

<b>Course Title:</b>				<b>Biostatistics</b>				
<b>Course Code:</b>				<b>BTL3613</b>				
<b>Course Coordinator</b>				<b>Dr Raju Shankarayan</b>				
<b>Credits</b>				<b>3-1-0=4</b>				
<b>Evaluation Scheme Total 100 Marks</b>								
<b>Quiz (Total 20 Marks)</b>				<b>Assignment/Project (Total 20 marks) (Minimum Two Assignments or one Project)</b>		<b>Mid-Term</b>	<b>Major Examination</b>	<b>Total</b>
<b>Quiz I (5 marks)</b>	<b>Quiz II (5 marks)</b>	<b>Quiz III (5 marks)</b>	<b>Quiz IV (5 marks)</b>			<b>20 marks) (1 ½ Hour Duration)</b>	<b>(40 marks) (3 Hour Duration)</b>	<b>100 Marks</b>
<b>WEEKS</b>				<b>TOPICS TO BE COVERED</b>				
<b>Week 1</b>				Introduction to Biostatistics, Definition of data and its types, Primary & Secondary data				
<b>Week 2</b>				Different ways of collection of data, Census, survey, questionnaire, Experiments; Validity of data				
<b>Week 3</b>				Graphical representation of Statistical data, Frequency curve, Polygon, Histogram, Bar chart,				
<b>Week 4</b>				Measures of central tendency, Mean, median and mode, Different ways of finding means, Direct method, Assumed mean method and				
<b>Week 5</b>				step deviation method, Method of finding median, Measurement of Quartile, percentiles				
<b>Week 6</b>				Measurement of Dispersion, Range, Mean deviation, Standard deviation				
<b>Week 7</b>				Measures of Skewness and Kurtosis				
<b>Week 8</b>				Basics of Probability, classical & axiomatic definition of probability, Methods of finding probability, Numericals,				
<b>Week 9</b>				Theorems on total and compound Probability, Addition law of probability,				
<b>Week 10</b>				Conditional probability, Multiplication law of probability, Bayes theorem				
<b>Week 11 (17<sup>th</sup> -21<sup>st</sup> March, 2025)</b>				<b>Mid-Term</b>				
<b>2<sup>nd</sup> May, 2025</b>				<b>Showing of Mid-Term Answer Sheets</b>				
<b>Week 13</b>				Probability distribution, Bernoullies Trials, Binomial and Poisson distributions, Normal distributions and concept of Z-score				
<b>Week 14</b>				Different Methods of sampling, confidence level, critical region, testing of hypothesis and standard error, large sample test and small sample				

	test.
<b>Week 15</b>	Problems on test of significance, t-test, chi-square test for goodness of fit and Analysis of variance (ANOVA)
<b>Week 16</b>	Correlation and different examples, methods of finding correlation, Concept of Regression, different theorems and ways of finding regression
<b>Week 17 (5<sup>th</sup> -9<sup>th</sup> May, 2025)</b>	<b>Revision Week</b>
<b>Week 18 (13<sup>th</sup> – 22<sup>nd</sup> May, 2025)</b>	<b>Major Examinations</b>
<b>29<sup>th</sup> May, 2025</b>	<b>Showing of Major Exams Answer Sheets</b>

**Course Outcomes:** After successful completion of this course, students shall be able to:

<b>CO1:</b>	Learn about the different types of Data, data collection, organization, and the different ways of their representation including measurement of central tendency and Dispersion.
<b>CO2:</b>	Know about the probability and the different types of probability distribution
<b>CO3:</b>	Gain the knowledge of different methods of sampling, interpreting the results of statistical analysis and testing of hypothesis
<b>CO4:</b>	Find the Correlation and Regression of the data and apply basic statistical concepts used in Health and Medical Sciences.

#### Recommended Books:

1	Introductory biostatistics, 1st Edition, Le CT, John Wiley, USA. 2003
2	High Yield <sup>TM</sup> Biostatistics, Glaser AN, Lippincott Williams and Wilkins, USA. 2001
3	Advanced Biology Statistics, Edmondson A and Druce D, Oxford University Press. 1996
4	Biostatistics: A foundation for Analysis in Health Sciences, Danial W, John Wiley and Sons Inc. 2004

**Calendar of Quizzes/Assignment etc. to be provided as per below details and exact dates to be fixed in consultation with other course coordinators to avoid overlap of Quizzes of different courses.**

Component	Date
<b>Quiz-I</b>	<b>27<sup>th</sup> -31<sup>st</sup>, January 2025</b>
<b>Quiz-II</b>	<b>24<sup>th</sup> -28<sup>th</sup> February, 2025</b>
<b>Assignment-I</b>	<b>10<sup>th</sup> -12<sup>th</sup> February, 2025</b>
<b>Mid-Term</b>	<b>17-21<sup>st</sup> March, 2025</b>
<b>Assignment-II/</b>	<b>21<sup>st</sup> – 24<sup>th</sup> April, 2025</b>

<b>Project Submission</b>	
<b>Quiz-III</b>	<b>7<sup>th</sup> – 11<sup>th</sup> April, 2025</b>
<b>Quiz-IV</b>	<b>28<sup>th</sup> April-2nd, May, 2025</b>
<b>Major Exam</b>	<b>13<sup>th</sup> – 22<sup>nd</sup> May, 2025</b>

**Note:**

- 1. One surprise Quiz may be fixed out of Quiz-II, Quiz-III or Quiz-IV.**
- 2. In case of any deviation in evaluation methodology for courses such as AEC/VAC/SEC shall be mentioned accordingly. Thus, same shall be approved by the next BOS of school if not done earlier.**

**Signature of Course Coordinator : Dr Raju Shankarayan**