

## Course Specification Student Version

Course Title:	Biostatistics
Course Code:	BIOS 101
Department:	Common Sciences
Program :	Bachelor of General Nursing
College:	Vision College in Riyadh
Institution:	Vision College in Riyadh
Revised:	July 2025

## A. Course Identification

1. Credit hours: 2 (2+0+0)
2. Level/year at which this course is offered: Level 3/Year 2
3. Pre-requisites for this course (if any): None
4. Co-requisites for this course (if any): None

## B. Teaching Methods

1	Interactive lectures
2	Assignments

## C. Course Description and Main objective

<p><b>1. Course Description</b> This course provide students with a basic understanding of biostatistics and Understanding concepts and rational for various methods with use of statistical software (such as Excel, SPSS).</p>
<p><b>2. Course Main Objective</b> The main objective of this course is to give student the ways to calculate and interpret mean, median, mode, ranges, variance, standard deviation and confidence intervals.</p>
<p><b>3. Course Objectives :</b> <b>At the end of this course the students will be able to :</b></p> <ul style="list-style-type: none"> <li>• Explain the importance of studying biostatistics in the nursing field.</li> <li>• Discuss the theory of Probability in the nursing sciences.</li> <li>• Conduct descriptive and inferential statistical analysis using statistical software programs.</li> <li>• Differentiate and implement qualitative, quantitative, and triangulation research approaches.</li> <li>• Practice teamwork and professional collaboration.</li> </ul>

## D. Course Content

No.	List of Topics
1	Introduction
2	Types of Data : quantitative – qualitative (Nominal Data , Ordinal Data, Ranked Data, Discrete Data, Continuous Data)
3	Types of Data : quantitative – qualitative (Nominal Data , Ordinal Data, Ranked Data, Discrete Data, Continuous Data)
4	Tables: Frequency Distributions, Relative Frequency. Graphs : Bar Charts , Histograms , Frequency Polygons, One- Way Scatter plots, Box Plots.

5	Measures of Central Tendency : Mean , Median ,Mode and The relationship between Measures of Central Tendency
6	Measures of Dispersion: Range, Interquartile Range, Variance and Standard Deviation. Coefficient of Variation
7	Probability: Operations on Events and Probability, Conditional Probability.
8	Theoretical Probability Distributions : Probability Distributions The Binomial Distribution The Poisson Distribution (The Normal Distribution)
9	Sampling Distribution of the Mean: Sampling Distributions
10	Hypothesis Testing: General Concepts, Two-Sided Tests of Hypotheses One-Sided Tests of Hypotheses
11	Independent Samples: Equal Variances. Unequal Variances, Inference On Proportions: Comparison of Two Proportions
12	Correlation: Pearson's Correlation Coefficient, Spearman's Rank Correlation Coefficient.
13	Simple Linear Regression, Regression Concepts, Population Regression Line
14	Types of Error. Comparison of Two Means: Paired Samples

#### E. Assessment tools

#	Assessment task	Time	Percentage of Total Assessment Score
1	Quizzes	First Quiz & Second Quiz	20% (each 10%)
2	Assignments	During the Semester	10 %
3	Mid-term	According to midterm exam timetable	30%
4	Final	According to final exam timetable	40%
	<b>Total</b>		<b>100%</b>

#### F. Learning Resources

<b>Required Textbooks</b>	Biostatistics (101 BIOS) – Vision college
<b>Essential Reference Material</b>	Vision college library, King Fahd library
<b>Electronic Material</b>	<a href="https://elearning.vision.edu.sa/course/view.php?id=167">https://elearning.vision.edu.sa/course/view.php?id=167</a>