

DEPARTMENT OF STATISTICS
VALUE ADDED COURSE SYLLABUS FOR 2021-2022
STATISTICAL COMPUTATIONAL TECHNIQUES

OBJECTIVES:

The value-added course aims to provide learner centric skill oriented technical training with primary objective of improving the practical skills.

COURSE OUTCOME:

- The students will get to know MS Excel as a powerful data analysis tool.
- The students will be able to perform basic operations such as reading, organising and manipulating data and to use some of the advanced functionalities in Excel.

COURSE DESIGN:

The course consists of 30 hours of interactive sessions and the effectiveness of the value-added course is tested through an online internal examination and one offline examination at the end of the course designed by the department which is made compulsory for all students.

MODULE - I

Unit 1: Introduction to Spreadsheets

Introduction to MS Excel: File opening, saving, data entry, reading data to Excel using various formats, Basic data manipulation, Arithmetic manipulation, Basic functions in Excel: arithmetic as well as various logical functions, formatting rows and columns, Functions using Absolute and Relative References. **(8 hours)**

Unit 2: Spreadsheet Functions to Organise Data

Excel Functions to organise and query data: IF command in Excel using numerical data, Nested IF Command, VLOOKUP and HLOOKUP Functions and examples, the RANDBETWEEN function. **(7 hours)**

MODULE – II

Unit 1: Introduction to Filtering, Pivot Tables, and Charts

Various data filtering capabilities of Excel: Using the VLOOKUP Function across worksheets, Data filtering in Excel, use of Pivot table with categorical as well as numerical data, application of Pivot tables to numerical data, introduction to charting capability of Excel. **(8 hours)**

Unit 2: Advanced Graphing and Charting

Explore various advanced graphing and charting techniques available in Excel: Line, Bar and Pie charts. Using the Pivot chart features, understanding and constructing Histograms, Scatterplot in Excel. **(7 hours)**

References

Austin, K. M., Bergkvist, L. N. (2017). Introduction to Microsoft Office 2016. United States: Goodheart-Willcox Company, Incorporated.