Course Description Form 1. Course Name: Statistical 2. Course Code: **STAT109** 3. Semester / Year: 2024/2025 4. Description Preparation Date: 1/2/2025 5. Available Attendance Forms: Attended 6. Number of Credit Hours (Total) / Number of Units (Total) 2 Theoretical + 3 Practical / 3.5 Unit 7. Course administrator's name (mention all, if more than one name) Name: Zakariya Bader Fathi / Nawaf Jassim Mohammed Email: <u>zakria-bader@uomosul.edu.iq</u> Hussein. Alzoubaee@uomosul.edu 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 hypothesis 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

9. Teaching and Learning Strategies

Theoretical:

- Interactive lecture
- Brainstorming
- Dialogue and discussion
- Assigning tasks and reporting
- The student is assigned to

Practical

- Assigning group work to reveal leadership skills
- Assigning tasks and a report for each lecture



prepare reports based on his own diligence and prepared for discussion with the students

10. Course Structure

0. Course Structure Evaluation					
Veek	Hours	Required Learning	Unit or subject name	Learning method	method
		Outcomes		Theoretical:	Short exams
	2 Theoretical	A1: Knows the science of	Theoretical:	auditory	assignment
	+ 3 Practical	statistics and its types,	Statistics, its	methods	of duties,
		and also distinguishes	definition and	A STATE OF THE PARTY OF THE PAR	discussions
		between descriptive	types	Style of writing	uiscussions
		statistics and inferential		on the	
		statistics	Practical: Solve	blackboard	
		A7: Differentiate	mathematical	Direct dialogue	
		between descriptive and	exercises on the	style	
		inferential statistics, as	topic	Practical:	
		the most important		Assigning tasks	
		statisticians in the		and reporting	
		twentieth century			
		remember	-		
2	2 Theoretical	A2: Explains what	Theoretical: The	Theoretical:	Short exams,
2	+ 3 Practical	descriptive variables are	nature and types	auditory	assignment
	+ 5 Tractical	and recognizes the	of statistical	methods	of duties,
		difference between a	data	Style of writing	discussions
		sample and population	3000 Cas 100 d 40 Addi	on the	
		A8: Compares	Practical: Solve	blackboard	N1
		quantitative variables	mathematical	Direct dialogue	
		and descriptive variables	exercises on the	style	
		It also distinguishes	topic	Practical:	
		between the population		Assigning tasks	
1		and the sample, giving		and reporting	
		examples of each			
3	2 Theoretical	C1: Organize and draw a	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	frequency distribution	tabular	auditory	assignment
		table and identify its	presentation	methods	of duties,
		parts	and graphical	Style of writing	discussions
1		B2: Organizes a	representation	on the	
1		frequency distribution		blackboard	
		table and identifies its	Practical: Solve	Direct dialogue	
		components. He also	mathematical	style Practical:	
		experiments with finding	exercises on the	Assigning tasks	
		the ascending and	topic	and reporting	
		descending group		and reporting	
	2.Th +'	frequencies 1 C2: Organizes table the	Theoretical:	Theoretical:	Short exams,
4	2 Theoretica		Types of	auditory	assignment
	+ 3 Practical	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	



				Direct dialogue	
		arithmetic mean,		Direct dialogue	
	1	geometric mean, and		style	
1		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
				on the	
		C7: Explains probability	Practical: Solve	blackboard	
		theory for random	mathematical	Direct dialogue	
		experiment, sample	exercises on the	style	
		space, and mutually	topic	Practical:	
		exclusive events with	•	Assigning tasks	
		solving examples		and reporting	
7	2 Theoretical	C4: Distinguish the	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	difference between	Principles of	auditory	assignment
		permutations,	probability	methods	of duties,
		combinations and a	theory	Style of writing	discussions
		random experiment		on the	
			Practical: Solve	blackboard	
1		B4: Explains the variables	mathematical	Direct dialogue	
		of the binomial	exercises on the	style	
		distribution law	topic	Practical:	
				Assigning tasks	
	2.71	CF. F	Th	and reporting	
8	2 Theoretical + 3 Practical	C5: Expresses the components of discrete	Theoretical: Piecewise	Theoretical:	Short exams,
	+ 3 Practical	probability distributions		auditory methods	assignment
		probability distributions	probability distributions		of duties,
	1	C8: Explains the null	uisti ibutions	Style of writing on the	discussions
		hypothesis and the	Practical: Solve	blackboard	
		alternative hypothesis	mathematical	Direct dialogue	
		and compares them	exercises on the	style	
			topic	31,10	
			25 F. 17	Practical:	
				Assigning tasks	
				and reporting	
9	2 Theoretical	A3: Recognizes the	Theoretical:	Theoretical:	Short exams,
	Incorected	1		, incorectical,	Short exams,



	+ 3 Practical	statistical hypothesis, the null hypothesis, and the	Hypothesis testing	auditory methods	assignment of duties,
	alternative hypothesis -		testing	Style of writing	discussions
	compares the type		Practical: Solve	on the	
		error	mathematical	blackboard	
		B5: Shows the T test "T-	exercises on the	Direct dialogue	
		test" and shows the Z	topic	style Practical:	
		test "Z-test"		Assigning tasks	
				and reporting	
10	2 Theoretical	A4: Learn about the T-	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	test and the Z-test and	Hypothesis	auditory	assignment
		the difference between	testing	methods	of duties,
		them		Style of writing	discussions
			Practical: Solve	on the	
		B6: Enumerate the types	mathematical exercises on the	blackboard	
		of applications of chi-	topic	Direct dialogue style	
		square	topic	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,
			Practical: Solve	Style of writing on the	discussions
		B7: Explains the simple	mathematical	blackboard	
		connection, and	exercises on the	Direct dialogue	
		reinforces it with	topic	style	
		examples	1955	Practical:	
				Assigning tasks	
12	2 Theoretical	A6: Learn about	Theoretical	and reporting	
12	+ 3 Practical	correlation, regression,	Theoretical: simple	Theoretical: auditory	Short exams,
	1 3 Tractical	correlation coefficient,	correlation and	methods	assignment of duties,
	Ì	regression, and the	regression	Style of writing	discussions
		properties of each		on the	discussions
		B8: Explains the nature		blackboard	
	ď	of the distribution of F. It	Practical: Solve	Direct dialogue	
		also explains the	mathematical	style	
		relationship between the distributions of Z, T, and	exercises on the	Practical:	Ė
		F and the distinction	topic	Assigning tasks and reporting	
		between each of them		and reporting	
13	2 Theoretical	D1: Training on how to	Theoretical +	Theoretical:	Short exams,
	+ 3 Practical	apply statistics in	practical: report	auditory	assignment
		designing agricultural	and discussion	methods	of duties,
		experiments		Style of writing	discussions
		D2: Organize a report on		on the	
		the statistics topics		blackboard Direct dialogue	
		studied and learn how to		Direct dialogue style	
				34710	



14	2 Theoretical + 3 Practical	apply statistics in agricultural sciences E1: Visit to the Statistics Department with the aim of learning about the most important statistical processes and how to implement E3: The student assumes some problems in agricultural fields and laboratories and how to develop statistical solutions	Theoretical + practical: A field visit to the Department of Statistics - University of Mosul	Practical: Assigning tasks and reporting Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
15	2 Theoretical + 3 Practical	E2: Visit to the Mathematics Department with the aim of learning about the most important statistical operations and how to implement them E3: The student assumes some problems in agricultural fields and laboratories and how to develop statistical solutions	Theoretical + practical: A field visit to the Department of Mathematics - University of Mosul	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions

11. Course Evaluation

N. C. C.				
	Evaluation methods	Evaluation date (week)	Degree	Percentage weight %
1	Report 1	Fourth week	2.5	2.5
2	Report 2	Fifth week	2.5	2.5
3	Short test (1) Quiz	Sixth week	2	2
4	Short test (2) Quiz	Fourteenth week	2	2
5	Short test (3) Quiz	Fifteenth week	1	1
6	Semester test (1)	Sixth week	7.5	7.5
7	Semester test (2)	Eleventh week	7.5	7.5
8	Final theoretical test	Final semester test	40	40
9	Practical field project	The fifteenth week	5	5
10	Field evaluation	Third and fifth week	2	2
11	Practical short test (1) Quiz	First week	1	1
12	Short practical test (2) Quiz	Fourth week	0.5	0.5
13	Short practical test (3) Quiz	Fourteenth week	1	1
14	Live drawings and homework	Weeks 6, 8, 9, 10, 11,	5.5	5.5
14	Live di divings and	12 and 13		
15	Final practical test	Final semester test	20	20
13	Total	100	Degree	Percentage weight %



12. Learning and Teaching Resources	S
Required textbooks (curricular books, if any)	Introduction to statistics
Main references (sources)	Principles of statistics
Recommended books and references	Statistics book and methods of statisti
(scientific journals, reports)	
Electronic References, Websites	

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