

Branch Name:	Management
Program Code:	MS101
Course Title:	Data Analysis
Course Code:	23-VAC163-2C
Pre-requisite Course:	Basic computer knowledge, basic Excel, basic maths and statistics

Course Objectives:

1. Perform intricate data analysis and synthesis.
2. Create comprehensive visual representations aiding decision-making processes.
3. Collaborate and integrate data effectively for efficient information exchange.
4. Apply learned skills to solve real-world managerial challenges and communicate insights succinctly.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
-	-	04	02	-	-	25	25	50

Course Contents:

Unit No	Topic	Total Hours	Weightage (%)
1	Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets, working with multiple worksheets and multiple workbooks, controlling worksheet views, naming cells using name box, name create and name define; Exchanging data using clipboard, object linking and embedding; Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae; Implementing file level security and protecting data within the worksheet; Understanding absolute, relative and mixed referencing in formulas, referencing cells in other worksheets and workbooks, correcting common formula errors, working with inbuilt function categories like mathematical, statistical, text, lookup, information, logical, database, date and time and basic financial functions. Conditional formatting.	15	50%
2	Advanced Formulas and Functions (IF, SUMIFS, COUNTIFS, etc.) Data Consolidation and Linking, Introduction to PivotTables and Pivot Charts, Producing a report with pivot tables. Use of solver to solve different business problems, Advanced Charting Techniques, Creating Interactive Dashboards, Conditional Formatting and Sparklines, Macros and Automation in Spreadsheets, Optimization Tools and Solver, What-If Analysis and Scenario Manager.	15	50%
	Total Hours	30	100%

Text Books:

- Microsoft Excel 2016 Data Analysis and Business Modeling, Wayne L. Winston, PHI
- Microsoft Excel 2016 Bible, John Walkenbach, Wiley

- Microsoft Office 2013 Digital Classroom by Walter Holland and the AGI Creative Team, Wiley

Reference Books:

- Wayne L. Winston, Data Analysis and Business Modeling [Chapter 18, 29-36, 41-48, 52]
- Microsoft Excel 2016 Bible, John Walkenbach [Part V, Chapter 32-36]

List of Open-Source Software/learning website:

- <https://nptel.ac.in/>
- <https://swayam.gov.in/>
- <https://support.microsoft.com/en-au/office/excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>

Course Learning Outcomes (CLO):

1. Demonstrate proficiency in utilizing a wide array of advanced spreadsheet functions and tools to manipulate, analyze, and interpret complex datasets efficiently, catering to diverse managerial needs.
2. Apply advanced data analysis techniques, including consolidation, linking, and the application of intricate formulas, to derive meaningful insights and support informed decision-making in managerial contexts.
3. Make meaningful representations of data in the form of charts and pivot tables.
4. Draw analysis on data using spreadsheets and use interpretation to make decisions

Mapping of CLO with PO and PSO

Course Learning Outcomes	Program Outcomes (POs)							Program Specific Outcomes (PSOs)
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1
CLO1		M	H				L	M
CLO2	H				L			H
CLO3			L			M	M	
CLO4		M		M	L			L

H: High, M: Medium, L: Low