

Course Description Form Computer applications3

1. Course Name:

Computer applications3

2. Course Code:

COMA301

3. Semester / Year:

Second semester/third stage/2023-2024

4. Description Preparation Date:

1/2/2024

5. Available Attendance Forms:

Blended learning (Attendance + Electronic)

6. Number of Credit Hours (Total) / Number of Units (Total):

3 practical hours/1.5 units

7. Course administrator's name (mention all, if more than one name)

Name: Mohammed Moath Abdulgani

Email: albakri2@uomosul.edu.iq

8. Course Objectives

Course Objectives

- Enabling the student to become familiar with the statistical program SPSS and its applications in agricultural experiments.
- Enabling the student to know and understand programs in the SPSS language and apply the steps and procedures followed to use the SPSS statistical program in analyzes of agricultural experiments.
- Enabling the student to write programs in the SPSS language for various agricultural and scientific experiments.
- Providing the student with the skills of dealing with data types when writing programs in SPSS.
- Enabling the student to correct grammatical and linguistic errors that appear when implementing programs written in SPSS.
- Enabling the student to read, understand and interpret the results and outputs of implementing programs written in SPSS..

9. Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> - Interactive lecture - Brainstorming - Dialogue and discussion - Field Training - Practical exercises - Field project - Self-education
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10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3 practical	A1: The student should be able to know and understand the nature and objectives of statistics	What is Statistics Science? Descriptive statistics: Statistics Inferential: Community Population: Census: Statistical metrics First: Measures of Central Tendency Second: Measures of absolute dispersion	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
2	3 practical	B1: Able to understand SPSS windows, the purpose of each window, and how to deal with them.	Run and familiarize yourself with the SPSS program Program windows Getting to know the program windows.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
3	3 practical	C1: Able to understand the types of files that SPSS deals with and know the basic steps and rules in analyzing data and executing basic commands in SPSS.	Retrieve data and files: save the file: Add, modify and control variables Add a variable or view: Cancel a variable, view, or state Search for a case search for value.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
4	3 practical	D1: Able to know, understand, and practically apply sorting and arranging observations and finding their sequential ranks in the SPSS program.	Sort observations command sort cases Ranking of observations according to a specific variable: Using the IF function with Compute	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
5	3 practical	D2: The student should be able to know, understand and	Compute. command Create a new variable using an arithmetic expression or an	Interactive lecture, brainstorming, dialogue and discussion,	Quiz, practical test, Homework,

		practically apply the Compute command and use it to create a new variable using an arithmetic expression, equation or function and use the IF function with Compute	equation Create a new variable using a function	practical exercises, and self-learning.	semester test, Final test.
6	3 practical	D3: The student should be able to know, understand, and practically apply to find a frequency distribution table and draw a histogram.	Descriptive statistics and histograms of data (1) Histogram and Frequencies + Scientific visit	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
7	3 practical	D4: The student should be able to know, understand, and apply practical measures to find descriptive statistics.	(2) Descriptive Statistics + Semester exam 1	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
8	3 practical	D5: The student should be able to know, understand, and practically apply the use of the graph and its types	Chart Learn about several types of chart Graph	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
9	3 practical	A2: The student should be able to know and understand hypothesis testing, the terminology used in it, and the steps for hypothesis testing.	Test of hypotheses 1- Statistical hypothesis 2- The level of significance or the level of probability 3- Statistical test function 4- Probability value (Sig. or P-value): -Steps for testing hypotheses	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
10	3 practical	D6: The student should be able to know, understand, and practically apply the T-test when testing hypotheses related to a single mean.	First: T-test in the case of testing hypotheses related to one mean.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
11	3 practical	D7: The student should be able to know, understand, and practically apply to test the differences between two independent combined averages	Second: Tests of differences between two independent combined averages.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
12	3 practical	D8: The student should be able to know, understand, and practically apply to test the differences between the means of two populations from	Third: Tests of differences between the averages of two groups of related samples. + Semester exam 2	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.

		related samples			
	3 practical	D9: The student should be able to know, understand, and practically apply one-way analysis of variance	Analysis of Variance (ANOVA) One-Way ANOVA	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
14	3 practical	D10: The student should be able to know, understand, and practically apply to find the simple linear correlation and the correlation coefficient	Simple Linear Correlation Correlation Coefficient.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.
15	3 practical	D11: The student should be able to know, understand, and practically apply how to find simple linear regression	Simple Linear Regression	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Quiz, practical test, Homework, semester test, Final test.

11. Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Final theoretical report + theoretical practical reports	Theoretical 15 weeks Practical 1-15 weeks	7theoretical + 6 practical	13%
2	Short test 1 Quiz	3 weeks	4theoretical + 2practical	6%
3	Midterm exam (theoretical and practical)	9 weeks	10theoretical + 5 practical	15%
4	Short test 2 Quiz	12 weeks	4 theoretical + 2 practical	6%
5	Final practical test	practical exams week	20	20%
6	Final theoretical exam	theoretical exams week	40	40%
	The total		100	100

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	A curriculum was prepared by computer professors at the college based on the SPSS software guide.
Main references (sources)	<ul style="list-style-type: none"> - A Handbook of Statistical Analyses using SPSS by Sabine Landau and Brian S. Everitt 2004 - IBM SPSS Statistics 22 Core System User's Guide by IBM – 2013. - Data analysis using the statistical program SPSS, written by Dr. Firas Rashad Al-Samarrai.
Recommended books and references	- Your guide to the statistical program SPSS

Scientific Journals, reports...)

Electronic References, Websites

Prepared by Saad Zaghloul Bashir.

https://www.SPSS.com/en_sg/training/offers/free-training.html

<https://video.SPSS.com/detail/videos/how-to-tutorials>

<https://www.udemy.com/course/SPSS-programming-for-beginners>

<https://SPSScrunch.com/courses/SPSS-base-programming-for-absolute-beginners-free-version/>

Practical subject teacher: Mohammed Moath Abdulgani

Chairman of the Scientific Committee:

Head of the Department:

