

## BA Statistics

| Course code                   | Course Name              | Course Outcome (CO)   |
|-------------------------------|--------------------------|---|
| <b>CBCS (Honours Generic)</b> |                          |   |
| <b>Semester I</b>             |                          |   |
| STA-HG-1016                   | Statistical Methods      | <ul style="list-style-type: none"> <li>• To understand about the meaning and scope of Statistics, population and sample, different types of data and its tabular and graphical representation, scales of measurements.</li> <li>• It helps student to gain knowledge about measures of central tendencies as well as dispersion, skewness, kurtosis, moments.</li> <li>• To gain knowledge about finite difference, its operators and properties, Newton's forward, backward and divided difference Interpolation formula, and Interpolation with unequal intervals.</li> <li>• To learn about the concept of Numerical Integration by using different formula like General Quadrature, Simpson's <math>1/3^{\text{rd}}</math> and <math>3/8^{\text{th}}</math> formula.</li> <li>• It helps the students to calculate simple, multiple and partial correlation, and also the regression lines.</li> <li>• To understand about the concept of attributes and measures of independence and association.</li> </ul> |
| <b>Semester II</b>            |                          |   |
| STA-HG-2016                   | Introductory Probability | <ul style="list-style-type: none"> <li>• Knowledge on basic concept of probability, and various notations and terminologies used in it such as sample point, sample space, mutually exclusive events and different approach of probability, Bayes theorem and its application.</li> <li>• It helps to gain knowledge about random variables, its different types, expectation and moment generating function.</li> <li>• To learn about convergence in probability, WLLN, CLT and its applications.</li> <li>• To learn about different types of discrete as well as continuous probability distributions, their properties and applications in real life situations.</li> </ul>  |
| <b>Semester III</b>           |                          |   |

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|--------------------|---------------------------------|--|
| STA-HG-3016        | Basics of Statistical Inference | <ul style="list-style-type: none"> <li>• To understand the testing of hypothesis, Type I and Type II error, confidence interval, test of significance for large samples, and idea of Non-parametric tests and different N-P tests such as Median test, Sign test and Wilcoxon two-sample test.</li> <li>• To gain knowledge about test of proportions, chi-square test of association and goodness-of-fit.</li> <li>• The students will to gain knowledge about ANOVA, basic principles in design of experiment, different types of designs like CRD, RBD and their applications in different fields.</li> </ul> |
| <b>Semester IV</b> |                                 |  |
| STA-HG-4016        | Applied Statistics              | <ul style="list-style-type: none"> <li>• To understand time series and different methods involved in it.</li> <li>• To understand the concept of Index number, its different types and uses.</li> <li>• To gain clear idea about statistical quality control, variable and attribute control charts.</li> <li>• To gain knowledge on the birth and death rates, construction of Life Tables and its uses.</li> <li>• To understand about demand function, elasticity of demand and concept of Income distribution.</li> </ul>  |