



الجامعة الزيتونة الأردنية
Faculty of Pharmacy
Al-Zaytoonah University of Jordan

" نحو تعليم صيدلاني متميز "
Toward Excellence in Pharmaceutical
Education

الجامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الصيدلة
Faculty of Pharmacy



" Tradition and Quality "

Detailed Course Description - Course Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-3.0E
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Faculty	Pharmacy	Department	Pharmacy
Course number	0201704	Course title	Applied biostatistics
Number of credit hours	3	Pre-requisite/co-requisite	

Brief course description

This course provides a graduate level introduction to the use of the computer as a health science research tool. It will introduce students to basic methodological and statistical issues in managing and analyzing data using specific and sophisticated computer applications.

In addition patterns and relationship between variables and data will be examined. Using SPSS (Statistical Package for Social Sciences) software, students will calculate needed statistics for reaching correct and sound conclusions about research hypotheses. Students will gain basic through intermediate computer knowledge and expertise needed to successfully compete in many levels of today's health related data research.

	Course goals and learning outcomes
Goal 1	Introduce biostatistics and its principles
Learning outcomes	1.1 The student will be able to describe the roles biostatistics serves in public health and biomedical research 1.2 The student will be able to Explain general principles of study design and its implications for valid inference when, for example, identifying risk factors for disease, isolating targets for prevention, and assessing the effectiveness of one or more interventions 1.3 Assess data sources and data quality for the purpose of selecting appropriate data for specific research questions;
Goal 2	Applying biostatistical analysis using SPSS
Learning outcomes	2.1 The student will be able to descriptive and inferential statistical analysis for selected research questions and designs using SPSS 2.2 Begin proper application of various analyses to hypothesis testing in research using SPSS.
Textbook	1.- Field A., Discovering Statistics Using SPSS, Fourth Edition, SAGE, 2013
Supplementary references	1.- 2.- 3.-



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Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1 1 1	- Introduction to SPSS - Data analysis with SPSS: general aspects, workflow, critical issues	Chapt. 3	
02	1 1 1	- SPSS: general description, functions, menus, commands - SPSS file management	Chapt. 3	
03	1 1 1	- Defining variables - Manual input of data	Chapt. 3	
04	1 1 1	- Automated input of data and file import - Data Transformation	Chapt. 3	
05	1 1 1	- Syntax files and scripts - Output management	5.7	
06	1 1 1	Descriptive analysis of data: - Frequencies, Descriptives, Explore - Crosstabs, Charts	Chapt.4	
07	1 1 1	Statistical tests: - Means - T-test	Chapt. 5, 9	
08	1 1 1	- One-way ANOVA - Non parametric tests	Chapt. 10, 15	
09	1 1 1	Correlation and regression - Linear correlation and regression - Multiple regression (linear)	Chapt. 6 & 7	
10	1 1 1	- Multiple regression (linear) Multivariate analysis - Factor analysis	Chapt. 7, 17	
11	1 1 1	- Factor analysis - Cluster analysis	Chapt. 7, 17	
12	1	- Cluster analysis	Chapt. 17	



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	1 1	- Cluster analysis		
13	1 1 1	-Practical exercises	Chapt. 17	
14	1 1 1			
15	1 1 1			
16	1 1 1			

Theoretical course evaluation methods and weight	Participation = 10% First exam 20% Second exam 20% Final exam 50%	Practical (clinical) course evaluation methods	Semester students' work = 50% (Reports, research, quizzes, etc.) Final exam = 50%
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Approved by head of department		Date of approval	
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Extra information (to be updated every semester by corresponding faculty member)

Name of teacher	Walid AlQerem	Office Number	222
Phone number (extension)	291	Email	waleed.qirim@zug.edu.jo
Office hours			