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| **PROGRAM** | **Master of Business Administration**  |
| **SEMESTER**  | **3** |
| **COURSE TITLE** | **Financial Modeling and Analytics** |
| **COURSE CODE** | **04MB0404** |
| **COURSE CREDITS** | **3** |
| **COURSE DURATION** | **42 Hours (42 sessions of 60 minutes each** |

**COURSE OUTCOMES:**

* To understand Financial Modeling and use of MS Excel in Financial Modeling
* To analyze performance of a firm in terms of Profit and loss, Balance sheet and Cash flow Analysis
* To Develop an integrated knowledge of Forecasting Model of Financial statement
* To develop and design the model for analysis of securities
* To Develop knowledge of Investment Analysis

**COURSE CONTENTS:**

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| **Unit No** | **Unit / Sub Unit** | **Sessions** |
| **I** | **Introduction to Financial Modeling** : What is Financial Model, Excel as Modeling tool, Independent and Dependent Variable, Steps in Creating Model – Define and Structure Problem, Define Variable, User of the Model, Design, Spreadsheet, Test the model, Protect and Documentation of Model, Update Model, Overview of **Financial Modeling Using Excel -**overview on Basic and Advanced Functions(Relative Cell reference, Creating Name for Cell and Range, Data Table, Scenario Manager, Goal Seek, Logical Functions, Data Validation, Conditional Formatting, Solver, Pivot table), Financial Functions – Annuity, PV, FV, PMT, NPER, RATE, IPMT, PPMT, TVM Functions, | 06 |
| **II** | **Analyzing Performance and Cash flow Analysis -** Profit and loss, Balance sheet, Key ratios – Du Pont ratios (core ratios), Profitability, Operating efficiency, Leverage, liquidity and capital structure, Coverage on interest, Trend analysis, SustainabilityCash flow - Deriving cash flow – NOCF, free cash flow, Cover ratios | 08 |
| **III** | **Forecasting Model and Forecast Financials -** Linear regression and Multiple Regression, Trend lines, Trend lines for analysis, Data smoothing – Simple Moving Average and Exponential Moving Average, Forecast financials Key drivers - Deriving financial statements Analysis | 10 |
| **IV** | **Portfolio Analysis and Bonds Pricing -**Review Of Theory And Concept, Model 1: Calculating Total Returns, Model 2: Comparing Returns On Several Assets, Model 3: Comparing Nominal And Real Growth Of Investment, Model 4: Comparing Rolling Period Returns, Simulating Stock Prices : Model 1: Estimating A Stock’s Volatility, Model 2: Simulating Stock Prices, Model 3: Lognormal Distribution Of Stock Prices, Bonds Pricing- Yield measures - Yield to maturity, Duration, Sensitivity Chart and modified duration | 08 |
| **V** | **Investment analysis** Investment model revisited, Payback and discounted payback, Accounting Return, Net present value, Fisher Formula, Internal rate of return, Benefit Cost Ratios, Management tests – cash flow etc., Scenarios, Sensitivity analysis and graphs, Capital rationing – Solver and Solver Chart | 10 |

**EVALUATION:**

The students will be evaluated on a continuous basis and broadly follow the scheme given below:

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|  | **Component** | **Weightage** |
| A | Continuous Evaluation Component (Assignments / Quizzes / Class Participation etc.)  | 20% (C.E.C.)  |
| B | Internal Assessment (Lab based Practical Examination using software) | 30% (I.A.)  |
| C | End-Semester Practical Examination | 50% (Practical/VIVA) |

**SUGGESTED READINGS:**

**Text Books:**

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| **Sr. No** | **Author/s** | **Name of the Book**  | **Publisher** | **Edition and Year**  |
| **T-01** | C. Sengupta  | Financial Modeling Using Excel and VBA  | John Wiley & Sons, Inc. | 1st Edition, Year 2004 |
| **T-02** | Alstair L. Day | Mastering Financial Modeling in Microsoft Excel: A Practitioner’s Guide to Applied Corporate Finance | FT Publishing International | 3rd Edition, Year - 2012 |

**Reference Books:**

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| **Sr. No** | **Author/s** | **Name of the Book**  | **Publisher** | **Edition and Year**  |
| R-01 | Alistair L. Day  | Mastering Risk Modeling: A Practical Guide to Modeling Uncertainty with Excel | Prentice Hall  | Second Edition, 2008 |
| R-02 | Sengupta Chandan  | Financial Analysis and Modeling  | Wiley India Pvt. Ltd.  | Second Edition, 2009 |