



**Deccan Education Society's
Fergusson College, Pune**

**Department of Statistics
B.Sc. Statistics**



CURRICULUM

Statistics as a subject is an important branch of knowledge and is devoted to various techniques of collection, presentation, analysis and interpretation of data. It is a science of learning from data.

B. Sc. in Statistics program is of three years duration, with semester pattern for the second and third year and annual examination pattern for the first year.

At first year of under-graduation, students will be given the basic information that includes – methods of data representation and summarization. Correlation and regression are the tools that are frequently used in statistical analysis. These topics are studied in Paper I. Further they are introduced to probability and different discrete probability distributions along with applications. Relevant experiments on these topics will be included in practical course.

At second year of under-graduation, students are expected to study various probability distributions and its applications to real life situations. An important branch of Statistics, viz testing of hypotheses related to mean, variance, proportion, correlation etc. will be introduced. Some topics related to applications of Statistics will be also introduced.

At third year of under-graduation, six theory papers deal with theoretical as well as applied aspect of statistics. Two papers each are included on distribution theory and parametric inference. Study of sampling methods is essential part which is covered in sampling theory paper. In

Design of Experiments paper, various designs used in agriculture and industry are studied. Papers of applied nature, like medical statistics, actuarial statistics, time series, R software and operations research will also be introduced. There are three practical courses based on core courses. In one of the practical courses, project component will be introduced.

Subject 'Applied Statistics' is taught at general level to F.Y.B.A., S.Y.B.A. and T.Y.B.A.

Eligibility :

First Year B.Sc.: Higher Secondary School Certificate (10+2) or its equivalent Examination with English and Mathematics; and two of the science subjects such as Physics, Chemistry, Biology, Geography, Geology, etc. 2.

Second Year B.Sc.: Keeping terms of First Year of B. Sc. with Statistics as one of the subjects. 3.

Third Year B. Sc.: Student shall clear all First Year B. Sc. Statistics

courses and keeping terms of Second Year of B. Sc. with Statistics as one of the subjects. Admissions will be given as per the selection procedure / policies adopted by the respective college keeping in accordance with conditions laid down by the University of Pune. Reservation and relaxation will be as per the Government rules.

Structure of the Course : Structure of the course for three years and the pattern of examination and question papers are as specified below.

F. Y. B. Sc. Statistics:

Paper Course Title	Lectures
Paper - I Descriptive Statistics	Three lectures / week (Total 36 lectures / paper per term)
Paper – II Discrete Probability and Probability Distributions	Three lectures / week (Total 36 lectures / paper per term)
Paper–III (Practical) Practical Course	24 Practicals & one project

S. Y. B. Sc. Statistics:

Sem	Paper Course Title	Lectures
I	St – 211: Discrete Probability Distributions , Time Series And R Software	Four lectures / week (Total 48 lectures /semester)
	St 212 : Continuous Probability Distributions	Four lectures / week (Total 48 lectures /semester)
II	St-221 : Statistical Methods And Use Of R-Software	Four lectures / week (Total 48 lectures /semester)
	St 222: Sampling Distributions And Inference	Four lectures / week (Total 48 lectures /semester)
I & II	Paper–III (Practical) Practical Course	24 Practicals & one Project

T. Y. B. Sc. Statistics:

Sem	Paper Course Title
III	ST 331 Distribution Theory
	ST 332 Theory of estimation
	ST 333 Sampling Methods
	ST 334 Design of Experiments
	ST 335 C Programming (TurboC)
	ST 336 Introduction to Regression Analysis
IV	ST 341: Actuarial Statistics
	ST 342: Testing of Hypotheses
	ST 343: Statistical Quality Control
	ST 344: Operations Research
	ST 345 (A): Reliability and Survival Analysis OR ST 345 (B): Introduction to Stochastic processes
	ST 346: Statistical Computing Using R software
III & IV	ST-347 Practical Course
	ST -348 Practical Course
	ST-349 Practical Course

T.Y.B.Sc.

Theory Course : 4 lectures / week (Total 48 lect/sem)

Practical Course :

ST- 347 : 24 Practicals, ST-348 : 24Practicals, ST-349: 24 Practicals & one Project

Placement:

Renowned companies like **μ Sigma**,
Convergys , **L & T Infotech**, **D.E.Shaw**,
WIPRO select many students of
Statistics department in the campus
interview drive.

CONTACT

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