

**SEMESTER IV****FINANCIAL MODELING****1. Course Description**

Programme: M. Com (Finance and Analytics)

Course Code:P24/COM/DSE/401/P

Type of course: DSE

No. Of Credits 5

Max Hours: 105

Max Marks: 100

Hours per week: 3T+4P hrs

**2. Course Objectives**

- To enable students to present management information and key performance indicators in a decision-oriented manner
- To gain expertise in spreadsheet functions and tools to build efficient models and use of scenario analysis.

**3. Course Outcome:** At the end of the course, the student will be able to

CO 1 Explain what financial models are and understand how to use various Excel functions to prepare a model.

CO 2 Apply different methods to prepare and present a financial model visually.

CO 3 creating models using forecasting techniques to aid in an organization's financial planning

CO 4 Analyse various business scenarios and prepare a sensitivity report

CO 5 Understand the process of developing a usable dynamic financial model.

**4. Course Content**

MODULE I: INTRODUCTION (21 Hrs)

Concept of financial Modeling- difference between spread sheet and model-types and purposes of financial model-skills required for a good modeller- best practices in spread sheet design-tool selection- Excel for financial modeling:

Excel features-financial – logical- statistical - mathematical, lookup reference. Custom formatting- shortcuts- array functions - pivot tables analysis – Tool pak-nested-cell references -named ranges-working with dates-linking external file- Useful windows keyboard shortcuts for financial modellers

MODULE II: BUILDING AND PRESENTING A MODEL (21 Hrs)

Attributes of a good model- documenting excel model-debugging excel model- error avoidance strategies -using formula auditing tools for debugging-learning modeling using excel-graphic and written presentation-chart types-bubble and waterfall charts-charting with two different axes

### MODULE III: USES OF FINANCIAL MODELLING

(21 Hrs)

Basic financial forecasting- Forecasting Models: Review of forecasting methods; financial "drivers"; Adding forecasts to the case models. Depreciation- project finance- bond calculation-capital budgeting-BEP-variance-cash flow-cost of capital-(simple models building exercises)

### MODULE IV: RISK MANAGEMENT, STRESS TESTING AND SCENARIO ANALYSIS AND SENSITIVITY ANALYSIS:

(21 Hrs)

Risk analysis and management- Risk Techniques: Risk and multiple answers- Scenario techniques - advanced financial functions- adding sensitivity to the case model- Advanced scenario methods- Composite methods.

Understanding stress testing and scenario analysis and sensitivity analysis- difference between scenario- sensitivity and what if analysis-overview of scenario tools-advanced conditional formatting- model review and checklist (theory)

### MODULE V: MANAGEMENT REPORTING AND MODEL COMPLETION

(21 Hrs)

Management Reporting: Requirement to consolidate and summarize data- consolidating data from different sources- spread sheet report managers- pivot tables- Techniques for summarising data- producing a management analysis. Model Completion: Model review- rebuilding an inherited- removing redundant assumptions and source data –auditing a financial model- Documentation- Final audit.

### Practicals

- Using excel functions with emphasis on array, pivot, nesting, goal seek
- Simple chart creation, understanding erroneous models, audit tool usage, simple bubble and waterfall charts.

- Depreciation- project finance- bond calculation-capital budgeting-BEP-variance-cash flow-cost of capital-Investment analysis-option pricing- decision tree-company valuation-(simple models building exercises).
- Sensitivity analysis in a model
- Preparing a report.

## 5. References:

1. Alastair Day, Mastering Financial modeling in Microsoft Excel; Pearson, India Edition
2. Danielle Stein Fairhurst ,Using excel for business analysis, Wiley finance
3. Ragnar Lavas Et al ,Financial Modeling and Asset valuation with Excel; Routledge
4. S Benninga Financial Modeling, MIT Press.
5. Building Financial Models, John Tjia ,McGraw-Hill.

**COMPUTER LAB BASED END SEMESTER TESTING**

**FINANCIAL MODELING**

Course Code: P24/COM/DSE/401/P

Max Marks: 60

Credits: 5

Time: 2 ½ HOURS

**SECTION A**

**I. COMPUTER BASED TESTING**

5 x 10 = 50 Marks

**SECTION B**

**I. THEORY BASED QUESTIONS ON CONCEPTS**

5 x 2 = 10 Marks