

K. J. SOMAIYA COLLEGE OF SCIENCE AND COMMERCE , AUTONOMOUS

Interdisciplinary Basic course in Statistics

Course Details

**Department of Statistics
2019-2020**

This document contains the structure of course, details of syllabus and evaluation pattern.

Course Details

- ❖ **Course type** : Certificate
- ❖ **Course Title** : Interdisciplinary Basic course in Statistics
- ❖ **Preamble** : The underlying philosophy of the “Interdisciplinary Basic certificate course in Statistics” is to develop theoretical and analytical skills of the students who have not taken statistics as subject in their XI, XII, UG or PG level. In the rapidly changing globalised market scenario, the need was felt to equip students with the capability to understand and handle the dynamic of statistics and the business world. In order to achieve the above-mentioned objectives, a comprehensive syllabus comprising of topics relating to statistics, quantitative techniques and business have been included.
- ❖ **Objectives of course** : To provide, an understanding, for the any UG/PG student (especially non statistics students), how to analyze data statistically.
 - **Learning Outcomes** : By completing this course the student will learn to
 - Define statistical terms.
 - Interpret, use and present information in written, graphical, diagrammatic and tabular terms.
 - Make students realise about understanding and importance of the data along with the summarising and presenting the data in tabular / diagrammatic manner.
 - Acquaint students in understanding behaviour of the data using measures of central tendency and measures of dispersion
 - To understand basic concepts of correlation and regression, fitting straight line and quadratic curves using method of least squares
 - Understand basic concepts of probability
 - Enable efficient use of statistical software such as Excel, R.
 - Develop the ability to use statistical knowledge and skills in other disciplines
- ❖ **Prerequisites / Eligibility Criteria:** The syllabus assumes the knowledge of school level Mathematics syllabus.
- ❖ **Intake Capacity** : 25
- ❖ **Duration** : 30 hours
- ❖ **Course Coordinator** : Mr. Prashant Shah
- ❖ **Career opportunities:** It provides a firm foundation for the learner who intends to study statistics and/or related subjects up to and beyond graduate Level and for the statistical requirements of a wide range of professions.

❖ **Syllabus** :

Theory:

- i) ***Descriptive statistics:*** Types of data, Data collection, Sampling technique, measurement of scale, Classification and Tabulation, graphs, diagrams, measures of central tendency, measures of dispersion,
- ii) ***Multiple correlation and regression analysis:*** Concepts of correlation and regression, fitting straight line and quadratic curves using method of least squares
- iii) ***Probability:*** Definition of probability and properties, addition rule, conditional probability, multiplication rule, Bayes' theorem and independence of events.

Practical: Statistical analysis using statistical software such as Excel, R.

❖ **Evaluation Pattern** :

- One internal assessment (test/assignment/quiz/open book test etc.) on each topic carrying 30 marks each: $3 * 30 = 90$ marks
- One Project at the end of course: 60 marks
- Total marks: 150 marks