Course Description Form

1. Course Name:

Statistical

2. Course Code:

STAT109

3. Semester / Year:

2024 - 2025 First semester (Autumn)

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: 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 descriptive statistics and inferential or inferential statistics
- Explains what descriptive variables are and recognizes the difference between a sample and a 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 of each

9. Teaching and Learning Strategies

Theoretical:

- Interactive lecture
- Brainstorming
- Dialogue and discussion
- Assigning tasks and reporting

Practical

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

 The student is assigned to prepare reports based on his own diligence and prepared for discussion with the students



10. Course Structure

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Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
		Outcomes	name	method	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 reporti ng	Short exams, assignment of duties, discussions

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	and reporting	
5	2 Theoretical	b1: Finds the arithmetic	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	mean - and learns about	Measures of	auditory	assignment
	1 3 Fractical	the properties of the	concentration or	methods	of duties,
		arithmetic mean	mediation	Style of writing	discussions
		and medic mean	mediation	on the	uiscussions
		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	topic	and reporting	
6	2 Theoretical	c3: Works out how to	Theoretical:	Theoretical:	Short exams,
0	+ 3 Practical		measures of	auditory	
	+ 3 Flactical	find the range, mean deviation, variance, and	dispersion or	methods	assignment of duties,
		standard deviation	difference		discussions
		Standard deviation	difference	Style of writing on the	uiscussions
		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	topic	Assigning tasks	
		solving examples		and reporting	
7	2 Theoretical	c4: Distinguish the	Theoretical:	Theoretical:	Short exams,
,	+ 3 Practical	difference between	Principles of	auditory	assignment
	· STructicui	permutations,	probability	methods	of duties,
		combinations and a	theory	Style of writing	discussions
		random experiment		on the	413043310113
		random experiment	Practical: Solve	blackboard	
		b4: Explains the variables	mathematical	Direct dialogue	
		of the binomial	exercises on the	style	
		distribution law	topic	Practical:	
				Assigning tasks	
				and reporting	
8	2 Theoretical	c5: Expresses the	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	components of discrete	Piecewise	auditory	assignment
	2.14000001	probability distributions	probability	methods	of duties,
		probability distributions	distributions	Style of writing	discussions
		c8: Explains the null	alstributions	on the	413643310113
		hypothesis and the	Practical: Solve	blackboard	
		alternative hypothesis	mathematical	Sidensourd	
		and compares them	matricinatical		
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			exercises on the topic	Direct dialogue style	
			topic	Style	
				Practical:	
				Assigning tasks	
9	2 Theoretical	a3: Recognizes the	Theoretical:	and reporting Theoretical:	Short exams,
9	+ 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	
		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	Practical: Solve	Style of writing on the	discussions
			mathematical	blackboard	
		b6: Enumerate the types	exercises on the	Direct dialogue	
		of applications of chi-	topic	style	
		square		Practical:	
				Assigning tasks	
44	2.71	. F. L	The second of Chi	and reporting	Charles
11	2 Theoretical + 3 Practical	a5: Learn how to perform the chi-square	Theoretical: Chi- square	Theoretical: auditory	Short exams, assignment
	1 3 Tractical	testing steps	distribution	methods	of duties,
		6		Style of writing	discussions
			Practical: Solve	on the	
		b7: Explains the simple	mathematical	blackboard	
		connection, and reinforces it with	exercises on the	Direct dialogue	
		examples	topic	style Practical:	
		Campies		Assigning tasks	
				and reporting	
12	2 Theoretical	a6: Learn about	Theoretical:	Theoretical:	Short exams,
	+ 3 Practical	correlation, regression,	simple	auditory	assignment
		correlation coefficient,	correlation and	methods	of duties,
		regression, and the properties of each	regression	Style of writing on the	discussions
		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		
		distributions of Z, T, and	topic	Practical:	الله عند المان
		F and the distinction between each of them		Assigning	إكلية الزراعة وا
		Detween each of them		1	6.37

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				tasks and reporting	
13	2 Theoretical + 3 Practical	d1: Training on how to apply statistics in designing agricultural experiments d2: Organize a report on the statistics topics studied and learn how to apply statistics in agricultural sciences	Theoretical + practical: report and discussion	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
14	2 Theoretical + 3 Practical	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	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

	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 45	المعادية الماسية
6	Semester test (1)	Sixth week	7.5	و كلية الزراعة والحالية
7	Semester test (2)	Eleventh week	7.5	7.5
8	Final theoretical test	Final semester test	40	40 (x - 7

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
		12 and 13		
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 book and methods of statistics	
(scientific journals, reports)		
Electronic References, Websites		

Practical lecturer

Khalil Ibrahim Khalil

Theoretical lecturer

Dr. Zaid Mohammed Alhabbar

Dr. Abdul Qader Abash Sbaka

Head of the Scientific Committee

Dr. Khaled Anwar Khaled

Head of department of plant protection