



Indraprastha College for Women

University of Delhi

Course Name:	B.Sc. (Hons.)/B.Com(Hons.)/B.A.(Hons.)/B.A.
Paper Title:	Advanced spreadsheet tools
Unique Paper Code:	
Semester:	III
Faculty(s):	Ashutosh Rajput
Year:	2024

Work Plan			
Period	Unit No.	Learning Objective	Topics to be Covered
1 st Aug - 3 rd Aug	Unit 1: Excel Advanced Techniques	1.To enable the students to use Excel for advanced data analysis	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
5 th Aug- 10 th Aug		2.To equip the students to with automation skills on excel	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
12 th Aug - 17 th Aug		3.To enable the students to use excel for informed decision making.	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	Unit 2: Excel Interactivity and Automation		Index and Match, Offset, Dynamic Charting, Database functions, Text functions, and Error functions: If Error, Is Error
26 th Aug- 31 st Aug			Aggregate, Circular Reference, Formula Auditing, Floating-Point Errors, Form Controls (Button, Combo, Check box, Spinner, List, Option), Visual Basic (only basic)
2 nd Sep-7 th Sep			Recording Macros, Absolute and relative macros, editing macros, Use of spinner buttons and command buttons; Sub Procedure, Function Procedure (creating New Functions)
9 th Sep- 14 th Sep			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	Unit 3: Introduction to VBA		Conditional Formatting, Charts that Inspire (Waterfall, Column, Line, Combo, Thermometer, Scatter, Histogram)
23 rd Sep- 28 th Sep			Slicers, Sparklines, Graphics Tricks and Techniques
30 th Sep- 5 th Oct			Worksheet Automation using Macros: Absolute and relative macros, editing macros

7 th Oct-12 th Oct			Creating new functions using macros, Use of spinner buttons and command buttons
14 th Oct-19 th Oct	Unit 4: Data Analysis and Decision-Making		Working with External Data, Advanced Uses of PivotTables, PowerPivot, Reporting with PowerPivot, Power query, Dashboard
21 st Oct-26 th Oct			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
28 th Oct-2 nd Nov			MID SEMESTER BREAK
4 th Nov-9 th Nov			Operations Management: Constraint, Forecasting & Trend Analysis optimization, Assignment Problems; Depreciation Accounting (Single Method)
11 th Nov-16 th Nov			Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression Analysis
18 th Nov-23 rd Nov			
25 th Nov-27 th Nov			
28 th Nov	DISPERSAL OF CLASSES		

Unit	TOPICS
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, 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	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 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	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	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.	Excel 2016 Power Programming with VBA, Michael Alexander, Dick Kusleika, Wiley.
2.	Financial Analysis and Modelling Using Excel and VBA, Chandan Sengupta, Second Edition, Wiley Student Edition.
3.	MS Excel 2016, Data Analysis & Business Modelling, Wayne Winston, PHI.
4.	Microsoft Excel 2016 - Data Analysis and Business Modelling Paperback – 1 May 2017 Wayne L. Winston, Microsoft Press.