Elective Course 3: Financial Modelling

Course Type:	PS: Program Specialisation	Course Credits:	2
Course Code:	F3PE511	Course Duration:	30 Hours

Course Objective:

- To equip students with practical skills in Excel-based financial modelling, including data analysis, visualization, automation using macros/VBA, and the creation of professional models for credit appraisal, working capital analysis, project financing, and business reporting.

Course Outcomes:

- CO1: Demonstrate proficiency in Excel functions and tools including formatting, formulas, charts, pivot tables, and scenario analysis essential for building financial models.
- CO2: Explain and utilize the Visual Basic Environment (VBE) to record and apply basic macros for automating financial modeling tasks.
- CO3: Apply financial modeling techniques to credit appraisal scenarios, including personal and housing loans and credit scoring, using practical datasets.
- CO4: Evaluate structured financial models for output based on user requirements and financial documentation.
- CO5: Construct and analyse financial models for working capital and project finance, including financial statements, key ratios, repayment schedules, sensitivity analysis, and comprehensive reporting.

Unit / Module	Content	CO Mapping	Hours Assigned
1	Introduction to Financial Modeling, Introduction to financial modes - static vs dynamic models, need and applications; **Excel Proficiency** Formatting of excel sheets, use of excel formulae function, data filter and sort, charts and graphs, table formula and scenario building, lookups, pivot tables.	CO1	3

2	Visual Basic Environment (VBE): Understanding thebasics of macros, recording of macros.	CO1, CO2	2
3	Combining the Tools and Theory into the model: Define and structure the problem, define the input and output variables of the model, decide users of the model, understand the financial and mathematical aspects of the model, design the model, create the Spread sheet, test the model, protect the model,	CO2, CO4	3
4	Credit Appraisal Techniques through Modeling Application of Modeling for: housing loan assessment; personal loan assessment; Credit Scoring Models (CIBIL) credit assessment.	CO1,CO2, CO3	4
5	Working Capital Assessment Model Projected Profit and Loss Statement, Balance Sheet, Cash Flow Statement, Key Ratios (including Current ratio & Interest Coverage), Sensitivity Analysis, Assessment of MPBF.	CO3, CO4, CO5	7
6	Project Finance Modelling Projected Profit and Loss Statement, Balance Sheet, Cash Flow Statement, Repayment Schedule, Key Ratios (Including ICR and DSCR), Break-even & Payback Period, Risk Assessment (Technical, Financial & Operational), sensitivity analysis	CO3, CO4, CO5	8
7	Report writing Report writing for project funding and working capital, Retail Loans.	CO3, CO4, CO5	3

Textbooks:

1. C. Sengupta, Financial Modeling using Excel and VBA
2. Alastair L. Day, Mastering Financial Modeling in Microsoft Excel
3. Simon Beninga, Financial Modeling

Reference Books:

1. Alistair L. Day, Mastering Risk Modeling
2. Dr. Manu Sharma, Mergers and Acquisitions and Corporate Valuation- An Excel Based Approach
3. John D. Finnerty , Project Financing- Asset based financial Engineering
4. Daniele Stein Fairhust, Financial Modeling in Excel
5. Alastair L. Day, Mastering Financial Modelling in Microsoft® Excel
6. R.K. Gupta & Himanushu Gupta , Credit Appraisal & Analysis of Financial Statement: A Handbook for Bankers and Finance Managers
7. R.K. Gupta & Himanushu Gupta, Working Capital Management & Finance : A Handbook for Bankers and Finance Manager