Probability Theory 1 – An Outline

Here we shall try to understand what we mean by the probability (chance) of an event and how to measure it. We shall consider three approaches – classical, frequency and axiomatic.

As a path to measure probability we shall consider some aspects of combinatorial analysis.

We shall further consider different laws of probability and the theorems connecting them.

Pre-Requisites for this course:

> - Elementary Arithmetic and Algebra.
> - Arithmetic and Geometric Progressions.
> - Infinite series like exponential series, logarithmic series, binomial series with negative index, etc.
> - Permutation and Combination.

Outcome of the Course

> - Knowledge of different approaches to probability and their inter-relations.
> - Elementary Combinatorial Analysis.
> - Different results related to probability theory and their applications.

References:

1. S.M. Ross : A First Course in Probability.

2. K.L. Chung : Elementary Probability Theory with Stochastic Process.

3. W. Feller : An Introduction to Probability Theory and its Application (Vol. 1).

4. A.M Gun, M.K. Gupta, B. Dasgupta : An Outline of Statistical Theory (Vol. 1).