Integrated Core economics

Semester: 3rd
Credits – 6

Title; Statistical Methods for Economics

Course Code IGECO-C303

Course Description

This is a course on statistical methods for economics. It begins with some basic concepts and terminology like population and sampling. This is followed by a discussion on notion of probability. Finally it deals with computing expected values.

Course outline

Unit 1. Population & Sampling

Population and sample; population parameters and sample statistics; the use of measures of location and variations to describe and summarise data; population moments and their sample counterparts. Principle steps in a sample survey.

Unit 2. Elementary Probability Theory

Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes rule; independence.

Unit 3. Random Variables and Probability Distributions

Defining random variables; probability distributions; expected values of random variables and of functions of random variables; properties of commonly used discrete and continuous distributions (binomial, normal, Poisson and).

Unit 4. Random Sampling and Jointly Distributed Random Variables

Density and distribution functions for jointly distributed random variables; computing expected values; covariance and correlation coefficients.

Unit 5. Tutorial Ist

- Group Discussion : different topics related to course content
- Class Test

Unit 6.Tutorial 2nd

- Home Assignments
- Oral Presentations: different topics related to course content
- Viva Voce

Readings:

- SC Gupta & VK Kapoor; Fundamentals of Mathematical Statistics, S. Chand
- Chandan J S; Statistics for Business & Economics, Vikas Publications
- Gupta S B; Statistical Methods, S Chand
- S C Gupta; Fundamentals of Statistics, Himalaya Publishing House
- Anderson Sweeney Willims et,al; Statistics for Business and Economics, Cengage
- Murray R. Spiegel; Schaums outline Statistics, McGraw-Hill