

Certificate Course in Advanced Statistics

Department of Statistics, Nirmalagiri College

Syllabus

Duration: 30 Hours

Objectives:

- To discuss the various concepts in statistics
- To introduce the application of correlation and regression
- To understand various tools in research methodology

Learning Outcomes: After completion of this course, students should be able to

- understand the analysis of bivariate data and interpretation of results
- perform the testing of hypothesis and analysis of variance
- understand the probability concepts and its applications

Module 1: Basic Statistics (12 Hours)

Population, Sample, Different sampling techniques, Various measures of central tendency and dispersion, Introduction to correlation and regression

Module 2: Concept of Probability (8 Hours)

Random experiment, Sample space, Event, Definition of probability, Addition theorem, Simple examples

Module 3: Statistical Inference (10 Hours)

Parameter, Statistic, Point estimation and interval estimation, Concept of hypotheses, Procedure for testing, Z-test, t-test, Chi-square test, ANOVA