



Heritage Status

Microsoft Excel

A Comprehensive 45-Hour Course for Second-Year Students

St. Bede's College, Shimla · Beginner to Advanced · 45 Hours

FUNDAMENTALS

DATA MANAGEMENT

FORMULAS & FUNCTIONS

DASHBOARDS

AUTOMATION



Course Objectives

By the end of this course, students will be equipped to use Excel confidently — from basic data entry to building interactive dashboards and automating routine tasks.



Interface & Workbooks

Navigate Excel's environment, manage workbooks, and use essential shortcuts.



Data Entry & Formatting

Enter, format, and style data professionally.



Formulas & Functions

Build formulas and apply logical, text, and lookup functions.



Data Cleaning & Validation

Clean, validate, and maintain data integrity at scale.



Charts & Visualization

Create charts and visual reports to communicate insights clearly.



Pivot Tables & Dashboards

Summarize large datasets and build interactive dashboards.



Business & Research

Apply Excel to real-world scenarios in HR, finance, and academia.

Getting Started with Excel



Introduction to Excel

- Workbook & Worksheet structure
- Rows, Columns & Cells
- Ribbon & Quick Access Toolbar
- Essential keyboard shortcuts

Data Entry & Formatting

- Cell formatting & number formats
- Conditional Formatting rules
- Creating and styling Tables

Practical Activities: Student Record Sheet · Attendance Sheet · Marks Sheet

Working with Formulas

Formulas are the engine of Excel. Students progress from basic arithmetic to powerful logical and text functions that automate real tasks.



Basic Formulas

SUM, AVERAGE, MIN, MAX, COUNT
— the building blocks of every spreadsheet.



Logical Functions

IF, IFS, AND, OR, NOT — make Excel respond intelligently to conditions.



Text Functions

LEFT, RIGHT, MID, CONCAT, TEXT — manipulate and combine text strings with precision.



Practical Activities: Result Sheet Automation · Grade Calculation System

Managing Large Data

Data Tools

- Sort&Filterfor quick navigation
- AdvancedFilter forcomplex queries

Data Validation

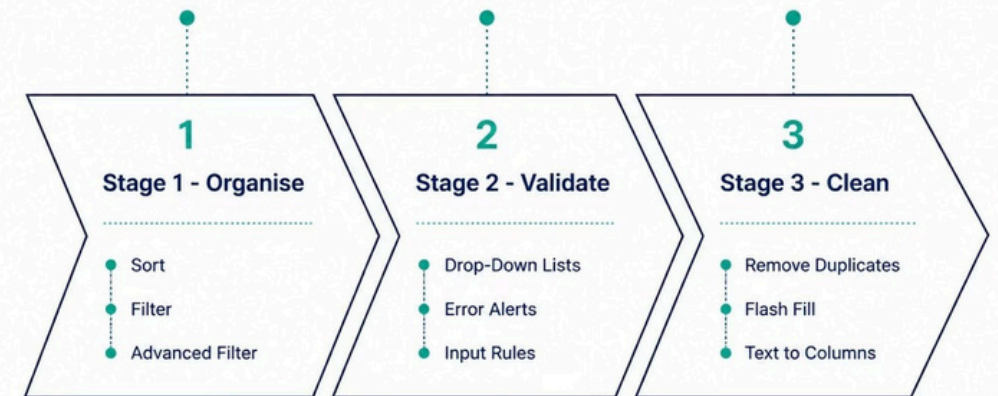
- Drop-Down Listsforcontrolled input
- ErrorAlerts topreventmistakes

Data Cleaning

- Remove Duplicates
- Flash Fill & Text to Columns



Practical Activities: Employee Database · Student Database Management



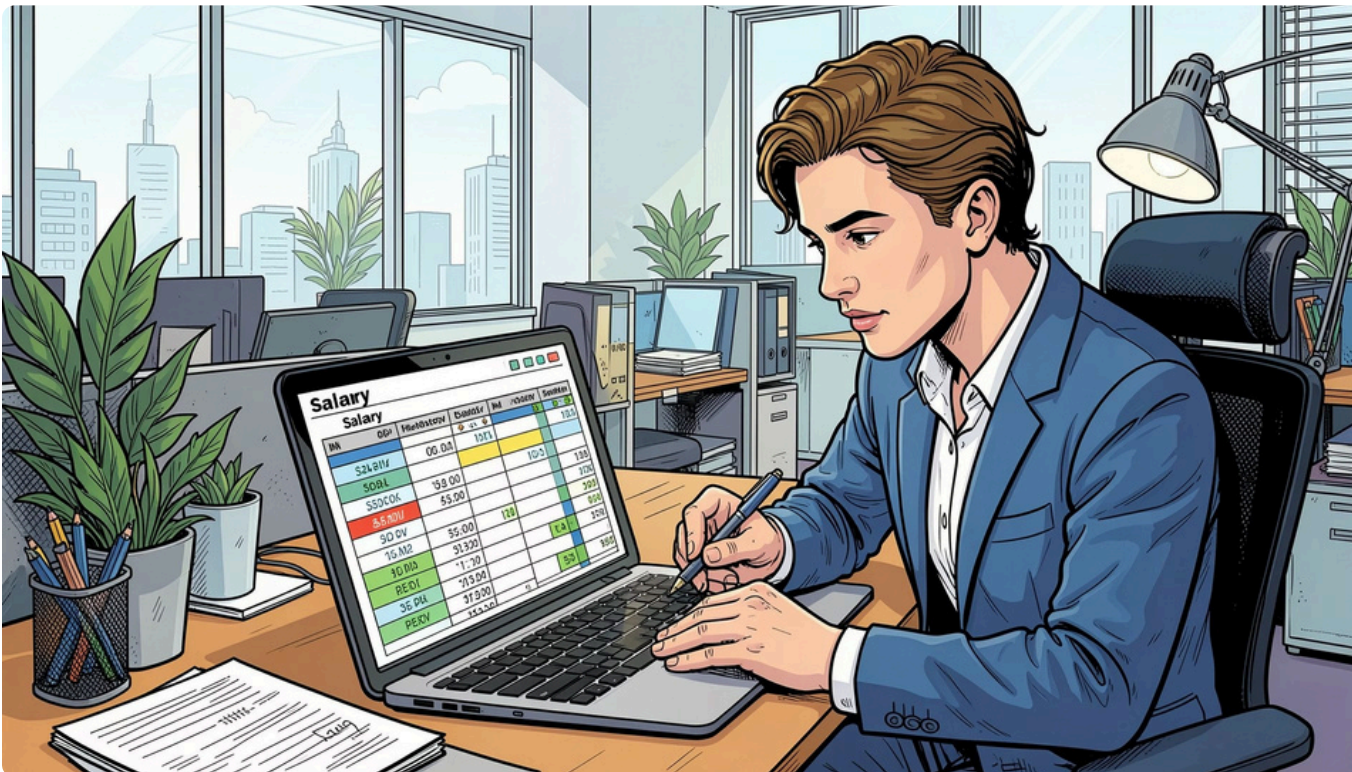
Advanced Excel Functions

Lookup Functions

VLOOKUP, HLOOKUP, XLOOKUP, INDEX & MATCH 4 find and retrieve data across large tables with speed and accuracy.

Date & Time Functions

TODAY, NOW, DATEDIF, NETWORKDAYS 4 calculate durations, deadlines, and working days automatically.



Practical Activities: Employee Salary System · Inventory Management

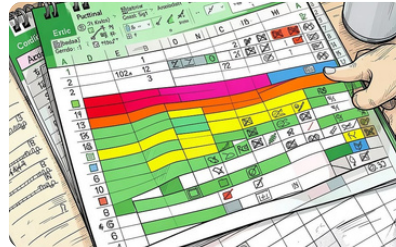
Data Visualization

Transform raw numbers into clear, compelling visual that tell a story at a glance.



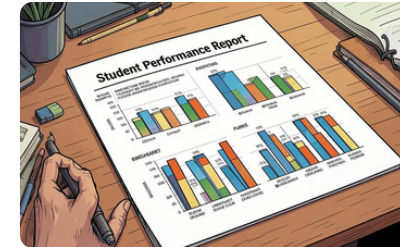
Charts

Column, Bar, Line, Pie, and Combo charts 4 choose the right visual for every dataset.



Conditional Formatting

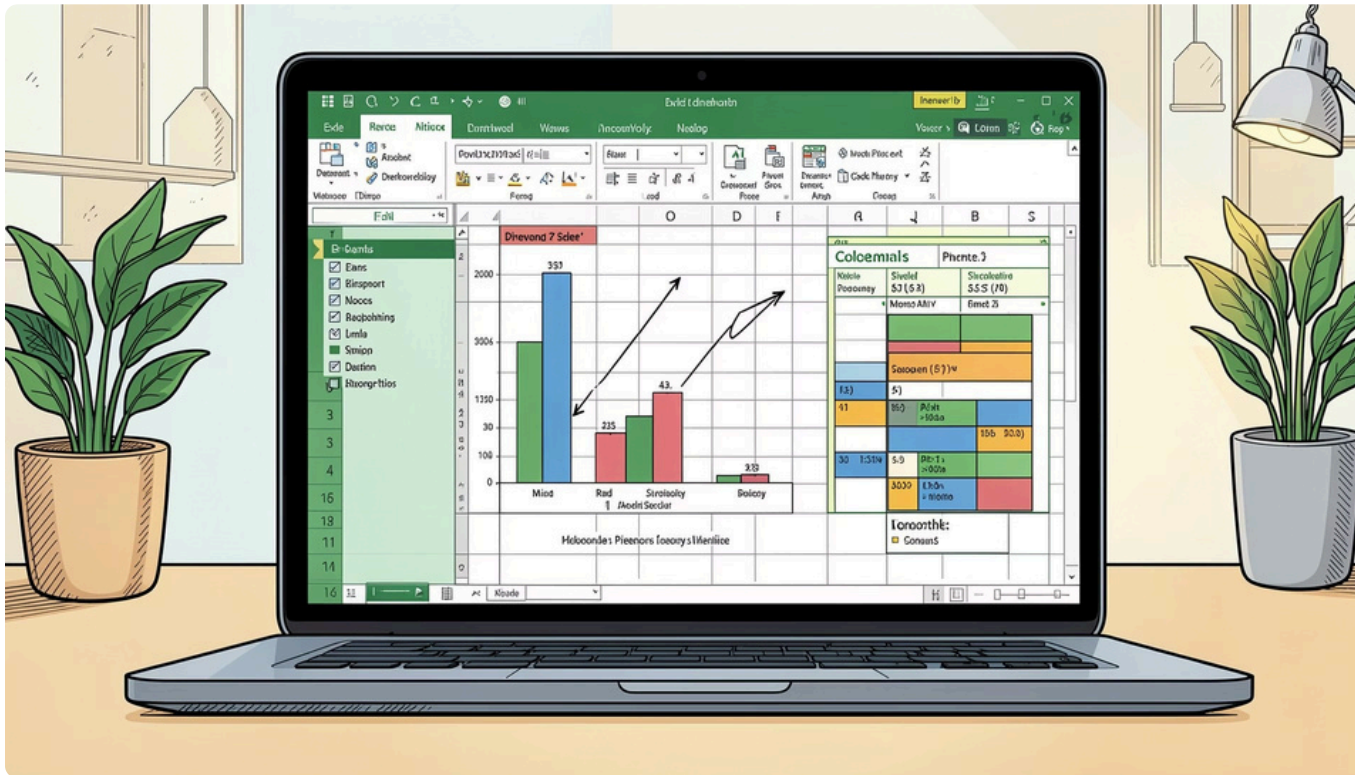
Data Bars, Color Scales, and Icon Sets highlight trends and outliers instantly.



Practical Outputs

Sales Analysis Dashboard and Student Performance Report 4 real outputs from real data.

Pivot Tables & Dashboards



Pivot Tables

- Create and configure Pivot Tables
- Group and summarize large datasets
- Build CalculatedFields

Dashboard Design

- Define KPIs for your data
- Build interactive reports with Slicers
- Link Pivot Charts for dynamic views

Practical Activities: College Data Dashboard · Business Dashboard

Productivity & Automation

Excel Automation Basics

- Named Ranges for cleaner formulas
- Reusable Templates for consistency
- Introduction to Macros for task automation

Business Applications

- HRReports& employee tracking
- Sales Reports & financial tracking
- Academic records management

Mini Projects

- AttendanceManagement System
- Expense Tracker
- Result Management System
- Sales Dashboard

Course Outcomes & Assessment

What You Will Achieve

Create professional spreadsheets

Analyze and visualize data

Use advanced functions confidently

Build dashboards & reports

Automate repetitive tasks

Apply Excel in business, research & academics

