

Course Description Form

- 1. Course Name:
 - Statistical
- 2. Course Code:
 - **STAT109**
- 3. Semester / Year:

2023/2024 Second semester (Spring)

- 4. Description Preparation Date:
- 1/2/2024
- 5. Available Attendance Forms:
 - Attended
- 6. Number of Credit Hours (Total) / Number of Units (Total)
 - 75 hours including 2 Theoretical + 3 Practical / 3.5 Unit
- 7. Course administrator's name (mention all, if more than one name) Name: Dr. Zaid Mohammed Talal Alhabbar
 - Email: zaid.alhabbar@uomosul.edu.iq
- 8. Course Objectives

• Knows the science of statistics and its types, and also differentiates between descript statistics and inferential or inferential statistics

- Explains what descriptive variables are and recognizes the difference between a sample an population
- Organize and draw a frequency distribution table and identify its parts
- Organizes a table of relative frequency distribution and ascending and descending grouping
- He finds the arithmetic mean and learns about the properties of the arithmetic mean
- Works on how to find the range, mean deviation, variance, and standard deviation
- Distinguish the difference between permutations, combinations and a random experiment
- Expresses the components of discrete probability distributions
- Identify the statistical hypothesis, the null hypothesis, and the alternative hypothesi compare the types of error
- Learn about the T-test and the Z-test and the difference between them
- Learn how to perform the chi-square test steps
- Learn about correlation, regression, correlation coefficient, regression, and the properties each

9. Teaching and Learning Strategies

Theoretical:

Practical

 Interactive lecture Brainstorming Dialogue and discussion Assigning tasks and reporting The student is assigned to prepare reports based on his own diligence and prepared for discussion with the students 			 Assigning group work to reveal leadership skills Assigning tasks and a report for each lecture 			
10. C	ourse Struct	ure		1		
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method	
1	2 Theoretical + 3 Practical	A1: Knows the science of statistics and its types, and also distinguishes between descriptive statistics and inferential statistics A7: Differentiate between descriptive and inferential statistics, as the most important statisticians in the twentieth century remember	Theoretical: Statistics, its definition and types Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions	
2	2 Theoretical + 3 Practical	A2: Explains what descriptive variables are and recognizes the difference between a sample and population A8: Compares quantitative variables and descriptive variables It also distinguishes between the population and the sample, giving examples of each	Theoretical: The nature and types of statistical data Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions	
3	2 Theoretical + 3 Practical	C1: Organize and draw a frequency distribution table and identify its parts B2: Organizes a frequency distribution table and identifies its components. He also experiments with finding the ascending and descending group frequencies	Theoretical: tabular presentation and graphical representation Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions	

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4	2 Theoretical	C2: Organizes table the	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	relative frequency	Types of	auditory	assignment
		distribution and	frequency	methods	of duties,
		ascending and	distribution	Style of writing	discussions
		descending grouping	tables and how	on the	
		B3: Calculates the	to draw them	blackboard	
		arithmetic mean,		Direct dialogue	
		geometric mean, and		style	
		harmonic mean. It also	Practical: Solve	Practical:	
		determines the squared	mathematical	Assigning tasks	
		mean, median, and	exercises on the	and reporting	
		mode.	topic		
5	2 Theoretical	B1: Finds the arithmetic	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	mean - and learns about	Measures of	auditory	assignment
		the properties of the	concentration or	methods	of duties,
		arithmetic mean	mediation	Style of writing	discussions
				on the	
		C6: The range law, mean		blackboard	
		deviation, variance of the	Practical: Solve	Direct dialogue	
		mean deviation, and	mathematical	style	
		standard deviation are	exercises on the	Practical:	
		applied to the classified	topic	Assigning tasks	
		and unclassified data		and reporting	
6	2 Theoretical	C3: Works out how to	Theoretical:	Theoretical:	Short exams.
•	+ 3 Practical	find the range, mean	measures of	auditory	assignment
		deviation, variance, and	dispersion or	methods	of duties.
		standard deviation	difference	Style of writing	discussions
			unterentee	on the	
		C7: Explains probability	Practical: Solve	blackboard	
		theory for random	mathematical	Direct dialogue	
		experiment, sample	exercises on the	style	
		space, and mutually	tonic	Practical	
		exclusive events with	topic	Assigning tasks	
		solving examples		and reporting	
7	2 Theoretical	C4. Distinguish the	Theoretical	Theoretical	Short exams
,	+ 3 Practical	difference hetween	Principles of	auditory	assignment
		nermutations	nrohability	methods	of duties
		combinations and a	theory	Style of writing	discussions
		random experiment	theory	on the	013003310113
			Practical: Solve	blackboard	
		B4. Explains the variables	mathematical	Direct dialogue	
		of the hinomial	avarcises on the		
		distribution law	topic	Bractical	
				Accigning tooks	
				Assigning Lasks	
0	2 Theoretical	CE: Expresses the	Theoretical	Theoretical	Short average
ō		co: expresses the	Discourise	ineoretical:	short exams,
	+ 3 Practical	components of discrete	Piecewise	auditory	assignment
		probability distributions	propability		of auties,
		CQ. Evaloine the mult	aistributions	Style of writing	aiscussions
		Co: Explains the null		on the	
		nypotnesis and the	Practical: Solve	blackboard	
		alternative hypothesis	mathematical	Direct dialogue	
		and compares them			

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			exercises on the	style	
			topic	Described	
				Practical:	
				Assigning tasks	
				and reporting	
9	2 Theoretical	A3: Recognizes the	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	statistical hypothesis, the	Hypothesis	auditory	assignment
		null hypothesis, and the	testing	methods	of duties,
		alternative hypothesis -		Style of writing	discussions
		compares the types of	Practical: Solve	on the	
		error	mathematical	blackboard	
			exercises on the	Direct dialogue	
		B5: Shows the T test "T-	topic	style	
		test" and shows the Z		Practical:	
		test "7-test"		Assigning tasks	
				and reporting	
10	2 Theoretical	Ad: Loarn about the T	Theoretical	Theoretical	Short oyama
10		tost and the 7 test and			Shurt exdills,
	+ 3 Practical	test and the 2-test and	Hypothesis	auditory	assignment
		the difference between	testing	methods	or auties,
		them		Style of writing	aiscussions
			Practical: Solve	on the	
			mathematical	blackboard	
		B6: Enumerate the types	exercises on the	Direct dialogue	
		of applications of chi-	topic	style	
		square		Practical:	
				Assigning tasks	
				and reporting	
11	2 Theoretical	A5: Learn how to	Theoretical: Chi-	Theoretical:	Short exams,
	+ 3 Practical	perform the chi-square	square	auditory	assignment
		testing steps	distribution	methods	of duties,
				Style of writing	discussions
			Practical: Solve	on the	
		B7: Explains the simple	mathematical	blackboard	
		connection, and	exercises on the	Direct dialogue	
		reinforces it with	topic	style	
		examples		Practical	
				Assigning tacks	
				and reporting	
10	2 Theoretical	A6: Loarn about	Theoretical	Theoretical	Short overs
12		AD. Ledin duoul			Shurt exams,
	+ 3 Practical	correlation, regression,	simple	auditory	assignment
		correlation coefficient,	correlation and	methods	of duties,
		regression, and the	regression	Style of writing	aiscussions
		properties of each		on the	
		B8: Explains the nature		blackboard	
		of the distribution of F. It	Practical: Solve	Direct dialogue	
		also explains the	mathematical	style	
		relationship between the	exercises on the	Practical:	
		distributions of Z, T, and	topic	Assigning tasks	
		F and the distinction		and reporting	
		between each of them			
13	2 Theoretical	D1: Training on how to	Theoretical +	Theoretical:	Short exams,
	+ 3 Practical	apply statistics in	practical: report	auditory	assignment

14	2 Theoretical	designing agricult experiments D2: Organize a re the statistics topi studied and learn apply statistics in agricultural science E1: Visit to the St	port on cs how to ces atistics	and discussion	methods Style of wr on the blackboard Direct dial style Practical: Assigning ta and reporti Theoretical	riting ogue asks ng	of duties, discussions Short exams,
	+ 3 Practical	Department with of learning about most important statistical process how to implemen E3: The student a some problems in agricultural fields laboratories and develop statistica solutions	the aim the ses and at ssumes and how to l	practical: A fiel visit to the Department of Statistics - University of Mosul	a auditory methods Style of wr on the blackboard Direct dial style Practical: Assigning ta and reporti	riting ogue asks ng	assignment of duties, discussions
15	2 Theoretical + 3 Practical	E2: Visit to the Mathematics Department with of learning about most important statistical operati how to implemen E3: The student a some problems in agricultural fields laboratories and develop statistica solutions	the aim the ons and at them ssumes and how to l	Theoretical + practical: A fiel visit to the Department of Mathematics - University of Mosul	Theoretical auditory methods Style of wr on the blackboard Direct dial style Practical: Assigning ta and reporti	: riting ogue asks ng	Short exams, assignment of duties, discussions
11.	Course Eval	luation					
	Evaluation meth	nods	Evaluatio	on date (week)	Degree	Perc weig	centage ght %
1	Report 1		Fourth week		2.5	2.5	
	Report 2	Fift		ek	2.5	2.5	
	Short test (1) QL	11Z	SIXTN WEEK		2	2	
<u>ч</u> с	Short test (2) QL	(2) Quiz (3) Quiz		h week	1	2 1	
6	Semester test (1))	Sixth week		75	- 75	
7	Semester test (2	·/	Fleventh week		7.5	7.5	
8	Final theoretical	nal theoretical test		nester test	40	40	
9	Practical field project		The fifteenth week		5	5	
10	Field evaluation		Third and fifth week		2	2	
11	Practical short to	al short test (1) Ouiz First		ek 1		1	
12	Short practical test (2) Quiz Fo		Fourth v	veek	0.5 0.5		
13	Short practical t	est (3) Quiz	Fourteenth week		1	1	

14	Live drawings and homework	Weeks 6, 8, 9, 10, 11, 12 and 13		5.5	5.5	
15	Final practical test	Final semester test		20	20	
	Total	100		Degree	Percentage weight %	
12. Learning and Teaching Resources						
Required textbooks (curricular books, if any)			Introduction to statistics			
Main references (sources)			Principles of statistics			
Recommended books and references			Statistics be	ook and met	hods of statistics	
(scier	ntific journals, reports)					
Electr	ronic References, Websites					

مدر العلدة العلن: خل ابراجس خابل

مدر المادة النظري: د. رميد عد حلال الحب ر

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