



CERTIFICATE COURSE ON BASIC STATISTICS

Department of Economics
North Kamrup College, Baghmara

Session: 2020-21

Statistical Methods are playing an ever-increasing role in framing suitable policies in a large number of diversified fields covering natural, physical and social sciences. Statistics today has become indispensable in all phases of human endeavour. It is perhaps a subject that should be used by everybody. Statistical techniques being powerful tools for analyzing numerical data are used in almost every branch of learning. In all areas, statistical techniques are being increasingly used, and are developing very rapidly. Statistics facilitates the decision making process by quantifying the element of chance or uncertainties. Its descriptive and inferential roles not only formulate the basis of growth of almost all the disciplines of the contemporary world, but also provide an array of non-traditional employment avenues ranging from that of sport analysts to business analysts. The thrust of the Certificate Course in Basic Statistics is to provide the students the basic ideas and concepts of statistics. It is a three months course and in this course the students will learn the basic statistics; not just how to calculate them, but also how to evaluate them and thereby helping them to apply statistics in real life scenarios.

Course Objective

- To make the learners to understand the fundamental concepts of statistics.
- To make the learners to understand the basic theoretical principles of statistics needed to enter the job force.
- To help the learners to become proficient in using statistical techniques for data analysis.

Course Outcome

After completing this certificate course the students will be able

- To learn about the scope of statistics, concept of statistical survey, population and sample, knowledge of various types of data, their organization and evaluation of summary measures such as measures of central tendency and dispersion etc.
- To learn how to do classification and tabulation of data, diagrammatic and graphic representation of data etc.
- To learn how to calculate correlation and how to carry out regression analysis.
- To learn the basic concepts of probability, rules of probability, conditional probability etc.
- To understand the various steps of a sample survey and the different methods of sampling.

Who Can Attend?

- Those candidates who have passed 10+2 classes or its equivalent.
- The candidates who have been studying in Degree second year onwards can apply for this course.
- The candidates who have completed their graduation and post graduation can also apply for this course.



Course Co-ordination Committee

Advisor

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Course Co-ordinator

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How to Apply?

The students may contact the Course Co-ordinator/Department of Economics of North Kamrup College for registration.

The last date of registration: 15th October, 2020.

Who will take classes?

Highly qualified teachers of our department as well as experts in the field from different colleges/institutions/organizations will take classes.

Registration Fee

Rs. 300 (rupees three hundred) Per student (non-refundable).

Duration: Minimum 32 Contact Hours

SYLLABUS FOR DIPLOMA COURSE ON BASIC STATISTICS

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Course Outline:

Unit-I: INTRODUCTION

Definition and Scope of Statistics; Concept of Statistical Survey; Concepts of statistical population and sample; Collection of Data: Primary and Secondary data, Methods collecting Primary and Secondary data, Classification and tabulation of data, Diagrammatic and graphic representation of data.

Unit-II: CENTRAL TENDENCY AND DISPERSION

Measures of Central Tendency: Arithmetic Mean, Median, Mode and Geometric Mean; Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation.

Unit-III: CORRELATION AND REGRESSION

Correlation: Meaning of Correlation, Types of Correlation, Measurement of Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation, Rank Correlation (Spearman's Method); Regression: Meaning of Regression, Regression lines and Regression equations, Regression Coefficients.

Unit-IV: ELEMENTARY PROBABILITY THEORY

Fundamental Concepts: Experiment, Trial, Events or Cases, Equally likely cases, Mutually exclusive cases, Exhaustive cases, Favourable cases; Definition of Probability; Rules of Probability (Addition and Multiplication); Conditional Probability; Basic Examples.

Unit-V: SAMPLING

Distinction between Sampling and Census; Principal steps in a sample survey; Methods of sampling: Simple Random Sampling, Stratified Random Sampling and Systematic Sampling; Parameter and Statistics.