



Course Syllabus (Academic Year 2023)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

1. **Course No. and Title** : KAID270 Introduction to Statistics
Credit (study hours) : 2(2-0-4)
2. **Program Name** : Bachelor of Science
3. **Course Module** : Major Required Courses
Pre/co-requisite : Non
4. **Class Semester** : 1st Semester 2nd Semester Academic Year 2023
5. **Class Schedule & Venue** : T 08:30 – 10:30 Room L316 Hybrid WebEx GoogleClassroom KAID270_66 and MUKA e-Learning.
6. **Class Coordinator** : Dr. Nuengruithai Tharawatcharasart
 Contact No. : Email : Nuengruithai.tha@mahidol.edu

7. Course Description

Introduction, basic data analysis, probability, random variables and probability distributions, population and sampling, estimation, hypothesis testing, Chi-square testing.

8. Course Objectives / Course Learning Outcomes (CLOs)

No.	Objectives / CLOs	Expected Skills / Knowledge			PLOs
		Specific	Generic	Knowledge	
8.1	To provide students with knowledge and understanding of basic skills of statistics				
8.2	To provide students with problem solving skills by an approach that describes statistics				
8.3	To provide students can apply the knowledge of statistics				

9. Class Instructor List

9.1 Name : Dr. Nuengruithai Tharawatcharasart (NT) Email Nuengruithai.tha@mahidol.edu

GoogleClassroom KAID270_66

10. Course Outline

Week	Date	Contents	CLOs	Teaching & Learning	Instructor's Names
1	8 Aug	Introduction	1	Lecture	NT
2	15 Aug	Basic data analysis	1	Lecture	NT
3	22 Aug	Basic data analysis (data visualizations)	1	Lecture	NT
4	29 Aug	Probability	1	Lecture	NT
5	5 Sep	Random variable and probability distribution	1	Lecture	NT
6	12 Sep	Random variable and probability distribution	1	Lecture	NT
7	19 Sep	Population and sampling	1	Lecture	NT
8	26 Sep	Application	2	Presentation	NT
9	2 – 6 Oct Mid-term Examination				
10	10 Oct	Estimation	1	Lecture	NT
11	17 Oct	Estimation	1	Lecture	NT
12	24 Oct	Hypothesis testing	1	Lecture	NT
13	31 Oct	Hypothesis testing	1	Lecture	NT
14	7 Nov	Chi-square testing	1	Lecture	NT
15	14 Nov	Application	3	Presentation	NT
16	21 Nov	Application	3	Presentation	NT
17	28 Nov	Quiz	2	Short answer	NT
18	4 – 15 Dec Final Examination				

11. Course Assessment

No.	Methods / Activities	Regulations	CLOs	Week	Weight Distribution (%)
11.1	Mid-term exam	Writing examination (Open book)	8.1, 8.2	8	30
11.2	Final exam	Writing examination (Open book)	8.1, 8.2	16	30
11.3	Quiz	Writing examination	8.2	17	10
11.4	Reports / Assignments	Complete and On time, Rubric Score	8.2, 8.3	2-16	20
11.5	Class participation	Complete and On time	8.2, 8.3	2-16	10
				Total	100

12. Grading System

Criterion-referenced evaluation

Grade	Score	Grade	Score	Grade	Score	Grade	Score
A	$\geq 80\%$	B	70 – 74.99%	C	60 – 64.99%	D	50 – 54.99%
B+	75 – 79.99%	C+	65 – 69.99%	D+	55 – 59.99%	F	< 50 %

Norm-referenced evaluation

*If use both criterion and norm-referenced evaluation, please tick two boxes.

13. References

13.1 กัลยา วานิชย์บัญชา. (2557). หลักสถิติ. (พิมพ์ครั้งที่ 14). กรุงเทพฯ: โรงพิมพ์สามลดา.

13.2 Weiss NA. (1995). Introductory statistics. 5th. Addison-Wesley.

13.3 Hogg RV. (1997). Probability and statistical inference. 5th. Prentice-Hall.

13.4 Dawn Griffiths. (2009). Head first statistics. O'Reilly Media.