

DegreeLive

FUNDAMENTALS OF SPREADSHEET IN BUSINESS

BBA Semester 2 – Calicut University

MODULE 1: SPREADSHEET FOUNDATIONS AND NAVIGATION

Introduction to Spreadsheet

1. A spreadsheet is software used to store, organize, calculate and analyze data in tabular form.
2. Data is arranged in rows and columns.
3. Most commonly used spreadsheet software is Microsoft Excel.

Functions of Spreadsheet

1. Data storage.
2. Calculations.
3. Data analysis.
4. Chart creation.
5. Report preparation.

Uses

1. Budgeting.
2. Payroll preparation.
3. Inventory tracking.
4. Sales analysis.
5. Financial reporting.

Limitations

1. Human data-entry errors.
2. Difficult to manage very large datasets.
3. Security risks if not protected.

Microsoft Excel and Workbook Basics

Microsoft Excel

1. Spreadsheet application developed by Microsoft.
2. Used for calculations, analysis and visualization.

Workbook

1. Excel file containing one or more worksheets.

Worksheet

1. Individual spreadsheet inside a workbook.

Basic Spreadsheet Skills

1. Entering data.
2. Editing data.
3. Using formulas.
4. Formatting cells.
5. Creating charts.

Excel Help System

1. Built-in support for formulas, functions and features.

Opening, Saving and Closing Workbooks

1. **Open** → Existing Excel file.
2. **Save** → Stores changes.
3. **Save As** → Creates a new copy.
4. **Close** → Exits workbook.

Data Entry and Manipulation

Data Types

1. **Text:** Examples: Name, Address.
2. **Numbers:** Examples: Sales figures, Quantity.
3. **Dates:** Examples: 01/01/2025, 15/08/2025.

AutoFill

1. Automatically fills a series of values.
2. Saves time during data entry.
3. Examples: Months, Dates, Number sequences.

Basic Editing

1. **Insert Rows/Columns:** Add new rows or columns.
2. **Delete Rows/Columns:** Remove unwanted data.
3. **Hide Rows/Columns:** Temporarily hide information.

Data Validation

1. Restricts users to specific types of data entry.
2. Improves accuracy.
3. Example: Allow only whole numbers between 1 and 100.

Formula Basics

1. Formula is an expression used to perform calculations.

Arithmetic Operators

Operator	Function
+	Addition
-	Subtraction
*	Multiplication
/	Division

Examples

```
=A1+B1  
=A1-B1  
=A1*B1  
=A1/B1
```

Order of Operations

1. Excel follows:
 - a. Brackets ()
 - b. Multiplication/Division
 - c. Addition/Subtraction

```
Example:  
=5+2*3  
Result = 11  
Not 21
```

Cell Referencing and Named Ranges

Relative Reference

1. Changes automatically when copied.

2. Example: =A1+B1

Absolute Reference

1. Remains fixed when copied.
2. Uses \$ symbol.
3. Example: =\$A\$1

Named Range

1. Assigning a meaningful name to a cell or range.

2. Example: Sales_Total Instead of: A1:A20

Benefits

1. Easier formulas.
2. Better readability.
3. Reduced errors.

MODULE 2: ESSENTIAL FUNCTIONS AND FORMATTING

Essential Math and Statistical Functions

SUM

1. Adds values.
2. Example: =SUM(A1:A10)

AVERAGE

1. Finds arithmetic mean.
2. Example: =AVERAGE(A1:A10)

MIN

1. Returns smallest value.
2. Example: =MIN(A1:A10)

MAX

1. Returns largest value.
2. Example: =MAX(A1:A10)

COUNT

1. Counts numeric cells.
2. Example: =COUNT(A1:A10)

COUNTA

1. Counts non-empty cells.
2. Example: =COUNTA(A1:A10)

Text Functions

PROPER

1. Converts first letter of each word to uppercase.
2. Example: "john doe" → "John Doe"

UPPER

1. Converts all text to uppercase.
2. Example: "excel" → "EXCEL"

LOWER

1. Converts all text to lowercase.
2. Example: "EXCEL" → "excel"

TRIM

1. Removes extra spaces from text.
2. Example: " John Doe " → "John Doe"

Importance

1. Helps clean and standardize data.

Basic Conditional Logic

IF Function

1. Performs logical tests.
2. Example: =IF(A1>=50,"Pass","Fail")

SUMIF

1. Adds values meeting a condition.
2. Example: =SUMIF(A1:A10,"East",B1:B10)

Uses

1. Performance evaluation.
2. Sales analysis.
3. Attendance tracking.

Number Formatting

Currency Format

1. Displays monetary values.
2. Example: ₹10,000

Percentage Format

1. Example: 25%

Date Format

1. Example: 15-08-2025

Custom Number Format

1. User-defined display format.
2. Example: 0001, 0002, 0003

Benefits

1. Improves readability.
2. Ensures consistency.

Aesthetic Formatting

1. **Font Styles:** Bold. Italic. Underline.
2. **Borders:** Separate and organize data visually.
3. **Cell Shading:** Add background color.
4. **Merge Cells:** Combine multiple cells into one.
5. **Wrap Text:** Displays long text within a cell.
6. **Format Painter:** Copies formatting from one cell to another.

MODULE 3: DATA MANAGEMENT AND VISUALIZATION

Sorting Data

Sorting

1. Arranging data in a specific order.

Single-Level Sorting

1. Sort by one column.
2. Example: Sort names alphabetically.

Multi-Level Sorting

1. Sort using multiple columns.
2. Example: Department first, then salary.

Custom List Sorting

1. Sort based on custom order.
2. Example: January → December.

Benefits

1. Faster analysis.
2. Better organization.

Filtering Data

AutoFilter

1. Displays only records meeting specified criteria.

Text Filters

1. Example: Show only "Marketing" department.

Number Filters

1. Example: Sales greater than ₹50,000.

Benefits

1. Quick data extraction.
2. Easier reporting.

MODULE 4: SIMPLE BUSINESS APPLICATIONS

Basic Business Budget

1. Budget compares expected and actual income and expenses.

Components

1. Budgeted Income.
2. Actual Income.
3. Budgeted Expenses.
4. Actual Expenses.

Using SUM Function

1. Total income calculation.
2. Total expense calculation.

Conditional Formatting

1. Highlights negative differences automatically.

Benefits

1. Expense control.
2. Better financial planning.

Basic Chart Creation

1. **Column Chart:** Compares values across categories.
2. **Bar Chart:** Similar to column chart but horizontal.
3. **Pie Chart:** Shows proportion of total.

Uses

1. Sales reports.
2. Budget analysis.
3. Performance comparison.

Chart Customization

1. **Chart Title:** Describes chart purpose.
2. **Axis Labels:** Explain chart axes.
3. **Legend Placement:** Identifies data series.
4. **Data Series Formatting:** Modify appearance of chart data.

Benefits

1. Improves presentation.
2. Makes charts easier to understand.

Conditional Formatting

1. Automatically formats cells based on rules.

Common Rules

1. **Top 10 Items:** Highlights highest values.
2. **Greater Than:** Highlights values above specified limit.
3. **Less Than:** Highlights values below specified limit.

Uses

1. Identify trends.
2. Detect problems.
3. Highlight important data.

Inventory Stock Tracking

Inventory

1. Goods held for sale or production.

Current Stock Formula

$$\text{Current Stock} = \text{Opening Stock} + \text{Stock Received} - \text{Stock Sold}$$

Data Validation

1. Restricts incorrect stock entries.

Reorder Alert

1. Highlights products reaching minimum stock level.

Benefits

1. Avoids stock-outs.
2. Improves inventory control.

Sales Data Analysis

Monthly Revenue Tracking

1. Records monthly sales performance.

Line Chart

1. Displays revenue trends over time.

Benefits

1. Identifies growth patterns.
2. Detects seasonal changes.
3. Supports forecasting.

Customer Contact Management

Customer Contact List

Contains:

1. Customer Name.
2. Contact Details.
3. Total Spend.
4. Last Order Date.

Excel Table

1. Structured format for managing records.

Sorting

Examples:

1. Highest spending customers.
2. Latest customers.

Filtering

Examples:

1. Customers with purchases above a specified amount.
2. Customers inactive for long periods.

Benefits

1. Better customer management.
2. Faster information retrieval.

Employee Payroll Tracking

Payroll

1. Process of calculating employee earnings.

Gross Pay

$$\text{Gross Pay} = \text{Hourly Rate} \times \text{Hours Worked}$$

Common Deductions

1. Provident Fund (PF).
2. Income Tax.
3. Other deductions.

Net Pay

$$\text{Net Pay} = \text{Gross Pay} - \text{Total Deductions}$$

Benefits

1. Accurate salary calculation.
2. Easy payroll management.
3. Better employee record keeping.