NIRMA UNIVERSITY
Institute of Technology
B. Tech. Computer Science and Engineering
Open Elective (open to all branches except Dept. of CSE)

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Course Code	2CSOE03
Course Title	Data Analytics

Course Outcomes:

At the end of this course, student will be able to-

1. interpret the statistical parameters and its tendencies
2. compare different data distributions, descriptions and their applications
3. use statistical parameters for inferences and support it with valid arguments and values
4. apply statistical inferences for various real life problems.

Syllabus:

Teaching Hours

Unit I   03
Introduction to data: Data structures, variables, summaries, graphics, and basic data collection techniques.

Unit II   03
Probability: The basic principles of probability such as conditional probability, random variables, Bayes theorem

Unit III   03
Distributions of random variables: Introduction to the normal distribution model, geometric distribution, Bernoulli distribution, Binomial distribution, Poisson distribution

Unit IV   04
Foundations for inference: Variability in estimates, Confidence Intervals, Hypothesis testing, Central Limit Theorem

Unit V   04
Inference for numerical data: Paired data, Inference for one or two samples means using the normal model and T-distribution, and also comparisons of many means using ANOVA.