Course Description Form Computer applications3

1. Course Name:

Computer applications3

2. Course Code:

COMA301

3. Semester / Year:

Second semester/ 2024-2025

4. Description Preparation Date:

1/2/2025

5. Available Attendance Forms:

In presence

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)

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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	- Interactive lecture - Brainstorming - Dialogue and discussion - Field Training - Practical exercises - Field project - Self-education

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3 practical	a1: The student remembers the concepts 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.	Final test.
2	3 practical	a2: The student learns about the 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.	Report, Final test.
3	3 practical	c1: The student enumerates the types of files that SPSS deals with, the basic steps and rules in analyzing data, and the 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.	Homework1, Final test.
4	3 practical	d1: The student sorts and arranges the observations and finds their sequential ranks in SPSS.	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.	Quiz1, Final test.
5	3 practical	d2: The student executes the Compute command and uses it to create a new variable using an	Compute. command Create a new variable using an arithmetic expression or an equation Create a new variable using a	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and	Homework2, Final test.

		arithmetic expression, equation, or function, and uses the IF function with Compute.	function	self-learning.	
6	3 practical	b1: The student works on finding a frequency distribution table and drawing 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.	scientific visit, Final test.
7	3 practical	b2: The student finds measures of descriptive statistics.	(2) Descriptive Statistics + Semester exam 1	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	semester test1, Final test.
8	3 practical	C2: The student uses the graph and its types in statistical analysis	Chart Learn about several types of chart Graph	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	practical test1, Final test.
9	3 practical	a3: The student remembers 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.	Homework3, Final test.
10	3 practical	b3: The T-test is performed 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.	Quiz2, Final test.
11	3 practical	b4: The student applies the difference test between two independent combined means	Second: Tests of differences between two independent combined averages.	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	Homework, Final test.
12	3 practical	b5: The student tests the differences between the means of two populations from related samples	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.	practical test2, Final test.
13	3 practical	b6: The student concludes the one-way analysis of variance	Analysis of Variance (ANOVA) One-Way ANOVA	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	semester test2, Final test.
14	3 practical	b7: The student determines the simple	Simple Linear Correlation Correlation Coefficient.	Interactive lecture, brainstorming, dialogue	Homework, Final test.

		linear correlation and the correlation coefficient		and discussion, practical exercises, and self-learning.	
15	3 practical	b8: The student discovers a simple linear regression equation	Simple Linear Regression	Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning.	practical test3, Final test.

11. Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Report 1	second week	2	2%
2	Homework1	the third week	1	1%
3	Short test Quiz1	fourth week	2	2%
4	Homework2	The fifth week	1	1%
5	Scientific visit	the sixth week	1.5	1.5%
6	Semester test1	Seventh week	10	10%
7	Practical test1	The eighth week	2.5	2.5%
8	Homework3	Week nine	1	1%
9	Short test Quiz2	The tenth week	2	2%
10	Homework4	Week eleven	1	1%
11	Practical test2	The twelfth week	2.5	2.5%
12	Semester test2	The thirteenth week	10	10%
13	Homework5	The fourteenth week	1	1%
14	Practical test3	The fifteenth week	2.5	2.5%
15	Final practical test	Final semester exams	60	60%
	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)	- 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 (scientific journals, reports...)	- Your guide to the statistical program SPSS Prepared by Saad Zaghloul Bashir.

Electronic References, Websites	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/

subject teacher: Mohammed Moath Albakri

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Chairman of the Scientific Committee:

Head of the Department: