



Indraprastha College for Women

University of Delhi

Course Name:	BA (H) Eco; BA(H) Geography Hindi; BA(H) History; BA(H) MMMC; BA(H) Political Science; B.Com. (H); B.Sc.(H) CS.
Paper Title:	Advanced Spreadsheet Tools
Unique Paper Code:	2346000001
Semester:	V
Faculty(s):	Dr. Rajneesh Prakash Verma
Year:	July – November 2026

Work Plan			
Period	Unit No.	Learning Objective	Topics to be Covered
1 st Aug -3 rd Aug	I	Excel Advanced Techniques	Templates, Efficiency, and Risk (Standard Deviation, Variance, and Coefficient of Variation), Data Validation; *Functions and Power functions, Array Formulae (Frequency Distribution
5 th Aug-10 th Aug	I	Excel Advanced Techniques	mode.mult, mode.sngl), Tables, Advanced Range Names, What-if-analysis: Goal-seek, Data tables, and Scenario Manager; Data analysis ToolPak: Descriptive Statistics, Moving averages, Histogram,
12 th Aug-17 th Aug	I	Excel Advanced Techniques	Covariance, correlation, and Regression analysis (only for projection); solver add-in. Problem Solving using Solver (optimal product mix, workforce scheduling, transportation, capital budgeting, financial planning), Integrating excel with other tools: MS word, outlook, PowerPoint, Access, Power BI
19 th Aug-24 th Aug	II	Excel Interactivity and Automation	Index and Match, Offset, Dynamic Charting; Database functions, Text functions, and Error functions: IfError, IsError, Aggregate, Circular Reference, Formula Auditing, Floating-Point Errors,
26 th Aug-31 st Aug	II	Excel Interactivity and Automation	Form Controls (Button, Combo, Check box, Spinner, List, Option), Visual Basic (only basic). Recording Macros, Absolute and relative macros, editing macros
2 nd Sep-7 th Sep	II	Excel Interactivity and Automation	Use of spinner 50 buttons and command buttons; Sub Procedure, Function Procedure (creating New Functions);
9 th Sep-14 th Sep	II	Excel Interactivity and Automation	Working with Loops: Do_while loop, For_Next loop; Creating User Forms: Message Box, Input Box; If Then Else.
16 th Sep-21 st Sep	III	Introduction to VBA	Conditional Formatting, Charts that Inspire (Waterfall, Column, Line, Combo, Thermometer, Scatter, Histogram);
23 rd Sep-28 th Sep	III	Introduction to VBA	Slicers, Sparklines, Graphics Tricks and Techniques,
30 th Sep-5 th Oct	III	Introduction to VBA	Worksheet Automation using Macros: Absolute and relative macros, editing macros. Creating new functions using macros, Use of spinner buttons and command buttons.

7 th Oct-12 th Oct	IV	Data Analysis and Decision-Making	Working with External Data, Advanced Uses of PivotTables; PowerPivot, Reporting with PowerPivot, Power query,
14 th Oct-19 th Oct	IV	Data Analysis and Decision-Making	Dashboard, Creating a spreadsheet in the area of: Loan and Lease statement; Ratio Analysis; Payroll Accounting; Capital Budgeting (NPV & IRR),
19 th Oct. – 24 th Oct.	AUTUMN BREAK		
4 th Nov-9 th Nov	IV	Data Analysis and Decision-Making	Portfolio Management, Breakeven analysis, and Sensitivity analysis; Operations Management: Constraint, Forecasting & Trend Analysis optimization
11 th Nov-16 th Nov	IV	Data Analysis and Decision-Making	Assignment Problems; Depreciation Accounting (Single Method); Graphical representation of data;
18 th Nov-23 rd Nov	IV	Data Analysis and Decision-Making	Frequency distribution and its statistical parameters; Correlation and Regression Analysis.
25 th Nov-27 th Nov	I, II, III & IV	Case Study	Case Study
28 th Nov	DISPERSAL OF CLASSES		

Unit	TOPICS
I	Unit 1: Excel Advanced Techniques Templates, Efficiency, and Risk (Standard Deviation, Variance, and Coefficient of Variation), Data Validation; *Functions and Power functions, Array Formulae (Frequency Distribution, mode.mult, mode.sngl), Tables, Advanced Range Names, What-if-analysis: Goal-seek, Data tables, and Scenario Manager; Data analysis ToolPak: Descriptive Statistics, Moving averages, Histogram, Covariance, correlation, and Regression analysis (only for projection); solver add-in. Problem Solving using Solver (optimal product mix, workforce scheduling, transportation, capital budgeting, financial planning), Integrating excel with other tools: MS word, outlook, PowerPoint, Access, Power BI.
II	Unit 2: Excel Interactivity and Automation Index and Match, Offset, Dynamic Charting, Database functions, Text functions, and Error functions: IfError, IsError, Aggregate, Circular Reference, Formula Auditing, Floating-Point Errors, Form Controls (Button, Combo, Check box, Spinner, List, Option), Visual Basic (only basic). Recording Macros, Absolute and relative macros, editing macros, Use of spinner 50 buttons and command buttons; Sub Procedure, Function Procedure (creating New Functions); Working with Loops: Do_while loop, For_Next loop; Creating User Forms: Message Box, Input Box; If Then Else.
III	Unit 3: Introduction to VBA Conditional Formatting, Charts that Inspire (Waterfall, Column, Line, Combo, Thermometer, Scatter, Histogram) Slicers, Sparklines, Graphics Tricks and Techniques, Worksheet Automation using Macros: Absolute and relative macros, editing macros, Creating new functions using macros, Use of spinner buttons and command buttons.
IV	Unit 4: Data Analysis and Decision-Making Working with External Data, Advanced Uses of PivotTables, PowerPivot, Reporting with PowerPivot, Power query, Dashboard, Creating a spreadsheet in the area of: Loan and Lease statement; Ratio Analysis; Payroll Accounting; Capital Budgeting (NPV & IRR), Portfolio Management, Breakeven analysis, and Sensitivity analysis; Operations Management: Constraint, Forecasting & Trend Analysis optimization, Assignment Problems; Depreciation Accounting (Single Method); Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression Analysis.
S. No.	Name of Authors/Books/Publishers
1.	Alexander, Michael & Kusleika, Dick. Excel 2016 Power Programming with VBA. Wiley
2.	Sengupta, Chandan. Financial Analysis and Modelling Using Excel and VBA. Second Edition, Wiley Student Edition.
3.	Winston, Wayne. MS Excel 2016, Data Analysis & Business Modelling. PHI
4.	Winston, Wayne. Microsoft Excel 2016 - Data Analysis and Business Modelling Paperback. Microsoft Press.