هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	**Advanced Biostatistics**
Course Code:	**PHE26333**
Program:	**Bachelor of Sciences in Public Health**
Department:	**Public Health**
College:	**Applied Medical Sciences**
Institution:	**University of Bisha**
Version:	**1**
Last Revision Date:	**2**-8-2023

وزارة التعليم - جامعة بيشة
Ministry Of Education - University Of Bisha
وكالة الجامعة للشؤون التعليمية

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours:					
2 (2+0)					
2. Course type					
A.	☐University	☐ College	☒ Department	☐Track	☐Others
B.	☒ Required		☐ Elective		
3. Level/year at which this course is offered: 5th level 3rd year					
4. Course general Description:					
Focuses on advanced biostatistical concepts and methods utilized in Public Health including demography, sample size computation, non-parametric statistics, multivariate analysis and Bayesian statistics with complementary applications using statistical software package.					
5. Pre-requirements for this course (if any)**:**					
PHE26222					
6. Co-requirements for this course (if any)**:**					
NA					
7. Course Main Objective(s):					

- **Present the concepts and techniques used in sample size determination, non-parametric statistics, survival analysis, multivariate analysis and Bayesian statistics.**
- **Present the concepts of Demography including population projections.**
- **Equip the students with the skills in generating advanced statistical values with the aid of statistical software package.**

2. Teaching mode

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	26	86.6%
2	E-learning	2	6.7%
3	Tutorial		
4	Interactive learning	2	6.7%
5	Practical		

3. Contact Hours

No	Activity	Contact Hours
1.	Lectures	26
2.	E-learning	2
3.	Practical	
4.	Interactive learning	2
5.	Seminars	
6.	Self-Learning	45
Total		**75**

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Explain the concepts related to demography, non-parametric statistics, survival analysis, multivariate analysis, and Bayesian statistics.	K2	lectures	Quiz Written exam
2.0	**Skills**			
2.1	Conduct appropriate advanced statistical test in a given scenario.	S1	Interactive learning	In class, In lab evaluation
	Perform population projections using appropriate technique.	S1		
2.2	Determine suitable sample size in each scenario.	S1		
3.0	**Values, autonomy, and responsibility**			
3.1	Make decisions based on evidence and sound arguments.	V2	lectures Interactive learning	In class, In lab evaluation
3.2	Observe professional integrity and ethical standards in the conduct of statistical procedures.	V2		

C. Course Content

No	List of Topics (Theory)	Contact Hours
1.	Analysis of Variance and Analysis of Covariance	2
2.	Regression Analysis	6
3.	Non-parametric Statistics	4

4.	Multivariate Statistics	8
5.	Survival Analysis	2
6.	Bayesian Statistics	2
7.	Sample Size Computation	2
8.	Demography	4
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz 1	3rd	5%
2.	E-Learning activities 1, In class- lab evaluation	4th	5%
3.	Midterm Examination	8th	25%
4.	Quiz 2	11th	5%
5.	E-Learning activities 2, In class- lab evaluation	12th	10%
6.	Final Examination	15th	50%
	Total		**100%**

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Daniel, Wayne W and Cross, Chad L (2014). **Biostatistics: Basic Concepts and Methodology for the Health Sciences.** 10th Edition. John Wiley & Sons Singapore P Ltd. ISBN: 978-1-118-36220-4 Afifi, Abdelmonem, May, Susannne, Donatello, Robin A., and Clark Virginia A. (2020). **Practical Multivariate Analysis**. 6th Edition. CRC Press. Florida. ISBN: 978-1-138-70222-6
Supportive References	Rosner, Bernard (2016). **Fundamentals of Biostatistics.** 8th Edition. Cengage Learning. Maryland. ISBN: 978-1-305-26892-0
Electronic Materials	Chortle.ccsu.edu/java5/cs151java.html 1. Google, Altavista, Medline.
Other Learning Materials	1. Saudi digital library

2. Required Facilities and equipment

Items	Resources
facilities	1. Middle size classroom 2. well-equipped laboratory
Technology equipment	3. Multimedia projector **4.** Smart board
Other equipment	• NA

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students, Faculty, Quality committee	Direct / indirect - Using well-structured questionnaire
Effectiveness of student's assessment	Faculty members Peer Reviewer	Direct / indirect - Continuous reviewing and course portfolio
Quality of learning resources	Faculty members Curriculum committee	Direct / indirect - Annual review course report
The extent to which CLOs have been achieved	Course coordinator	Direct / indirect

G. Specification Approval

COUNCIL /COMMITTEE	**PH DEPARTMENT BOARD**
REFERENCE NO.	
DATE	

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