INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

FINANCIAL ANALYTICS								
IV Semester: MBA								
Course Code	**Category**	**Hours / Week**			**Credits**	**Maximum Marks**		
		L	**T**	**P**	**C**	**CIA**	**SEE**	**Total**
CMBE54	**Elective**	2	-	-	2	40	60	100
Contact Classes: 45	**Tutorial Classes: Nil**	**Practical Classes: Nil**				**Total Classes: 45**		
Prerequisite: Financial Management								
SDGs Mapped: SDG 9 (Industry, Innovation and Infrastructure), SDG 8 (Decent Work & Economic Growth)								

I. COURSE OVERVIEW:

This course introduces to advanced techniques of financial statement analysis, time value of money concepts, risk-return analysis, capital budgeting, and valuation of equity and bonds. It emphasizes the use of spreadsheets and financial models for practical applications, preparing students to make informed investment, financing, and portfolio management decisions. The course equips students with tools to analyze financial statements, assess project viability, evaluate securities, and apply quantitative techniques in financial decision-making.

II.OBJECTIVES:

The students will try to learn:

I. The techniques for analyzing financial statements including horizontal, vertical, trend, and ratio analysis.
II. The time value of money, and analyze risk and return for investment decisions.
III. Evaluate capital budgeting projects using traditional and advanced techniques for effective decision-making.
IV. How to assess equity valuation using portfolio analysis, CAPM, security market line, and industry/economic analysis.
V. The valuation methods, duration, immunization strategies, and term structure modeling.

III. COURSE OUTCOMES:

At the end of the course students should be able to:

CO1	Recall and apply techniques of financial statement analysis, including ratio, trend, and cash flow analysis using spreadsheets.
CO2	Compute future and present values, annuities, perpetuities, and perform risk-return analysis using statistical measures.
CO3	Evaluate investment projects using Payback, ARR, NPV, IRR, Profitability Index, and advanced capital budgeting techniques.
CO4	Analyze and value equity using CAPM, portfolio variance, beta estimation, and security market line, considering industry and economic factors.
CO5	Compute bond valuation, duration, and implement immunization strategies; model term structure and calculate expected bond returns.
CO6	Integrate financial analysis, risk assessment, and valuation techniques for informed corporate financial decision-making.

IV. COURSE CONTENT:

MODULE-I: TECHNIQUES OF FINANCIAL STATEMENT: (09)
Horizontal, Vertical Analysis, Trend Analysis, Ratio Analysis, Liquidity, Profitability, Solvency and Turnover Ratio, Valuation of Ratios, Statement of Cash Flow, Classification of Cash Flow, Computing Net Cash Flow: Operating, Investing and Financing Activities. Reporting and Interpretation using Spreadsheet.

MODULE –II: TIME VALUE OF MONEY AND RISK AND RETURN: (09)
Future Value: Simple, Compound Interest and Annuity, Present Value: Discounted, Annuity, Equated Loan Amortization, Perpetuity using Spreadsheets. **Risk and Return:** Holding Period Returns, Arithmetic Mean vs Geometric Mean, Risk: Standard Deviation, Coefficient of Variation, Beta, Covariance of Stock.

MODULE –III: CAPITAL BUDGETING TECHNIQUES: (09)
Payback Period, Accounting Rate of Return, Net Present Value, Internal Rate of Return, Profitability Index, Decision Tree, Cash Flow in Capital Budgeting.

Cost of Capital, Advance Capital Budgeting Techniques, Adjusted Present Value Approach, Competing Project Risk using Spreadsheets.

MODULE –IV: EQUITY VALUATION: (09)
Calculation of Portfolio Mean and Variance, Capital Asset Pricing Model (CAPM), Variance: Covariance Matrix, Estimating Beta and Security Market Line. Industry Analysis, Economic Analysis and Technical Analysis in Stock, Real Option in Capital Budgeting.

MODULE –V: BOND VALUATION: (09)
Duration, Duration of Bond with Uneven Payments, Immunization Strategies, Modeling the Term Structure, Calculating Expecting Bond Return in a Single and Multi-period Framework, Semi-annual Transition Matrix, Computation of Bond Beta.

V. TEXT BOOKS:

1. Sheeba Kapil, Financial Valuation and Modeling, Wiley, 1e, 2022.
2. R. Narayanaswamy, Financial Accounting-Managerial Perspective, PHI, 7e, 2022.
3. Timothy Mayes, Financial Analysis with MS Excel, Cengage, 7e, 2013.
4. N R Parasuraman, Financial Management-step by step approach, Cengage, 1e, 2014.

VI. REFERENCE BOOKS:

1. Simon Bennings, Financial Modeling-Using Excel, MIT Press, Camberidge,3e
2. Vijay Gupta, Financial Analysis using Excel, VJ Books Inc, Canada.

VII. WEB REFERENCES:

1. https://bookboon.com/en/derivative-markets-an-introduction-ebook
2. https://en.wikipedia.org/wiki/Book:Financial_Derivatives

VIII. E-TEXT BOOKS:

1. http://www.pondiuni.edu.in/sites/default/files/downloads/Financial-analytics-260214.pdf
2. http://down.cenet.org.cn/upfile/10/2007188195141.pdf
3. http://polymer.bu.edu/hes/rp-hull12.pdf
4. https://www.amazon.in/dp/B01FFRTZW6/ref=cm_sw_r_apan_glt_T3GT8DYS9DPTKE0H5T.
5. https://www.amazon.in/dp/B00K7YG27O/ref=cm_sw_r_apan_glt_FJ3Z3G106SD6GWZH0Y.
6. https://ebooks.lpude.in/commerce/mcom/term_4/DCOM510_FINANCIAL_ANALYTICS.Pdf