

**“Education through self-help is our motto”-Karmveer
Rayat Shikshan Sanstha’s
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Statistics
Information regarding Skill Development Courses/Career Oriented Courses**

Name of the Department: Department of Statistics

Course name: Certificate Course in Advanced Excel

Course Coordinator name & Contact number: Dr. Tejaswi S. Kurane (8928650101)

Duration: 30 days

Course Fee: Rs. 500/-

Eligibility: It's suitable for post-graduate and researchers from any field that uses statistical computing.

Minimum intake Capacity: 20

Objectives of the Course:

This course aims to provide knowledge about how to

- Apply advanced formulas to lay data in readiness for analysis
- Use advanced techniques for report visualizations
- Understand various statistical methodologies of summarizing data

Learning Outcomes: At the end of the course, students should be able to:

- Import and export data from other applications.
- Share workbooks with others.
- Identify the different components of the Excel worksheet.
- Open an existing workbook and create a new workbook
- Save and print workbooks.
- Enter text and formulas in to an Excel spreadsheet ·
- Work with cell references.

- Create a spreadsheet to tabulate and record numeric values
- Learn to use functions and formulas.
- Create and edit charts and graphics.
- Create, sort, and filter table data
- Differentiate between formulas and functions in Excel. .
- Save and print workbooks.
- Construct formulas, including the use of built-in functions, and relative and absolute references.
- Create charts and share information.

Syllabus:

1. Why Microsoft Excel?

1.1 Introduction to Ms-Excel, features of Ms-Excel, starting and ending of Ms-Excel, getting help in Ms-Excel.

1.2 workbooks and worksheets, moving the cell pointer, Excel file operations, opening file ,entering data, text entry, text editing, copying cells contents, spell check, formatting numbers in cells, cells merging, alignment property page,

1.3 Writing and using formulae in Excel

1.4 Mathematical and Statistical Functions using Excel.

a) Absolute value, combination, Exponent, Factorial, multinomial, Random numbers, Square root, sum.

b) Statistical Functions: Mean, geometric mean, Harmonic mean, mode, median, quartile, deciles, percentiles, variance.

2. Diagrams:

Simple bar diagram, subdivided bar diagram, multiple bar diagram, Pie diagram

3. Graphs:

Histogram (both equal and unequal class intervals), frequency polygon, ogive curves, empirical distribution function.

4. Measures of central Tendency:

Computation of following measures for all types of data. Mean, mode, median, quartiles, Deciles, Percentiles, Geometric mean, Harmonic mean.

5. Measures of dispersion:

Computation of following measures for all types of data. Range, Quartile Deviation, Variance, Standard Deviation, Coefficient of Variation, Mean Deviation, Mean Squared Deviation.

6. Cell formatting, conditional formatting, Data manipulation using EXCEL: sort and filter

find and replace, text to columns, remove duplicate, data validation, consolidate, what-if-analysis. Working with Multiple Worksheets and Workbooks. Built-in mathematical and statistical functions for obtaining descriptive statistic, computing PMF/PDF, CDF and quantiles of the well-known distributions, rand and randbetween function, Logical functions: if, and, or, not. Lookup functions: hlookup, vlookup, Formula Errors, Creating and Working with Charts, Database functions, Text functions, Date and time functions, Excel add-ins: analysis tool pack, Pivot tables and charts.