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| **Course Title** | **FINANCIAL ANALYSIS AND MODELLING** | | | | **Credits** | **3** | |
| **Course Code** | **MGT 3129** | **Course category** | **OE** | | **L-T-P-S-C** | **2-0-0-4-3** | |
| **Version** | **1.0** | **Approval Details** | **ACM** | **LEARNING LEVEL** | | | **BTL-6** |
| **Course Description** | The primary objective of this course is to develop the abilities in students to acclimatize themselves to model-building in the domain of finance. The focus of this course will be on reducing numerical in finance and accounting into intrinsic variables of model-building which would enable managerial decisions. The students are expected to leave the course with a strong hold on the use of MS-Excel applied to appropriate managerial decision-making | | | | | | | |
| **Course Objective** | * To help the students understand the variables of financial problems experienced on a day-to day basis. * To facilitate recognition how MS excel can be used as a platform for financial model-building. * To help students understand creation of different financial models used in day-to-day operations. | | | | | | | |
| **Course Outcome** | Upon completion of this course, the students will be able to: | | | | | | |
| 1. Identify and Analyze financial modelling variables and develop the ability to build small real time financial models in MS Excel. | | | | | | |
| 1. Develop the ability to analyze and create financial accounting, cost accounting and management accounting models in MS Excel. | | | | | | |
| 1. Develop the ability to analyze and create financial models for managerial decision making in MS Excel. | | | | | | |
| 1. Develop the ability to do shareholder value analysis and investment analysis besides creating personal finance decision models in MS Excel. | | | | | | |
| 1. Develop the ability to do financial analysis using Time Series etc through statistical techniques in MS Excel. | | | | | | |
| 1. Develop the ability to conceptualize, create and develop real life practical Equity Valuation Models in MS Excel. | | | | | | |

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| **CO, PO and PSO Mapping** | | | | | | | | | | | | | | | |
| **CO** | **PO -1** | **PO-2** | **PO-3** | **PO-4** | **PO-5** | **PO-6** | **PO-7** | **PO-8** | **PO-9** | **PO -10** | **PO-11** | **PO-12** | **PSO-1** | **PSO-2** | **PSO-3** |
| **CO-1** | **3** | **3** | **-** | **-** | **-** | **-** | **-** | **-** |  |  |  | **-** | **3** | **2** | **3** |
| **CO-2** | **3** | **3** | **-** | **-** | **2** | **-** | **-** | **-** |  |  |  | **-** | **3** | **2** | **3** |
| **CO-3** | **3** | **3** | **-** | **-** | **2** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **3** | **3** | **3** |
| **CO-4** | **3** | **3** | **-** | **-** | **2** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **3** | **3** | **3** |
| **CO-5** | **3** | **3** | **-** | **-** | **2** | **2** | **-** | **-** | **-** | **-** | **-** | **-** | **3** | **1** | **3** |
| **CO-6** | **3** | **3** | **-** | **-** | **2** | **2** | **-** | **-** | **-** | **-** | **-** | **-** | **3** | **3** | **3** |
| **1: Weakly related, 2: Moderately related and 3: Strongly related** | | | | | | | | | | | | | | | |

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| **Outline Teaching Schedule** | | |
| **Unit** | **Topics** | **No. of Sessions** |
| **1** | **BASICS OF MODEL BUILDING:** The IPO (Input-Process-Output) Cycle, Identification of Variables, Intermediate and final data tables | **2** |
| **2** | **BASIC FINANCIAL MODELS:** Time value of money, Fixed and fluctuating WACC, Capital Budgeting models –NPV, IRR, MIRR | **4** |
| **3** | **FINANCIAL/ACCOUNTING ANALYSIS:** Ratio Analysis, Estimation of NOPLAT, Calculation of FCFE | **4** |
| **4** | **COSTING ANALYSIS:** Preparation of cost sheet-Product/ Service, Material cost/Bill of Material Analysis Activity based costing. | **4** |
| **5** | **DECISION MODELS:** Make or buy, Discontinuance of product, Accept /Reject additional orders | **3** |
| **6** | **SHAREHOLDER VALUE ANALYSIS:** Dividend discount model, Abnormal earnings model, EVA analysis | **3** |
| **7** | **SECURITY ANALYSIS & PORTFOLIO MANAGEMENT:** Equity valuation, Bond valuation, Beta estimation, CAPM, Sharpe / Treynor / Jenson models | **3** |
| **8** | **PERSONAL FINANCE:** Tax planning thro Housing Loan, Group housing scheme problems | **4** |
| **9** | **FINANCIAL ANALYSIS USING STATISTICAL TECHNIQUES:** Decision tree analysis using probability, Time series analysis, Regression, ANOVA | **3** |
| **Total Sessions** | | **30** |
| **Recommended Resources** | | |
| **Essential readings:**  **1. Financial Analysis and Modeling, (Second Edition), by Chandan Sengupta, M/s. Wiley Publications.**  **Additional readings:**  1. Mayes T.R. & Shank, T.M. (2020) Financial Analysis with Microsoft Excel 2019. 9e. South-Western College Publishing USA  2. Rees, M. (2018) Principles of Financial Modelling: Model Design and Best Practices Using Excel and VBA. 1e. UK: John Wiley & Sons. Ltd. Wiley Finance Series.  3. Benningo, S. (2000) Financial Modelling.2e. London: The MIT Press.  **Websites:**  <https://open.umn.edu/opentextbooks/textbooks/>  <https://www.udemy.com/courses/finance-and-accounting/financial-modeling-and-analysis/> | | |

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| **Session Plan** | | | | | |
| **Session No.** | **Topics to be Covered** | | **Methodology** | **Reading Materials** | |
| **1** | **BASICS OF MODEL BUILDING:** The IPO (Input-Process-Output) Cycle, Identification of Variables, Intermediate and final data tables | | Lecture & Analysis | Chapter 1 & 2 from Textbook | |
| **2** | **BASICS OF MODEL BUILDING:** The IPO (Input-Process-Output) Cycle, Identification of Variables, Intermediate and final data tables | | Lecture & Analysis | Chapter 1 & 2 from Textbook | |
| **3** | BASIC FINANCIAL MODELS: Time value of money, Fixed and fluctuating WACC, Capital Budgeting models –NPV, IRR, MIRR | | Practical | Chapter 7,10,11 from Textbook | |
| **4** | **BASIC FINANCIAL MODELS:** Time value of money, Fixed and fluctuating WACC, Capital Budgeting models –NPV, IRR, MIRR | | Practical | Chapter 7,10,11 from Textbook | |
| **5** | **BASIC FINANCIAL MODELS:** Time value of money, Fixed and fluctuating WACC, Capital Budgeting models –NPV, IRR, MIRR | | Practical | Chapter 7,10,11 from Textbook | |
| **6** | **BASIC FINANCIAL MODELS:** Time value of money, Fixed and fluctuating WACC, Capital Budgeting models –NPV, IRR, MIRR | | Practical | Chapter 7,10,11 from Textbook | |
| **7** | **FINANCIAL/ACCOUNTING ANALYSIS:** Ratio Analysis, Estimation of NOPLAT, Calculation of FCFE | | Practical | Chapter 4 & 8 from Textbook | |
| **8** | **FINANCIAL/ACCOUNTING ANALYSIS:** Ratio Analysis, Estimation of NOPLAT, Calculation of FCFE | | Practical | Chapter 4 & 8 from Textbook | |
| **9** | **FINANCIAL/ACCOUNTING ANALYSIS:** Ratio Analysis, Estimation of NOPLAT, Calculation of FCFE | | Practical | Chapter 4 & 8 from Textbook | |
| **10** | **FINANCIAL/ACCOUNTING ANALYSIS:** Ratio Analysis, Estimation of NOPLAT, Calculation of FCFE | | Practical | Chapter 4 & 8 from Textbook | |
| **11** | **COSTING ANALYSIS:** Preparation of cost sheet-Product/ Service, Material cost/Bill of Material Analysis Activity based costing. | | Practical | Videos on Basic concepts of costing, BoM, ABC from Internet | |
| **12** | **COSTING ANALYSIS:** Preparation of cost sheet-Product/ Service, Material cost/Bill of Material Analysis Activity based costing. | | Practical | Videos on Basic concepts of costing, BoM, ABC from Internet | |
| **13** | **COSTING ANALYSIS:** Preparation of cost sheet-Product/ Service, Material cost/Bill of Material Analysis Activity based costing. | | Practical | Videos on Basic concepts of costing, BoM, ABC from Internet | |
| **14** | **COSTING ANALYSIS:** Preparation of cost sheet-Product/ Service, Material cost/Bill of Material Analysis Activity based costing. | | Practical | Videos on Basic concepts of costing, BoM, ABC from Internet | |
| **15** | **DECISION MODELS:** Make or buy, Discontinuance of product, Accept /Reject additional orders | | Practical | Make or Buy, Accept/ Reject additional orders examples & cases | |
| **16** | **DECISION MODELS:** Make or buy, Discontinuance of product, Accept /Reject additional orders | | Practical | Make or Buy, Accept/ Reject additional orders examples & cases | |
| **17** | **DECISION MODELS:** Make or buy, Discontinuance of product, Accept /Reject additional orders | | Practical | Make or Buy, Accept/ Reject additional orders examples & cases | |
| **18** | **SHAREHOLDER VALUE ANALYSIS:** Dividend discount model, Abnormal earnings model, EVA analysis | | Practical | Chapter 8 from Textbook | |
| **19** | **SHAREHOLDER VALUE ANALYSIS:** Dividend discount model, Abnormal earnings model, EVA analysis | | Practical | Chapter 8 from Textbook | |
| **20** | **SHAREHOLDER VALUE ANALYSIS:** Dividend discount model, Abnormal earnings model, EVA analysis | | Practical | Chapter 8 from Textbook | |
| **21** | **SECURITY ANALYSIS & PORTFOLIO MANAGEMENT:** Equity valuation, Bond valuation, Beta estimation, CAPM, Sharpe / Treynor / Jenson models | | Practical | Chapter 8,9,13 from Textbook | |
| **22** | **SECURITY ANALYSIS & PORTFOLIO MANAGEMENT:** Equity valuation, Bond valuation, Beta estimation, CAPM, Sharpe / Treynor / Jenson models | | Practical | Chapter 8,9,13 from Textbook | |
| **23** | **SECURITY ANALYSIS & PORTFOLIO MANAGEMENT:** Equity valuation, Bond valuation, Beta estimation, CAPM, Sharpe / Treynor / Jenson models | | Practical | Chapter 8,9,13 from Textbook | |
| **24** | **PERSONAL FINANCE:** Tax planning thro Housing Loan, Group housing scheme problems | | Practical | IT Act and guidelines on Tax Planning, Videos on Group Housing Schemes from Internet | |
| **25** | **PERSONAL FINANCE:** Tax planning thro Housing Loan, Group housing scheme problems | | Practical | IT Act and guidelines on Tax Planning, Videos on Group Housing Schemes from Internet | |
| **26** | **PERSONAL FINANCE:** Tax planning thro Housing Loan, Group housing scheme problems | | Practical | IT Act and guidelines on Tax Planning, Videos on Group Housing Schemes from Internet | |
| **27** | **PERSONAL FINANCE:** Tax planning thro Housing Loan, Group housing scheme problems | | Practical | IT Act and guidelines on Tax Planning, Videos on Group Housing Schemes from Internet | |
| **28** | **FINANCIAL ANALYSIS USING STATISTICAL TECHNIQUES:** Decision tree analysis using probability, Time series analysis, Regression, ANOVA | | Practical | Decision Tree Funda-mentals, Videos on TSA, Regression and ANOVA from Internet | |
| **29** | **FINANCIAL ANALYSIS USING STATISTICAL TECHNIQUES:** Decision tree analysis using probability, Time series analysis, Regression, ANOVA | | Practical | Decision Tree Funda-mentals, Videos on TSA, Regression and ANOVA from Internet | |
| **30** | **FINANCIAL ANALYSIS USING STATISTICAL TECHNIQUES:** Decision tree analysis using probability, Time series analysis, Regression, ANOVA | | Practical | Decision Tree Funda-mentals, Videos on TSA, Regression and ANOVA from Internet | |
| **Assessment Method (Mapped with COs)** | | | | | | |
| **Mode of Assessment** | | | **Marks Assigned** | | | **Assessment Method**  **(Mapped with CO’s)** |
| Class Participation | | | 25 | | | CO – 1, CO – 2, CO – 3, CO – 4, CO – 5, CO – 6 |
| Project (Group) | | | 25 | | | CO – 1, CO – 2, CO – 3, CO – 4, CO – 5, CO – 6 |
| Semester End Exam | | | 50 | | | CO – 1, CO – 2, CO – 3, CO – 4, CO – 5, CO – 6 |
| Total | | | 100 | | |  |
| **General Instruction to Students** | | | | | | |
| * Laptop compulsory for sessions * Basic pre-requisite – Basic knowledge of MS Excel | | | | | | |