Ministry of Higher Education and Scientific research



Department of Chemistry

College of Education

University of Salahaddin

Subject:Statistics

Course Book – (Year 2)(second Course)

Lecturer's name Ferman Ali Ahmed

Academic Year: 2022/2023

Course Book

1. Course name	Statistics					
2. Lecturer in charge	Ferman Ali Ahmed					
3. Department/ College	Mathematics / Education					
4. Contact	e-mail: ferman.ahmed@su.edu.krd					
	Tel: 07504753287					
5. Time (in hours) per week	Theory: 2 hours					
6. Office hours	Monday 10-12 am					
	Tuesday 10-12 am					
7. Course code						
8. Teacher's academic profile	2003-2007 BSc. of the mathematics					
	Department of Mathematics					
	College of Education					
	University of Salahaddin-Hawler					
	Erbil					
	Kurdistan Region					
	Iraq					
	2012-2013 MRes of the mathematics					
	Department of Mathematics					
	University of Leicester					
	UK					
9. Keywords	Statistics					

10. Course overview:

We will start with introducing the science of statistics and its methods, Then we will define essential terms and concepts in statistics like statistical population ,sample, data, datum. Next we will define basic sources of information and distinguish between various types of data. Then we will consider the most important measures for centrality (mean, median and mode) and spread (range, standard deviation, variance & coefficient of variation). These will be followed by tabulating raw data and representing them by appropriate graphs. Finally, we will learn how to summarize tabulated data .All the previous, make it possible to represent large amounts of data in a clear way, enabling the student to spot interesting patterns.

11. Course objective:

Statistics is the science of learning from data, and of measuring, controlling, and communicating uncertainty; and it thereby provides the navigation essential for controlling the course of scientific and societal advances

Statisticians apply statistical thinking and methods to a wide variety of scientific, social, and business endeavors in such areas as astronomy, biology, education, economics, engineering, genetics, marketing, medicine, psychology, public health, sports, among many.

Many economic, social, political, and military decisions cannot be made without statistical techniques, such as the design of experiments to gain federal approval of a newly manufactured drug.

12. Student's obligation

in this year we take some quiz ,the student must prepare report and take two assignments, determine the active students.

13. Forms of teaching

Different forms of teaching will be used to reach the objectives of the course: power point presentations for the head titles and definitions ,figure and summary of conclusions, classification of materials and any other illustrations.

14. Assessment scheme

30 %
10 %
60 %.

Total Marks

15. Student learning outcome:

• Understand what is statistics and be familiar of basic definition of statistics to learn how summarize and analysis the data

100%

- To Learn frequency what is frequency distribution
- Learn how to construct a frequency tables (line, pie and chart).
- Learn how to use grouped data and ungrouped data.
- Learn how to compute mean and median and mode..

16. Course Reading List and References:

- AGAG Bluman. "Frequency Distributions and Graphs"
- Graham Hole, COGS "Research Methods 1: Frequency Distributions:"

The course materials of the course consists of the above books, articles from internet, and lectures notes, make sure read all the materials and prepare will before going for the exams.

17. The Topics	Lecturer's name				
1	Statistics, general types of statistics, Descriptive statistics Examples, Inferential statistics Examples, branches of statistical inference some basic definition.	Ferman Ali			
2	Frequency Distribution, Examples. Type of frequency distribution	Ferman Ali			
3	Ungrouped frequency distribution Examples Grouped frequency distribution, examples	Ferman Ali			
4	some type of average athematic mean examples For grouped data	Ferman Ali			
5	Median, examples. For grouped data	Ferman Ali			
6	Mode, examples. For grouped data	Ferman Ali			
7	Median, examples, for ungrouped data.	Ferman Ali			
8	Mode, examples, for grouped data examples.	Ferman Ali			
9	Exam	Ferman Ali			
10	The Midrange, weighted mean,	Ferman Ali			
11	Measures of Variation, Range	Ferman Ali			
12	Population Variance and Standard Deviation Sample Variance and Standard Deviation	Ferman Ali			
13	Coefficient of Variation	Ferman Ali			
14	Measures of Position, Standard Scores, Percentiles, Quartiles and Deciles	Ferman Ali			
15	Exam				
18. Practical To					
In this section The he/she is going to description of the lecture	Lecturer's name ex: (3-4 hrs) ex: 1/11/2020				

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19. Examin	ations:								
Q1/A:-What	t is Statis	tics? Give	the defi	nition of th	e main	branche	s of sta	tistics?	
		· -				(10marl	ks)	
B: - Defines t	he follow	ring?							
1- Pop	ulation.	2- Sampi	e. 3-Fr	equency ai	stributi	on. 4-E	xciusivo (10ma	e metnoa arks)	
Q2/ Construct a group frequency from following data? (20marks)									
55	115	117	114	59	109	63	97	90	59
105	81	84	81	82	61	103	77	82	76
68	86	97	80	77	85	69	62	101	83
58	83	101	86	84	78	59	92	88	97
87	92	70	86	72					
 Find cumulative frequency and mid-point? Draw a bar, pie graph to represent the data? Q3/ The following table give the marks obtained by 89 students in statistics exam. 									
Estimate	the mear	n and med	lian.				(20	marks)	
marks 1	.0-14	15-19	20-24	25-29	30-3	34 35	-39	40-44	45-49
No. of students	1	6	10	16	21	18	•	9	5
20. Extra n	otes:								
پيداچوونەوەى ھاوەل 21. Peer review									
Hemin Assistar	A. Ahm nt Lectu	ad rer.							

بەر يو بەس ايەتى دانيايى جۆرى و متمانەبەخشىن Directorate of Quality Assurance and Accreditation