

## ADVANCED EXCEL FOR BUSINESS (PRACTICAL)

**Semester – II**  
**4H – 2C**

**19CMP211**

Instruction Hours / week: L: 0 T: 0 P :4

Marks: Internal: 40

External: 60

Total: 100

End Semester Exam: 3 Hours

**COURSE OBJECTIVES:**

To make the students

1. To prepare template to present the financial data for supporting analysis.
2. To use advanced formula in financial calculations
3. To use visualization tools to represent the financial data graphically
4. To forecast the financial data using the inbuilt tools
5. To Understand and apply Sensitivity analysis on models like Goal Seek , Scenarios; for financial decision making

**COURSE OUTCOMES:**

Learners should be able to

1. Apply advanced formulas to lay data in readiness for financial analysis
2. Use advanced techniques for financial report visualizations
3. Leverage on various methodologies of summarizing financial data
4. Understand and apply Sensitivity (“What-if”) analysis models like Goal Seek , Scenarios; Excel models for financial decision making
5. Exhibit communication skills to communicate the output derived from the program.

**EXERCISES**

**Corporate Financial Statements**-Organizing and creating spreadsheets; entering and formatting data values; entering expressions for calculating values; linking worksheets; splitting screens to facilitate working between several worksheets

**Analysis of Financial Statements** - Using logical IF statements; using conditional formatting to call attention to conditions that need correcting; pasting an Excel document into a Word document

**Forecasting Annual Revenues** - Creating, validating, and using linear, quadratic, cubic, and exponential regression models to fit the trends of historical data; creating various types of charts (e.g., scatter diagrams, forecast charts, error patterns, and downside risk curves); estimating the accuracy of forecasts; expressing forecast accuracy in terms of confidence limits and downside risk curves.

**Forecasting Financial Statements** - Using forecasts of revenues to forecast financial statements; using Excel’s Scenario Manager to do sensitivity analysis

**Forecasting Seasonal Revenues** - Creating a seasonally-adjusted forecasting model by joining seasonal adjustments to an annual trend line or a moving average trend line; using error feedback to correct a model so that the average error is zero; using period values to update annual forecasts and revise the model

**Time Value of Money** - Using Excel's financial functions for calculating the present value of a future amount, the future value of a present amount, the net present value of a series of cash flows, periodic payments for mortgages and loans, etc.; linking an Excel worksheet to a Word document.

**Cash Budgeting** - Organizing a spreadsheet into modules for different parts of a company and linking results; using a one-variable input table for sensitivity analysis to evaluate alternate operating tactics.

**Cost of Capital** - Calculating the weighted average cost of capital (WACC); using Excel's Goal Seek and Solver tools to find the value of an independent variable (e.g., return on equity) to satisfy a related goal (e.g., a specified WACC); evaluating the WACC for different amounts of capital raised and creating charts to display the results.

**Profit, Break Even, and Leverage** - Calculating profits from a firm's cash flows; using Excel's Solver tool to determine the sales volume needed to break even; evaluating a firm's operating, financial, and combined leverages

**Capital Budgeting:** - Organizing spreadsheets to move from sales revenues to after-tax cash flows; using Excel's financial functions to calculate depreciation schedules; calculating financial measures of success, such as net present value and internal rate of return; using nested IF statements to determine the discounted years to break even; creating two-variable input tables for sensitivity analysis; using Excel's Solver tool to determine changes that must be made to achieve specified goals, such as a specified net present value or discounted years to break even.

**Applications of Capital Budgeting** - Creating spreadsheets that evaluate the financial payments from various types of capital investments; using one- and two-variable input tables to analyze the sensitivity of financial payoffs to changes in conditions

**Capital Budgeting: Risk Analysis with Scenarios** - Using Excel's Scenario Manager to analyze the effects of various combinations of conditions (e.g., best-on-best, most probable, and worst-on-worst) on future payoffs.

**Capital Budgeting: Risk Analysis with Monte Carlo Simulation** - Using Excel's tools for Monte Carlo simulation; using Excel's random number generator to generate random numbers that follow different probability distributions (e.g., uniform, normal, and triangular distributions) and use the results.

**Valuation of Common Stocks** - Determining the value of shares of common stocks from their expected future cash flows and an investor's expected rate of return; performing sensitivity and risk analysis related to the value of stocks.

**Valuation of Bonds** - Determining the value of bonds from their fixed future cash flows and an investor's expected rate of return; performing sensitivity and risk analysis related to the value of bonds; evaluate the effect of call date on a bond's value.

**SUGGESTED READINGS:**

1. Wayne L. Winston, (2017), Microsoft Excel 2016 - Data Analysis and Business Modeling, Prentice Hall India Learning Private Limited, NewDelhi
2. JohnWalkenbach(2015),MicrosoftExcel2016Bible:TheComprehensiveTutorialResource, Wiley India, NewDelhi.
3. Manohar Hansa Lysander (2016), Data Analysis and Business Modelling Using Microsoft Excel , PHI, NewDelhi.
4. K. Scott Proctor (2010), Building Financial Models with Microsoft Excel: A Guide for Business Professionals, 2nd edition, Wiley, NewDelhi.
5. Chandan Sengupta (2011), Financial Analysis and Modeling using Excel and VBA, 2nd edition, Wiley, NewDelhi.