SYLLABUS
For
Value Added Course

Certificate Course
In
Data Analytics Using Excel

Department of Information Communication and Technology

TECNIA INSTITUTE OF ADVANCED STUDIES
GRADE 'A' INSTITUTE
3 PSP, Institutional Area, Sector – 14, Rohini, Delhi – 11008

COURSE MODULE

Course Code-MCA 503
Course Name- Data Analytics Using Excel

Duration: 30Hrs
Credit: 2

LEARNING OBJECTIVES:

In this course, the learners will be able to develop expertise related to the following:-

- Develop proficiency in using complex formulas and functions such as VLOOKUP, INDEX-MATCH, SUMIFS, and PivotTables.
- Descriptive and inferential statistics and its application to real world problems.
- Data analysis using different statistical tools and techniques.
- Learn how to analyze and manipulate large datasets, perform data cleaning, and apply advanced filtering and sorting methods.

PRE-REQUISITES:

Basic & Advanced knowledge of Excel

Unit -I

Introduction to Excel   (5 hours)

About Excel & Microsoft, Uses of Excel, Excel software, Spreadsheet window pane, Title Bar, Menu Bar, Standard Toolbar, Formatting Toolbar, the Ribbon, File Tab and Backstage View, Formula Bar, Workbook Window, Status Bar, Task Pane, Workbook & sheets

Columns & Rows

Selecting Columns & Rows, Changing Column Width & Row Height, Auto fitting Columns &Rows, Hiding/ Unhiding Columns & Rows, Inserting & Deleting Columns & Rows, Cell, Address of a cell, Components of a cell– Format, value, formula, Use of paste and paste special

Functionality Using Ranges.

Using Ranges, Selecting Ranges, Entering Information into a Range, Using AutoFill

Unit-II

Creating Formulas   (7 hours)

Using Formulas, Formula Functions – Sum, Average, if, Count, max, min, Proper, Upper, Lower, Using Auto Sum,

Advance Formulas

Concatenate, V lookup, H lookup, Match, Count If, Text, Trim

Spreadsheet Charts

Creating Charts, Different types of chart, Formatting Chart Objects, Changing the Chart Type, Showing and Hiding the Legend, Showing and Hiding the Data Table

Unit -III

Data Analysis   (8 Hours)

Sorting, Filter, Text to Column, Data Validation

Pivot Tables

Creating Pivot Tables, Manipulating a PivotTable, Using the Pivot Table Toolbar, Changing Data Field, Properties, Displaying a Pivot Chart, Setting PivotTable Options, . Adding Subtotals to Pivot Tables

Spreadsheet Tools
(10 hours)

Moving between Spreadsheets, Selecting Multiple Spreadsheets, Inserting and Deleting Spreadsheets Renaming Spreadsheets, Splitting the Screen, Freezing Panes, Copying and Pasting Data between Spreadsheets, Hiding, Protecting work sheets

Making Macros

Recording Macros, Running Macros, Deleting Macros

Final Project and Review

Applying Excel Skills to a Real-world Project, Review of Key Concepts, Q&A Session

Text Books

1. Data Analytics Made Accessible: "A. Maheshwari", Sandra Durcevic, 2018.
2. Advanced Excel Success: A Practical Guide to Mastering Excel: "Alan Murray", O'Reilly, 2020.
3. Microsoft Excel 365 Bible: The Comprehensive Tutorial Resource: "Michael Alexander and Dick Kusleika", Wiley, 2022.

References:

1. Excel 2019 Bible: "Michael Alexander and Richard Kusleika" , Wiley , 2019.
2. Excel 2019 For Dummies: "Greg Harvey" , Wiley, 2019.
3. Excel Dashboards and Reports: "Michael Alexander and John Walkenbach", Wiley, 2010.