

COURSE TITLE	ADVANCED EXCEL
COURSE CODE	04BC0432
COURSE CREDITS	2

Objective:

- 1 NA

Course Outcomes: After completion of this course, student will be able to:

- 1 Understand and perform advanced data operations using Microsoft Excel for efficient data management.
- 2 Apply appropriate security measures to protect workbooks, worksheets, and sensitive data.
- 3 Conduct complex data analysis using Excel functions and tools to support decision-making.
- 4 Design and develop interactive KPI dashboards from scratch to visually represent business performance.
- 5 Convert raw Excel data into meaningful insights and generate structured reports using Excel features.

Pre-requisite of course:NA

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	4	50	50	0	0	0

Contents : Unit	Topics	Contact Hours
1	IMPORTANT EXCEL FUNCTIONS & UTILITIES Creating Table – Sort & Unsort Data – Filter Data – Text to Column – Data Validation – Conditional Formatting– Adding Hyperlinks – Text Functions (TRIM, PROPER, UPPER, LOWER, CONCAT, LEFT, RIGHT, TEXT JOIN), Statistical Functions (COUNT, COUNTA, COUNTBLANK, AVERAGE, MIN, MAX, COUNTIF, COUNTIFS, AVERAGEIF, AVERAGEIFS, MAXIFS, MINIFS) , Financial Functions – Logical Functions (IF, NESTED IF, OR, AND, TRUE, FALSE) , Math Functions (SUM, SUMIF, SUMIFS) Lookup Functions (VLOOKUP, HLOOKUP, INDEX, MATCH) , New Office 365 Functions (XLOOKUP, FILTER, SORT, UNIQUE)	10
2	DATA VISUALIZATION USING EXCEL Chart Elements – Creating Dynamic Charts (Column Chart, Map Chart, Bar Chart, Pie Chart, Doughnut Chart, Stacked Chart, Line Chart, Histogram Chart, Tree Chart, Sunburst Chart, Funnel Chart, Scatter & Bubble Chart) , Inserting Pivot Table – Using Slicers & Timeline – Creating Pivot Charts – Building dynamic Dashboards	10

Contents : Unit	Topics	Contact Hours
3	ADVANCE UTILITIES IN EXCEL Solve problems with Goal Seek & Scenario Manger – Solver - Import Text, CSV & Web Data, Introduction to Power Query – Introduction to Macros & VBA – Recording Macro, Difference between Macros & VBA	10
Total Hours		30

Textbook :

- 1 Excel 2019 Bible, Michael Alexander, Wiley , 2019
- 2 Learn Excel 2016 Essential Skills with the Smart Method: Courseware Tutorial for Self-Instruction to Beginner and Intermediate Level 2016, Mike Smart, Mike Smart, 2016
- 3 Microsoft Excel 2019 Formulas and Functions, Paul McFedries, Pearson, 2019

References:

- 1 Learn Excel 2016 Expert Skills with the Smart Method: Courseware Tutorial Teaching Advanced Techniques, Learn Excel 2016 Expert Skills with the Smart Method: Courseware Tutorial Teaching Advanced Techniques, Mike Smart, Mike Smart, 2016
- 2 Microsoft Excel 2019 Data Analysis and Business Modeling (Business Skills), Microsoft Excel 2019 Data Analysis and Business Modeling (Business Skills), WinstonWayne , WinstonWayne , 2019

Suggested Theory Distribution:

The suggested theory distribution as per Bloom’s taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
0.00	10.00	30.00	25.00	25.00	10.00

Instructional Method:

- 1 Lecture

Supplementary Resources:

- 1 https://www.cmu.edu/finance/training/catalog/instructor/excel/files/advanced_excel.pdf