

Skill Enhancement Elective Courses

Data Analysis (HS31)

Skill Enhancement Elective Courses (SEC) Credit: 4

Course Objective

This is a skill enhancement course for data analysis. The students will be given hands on training on using statistical and computing software to better visualize and understand data concepts. The course is designed to be delivered through 2 classroom lectures and 4 computer lab classes per week.

Course Learning Outcomes

The course will use data simulations and publicly available data sources to help students learn about data types, their organization and visual representation. They will learn how to compute summary statistics and do some basic statistical inference.

Unit 1

Introduction to the course: How can the representation and analysis of data help us study real-world problems. Publicly available data sets

Unit 2

Using Data: Available statistical software, steps in data storage, organisation and cleaning

Unit 3

Visualisation and Representation: Alternative forms of presenting summarising and presenting data

Unit 4

Simple estimation techniques and tests for statistical inference

References

1. Levine, D., Stephan, D., Szabat, K. (2017). *Statistics for managers using Microsoft Excel, 8th ed.* Pearson.
2. Tattar, P., Ramaiah, S., Manjunath, B. (2018). *A course in statistics with R.* Wiley.

Teaching Learning Process

Lectures and tutorials

Assessment Methods

Internal assessment and final examination as per CBCS rules

Keywords

Data representation, statistical software, estimation
