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جامعة كل العرب

Course Syllabus
Faculty of Arts and Science
Academic Department Basic Science and Humanities
Academic Year 2021 / 2022 Semester: Second

Course Title :	Biostatistics
Course No. :	1501155
Prerequisite :	None
Concurrent :	None
Department :	Basic Science and Humanities
Coordinator :	Dr. Mayada Abualhomos
Mode of Instruction	- On- Campus 2 hours in class (Synonym) learning

*** Instructor:**

Lecturer	Office Phone	Room No.	Office Hours	E-mail
Dr. Mayada Abualhomos_	1442	225	Sun-Tues-Thu 11-12 Mon-Wed 9:30-11	abuhomosr@asu.edu.jo

Course Description

The course biostatistics will cover descriptive statistics, axioms and theorems of probability, inferential statistics and vital statistics.

Intended Learning Outcomes

Upon the completion of the course, this module should lead to the following learning outcomes:

A. Knowledge and Understanding (Student should):

- A1 Understand the basic concepts of descriptive statistics.
- A2 Study the axioms and theorems of probability
- A3 Understand the conditional probability and Baye's theorem.

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- A4 List the counting techniques and its application.
- A5 Study discrete probability distributions such as Binomial Distribution
Poisson Distribution
- A6 Understand Central Limit Theorem, concepts of estimation and Testing hypothesis.

B. Cognitive and Intellectual Skills (Student should):

- B1 Describe data by tables and graphs.
- B2 Compare between discrete and continuous distribution.
- B3 Analyze data and draw inferences from large samples.

C. Subject Specific Skills (Student should):

- C1 Implement solutions of descriptive statistics.
- C2 Implement solutions of Binomial Distribution and Poisson Distribution.
- C3 Implement solutions of inferences about population parameters.

D. Transferable Skills (Student should):

- D1 Home works and quizzes.
- D2 Assignments

Program Learning Outcomes (PLOs):

1. -----
2. -----
3. -----
4. -----
5. -----



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Course Learning Outcomes Alignment Matrix				
	CLO. 1	CLO. 2	CLO. 3	CLO. 4
PLO.1:	-	-	-	-
PLO 2:	-	-	-	-
PLO.3:	-	-	-	-
PLO.4:	-	-	-	-
PLO. 5	-	-	-	-

Course Contents and Schedule

Week	Day and Date	Topics to be covered	Method of instruction	CLOs	PLOs
1	Sun. 6/3/2022	Introduction Course overview, basic concepts, Frequency table, Stem and leaf table	In-class lecture	A1, B1 & C1	-
2	Sun13/3/2022	Descriptive Statistics Measures of central tendency for ungrouped data (Mean, median, mode), Measures of dispersion for ungrouped data (range, variance, standard deviation)	In-class lecture	A1	-
3	Sun. 20/3/2022	Measures of central tendency for grouped data (mean, median, mode) Measures of dispersion for grouped data (range ,variance ,standard deviation)	In-class lecture	C1	-
4	Sun 27/3/2022	Counting techniques Multiplication rule	In-class lecture	A4	-
5	Sun3/4/2022	Permutation Combination	In-class lecture	A4 & D1	-
6	Sun10/4/2022	Axioms of probability Theorems of probability, Conditional probability Baye's theorem,	In-class lecture	A2 & A3	-



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		Independence			
7	Sun17/4/2022	Discrete probability distribution Mean, variance, standard deviation Special Discrete Distributions Bernoulli Distribution , Binomial Distribution, Poisson Distribution	In-class lecture	A5 and C2	-
8.	MID Term Exam				
9	Sun 24/4/2022	Continuous probability distribution Mean ,variance ,standard deviation	In-class lecture	A6 & B2	-
10	Sun1/5/2022 2	Special Continuous Distribution Normal Distribution, Properties, Standard normal distribution	In-class lecture	A6 & B2	-
11	Sun. 8/5/2022	Continuous Probability Distribution Student t distribution, Chi square distribution, Central limits theorem	In-class lecture	B2	-
12	Sun. 15/5/2022	Statistical Inference Estimation of the mean, Proportion confidence interval for the mean Variance proportion	In-class lecture	C3	-
13	Sun. 22/5/2022	Hypothesis testing type I and type II error , test for the mean	In-class lecture	C3	-
14	Sun. 29/5/2022	Vital Statistics Death rates and ratio	In-class lecture	C3	-
15	Sun. 5/6/2022	Measures of fertility, Measures of morbidity	In-class lecture	C3 & D1	-
16.	Final Exam				



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Grading Plan and Assessment Tools

Assessment Tools	Weights	Due date
Mid-term	30%	-
Assignments	20%	-
Quizzes		
Inter active lectures		
Group Work		
Presentation		
Reports		
Project		
Case-Study		
Final Exam	50%	-

Supplementary Reading

Textbook:

Wayne W. Daniel: Biostatistics: A foundation for analysis in the health sciences, Sixth edition.

References:

- 1- Richard A. Johnson: Statistics principles and methods second edition
- 2- Harold Larson: introduction to probability theory and statistical inference third edition



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Subject Coordinator

----- Signature: -----

Head of Curriculum Committee

----- Signature: -----

Department Head

----- Signature: -----

Faculty Dean

----- Signature: -----

Copy to:

- Department Head.
- Head of Curriculum Committee.
- Course File.

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رمز النموذج: UF 28 / 2

رقم القرار 24 / 233

تاريخ الاعتماد 2021/10/18