

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	
<ul style="list-style-type: none"> • 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 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 each 	
9. Teaching and Learning Strategies	
Theoretical: <ul style="list-style-type: none"> • Interactive lecture • Brainstorming • Dialogue and discussion • Assigning tasks and reporting • The student is assigned to 	Practical <ul style="list-style-type: none"> • Assigning group work to reveal leadership skills • Assigning tasks and a report for each lecture

9. Teaching and Learning Strategies

<p>Theoretical:</p> <ul style="list-style-type: none"> - 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 	<p>Practical</p> <ul style="list-style-type: none"> - Assigning group work to reveal leadership skills - Assigning tasks and a report for each lecture
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical + 3 Practical	<p>A1: Knows the science of statistics and its types, and also distinguishes between descriptive statistics and inferential statistics</p> <p>A7: Differentiate between descriptive and inferential statistics, as the most important statistical in the twentieth century remember</p>	<p>Theoretical: Statistics, its definition and types</p> <p>Practical: Solve mathematical exercises on the topic</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style</p> <p>Practical: Assigning tasks and reporting</p>	Short exams, assignment duties, discussions
2	2 Theoretical + 3 Practical	<p>A2: Explains what descriptive variables are and recognizes the difference between a sample and population</p> <p>A8: Compares quantitative variables and descriptive variables It also distinguishes between the population and the</p>	<p>Theoretical: The nature and types of statistical data</p> <p>Practical: Solve mathematical exercises on the topic</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style</p> <p>Practical: Assigning tasks and reporting</p>	Short exams, assignment duties, discussions

		sample, giving examples of each			
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 duties, discussions
4	2 Theoretical + 3 Practical	C2: Organizes table of relative frequency distribution and ascending and descending grouping B3: Calculates the arithmetic mean, geometric mean, and harmonic mean. It also determines the squared mean, median, and mode.	Theoretical: Types of frequency distribution tables and how to draw them 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 duties, discussions
5	2 Theoretical + 3 Practical	B1: Finds the arithmetic mean - and learns about the properties of the arithmetic mean C6: The range law, mean deviation, variance of the mean deviation, and standard deviation are applied to the classified and unclassified data	Theoretical: Measures of concentration or mediation 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 duties, discussions

6	2 Theoretical + 3 Practical	C3: Works out how to find the range, mean deviation, variance, and standard deviation C7: Explains probability theory for random experiment, sample space, and mutually exclusive events with solving examples	Theoretical: measures of dispersion or difference 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 duties, discussions
7	2 Theoretical + 3 Practical	C4: Distinguish the difference between permutations, combinations and a random experiment B4: Explains the variables of the binomial distribution law	Theoretical: Principles of probability theory 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 duties, discussions
8	2 Theoretical + 3 Practical	C5: Expresses the components of discrete probability distributions C8: Explains the null hypothesis and the alternative hypothesis and compares them	Theoretical: Piecewise probability distributions 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 duties, discussions
9	2 Theoretical + 3 Practical	A3: Recognizes the statistical hypothesis the null hypothesis, and the alternative hypothesis - compare the types of error B5: Shows the T test "T-test" and shows the Z test "Z-test"	Theoretical: Hypothesis testing Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style	Short exams, assignment duties, discussions

				Practical: Assigning tas and reporting	
10	2 Theoretical + 3 Practical	A4: Learn about the test and the Z-test ar the difference betwe them B6: Enumerate the types of applications of chi- square	Theoretical: Hypothesis testing Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on th blackboard Direct dialogue styl Practical: Assigning tas and reporting	Short exams, assignment d duties, discussions
11	2 Theoretical + 3 Practical	A5: Learn how to perform the chi-squa testing steps B7: Explains the simple connection, and reinforces it with examples	Theoretical: Chi- square distributio Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on th blackboard Direct dialogue styl Practical: Assigning tas and reporting	Short exams, assignment d duties, discussions
12	2 Theoretical + 3 Practical	A6: Learn about correlation, regressi correlation coefficient regression, and the properties of each B8: Explains the nature of the distribution of F. It also explains the relationship between the distributions of Z, T, and F and the distinction between each of them	Theoretical: simpl correlation and regression Practical: Solve mathematical exercises on the topic	Theoretical: auditory methods Style of writing on th blackboard Direct dialogue styl Practical: Assigning tas and reporting	Short exams, assignment d duties, discussions
13	2 Theoretical + 3 Practical	D1: Training on how apply statistics in designing agricultura experiments	Theoretical + practical: report a discussion	Theoretical: auditory methods	Short exams, assignment d duties, discussions

		D2: Organize a report on the statistics topics studied and learn how to apply statistics in agricultural sciences		Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	
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 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 Statistics - University of Mosul	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment 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 duties, discussions

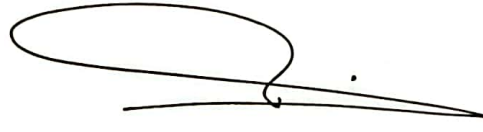
11. Course Evaluation

	Evaluation methods	Evaluation date (week)	Degree	Percentage weight
1	Theoretical final report + practical experience reports	Theoretical Week 15 Practical Week 1-15	7 Theoretical + 6 Practical	%13
2	Quiz (1)	Week (3)	4 Theoretical + 2 Practical	%6
3	Midterm Exam	Week (9)	10Theoretical + 5 Practical	%15
4	Quiz (2)	Week (12)	4 Theoretical + 2 Practical	%6
5	Final practical Exam	Practical exam week	20	%20
6	Final Theoretical Exam	Theoretical exam week	40	%40
7	Total		100	%100


12. Learning and Teaching Resources

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


مدرس المادة العملي: م.م خليل


مدرس المادة النظري: م.د. زيد محمد طلال الحبار


رئيس القسم: أ.م.د ميسر عزيز


رئيس اللجنة العلمية: أ.د. ونام رشيد يحيى