SIES College of Commerce and Economics (Autonomous)

RISE WITH EDUCATION

Master of Commerce

(Financial Research & Technical Analysis)

Programme

Two Year Integrated Programme – Four Semesters

Course Structure

Under Choice Based Credit, Grading and Semester System

To be implemented Progressively from the Academic Year 2023 – 2024

(As Per NEP 2020)

M.Com. (Financial Research & Technical Analysis) Programme

Under Choice Based Credit, Grading and Semester System

Course Structure

First Year M. Com (Financial Research & Technical Analysis)

(To be implemented from the Academic Year 2023 – 2024)

(As Per NEP 2020)

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
	Major			**Major**	
1.1	Indian and Global Financial System	**04**	2.1	Quantitative Methods in Finance	**04**
1.2	Indian and Global Taxation on Investments	**04**	2.2	Alternative Investments	**04**
1.3	Regulatory Requirements and Ethics of Financial Markets	**04**	2.3	Introduction to Global Wealth Management and Financial Research and Technical Analysis	**04**
1.4	Strategic Management	**02**	2.4	Personal Financial Planning	**02**
	Elective (any 1)			**Elective (any 1)**	
1.5	Indian and Global Financial Economics	**04**	2.5	Behavioral Finance and Investors' Psychology	**04**
1.5	Registrars and Transfer Agents – I	**04**	2.5	Registrars and Transfer Agents – II	**04**
	Research Methodology			**On the Job Training / Field Projects**	
1.6	Research Methodology in Financial Markets	**04**	2.6	On the Job Training / Field Projects	**04**
	Total Credits	**22**		**Total Credits**	**22**

M.Com. (Financial Research & Technical Analysis) Programme

Under Choice Based Credit, Grading and Semester System

Course Structure

Second Year M. Com (Financial Research & Technical Analysis)

(To be implemented from the Academic Year 2024 – 2025)

(As Per NEP 2020)

No. of Courses	Semester III	Credits	No. of Courses	Semester IV	Credits
	Major			**Major**	
3.1	Technical Analysis I	**04**	4.1	Technical Analysis II	**04**
3.2	Chart Development and Analysis - I	**04**	4.2	Chart Development and Analysis – II	**04**
3.3	Statistics for Technical Analysts	**04**	4.3	Derivatives Market	**04**
3.4	Marketing of Financial Products and Services	**02**			
	Elective (any one)			**Elective (any one)**	
3.5	Financial Technologies & Algo Trading	**04**	4.4	Designing and Testing Technical Trading Systems	**04**
3.5	Securities Broking Operations	**04**	4.4	Merchant Banking	**04**
	Project & Research Work			**Project & Research Work**	
3.6	Project & Research Work	**04**	4.5	Project & Research Work	**06**
	Total Credits	**22**		**Total Credits**	**22**

SIES
RISE WITH EDUCATION

College of Commerce and Economics (Autonomous)

Syllabus and Question Paper Pattern of Course

Master of Commerce

(Financial Research & Technical Analysis)

Programme

Second Year

Semester III and IV

Under Choice Based Credit, Grading and Semester System

To be implemented from the Academic Year 2024 – 2025

(As Per NEP 2020)

M.Com. (Financial Research & Technical Analysis) Programme

Under Choice Based Credit, Grading and Semester System

Course Structure

Second Year M. Com (Financial Research & Technical Analysis)

To be implemented from the Academic Year 2024 – 2025

(As Per NEP 2020)

No. of Courses	Semester I	Credits	Total Marks	Internal Assessment	Semester End Examination
	Major				
3.1	Technical Analysis I	**04**	100	40	60
3.2	Chart Development and Analysis - I	**04**	100	40	60
3.3	Statistics for Technical Analysts	**04**	100	40	60
3.4	Marketing of Financial Products and Services	**02**	50	20	30
	Elective				
3.5	Financial Technologies & Algo Trading	**04**	100	40	60
3.5	Securities Broking Operations	04	100	40	60
	Project & Research Work				
3.6	Project & Research Work	**04**	100	40	60
	Total Credits	**22**	**550**	**220**	**330**

3.1 Technical Analysis I

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	The Basic Principle of Technical Analysis —The Trend	15
II	History and Construction of Charts	15
III	Dow theory	15
IV	Introduction to charts	15
Total		**60**

3.1 Technical Analysis I

Detailed Syllabus

Sr. No.	Modules / Units	No of Lectures
I	**The Basic Principle of Technical Analysis —The Trend**	**15**
	• Trend in technical analysis • Determining the trend is important to analysts • Identify primary, secondary, short-term, and intraday trends • Basic beliefs behind the art of technical analysis • "Fractal" and price action	
II	**History and Construction of Charts**	**15**
	• Reviewing price information in chart format - advantages / disadvantages • Data points required to construct line, bar, and candlestick charts • Line, bar, and candlestick charts • Arithmetic and logarithmic scales and their uses	
III	**Dow theory**	**15**
	• History of the development of Theory • Principles of Dow Theory • Dow Theory as defined by time: primary, secondary and minor and its trends • Basic trend patterns of all prices: upward, downward and sideways • "Ideal market picture" according to Dow Theory Express the concept of confirmation in Dow Theory Explain the role of volume in Dow Theory	
IV	**Introduction to charts**	**15**
	• Price action • Four basic price points represented in charting • Constructing line, bar, and candlestick charts • Components of individual candles - real body and shadows • Data interval • Range • Fractal and its relation to chart construction	
	Total Lectures	**60**

3.2 Chart Development and Analysis - I

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Charts - Understanding Data Intervals & additional charting methods	15
II	Moving Averages	15
III	Trend systems	15
IV	Momentum & Oscillators	15
Total		**60**

3.2 Chart Development and Analysis - I

Detailed Syllabus

Sr. No.	Modules / Units	No. of lectures
I	**Charts - Understanding Data Intervals & additional charting methods**	**15**
	• Sequence of multiple data intervals to identify Trends. • Typical construction of weekly and monthly interval charts. • Challenges related to consistent data sampling using time-based intraday intervals. • General trend relationships in charts with multiple price-data sets. • Interpret the significance of the data points in a scatter plot. • Construction of different types of charts • Compare the axes and intervals of these charts • Analyze trends and price action using these charts • Demonstrate how point-and-figure charts help minimize "noise" • Comparison between charts with defined and undefined x-axes. • Basic principles behind Market Profile	
II	**Moving Averages**	**15**
	• Contrast various types of moving averages used in trend analysis. • Four ways moving averages are used by technicians. • Trend movement using Directional Movement. • Indicators. • Study of common envelope, channel and band indicators.	
III	**Trend Systems**	**15**
	• Reasons why trend systems work. • Appropriate asset selections based on trend and forecast. • Diagram how buy and sell signals are used with indicators and tools for measuring trend, such as: Moving Averages, Bollinger Bands, Keltner Channels, Percentage Bands, Volatility Bands, and combinations of bands and other indicators. • 10-day moving average rule in a trading system. • Moving average, trend method, and speed • Role of each moving average in a two-trend or three-trend method of trading. • Rules for generating an exit signal when using moving averages, and its comparison. • "Golden Cross" and the "Death Cross"	
IV	**Momentum & Oscillators**	**15**
	• Momentum and rate of change studies in technical analysis • Various calculations of momentum • Use of momentum for trend indication & associated signals and for finding price extremes & associated signals. • Use of MACD to generate trading signals. • Various oscillators and their trading signals including RSI, stochastic and TRIX	
	Total Lectures	60

3.3 Statistics for Technical Analysts

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Introduction to Descriptive & Inferential Statistics	15
II	Correlation	15
III	Introduction to Probability	15
IV	Regression and Regression Analysis	15
Total		**60**

3.3 Statistics for Technical Analysts

Detailed Syllabus

Sr. No.	Modules / Units	No. of lectures
I	**Introduction to Descriptive & Inferential Statistics**	**15**
	Descriptive statistics: • Most common measures of central tendency: mean, median, and mode. • Alternative methods of calculating the mean and their uses. • "Measures of dispersion" • Types of measures of dispersion: standard deviation and variance • Value of data visualization as a complement to descriptive statistics **Inferential Statistics:** • Descriptive and inferential statistics – comparison. • Use of hypothesis testing to frame statistical tests. • Confidence intervals, statistical significance and the base rate fallacy. • Coefficients of correlation and determination. • Correlation and causation. • Use of regression analysis in technical studies.	
II	**Correlation**	**15**
	• Pearson's and Spearman's methods. • Importance of linearity and normality to useful correlation studies. • Effect of outliers on a regression study.	
III	**Introduction to Probability**	**15**
	• Introduction to probability. • Impact of the law of large numbers on a series of outcomes. • Random variable and the phrase "independent and identically distributed". • Normal probability distribution. • Identify skew and kurtosis.	
IV	**Regression & Regression Analysis**	**15**
	• Values generated by regression, multiple regression and tolerance calculations • Predictor variables for multiple regression studies. • Concept behind the ARIMA method. • ARIMA process. • Results of the ARIMA. • Use of linear regression to generate trading signals and linear regression for relative strength studies.	

3.4 Marketing of Financial Services

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Foundation of Services Marketing	**10**
II	Issues in Marketing of Services	**10**
III	Customer Satisfaction & Quality in Service Marketing	**10**
Total		**30**

3.4 Marketing of Financial Services

Detailed Syllabus

Sr. No.	Modules / Units	No. of lectures
I	**Foundation of Services Marketing**	**10**
	• Foundation of services marketing – Introduction – The services concept – Service • Industry – Nature of Service, Characteristics of Services, Classification of Services - Importance of Services Marketing – The Growth in Services – Global and Indian • Scenario, Retail Financial Services: Investment Services – Insurance Services, • Credit Services – Dimensions and drivers, Institutional Financial Service, • Distinctive Characteristics of Services _ Four I's of Services – Intangibility, • Inconsistency, Inseparability and Inventory, Managing Service Encounters.	
II	**Issues in Marketing of Services**	**10**
	• Issues in Marketing of Services – Extended Services Marketing Mix : Going • Beyond the 4 Ps. (7Ps of Services Marketing). Service Delivery Process – Service • Blueprints - Service Mapping – Managing Employees for service orientation. • Distribution Strategies of Services – Challenges in Distribution of Services. • Personal Selling – Advertising and Sales Promotion in Service Industry.	
III	**Customer Satisfaction & Service Quality in Service Marketing**	**10**
	• Service Encounter – Role of HR & Internal Marketing – Monitoring and Measuring customer satisfaction, • GAP Model – Handling complaints effectively – Service Failure – Recovery, • Use of Internet in Service Marketing, Role of IT in marketing Financial Services, • Ethics in Marketing, New trends in marketing, Marketing in 21st Century, • Marketing through social networking channels	

3.5 Financial Technologies & Algo Trading

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Fintech & Payments	15
II	Fintech regulation & Reg tech	15
III	Algorithmic Trading using Python	15
IV	Grey Box & Black Box Trading (Using Python)	15
Total		**60**

3.5 Financial Technologies & Algo Trading

Detailed Syllabus

Sr. No.	Modules / Units	No of Lectures
I	**Fintech & Payments**	15
	• Fintech Introduction. • FinTech Transformation. • FinTech Evolution 1.0: Infrastructure. • FinTech Evolution 2.0: Banks. • FinTech Evolution 3.0 & 3.5: Startups and Emerging Markets. • Industry Showcase: Collaboration between Financial Institutions and Startups. • FinTech Typology. • Emerging Economics: Opportunities and Challenges. • From too-Small-To-Care to Too-Big-To-Fail. **Payments, Crypto currencies and Block chain:** • Individual Payments. • Developing Countries and DFS: The Story of Mobile Money. • Developing Countries and DFS: Regulation of Mobile Money. • RTGS Systems. • The ABCDs of Alternative Finance. • Building a New stack. • Crypto currencies. • Industry Showcase: Legal and Regulatory Implications of Crypto currencies. • Block chain.	
II	**Fintech regulation & Reg tech**	15
	• FinTech Regulations. • Evolution of RegTech. • RegTech Ecosystem: Financial Institutions. • RegTech Ecosystem: Startups. • RegTech Startups: Challenges. • RegTech Ecosystem: Regulators. • Industry Showcase: Use Case of AI in Smart Regulation and Fraud Detection. • Regulatory Sandboxes. • Smart Regulation. • Redesigning Better Financial Infrastructure.	
III	**Algorithmic Trading using Python**	15

	Technical Trading (Using Python) • Basics of Technical Analysis: Chart Types, Chart Patterns, Gap Theory, Candle Pattern, Technical. • Indicators • Designing of Strategy Builder using Technical Indicators & Price Theory. • Designing of Back-Testing platform to achieve strategy optimization. • Real-time API Connectivity by handling Broadcast, OMS & RMS. • Real-time Database upgrade & Data wrangling. • Comprehensive LIVE Strategy Engine. **Options Trading (Using Python)** • Basics of Options Trading: Option Payoffs, Black Scholes Calculator, Greeks Profile. • Implementing Option Strategies in Live Market using Python. • Designing Greeks Dashboard for hedging mechanism. • Delta Neutral, Gamma Hedging & Volatility Trading using Live Simulators. • Design Back-Testing platform for IV Trading, OI Analysis & Results Trading. • Strategy based on Volatility Smile & Volatility Skew.	
IV	**Grey Box & Black Box Trading (Using Python)**	**15**
	• Implementation of Scalping, Scaling, Advance Jobbing & Trend Jobbing in Live Market. • Environment. • Triangular Arbitrage Strategies for Forex & Commodities. • Mean Reverting Strategies like Pair Trading using Z score Model. • Basket Strategy (Index-Index, Index-Stocks). • Statistical Arbitrage Strategies. • Pre & Post Result based Trading Strategies using Sentiment Indicators. • Overview on High Frequency Trading. • Overview on Artificial Intelligence and Machine Learning in Trading.	

3.5 Securities Broking Operations

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Introduction to Securities Broking Operations	15
II	Clearing and Settlement Process	15
III	Investor Grievances and Arbitration	15
IV	Other Services provided by Brokers	15
Total		**60**

3.5 Securities Broking Operations

Detailed Syllabus

Sr. No.	Modules / Units	No of Lectures
I	**Introduction to Securities Broking Operations**	**15**
	Introduction • Concept of securities trade life cycle • Front Office, Middle Office and Back Office Operations of a stock broking firm • Information Technology and Business Continuity Plan of a stock broking firm Market Participants in the Securities Market • Different types of securities market participants • Different types of investors based on their investment objectives • Issuer and regulations related to issuer • Role of different kinds of intermediaries in the securities markets	
II	**Clearing and Settlement Process**	**15**
	Clearing Process • Introduction • Role of Clearing Corporation • Role of Clearing Members and Custodians • Role of Depositories and Depository Participant • Clearing Process Settlement Process • Introduction • Determining of Settlement of obligations • Settlement of Funds • Settlement of Securities • Corporate Actions adjustment • Methodology for adjustment in Equity F&O • Auction of securities	
III	**Investor Grievances and Arbitration**	**15**
	Investor Grievances and Arbitration • Introduction • Investor Grievance • Online Resolution of Disputes • Investor Protection Fund • Arbitration process • Code of Conduct for Stock Brokers	
IV	**Other Services provided by Brokers**	**15**
	Other Services provided by Brokers • IPO Applications • Trading of Mutual Fund Units • Portfolio Management Service • Research Reports • Depository Services • Margin Trading • Internet Based Trading etc.	

3.6 Project & Research Work

Inclusion of project work in the course curriculum of the M.Com. programme is one of the aspect in the programme structure with the main objective to inculcate the element of research work challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study in his/ her own words. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the project work based on research methodology in the study area including the methodology of formulation, preparation and evaluation pattern of the project work.

General guidelines for preparation of project work based on research methodology.

- The project topic may be undertaken in any area of interest of learner but related to the theme of Courses.
- Each of the learner must undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- College shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
    - Font type: Times New Roman
    - Font size: 12-For content, 14-for Title
    - Line Space : 1.5-for content and 1-for in table work
    - Paper Size: A4
    - Margin : in Left-1.5, Up-Down-Right-1
    - The project report should be 80 to 100 page and shall be bounded.

Structure to be followed in formulation and presentation of Project Work

(Model Structure of the Project Work)

Chapter No. 1: Introduction In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

Chapter No. 2: Research Methodology This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

Chapter No. 3: Literature Review This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

Chapter No. 4: Data Analysis, Interpretation and Presentation This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

Chapter No. 5: Conclusions and Suggestions In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

Note: If required more chapters of data analysis can be added.

- Bibliography
- Appendix

Evaluation pattern of Project & Research Work

The Project Report shall be evaluated in two stages viz.

- Internal Assessment - Internal Examiner - 40 Marks
- Semester End Examination - External Examiner - 60 Marks

The guiding teacher along with the external evaluator appointed by the College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern through Viva Voce asking questions based on theme of course and course work during the period of preparation of Project or Any other questions as deemed fit by the examiners can be asked to assess based on the theme of course.

No marks will be allotted on the Project Report unless a candidate appears at the Viva-Voce Examination. Similarly, no marks will be allotted on Viva-Voce Examination unless a candidate submits his/her Project Report.

M.Com. (Financial Research & Technical Analysis) Programme

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Course Structure

Second Year M. Com (Financial Research & Technical Analysis)

(To be implemented from the Academic Year 2024 – 2025)

(As Per NEP 2020)

No. of Courses	Semester IV	Credits	Total Marks	Internal Assessment	Semester End Examination
	Major				
4.1	Technical Analysis II	**04**	**100**	**40**	**60**
4.2	Chart Development and Analysis – II	**04**	**100**	**40**	**60**
4.3	Derivatives Market	**04**	**100**	**40**	**60**
	Elective				
4.4	Designing and Testing Technical Trading Systems	**04**	**100**	**40**	**60**
4.4	Merchant Banking	**04**	**100**	**40**	**60**
	Project & Research Work				
4.5	Project & Research Work	**06**	**100**	**40**	**60**
	Total Credits	**22**	**500**	**200**	**300**

4.1 Technical Analysis II

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Markets, Instruments, Data, and the Technical Analyst	15
II	Options & Understanding implied volatility	15
III	About the VIX Index	15
IV	Risk Control	15
Total		**60**

4.1 Technical Analysis II

Detailed Syllabus

Sr. No.	Modules / Units	No of Lectures
I	**Markets, Instruments, Data, and the Technical Analyst**	**15**
	• Asset classes amenable to technical analysis. • Tradable instruments that a technician is likely to employ. • Data-handling issues and technician analysis	
II	**Options & Understanding implied volatility**	**15**
	• Purpose of options markets. • Major terms of an option contract. • "The Greeks". • Implied volatility. **Introduction to Options** • Risk Hedging and Return Enhancing Strategies in Options • Option Pricing • Concept of Volatility • Historical and Implied Volatility • Swaps-Advantages and Disadvantages • Application of Index Swaps, Interest Rate Swaps & Currency Swaps • Contrast historical and implied volatility when used in price analysis and forecasting • Interpret implied volatility as the market's estimate of possible future asset prices • Calculate single-day implied volatility • List the inputs to an option pricing model	
III	**About the VIX Index**	**15**
	• Explain how the VIX is impacted by put-call parity and options supply. • Interpret VIX as an indication of market sentiment. • Interpret changes in VIX as part of a market forecast. • Calculate expected 30-day movement of an index or a stock.	
IV	**Risk Control**	**15**
	• Risk and performance metrics derived from the following: Sharpe Ratio, Information Ratio, • Treynor Ratio, Calmar Ratio, Sortino Ratio. • Calculations of Value at Risk (VaR). • Various methods for setting stops and profit targets. • Model position size using various capital and volatility approaches	

	in this chapter. • Compare approaches to compounding positions. • Risk of ruin	
	Total	**60**

4.2 Chart Development Analysis - II

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Price Trends and Volume	15
II	Bar Chart Patterns	15
III	Candle Pattern Forecasting and Trading Techniques	15
IV	Concepts in Cycle Theory	15
Total		**60**

4.2 Chart Development Analysis - II

Detailed Syllabus

Sr. No.	Modules/Units	No. of lectures
I	**Price Trends, Volume & Breadth**	**15**
	• Phases of price-volume trends • Volume in the context of price trends. • Price and volume to identify the current phase. • Compare various volume indicators such as On-Balance • Volume, Accumulation Distribution and VWAP. • Changes in breadth in the context of price trends. • Breadth indicators such as the McClellan Oscillator. • Indicators that combine breadth with volume such as Arms Index and Thrust Oscillator. • Approaches to incorporating volume and breadth into systematic methods.	
II	**Bar Chart Patterns**	**15**
	• Existence of tradable patterns in technical analysis. • Influence that computer technology has had on the study of patterns. • Classic chart patterns such as triangles, and double and triple tops and bottoms with diagrams. • Rounding chart patterns such as head-and-shoulders • "Half-mast" chart patterns - flags and pennants. • Methods for determining price objectives from patterns. **Short term patterns:** • Reversals in longer-term trends using short-term price patterns. • Interpret the significance of various types of gaps that occur on price charts. • Compare and analyze wide-range and narrow-range bars and their implications for volatility. • One and two-bar reversal patterns. • Candlestick patterns and analyze their significance within a trend **Single & Multi Candle Patterns:** • Market psychology from candle shapes. • Individual candles: hammer, hanging man, doji and others • Importance of candles in the context of trends. • Buying and selling activity represented by real bodies and shadows in these candles. • Patterns formed by multiple candles: engulfing, stars, windows and others in this chapter. Importance of the prevailing trend when interpreting candle patterns.	

III	**Candle Pattern Forecasting and Trading Techniques**	**15**
	• Analyze candle patterns on charts for indications of trend reversal and continuation. • Candle patterns for support and resistance indications and confirmation. • Combining Western chart analysis with candles. • Candlestick analysis for risk management. • Using candles in multiple time frames.	
IV	**Concepts in Cycle Theory**	**15**
	• Causes of the "mid-cycle dip" and "3/4 cycle high". • Implications of an inversion. • Cyclical explanation for rounded tops and "V-bottoms". • Implications of left and right translation. • Centered moving average (CMA) envelope. • Valid trend line (VTL) and its uses.	

4.3 Derivatives Market

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Introduction to Derivatives Market	15
II	Pricing of Futures and Options	15
III	Trading Clearing and Settlement of Options and Futures	15
IV	Interest Rate, Credit, Currency and Energy Derivatives	15
Total		**60**

4.3 Derivatives Market

Detailed Syllabus

Sr. No.	Modules/Units	No. of lectures
I	**Introduction to Derivatives Market**	**15**
	• Definition – Types – Participants and functions – Development of exchange traded derivatives – Global derivatives markets – Exchange traded vs. OTC derivatives markets – Derivatives trading in India – L.C.Gupta Committee J.R.Varma committee-Requirements for a successful derivatives markets • Futures: Introduction – Futures terminology – Key features of futures contracts – Futures vs. Forwards – Pay off for futures – Equity futures in India – Index futures – Stock futures – Futures trading strategies – Hedging – Speculation – Arbitrage – Spread trading. • Options: Introduction – Options terminology – Types – Options pay off – Equity options contracts in India – Index options – Stock options – Options trading strategies – Hedging – Speculation – Arbitrage – Straddle – Strangles – Strips and straps – Spread trading.	
II	**Pricing of Futures and Options**	**15**
	• The cost of carry models for stock and index futures – Cash price and futures price , arbitrage opportunity. • Factors affecting options pricing – Option pricing models – Binomial pricing model – The Black and Scholes Model – Pricing of index options • Sensitivity of option premia (Delta, Gamma, Lambda, Theta, Rho)	
III	**Trading Clearing and Settlement of Options and Futures**	**15**
	• Futures and options trading system – Trader workstations – contract specification-specification for stocks and index eligibility for trading charges • Clearing entities and their role –clear mechanism-adjustment for corporate actions- Open position calculation • Margining and settlement mechanism-Risk Management-SPAN Mechanics of SPAN-Overall portfolio margin requirement	
IV	**Interest Rate, Credit, Currency and Energy Derivatives**	**15**
	• Interest rate options-caps-floors-collars-swaptions-hedging • Credit derivatives-credit risk management • Currency futures and options-trading strategies • Energy derivatives-Real options-Derivative mishaps-lessons.	
	Total	**60**

4.4 Designing and Testing Technical Trading Systems

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	The Statistics of Back testing	15
II	The Scientific Method and Technical Analysis	15
III	Theories of Non random Price Motion	15
IV	System Design and Testing	15
Total		**60**

4.4 Designing and Testing Technical Trading Systems

Detailed Syllabus

Sr. No.	Modules/Units	No. of lectures
I	**The Statistics of Backtesting**	**15**
	• Statistical challenges faced when backtesting • Important statistical features of time-series price data. • Log returns are often used in backtesting. • Statistical concerns in backtesting. • Signal testing and backtesting.	
II	**The Scientific Method and Technical Analysis**	**15**
	• Possibilities and challenges of applying the scientific method to traditional technical analysis. • Forms of the EMH as to their information content. • "Null hypothesis" as used in the scientific method. • Stages of the hypothetico-deductive method. • Aadopting the scientific method in technical analysis	
III	**Theories of Non random Price Motion**	**15**
	• Reason for existence of nonrandom price motion is a premise of technical analysis. • "Efficient market". • Behavioral finance as a theory of nonrandom price motion. • Foundations of behavioral finance. • Feedback loops in price action.	
IV	**System Design and Testing**	**15**
	• Discretionary and nondiscretionary systems. • Advantages and disadvantages of nondiscretionary trading systems. • Inventory the five initial decisions for constructing a trading system • Four types of technical trading systems. • Comparison on various metrics for evaluating trading systems such as profit factor, percent profitable and average trade net profit. • Methods of optimization. • "Robustness" its application on system.. • Risk-adjusted performance metrics such as Sharpe, Sterling and Sortino ratios.	

4.4 Merchant Banking

Module at a Glance

Sr. No.	Modules	No. of Lectures
I	Introduction to the Merchant Banking	15
II	Issue Management	15
III	General Obligations and Due Diligence	15
IV	Other Merchant Banking Activities	15
Total		**60**

4.4 Merchant Banking

Detailed Syllabus

Sr. No.	Modules/Units	No. of lectures
I	**Introduction to the Merchant Banking**	**15**
	• Concept and evolution of merchant banking • Merchant banking scenario in Indian and international market • Different categories and eligibility criteria for becoming a merchant banker • General obligations and code of conduct for merchant bankers • Investor grievance redressal and SCOREs mechanism	
II	**Issue Management**	**15**
	• Various terms which are related to offering e.g. IPO, Green Shoe Option, QIP, etc • Issue management process which includes filing of offer document, • documents required to be filed before the issue etc. • Pricing of issue • Underwriting obligations • Minimum subscription, allotment and refund	
III	**General Obligations and Due Diligence**	**15**
	• General obligations of merchant bankers relating to issue management • process • Offer for sale through stock exchange mechanism • Preferential issue, QIP process, Rights issue • Due diligence to be followed by the merchant banker	
IV	**Other Merchant Banking Activities**	**15**

	• Role of merchant banker in
	  • Mergers, Acquisitions & Takeovers
	  • Disinvestment transactions
	  • Buyback of shares and delisting of shares
	  • Issue and listing of debt issues
	  • Share based employee benefits	

4.5 Project & Research Work

Inclusion of project work in the course curriculum of the M.Com. programme is one of the aspect in the programme structure with the main objective to inculcate the element of research work challenging the potential of learner as regards to his/ her eager to enquire and ability to interpret particular aspect of the study in his/ her own words. It is expected that the guiding teacher should undertake the counselling sessions and make the awareness among the learners about the project work based on research methodology in the study area including the methodology of formulation, preparation and evaluation pattern of the project work.

General guidelines for preparation of project work based on research methodology.

- The project topic may be undertaken in any area of interest of learner but related to the theme of Courses.
- Each of the learner must undertake a Project individually under the supervision of a teacher-guide.
- The learner shall decide the topic and title which should be specific, clear and with definite scope in consultation with the teacher-guide concerned.
- College shall allot a guiding teacher for guidance to the students based on her / his specialization.
- The project report shall be prepared as per the broad guidelines given below:
    - Font type: Times New Roman
    - Font size: 12-For content, 14-for Title
    - Line Space : 1.5-for content and 1-for in table work
    - Paper Size: A4
    - Margin : in Left-1.5, Up-Down-Right-1
    - The project report should be 80 to 100 page and shall be bounded.

Structure to be followed in formulation and presentation of Project Work

(Model Structure of the Project Work)

Chapter No. 1: Introduction In this chapter Selection and relevance of the problem, historical background of the problem, brief profile of the study area, definition/s of related aspects, characteristics, different concepts pertaining to the problem etc can be incorporated by the learner.

Chapter No. 2: Research Methodology This chapter will include Objectives, Hypothesis, Scope of the study, limitations of the study, significance of the study, Selection of the problem, Sample size, Data collection, Tabulation of data, Techniques and tools to be used, etc can be incorporated by the learner.

Chapter No. 3: Literature Review This chapter will provide information about studies done on the respective issue. This would specify how the study undertaken is relevant and contribute for value addition in information/ knowledge/ application of study area which ultimately helps the learner to undertake further study on same issue.

Chapter No. 4: Data Analysis, Interpretation and Presentation This chapter is the core part of the study. The analysis pertaining to collected data will be done by the learner. The application of selected tools or techniques will be used to arrive at findings. In this, table of information's, presentation of graphs etc. can be provided with interpretation by the learner.

Chapter No. 5: Conclusions and Suggestions In this chapter of project work, findings of work will be covered and suggestion will be enlisted to validate the objectives and hypotheses.

Note: If required more chapters of data analysis can be added.

- Bibliography
- Appendix

Evaluation pattern of Project & Research Work

The Project Report shall be evaluated in two stages viz.

- Internal Assessment - Internal Examiner - 40 Marks
- Semester End Examination - External Examiner - 60 Marks

The guiding teacher along with the external evaluator appointed by the College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern through Viva Voce asking questions based on theme of course and course work during the period of preparation of Project or Any other questions as deemed fit by the examiners can be asked to assess based on the theme of course.

No marks will be allotted on the Project Report unless a candidate appears at the Viva-Voce Examination. Similarly, no marks will be allotted on Viva-Voce Examination unless a candidate submits his/her Project Report.

M.Com. (Financial Research & Technical Analysis) Programme

Under Choice Based Credit, Grading and Semester System

(To be implemented from the Academic Year 2023 – 2024)

(As Per NEP 2020)

Scheme of Evaluation

The performance of the learners will be evaluated in two Components. One component will be the Internal Assessment / Continuous Evaluation component carrying 40% marks and the second component will be the Semester-wise End Examination component carrying 60% marks. The allocation of marks for the Internal Assessment / Continuous Evaluation and Semester End Examinations will be as shown below

(A) Internal Assessment / Continuous Evaluation 20 / 40 Marks

Description	Marks
One objective based online tests (multiple choice questions, practical questions) of 10 / 20 marks	10 / 20
Project or Viva - Voce or Presentation or Assignment or Group Discussion or Case Studies or Open Book Test or Internship (Any 1 / 2 of 10 marks each)	10 / 20
Total	20 / 40

(B) Semester End Examination 60 Marks

i) Duration: The examination shall be of 2 Hours.
ii) Question paper pattern
- There shall be four questions each of 15 marks.
- All questions shall be compulsory with internal choice within the questions.
- Question may be subdivided into sub-questions a, b, c… and the allocation of marks depends on the weightage of the topic.

Exam Paper Pattern

Maximum Marks: 60
Questions to be set: 04
Duration: 2 Hours.
All Questions are Compulsory Carrying 15 Marks each.

Question No	Particulars	Marks
Q1	Full Length Question	15
	Or	
Q1	Full Length Question	15
Q2	Full Length Question	15
	Or	
Q2	Full Length Question	15
Q3	Full Length Question	15
	Or	
Q3	Full Length Question	15
Q4	Full Length Question	15
	Or	
Q4	Full Length Question	15
	Total	60
	Note: Equal weightage of all modules should be given in examination question paper. 15 marks question may be divided into sub questions of 8 and 7 or 10 and 5 or 5, 5 and 5 marks if required.	

(C) Semester End Examination 30 Marks

i) Duration: The examination shall be of 1 Hour
ii) Question paper pattern
- There shall be three questions each of 10 marks.
- All questions shall be compulsory with internal choice within the questions.
- Question may be subdivided into sub-questions a, b, c… and the allocation of marks depends on the weightage of the topic.

Exam Paper Pattern

Maximum Marks: 30
Questions to be set: 03
Duration: 1 Hour.
All Questions are Compulsory Carrying 10 Marks each.

Question No	Particulars	Marks
Q1	Full Length Question	10
	Or	
Q1	Full Length Question	10
Q2	Full Length Question	10
	Or	
Q2	Full Length Question	10
Q3	Full Length Question	10
	Or	
Q3	Full Length Question	10
	Total	30
	Note: Equal weightage of all modules should be given in the examination question paper.10 marks question may be divided into sub questions of 5 marks each if required.	

Passing Standard

The learners to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Internal Assessment / Continuous Evaluation and Semester End Examination. The learners shall obtain minimum of 40% marks (i.e. 16 out of 40 or 8 out of 20) in the Internal Assessment / Continuous Evaluation and 40% marks in Semester End Examination (i.e. 24 Out of 60 or 12 out of 30) separately, to pass the course and minimum of Grade E to pass a particular semester A learner will be said to have passed the course if the learner passes the Internal Assessment / Continuous Evaluation and Semester End Examination together.