

Course Description Form Computer applications3

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| 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 | <ul style="list-style-type: none"> ● 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

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| 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 |
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| 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. |

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| 5 | 3 practical | D2: The student should be able to know, understand and 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 | Compute. command Create a new variable using an arithmetic expression or an equation Create a new variable using a function | Interactive lecture, brainstorming, dialogue and discussion, practical exercises, and self-learning. | Quiz, practical test, Homework, 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. |

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| 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 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. | Quiz, practical test, Homework, semester test, Final test. |
| 13 | 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

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| Required textbooks (curricular books, if any) | A curriculum was prepared by computer professors at the college based on the SPSS software guide. |
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| 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 (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/ |

Instructor of theoretical part

Instructor of practical part

Mohammed moath abdulgani

Chairman of the scientific committee

Head of the department of Food science

Prof. Dr. Moafak mahmood ahmed

Prof. Dr. Sumaya khalaf badawi