

نموذج وصف المقرر

Review the performance of the higher education institution
(review of the academic program)

وصف المقرر

This course description provides a summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he has made the most of the available learning opportunities and must be linked to the program description.

1. Educational Institution	Al-Zahrawi University College - Ministry of Higher Education and Scientific Research
2. University Department / Center	Medical Laboratory Techniques
3. Course Name / Code	Descriptive Biostatistics / Theoretical
4. Programs in which it is included	Included in laboratory presence and classroom lectures
5. Available Forms of Attendance	Classroom and lab presence
6. Semester / Year	Second Semester 2024–2025
7. Total Number of Study Hours	١٥ hours
8. Date of preparing this description	January 1, 2025
9. Course Objectives:	<ul style="list-style-type: none">• Train students theoretically, practically, and applicably in the most important computer applications, especially widely used programs in institutions.• Understand the main components of a computer and how to operate them.• Learn how to open computer programs and work with files (save, open, edit, lock).• Learn to use Microsoft Excel.• Learn to use the widely known statistical software SPSS.

10. Learning Outcomes, Teaching and Learning Methods, and Evaluation

A. Knowledge and Understanding

Upon successful completion of this course, students will be able to:

- Collect and analyze data using computers.
- Design experiments and process data using statistical software.

B. Subject-Specific Skills

- Understand how to approach epidemiological problems.
- Solve data-related problems and perform data analysis.

Teaching and Learning Methods

- Lectures, visual aids, and attendance in laboratory sessions.

Assessment Methods:

- Quizzes
- Monthly exams
- Midterm and final exams
- Attendance, class participation, extracurricular activities, and proper conduct

C. Evaluation Methods

- Identify molecular structures of nucleic acids and relate them to human traits, diseases, and abnormalities.
- Provide technical consultations related to human diseases.
- Evaluate the legitimacy of using scientific techniques to address genetic structural defects in humans.

D. Thinking Skills

- Identify correct data collection methods
- Apply various techniques for data processing and analysis
- Use personal computers effectively to evaluate large datasets

Teaching and Learning Methods

- **Utilizing modern educational models in teaching.**
- **Allocating a portion of the grade for activities and participation.**
- **Managing the lecture in a way that makes students value the importance of time.**

Evaluation Methods

- Through dialogue and discussion.

e. General and Transferable Skills

- Upon successful completion of this course, students will be able to:
- Conduct survey observations and data collection, which are fundamental parts of teamwork, and manage large amounts of research data

11.Course Structure

Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
١	1	Understanding biostatistics	Definition of Biostatistics, types of data, types of Variables and Sources of data.	Lecture & explanation	Quiz
٢	1	Understanding sampling	Methods of data collection and sampling types.	Lecture & explanation	Quiz
٣	1	Understanding numerical representation	Numerical methods of presentation of data.	Lecture & explanation	Quiz
٤	1	Understanding graphical representation	Graphical methods of presentation of data	Lecture & explanation	Quiz
5-7	3	Understanding central tendency and distribution	Mathematical methods of presentation of data: (1): Measures of Central Tendency (Arithmetic Mean, Median, Mode). (2): Measures of Non-Central location (Percentiles, Quartiles).	Lecture & explanation	Quiz
8-9	2	Understanding dispersion	Measures of Dispersion (Range, Variance, Standard Deviation) of ungroup and group data. Coefficient of Variation , Standard Errs	Lecture & explanation	Quiz
10-11	2	Understanding relative position measures	Percentiles, Quartiles and Interquartile Rang.	Lecture & explanation	Quiz
12-13	2	Understanding distribution shape	Moments, Skewness measurement and Kurtosis Measurement.	Lecture & explanation	Quiz
14-15	2	Understanding probability	Elementary Probability Theory.	Lecture & explanation	Quiz

12. Infrastructure	
Required Readings:	References: <ul style="list-style-type: none"> • John Walkenbach, <i>Microsoft Excel 2016 Bible</i>, John Wiley & Sons, 2015 • Curtis Frye, <i>Microsoft Excel 2016 Step by Step</i>, Microsoft Press, Redmond, Washington, 2015
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: <ul style="list-style-type: none"> • Corporate Finance Institute Excel Course • Skillshare – Microsoft Excel • Udemy – SPSS Data Analysis for Beginning Researchers • Hindawi Journal of Biomedical Engineering
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates:

13.	
Prerequisites	
Minimum Number of Students	100
Maximum Number of Students	160

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Name of the Instructor: Dr. Haider Fadhil Jawad