

## B.S. FINTECH - SEMESTER 3 COURSES

### Course Title: Advance Spreadsheet Tools

Course Code: SEC209-2C

#### Course Outcomes: On successful completion of the course the learner will be able to

- To develop students' proficiency in using advanced features of MS Excel.
- To enable learners to solve real-time financial problems using Excel tools.
- To provide hands-on experience with Excel functions, data analysis, financial modelling, and dashboards.
- To promote data-driven decision-making using Excel in FinTech environments.

| CO Code | Course Outcome Description   | Bloom's Level |
|---------|--|---------------|
| CO1     | Use advanced Excel functions including lookup, logical, and text functions for data handling | APPLYING      |
| CO2     | Perform data visualization using charts, sparklines, and conditional formatting              | ANALYSING     |
| CO3     | Use pivot tables and data tools for data summarization and analysis                          | ANALYSING     |
| CO4     | Automate repetitive tasks using Excel Macros and basic VBA                                   | CREATING      |
| CO5     | Apply Excel techniques to develop financial models and dashboards                            | EVALUATING    |

| Unit No | Unit Content   | Sessions Allotted |
|---------|--|-------------------|
| 1       | <b>Advanced Formulas and Functions</b> <ul style="list-style-type: none"><li>• Logical Functions (IF, AND, OR, IFERROR)</li><li>• Lookup Functions (VLOOKUP, HLOOKUP, XLOOKUP, INDEX-MATCH)</li><li>• Text Functions (TEXT, LEFT, RIGHT, MID, CONCAT, TRIM)</li><li>• Date and Time Functions (TODAY, NOW, DATEDIF, NETWORKDAYS)</li></ul> | <b>4 Hours</b>    |
| 2       | <b>Data Management Tools</b> <ul style="list-style-type: none"><li>• Data Sorting and Filtering (Advanced Filter)</li><li>• Data Validation and Drop-Down Lists</li><li>• Removing Duplicates</li><li>• Named Ranges</li></ul>   | <b>5 Hours</b>    |

|   |   |                |
|---|---|----------------|
|   | <ul style="list-style-type: none"> <li>What-If Analysis (Goal Seek, Scenario Manager, Data Tables)</li> </ul>   |                |
| 3 | <b>Data Analysis with Pivot Tables</b> <ul style="list-style-type: none"> <li>Creating and Modifying Pivot Tables</li> <li>Grouping Data in Pivot Tables</li> <li>Using Slicers and Timelines</li> <li>Pivot Charts</li> </ul>  | <b>4 Hours</b> |
| 4 | <b>Data Cleaning &amp; Financial Functions</b> <ul style="list-style-type: none"> <li>Removing duplicates, handling blank cells</li> <li>Text to Columns, Data Validation</li> <li>Financial Functions: PMT, NPV, IRR, FV, RATE</li> <li>Connecting to external data sources (CSV, Web, Databases)</li> </ul> | <b>3 Hours</b> |
| 5 | <b>Introduction to Macros and VBA</b> <ul style="list-style-type: none"> <li>Recording Macros for automation</li> <li>Basic VBA editor: Sub routines and Functions</li> <li>Writing simple VBA code for repetitive tasks</li> </ul>   | <b>4 Hours</b> |
| 6 | <b>Excel in FinTech Applications</b> <ul style="list-style-type: none"> <li>Budgeting and Forecasting Models</li> <li>Loan amortization and EMI schedules</li> <li>Investment tracking and portfolio analysis</li> </ul>  | <b>6 Hours</b> |
| 7 | <b>Real World Example</b> <ul style="list-style-type: none"> <li>The course prepares students for practical Excel tasks, especially in <b>FinTech</b>, where data analysis, financial modelling, and automation are key.</li> </ul>   | <b>4 Hours</b> |

### Recommended Texts / References

- Excel 2021 Bible – John Walkenbach
- Microsoft Excel 2019 Inside Out - **Bill Jelen**, widely recognized as "MrExcel."
- Excel 2019 All-in-One For Dummies - Michael Alexander
- Microsoft Excel Data Analysis and Business Modelling – Wayne L. Winston
- Lecture Notes.
- Online Excel Courses: Microsoft Learn, Coursera (for supplementary)