching Materials	Self-made teaching materials:Presentations, Handouts, Worksheets Using teaching materials from other writers:Textbooks Name of teaching materials: 【Textbook】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】		
References	(1) Weiss, Neil A. (2017). Introductory Statistics (10e). Pearson. (2) Moore D., McCabe G.P. & Craig B.A. (2017). Introduction to the Practice of Statistics (9e). Macmillan Learning. (3) Lind D.A., Marchal W.G. and Wathen S.A. (2021). Statistical Techniques in Business & Economics (18th edition). McGraw Hill. 【ISBN: 978-1-260-57048-9】		
Grading Policy	◆ Attendance : 5.0 % ◆ Mark of Usual : 20.0 % ◆ Midterm Exam : 20.0 % ◆ Final Exam : 30.0 % ◆ Other (Term report using AI) : 25.0 %		

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>
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