

Integral Economics SEC



Course: Economics

Semester 3rd

SEC-ECO-01

Skill Enhancement Course (SEC); Course Code: SEC-01

Course title: Statistical Tools for Data Analysis

Course objectives: Skill enhancement course (SEC) consists of 4 credits. Each unit carries one credit. Each credit constitutes of 15 marks.

This course introduces the students to collection and presentation of data. It also discusses how data can be summarized and analysed for drawing statistical inferences. The student will also be trained in the use of free statistical methods to analyse data.

4 credits

UNIT I: Collection of Data

Sources of data: primary and secondary data, Population census versus sample surveys, Random sampling.

UNIT II: Graphic Representation of Data.

Histograms, Graphs of frequency curves: frequency polygons, Cumulative frequency curves-Ogives.

UNIT III: Measures of central tendency

Arithmetic mean: calculation of arithmetic mean, merits and demerits; Median- calculation, merits and demerits; Mode: calculation merits and demerits; Geometric mean and Harmonic mean: calculation, merits and drawbacks of GM &HM.

UNIT IV: Measures of dispersion & Skewness

Range; Quartile deviation; Mean deviation; standard deviation; merits and demerits of measures of dispersion.

Skewness- Karl Pearson's coefficient of skewness, Bowley's coefficient of skewness.

Suggested Readings:

1. D.N Elhance, Veena Elhance and B.M. Aggarwal, *Fundamentals of Statistics*.
2. Das, N.G, *Statistical Methods*.
3. Goon, Gupta and Dasgupta, *Fundamentals of Statistics* (volume I)
4. P.H. Karmel and M. Polasek (1978), *Applied Statistics for Economists*, 4th edition, Pitman
5. A.L. Nagar and R.K. Das, *Basic Statistics*, OUP, Second Edition