S.P. Mandali's

R. A. Podar College
Of
Commerce and Economics (Autonomous)
Matunga, Mumbai

Syllabus

For

Post Graduate Programme

M.Com *(Business Analytics)*
Semester III & IV

CHOICE BASED CREDIT AND GRADING SYSTEM
(CBCGS)

With effect from academic year 2023-24

www.rapodar.ac.in

M.Com
(Business Analytics)
Under Choice Based Credit, Grading and Semester System
Course Structure

M.Com-I

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
Core Courses (CC)			***Core Courses (CC)***		
1	Introduction to Business Analytics	**06**	1	Introduction to Financial Analytics	**06**
2	Business Ethics	**06**	2	Data Visualization and Communication	**06**
Discipline Specific Courses			***Discipline Specific Courses***		
3	Introduction to Data Science-I	**06**	3	Data Science II	**06**
Ability Enhancement Compulsory Courses (AECC)			***Ability Enhancement Compulsory Courses (AECC)***		
4	R and Python for Data Science- Lab Course	**06**	4	Research Methodology for Business	**06**
Total Credits		**24**	**Total Credits**		**24**

M.Com-II

No. of Courses	Semester III	Credits	No. of Courses	Semester IV	Credits
Core Courses (CC)			***Core Courses (CC)***		
1	Machine Learning and Mining Algorithms	**06**	1	Predictive Analytics	**06**
2	Financial Model Based Analytics-I	**06**	2	Financial Model Based Analytics-II	**06**
Elective Courses(EC)			***Elective Courses(EC)***		
3	*Any one courses from the following list of the courses A. Sales and Marketing analytics B. Tools for Data Analytics Lab Course-II C. Financial Accounting & Analysis	**06**	3	*Any one courses from the following list of the courses A. Foundation of Behavioural Finance Analysis B. International Financial Reporting Statndards C. Supply Chain Design and management	**06**
4	Project Work-I	**06**	4	Project Work-II	**06**
Total Credits		**24**	**Total Credits**		**24**

Note: Project work is considered as a special course involving application of knowledge in solving/ analyzing/ exploring a real-life situation/difficult problem. Project work would be of 06 credits. A project work maybe undertaken in any area of Elective courses.

Syllabus of Courses of Master of Commerce (M.Com)

Business Analytics Programme at Semester III Core Courses (CC)

1. Machine Learning and Mining Algorithms

Modules at a Glance

SN	Modules	No. of lectures
1	Introduction	15
2	Artificial Neural networks and Deep learning	15
3	Data Mining Algorithms	15
4	Web mining and other data mining	15
	Total	**60**

SN	Objectives
1	To understand basic human learning concepts
2	To understand primitivities in learning process by computer
3	To understand nature of problems solved with machine learning

SN	Modules/ Units
1.	**Introduction**
	AI Basics: Foundations, History and State of the Art of AI. Intelligent Agents: Agents and Environments, Nature of Environments, Structure of Agents, Search strategies. **Types of learning**: -Basics and applications of supervised, unsupervised, evolutionary, inductive, Analytical and reinforcement learning.
2.	**Artificial Neural networks and Deep learning**
	Artificial Neural Networks-Artificial neuron, activation function, Neural networks-Multi-layered Neural Network, Feedforward network, Backpropagation network. **Deep Learning-**Deep neural networks-overview of Convolutional Neural networks, Recurrent neural networks and multi-layer perceptron. Deep Learning frameworks. **Applications of Deep Learning in Business:** Customer service, Marketing Campaign, Financial Fraud detection, Quality Control.
3.	**Data Mining Algorithms**
	Classification: Neural Network based Algorithms, Distance Based Algorithms. **Clustering**-Density Based methods, outlier detection and analysis, Clustering high dimensional data. **Mining frequent patterns**: Rule Based analytics, Apriori. **Prediction**-Time Series Forecasting, Accuracy of prediction. **Ensemble Methods**: Bagging, Boosting and cross validation **Case Studies** : Market basket analysis, stock market analytics, financial Risk Assessment.
4.	**Web mining and other data mining**
	Web Mining: Introduction to Web Mining- Web content mining-Web usage mining-Web Structure mining- Web log structure and issues regarding web logs. **Advanced techniques: -** Text Analytics , Sentiment Analysis, Spatial data mining, Temporal mining

REFERENCES:

- Introduction To Algorithms For Data Mining And Machine Learning by Yang Xin-She, Acad Pr.
- Data Mining and Machine Learning: Fundamental Concepts and Algorithms by Mohammed J. Zaki (Author), Wagner Meira Jr (Author)
- Leskovec, J & Rajaraman, A. & Ullman, J (2014). *Mining of Massive Datasets*. The book is available online from here.
- Bishop, C. (2007). *Pattern Recognition and Machine Learning*. More information supporting the book can be found here.
- James, G. & Witten, D. & Hastie, T. & Tibshirani, R. (2014). *An introduction to Statistical Learning: with Applications in R*. The book is available online from here.
- Murphy, K.P. (2012). *Machine Learning: A Probabilistic Perspective*. MIT Press. More information supporting the book can be found here.
- Mitzenmacher, M. and Upfal, E. (2005). Probability and Computing. Cambridge University Press. A PDF version of the book is available here

2. Financial Model Based Analytics - I

Modules at a Glance

SN	Modules	No. of lectures
1	Interest rates: an introduction.	15
2	Interest rate models.	15
3	Valuation of forwards, futures and swaps.	15
4	Credit risk models.	15
	Total	**60**

SN	Objectives
1	To appreciate interest rates and their types
2	To introduce various models around the term structure of interest rates.
3	To educate on valuation techniques and its application in BFSI industry.

SN	Modules/ Units
1.	**Interest rates: An Introduction**
	Nominal and effective interest rates including drivers in domestic and international markets Continuous compounding and force of interest Spot rate, par yield, gross redemption yield, forward rates, instantaneous forward rates and the term structure of interest rates Forward rates from expectations theory, liquidity preference theory and market segmentation theory Modified duration, discounted mean term and convexity calculations with impact on bond prices. Immunisation theory for bond portfolios.
2.	**Interest Rate Models**
	Term structure of interest rates, Vasicek model, Cox-Ingersoll-Ross model, Hull and White model, Pricing of zero-coupon bonds, Credit spreads for risky bonds, Forward rate agreements (FRA) and FRA pricing, Introduction to interest-rate swaps (IRS).
3.	**Valuation of forwards, futures and swaps**
	System of margins underlying exchange-traded futures, Valuation of interest rate forwards and futures, Valuation of commodity forwards and futures, Valuation of cross-currency forwards, Valuation of index- forwards, Valuation of swaps e.g., nominal, cash flow exchanges, settlements.
4.	**Credit Risk Models**
	Introduction to structural and intensity-based models, Merton model and its quantitative applications for credit risks, Intensity based models viz. two-state and Jarrow Lando Turnbull models, Appreciation of credit rating and credit spreads from these “model based” approach, Expected credit loss (ECL) models for IFRS 9/ Ind AS 109 in banks and other lenders, Calculation of ECL using frequency and severity, including the ‘Loss Given Default’ parameters.

REFERENCES:

Davis, Mark, and Alison Etheridge. "Louis Bachelier's theory of speculation." *URL: https://f-origin. hypo1heses. org/wp-content/blogs. dir/1596/files/2014/12/Mark-Davis-Talk. pdf* (2006).

Hull, John C. *Options, futures and other derivatives*. Pearson Education India, 2003.

Cairns, Andrew JG. *Interest rate models: an introduction*. Vol. 10. Princeton University Press, 2004.

Baxter, Martin, Andrew Rennie, and Andrew JO Rennie. *Financial calculus: an introduction to derivative pricing*. Cambridge university press, 1996.

Panjer, Harry H., D. Dufresne, H. U. Gerber, H. H. Mueller, H. W. Pedersen, S. R. Pliska, M. Sherris, E. S. Shiu, and K. S. Tan. *Financial Economics: With Applications to Investments, Insurance, and Pensions*. Edited by Phelim P. Boyle, and Samuel H. Cox. Schaumburg, Ill.: Actuarial Foundation, 1998.

Johnson, Timothy. *Ethics in quantitative finance: A pragmatic financial market theory*. Springer, 2017.

Macdonald, Robert L. *Derivatives Markets.* Pearson new international edition 2013.

Syllabus of Courses of Master of Commerce (M.Com)
Business Analytics Programme at Semester III

Elective Courses (EC)

Sales and Marketing Analytics

Modules at a Glance

SN	Modules	No. of lectures
1	Introduction to Marketing Analytics	15
2	Segmentation and Targeting	15
3	Positioning	15
4	Analyzing Customer satisfaction	15
	Total	**60**

SN	Objectives
1	To understand various tools for generating marketing insights from data in such areas as segmentation, targeting and positioning, satisfaction management, customer lifetime analysis, customer choice, product and price decisions using conjoint analysis, and text analysis and search analytics
2	To develop insights through application in MS-excel and other technical softwares

SN	Modules/ Units
1.	**Introduction to Marketing Analytics**
	The new realities of marketing decision making, Need for Better Marketing Decision making, Challenges in Marketing Decision making Marketing Engineering (ME), Skills needed for Marketing Engineering, The role of models in ME
2.	**Segmentation and Targeting**
	The segmentation-targeting-positioning (STP) framework , Segmentation - The concept of market segmentation - Managing the segmentation process , Deriving market segments and describing the segments -Cluster analysis and Discriminant analysis , Targeting, Portfolio analysis, BCG matrix, Steps in constructing a market attractiveness/competitive position matrix for selecting target markets, Formulation of strategies based on market Attractiveness/Competitive Position Matrix
3.	**Positioning**
	The concept of product positioning , Conducting a positioning study, Perceptual mapping using principal component analysis, Incorporating preferences into perceptual maps, Derive marketing insights based on the distribution of preferences, Metrics for Measuring Brand Assets
4.	**Analysing Customer satisfaction**
	The psychology of customer satisfaction, The concept of customer satisfaction, Determinants of customer satisfaction, The expectancy-disconfirmation model of customer satisfaction ,Designing a customer satisfaction survey , Measuring customer satisfaction and related concepts , Analyzing customer satisfaction

REFERENCES:

- Gurley, B. (2012). The dangerous seduction of the lifetime value (LTV) formula. Above the Crowd. [optional, grumpy]
- Seward, Z.M. (2013). The first-ever hashtag, @-reply and retweet, as Twitter users invented them. Quartz. [optional]
- Teehan, G. (2016). Reactions: Everything in life is not Likable. Facebook Design blog.
- Guo, J. (2015). Seriously, here's one amazing math trick to learn what can't be known. Wonkblog. Washington Post. [optional, on synthetic control methods]
- Kohavi, R., Tang, D., & Xu, Y. (2020). Trustworthy Online Controlled Experiments. Ch. 3-4 & 7.
- Zhuo, J. (2019). The agony and ecstasy of building with data.

Tools for Data Analytics- Lab course-II

Modules at a Glance

SN	Modules	No. of lectures
1	Tableau	15
2	PowerBI	15
3	Frameworks and API	15
4	Other Tools	15
	Total	**60**

SN	Objectives
1	To use visual analytics platform to transforming the way data is used to solve problems
2	To learn the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.

SN	Tools For Data Science
1.	**Tableau**
	Charts: Connecting to data source, Bar chart, Pie chart, Line chart Tables: Grid table, Table calculations Grouping, Filtering, Sorting, Data hierarchy, Drill down Dash board: Creating Dashboard, storyboarding, interactive dashboard
2.	**PowerBI**
	Components Features Data modelling Charts and graphs :donught, Pie, Maps, Tree maps, Bubble, gauge ,Waterfall. DAX functions: Date and Time, logical, information, Mathematical, text, Statistical PowerBI dashboard and reports
3.	**Frameworks and API**
	Machine learning:Sci-kit learn, Deep learning:Keras, Pytorch, Tenserflow, Web : Jupyter, Visualization- Matplotlib, ggplot2()
4.	**Other Tools**
	Weka-Installation, Connecting to various data sources , Data Preprocessing, Classification,clustering,Association, Select Attribute, Visualization, Evaluating accuracy Nltk-Tokenizing, Filtering, stemming, tagging part of speech, lemmatizing, syntax and semantic analysis of text.

REFERENCES:

- Ronen Feldman and James Sanger, ―The Text Mining Handbook:
  - Advanced Approaches in Analyzing Unstructured Data‖, Cambridge University Press, 2006.

Financial Accounting & Analysis
Modules at a Glance

SN	Modules	No. of lectures
1	Introduction to Accounting	15
2	Inventory Valuation	15
3	Financial Analysis-I Financial Statement Analysis	15
4	Capital Structure Decisions	15
	Total	**60**

SN	Objectives
1	To provide the information that is needed for sound economic decision making.
2	To provide information about firm's performance to external parties such as investors, creditors, bankers, researchers and Government Agencies.
3	To use the analytical techniques and arriving at conclusions from financial information for the purpose of decision making.

SN	Modules/ Units
1.	**Introduction to Accounting**
	Importance - Objectives – Principles. GAAP: Accounting Concepts and Conventions. Accounting System: Double Entry System - Recording Business Transactions - Classification of Accounts - Accounting Cycle- Users of Accounting Information. The Accounting Process Overview: Accounting Process. Books of Original Record: Journal - Ledger - Trial Balance (Problems) - Classification of Capital and Revenue Expenses – Final Accounts with Adjustments (Problems) - Cash Book and other Subsidiary books. (Only Theory)
2.	**Inventory Valuation**
	Methods of Inventory Valuation and Valuation of Goodwill, Methods of Valuation of Goodwill, Accounting from Incomplete Records, Advantages and Disadvantages of Single Entry and Double Entry System and the Differences Between the Two, Preparation of Accounts and Ascertainment of Profit from Incomplete Records, Accounting Treatment as per the Statement of Affairs Method and Calculation of Missing Figures.
3.	**Financial Analysis-I Financial Statement Analysis**
	Analysis and Interpretation of Financial Statements from Investor and Company point of view - Horizontal Analysis and Vertical Analysis of Company Financial Statements - Liquidity - Leverage - Solvency and Profitability Ratios. (Problems) Techniques: Du Pont Chart - Window Dressing - Limitations of Financial Statements. Accounting Standards (AS) Issued by ICAI-IFRS. Case Study on Financial Reporting & Analysis (FRAs).
4.	**Capital Structure Decisions**
	Capital Structure Decisions - Meaning, Choice of Capital Structure, Importance, Optimal Capital Structure, EBIT-EPS Analysis, Cost of Capital, Capital Structure and Market Price of Share, Capital Structure Theories, Dividend Policy - Pay Out Ratio Business Risk and Financial Risk - Introduction, Debt v/s Equity Financing, Types of Investment Objective/Criteria for Individuals/Non-business Purpose.

REFERENCES:

- Robert N. Anthony, David F. Hawkins, Kenneth A. Merchant. Accountancy- text and cases. McGraw Hill Education (India) Private Limited, New Delhi.

- Maheshwari S. N., Maheshwari Sunil K., and Maheshwari Sharad K, An Introduction to Accountancy, Vikas Publishing House Pvt. Ltd.

- Narayanaswamy R. Financial Accounting: A Managerial Perspective. PHI Learning Pvt. Ltd., Delhi

- Garg CA Kamal, and Sehrawat Neeraj Kumar. Beginner`s Guide to Ind AS & IFRS. Bharat Law House Pvt. Ltd., New Delhi

Syllabus of Courses of Master of Commerce (M.Com)
Business Analytics Programme at Semester IV

Core Courses (CC)

1. Predictive Analytics

Modules at a Glance

SN	Modules	No. of lectures
1	Basics of Personal Financial Management	15
2	Computation of Return and Risk of Personal Investment	15
3	Introduction To Wealth Management And Economic Environment	15
4	Wealth Management Process, Products & Ethics	15
	Total	**60**

SN	Objectives
1	To learn, how to develop models to predict categorical and continuous outcomes, using such techniques as neural networks, decision trees, logistic regression, support vector machines and Bayesian network models.
2	To know the use of the binary classifier and numeric predictor nodes to automate model selection.
3	To advice on when and how to use each model. Also learn how to combine two or more models to improve prediction

SN	Modules/ Units
1	**Introduction to Predictive Analytics and Model Development**
	Introduction to Predictive Analytics- Analytics in Decision Making- Game changers & Innovators; Model; Development and Model Validation using Simple Linear Regression-Demo using Excel & SPSS ; Multiple Linear Regression-Estimation of Regression Parameters-Model Diagnostics-Dummy, Derived & Interaction; Variables-Multi-collinearity-Model Deployment-Demo using SPSS; Introduction to Cox Regression Analysis- Need and importance – Application in Business and Economics
2	**Logistic Regression**
	Discrete choice models-Logistic Regression-Maximum Likelihood Estimation of Parameters-Logistic Model Interpretation-Logistic Model Diagnostics-Logistic Model Deployment-Demo using SPSS
3	**Decision Trees and Unstructured Data Analysis**
	Introduction to Decision Trees- Chi-Square Automatic Interaction Detectors (CHAID)-Classification and Regression Tree (CART)- Demo using SPSS ; Analysis of Unstructured data-Naive Bayes Classification- Discriminant Analysis-Linear Discriminant ;Analysis-Estimating Misclassification probabilities- Quadratic Discriminant analysis
4	**Forecasting and Time series Analysis**
	Forecasting-Time Series Analysis- Additive & Multiplicative Models-Exponential smoothing techniques Forecasting Accuracy- Auto-regressive and moving average models-Demo using SPSS

REFERENCES:

- Trevor Hastie, Robert Tibshirani, Jerome Friedman, The Elements of Statistical Learning-Data Mining, Inference, and Prediction, Second Edition, Springer Verlag, 2009.
- C.M.Bishop –Pattern Recognition and Machine Learning, Springer, 2006.
- L. Wasserman-All of statistics.
- Gareth James. Daniela Witten. Trevor Hastie Robert Tibshirani. An Introduction to Statistical Learning with Applications in R.

2. Financial model based analytics - II

Modules at a Glance

SN	Modules	No. of lectures
1	Efficient Markets Hypothesis	15
2	Equity valuation models	15
3	Options theory: an introduction	15
4	Options pricing	15
	Total	**60**

SN	Objectives
1	To appreciate the setting of distribution of share price returns.
2	To enable the student to quantitatively apply theories around equity valuation and diversification across asset classes.
3	To impart learning around options theory in order to improve analytical understanding.

SN	Modules/ Units
1.	**Efficient Markets Hypothesis**
	The three primary forms viz. weak form, semi-strong form, and strong form Evidence from the testing of the EMH Random walk theory and its links to the Brownian motion model Share price modelling using standard Brownian motion and its links to the lognormal distribution of share price returns, Limitations of lognormal distribution as seen from EMH evidence
2.	**Equity Valuation Models**
	Dividend discount model, Capital Asset Pricing models Security market line and Capital market line, and market price of risks Models of asset returns viz. multifactor models, including orthogonality, single index models, Modern portfolio theory including optimization of the risk-return tradeoff Benefits and traits of diversification for reducing diversifiable and non-diversifiable risks, especially covariance and beta related risks.
3.	**Options Theory: An Introduction**
	Introduction to the six Greeks in options Call and Put options with Put-Call parity theory Delta-hedging for option writers Forward contract and equity futures pricing Payoffs of various options including synthetic OTC option products
4.	**Options pricing**
	Binomial model for equity options Black-Scholes-Merton model for equity options Black's model for interest rate floor Application of options pricing to develop a hedging portfolio ESOP valuation and appreciation of IFRS 2/ Ind AS 102 Valuation of Restricted Stock Units whilst appreciating martingale theory Introduction to state price deflators.

REFERENCES:

Elton, Edwin J., Martin J. Gruber, Stephen J. Brown, and William N. Goetzmann. *Modern portfolio theory and investment analysis*. John Wiley & Sons, 2009.

Davis, Mark, and Alison Etheridge. "Louis Bachelier's theory of speculation." *URL: https://f-origin. hypo1heses. org/wp-content/blogs. dir/1596/files/2014/12/Mark-Davis-Talk. pdf* (2006).

Hull, John C. *Options futures and other derivatives*. Pearson Education India, 2003.

Baxter, Martin, Andrew Rennie, and Andrew JO Rennie. *Financial calculus: an introduction to derivative pricing*. Cambridge university press, 1996.

Panjer, Harry H., D. Dufresne, H. U. Gerber, H. H. Mueller, H. W. Pedersen, S. R. Pliska, M. Sherris, E. S. Shiu, and K. S. Tan. *Financial Economics: With Applications to Investments, Insurance, and Pensions*. Edited by Phelim P. Boyle, and Samuel H. Cox. Schaumburg, Ill.: Actuarial Foundation, 1998.

Joshi, Mark S., and Jane M. Paterson. *Introduction to mathematical portfolio theory*. Cambridge University Press, 2013.

Johnson, Timothy. *Ethics in quantitative finance: A pragmatic financial market theory*. Springer, 2017.

O'neil, C. (2017). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown.

Harder, Sebastian. *The efficient market hypothesis and its application to stock markets*. GRIN Verlag, 2010.

Macdonald, Robert L. *Derivatives Markets.* Pearson new international edition 2013.

Shiller, Robert J. "From efficient markets theory to behavioral finance." *Journal of economic perspectives* 17, no. 1 (2003): 83-104.

Syllabus of Courses of Master of Commerce (M.Com)
Business Analytics Programme at Semester IV

Elective Courses (EC)
Foundation of Behavioural Finance Analysis

Modules at a Glance

SN	Modules	No. of Lectures
1	Behavioral finance: introduction	15
2	Utility/ Preference Functions	15
3	Behavioral Factors and Financial Markets	15
4	Heuristics and behavioral biases of investors	15
	Total	**60**

SN	Objectives
1	The purpose of this course is to introduce the student to the new field of behavioural finance.
2	Students will deal with major implications of human psychology for financial decisionmakers and for financial markets.
3	Students will be able to have a good understanding of the major concepts and topics of behavioural finance

SN	Modules/ Units
1	**Behavioral finance**
	Introduction to Behavioral finance – Nature, scope, objectives and application; Investment Decision Cycle: Judgment under Uncertainty :Cognitive information perception - Peculiarities (biases) of quantitative and numerical information perception - Representativeness – Anchoring - Exponential discounting - Hyperbolic discounting
2	**Utility/ Preference Functions**
	Expected Utility Theory [EUT] and Rational Thought: Decision making under risk and uncertainty - Expected utility as a basis for decision-making – Theories based on Expected Utility Concept - Investor rationality and market efficiency.
3	**Behavioral Factors and Financial Markets**
	The Efficient Markets Hypothesis – Fundamental Information and Financial Markets - Information available for Market Participants and Market Efficiency -Market Predictability –The Concept of limits of Arbitrage Model - Asset management and behavioral factors - Active Portfolio Management: return statistics and sources of systematic underperformance. - Fundamental information and technical analysis – the case for psychological influence.
4	**Heuristics and behavioral biases of investors**
	Types of investors- Individual and Institutional - How the human mind works-the two systems; Familiarity and related heuristics; Representativeness and related biases; Anchoring; Irrationality and adaptation; Hyperbolic discounting. Sovereign credit rating - drivers

REFERENCES:

- Shleifer, Andrei (2000). Inefficient Markets: An Introduction to Behavioral Finance. Oxford, UK: Oxford University Press.
- Kahneman, D. and Tversky, A. (1984). "Choices, Values, and Frames". American Psychologist 39 (4): 341– 350. 5
- HershShefrin, (2000) Beyond Greed and Fear, Harvard Business School Press.
- Chandra, P. (2017), Behavioural Finance, Tata Mc Graw Hill Education, Chennai (India).
- Ackert, Lucy, Richard Deaves (2010), Behavioural Finance; Psychology, Decision Making and Markets, Cengage Learning.
- Forbes, William (2009), Behavioural Finance, Wiley.
- Kahneman, D. and Tversky, A. (2000). Choices, values and frames. New York : Cambridge Univ. Press. 5.
- Shefrin, H. (2002), Beyond Greed and Fear; Understanding Behavioural Finance and Psychology of investing.

  New York; Oxford University Press.
- Shleifer, A. (2000). Inefficient markets; An introduction to Behavioural Finance. Oxford Univ. Press.
- Thaler, R. (1993). Advances in Behavioral Finance. Vol. I. New York, Russell Sage Foundation.
- Thaler, R. (2005). Advances in Behavioural Finance. Vol. II. New York; Princeton University Press.

International Financial Regulatory Bodies

Modules at a Glance

SN	Modules	No. of lectures
1	Conceptual Foundations of Financial Statements	15
2	Presentation of financial statements	15
3	Indian Accounting Standards for Assets, Liabilities and Revenue	15
4	Presentation of Single Entity Financial Statements Covered by IFRS Convergence	15
	Total	**60**

SN	Objectives
1	This course aims at giving the students the Conceptual Foundations of Financial Statements and IndianAccounting Standards for Assets, Liabilities and Revenue.

SN	Modules/ Units
1	**Conceptual Foundations of Financial Statements**
	The objective of financial reporting, - The main assumptions, Qualitative characteristics of financial reporting, Elements of Financial Statements: recognition and measurement
2	**Presentation of financial statements**
	Accounting standards: Role/objectives of accounting standards, Development of accounting standards in India - Requirements of international accounting standards - International organizations engaged in accounting harmonization - IASB - FASB - Role of IASB in developing accounting standards IFRS:- Introduction, scope ; Indian Accounting standards (Ind AS): Introduction Road map; Comparison ofInd AS, IFRS and AS ; Conceptual framework ; Definition of financial elements Principles of recognition, measurements, presentation and disclosure. (Theory and Practical)
3	**Indian Accounting Standards for Assets, Liabilities and Revenue**
	Valuation of Inventories, Cash flow statement, Accounting for tangible non-current assets, Accounting for intangible assets, Accounting for impairment of assets, Accounting for borrowing costs, Investment property,Revenue from contracts with customers, Income tax, Employee benefits, Provisions, contingent liabilities and contingent assets (Theory and Practical)
4	**Presentation of Single Entity Financial Statements Covered by IFRS Convergence**
	(Ind AS 1): Accounting policies, accounting estimates; (IAS 8 and Ind AS 8) - Events after reporting date; (IAS10 and Ind AS 10) - Structure and contents of financial statements - Preparation of financial statements: Statement of Financial Position (SOFP) - Statement of Profit or Loss (SOPL) - Statement of Changes in Equity(SOCE)- Cash Flow Statement (SOCF); (IAS 7 and Ind AS 7). · (Theory and Practical)

REFERENCES:

- Indian Accounting Standards and IFRS for non-financial executives: By T.P. Ghosh– Taxman
- Jan Williams: Financial & Managerial Accounting.
- Maurice D. Levi – International Finance: Tata Mc Graw Hill.
- P .Chandra: Financial Management:
- Dr. S. N. Maheshwari: Corporate Accounting
- Mukherjee, Hanif: Corporate Accounting
- Steven Collings:IFRS for Dummies

Supply Chain Design and Management
Modules at a Glance

SN	Modules	No. of lectures
1	Introduction to Supply Chain Management	15
2	Perspectives of SCM	15
3	Introduction to Logistics	15
4	Design of SCM, Logistics and Use of Internet	15
	TOTAL	**60**

SN	Objectives
1	To understand how Logistics, Supply Chain, Operations, Channels of Distribution fit in to various types of Business viz., Manufacturing, Service and Project.
2	To understand how Managers, take decisions in Logistics and supply chain management functional area
3	To understand how Transportation and Warehouse functions fits into Logistics & Supply Chain Management.

SN	Modules/ Units
1.	**Introduction to Supply Chain Management**
	Supply Chain Management: Concept, Features, Evolution, Importance, Process and Barriers of Supply Chain Management. Principles and Strategies: Principles, Supply Chain Strategies – Organizations, Coordination, Innovation and Forecasting. Participants in SCM: Supply chain intermediaries- Concept and Types, Channels of Distribution for Industrial. Goods and Consumer Goods, Channel of Distribution at Services Level, Factors for selection of suitable channels.
2.	**Perspectives of SCM**
	Global perspectives: Measuring and analyzing the value and efficiency of global Supply Chain Networks, Global market forces, Types of global supply chain; Indian Perspectives: Measuring and Analyzing the value and efficiency of domestic Supply Chain Networks, Economic effects of supply chains; Customer Perspectives: Customer values, Role of customers and Ways of improving customer services in SCM.
3.	**Introduction to Logistics**
	Logistics Management: Concept and Process, Competitive Advantages and Three C's, Changing Logistics; Environment, Reverse Logistics, Importance of Inventory Control, Bull-whip effect Transportation and Warehousing: Transport Functions and Participants in Transportation Decisions, Transport Infrastructure- Forms, Warehouse Functions and Operations. Packaging and Materials Management- Consumer and Industrial Goods Packaging - Importance, Factors influencing Materials Planning, Preservation Safety and Measures of Materials Handling
4.	**Design of SCM, Logistics and Use of Internet**
	SCM Plan- Demand Planning, Source of Procurement, Production or Assembly Steps, Sales return of defective or excess goods. Use of Internet in SCM- E-market places, E-procurement, E-logistics, E-fulfillment. Operative Systems in SCM: Enterprise Resource Planning (ERP), Performance Modeling of supply chains using Markov chains, Inventory Control Importance, Pareto's Law. New Horizon in Supply chain Management (Careers)

REFERENCES:

- Modeling the Supply Chain-2nd edition; Shapiro, Jeremy F, Duxbury Applied Series
- Logistics and Supply Chain Management; Christopher, M (1992), Pitman Publishing, London.
- Logistics and Supply Chain Management Cases and Concepts; Raghuram and Rangaraj, Macmillan
- Supply Chain Management; N. Chandrasekaran, Oxford
- Supply Chain Logistics Management-2nd Edition; Bowersox, Closs, Cooper, McGraw Hill
- Supply Chain Management; Dubey, Kumar Sai, New Century

EXAMINATION PATTERN

Under Choice Based Credit, Grading and Semester System

With Effect from Academic Year: 2022-23

Evaluation Pattern

1. Continuous Internal Evaluation
2. Semester End Exam (60 Marks

Continuous Internal Evaluation (CIE)	**40 marks**
The internal evaluation of 40 marks for M.Com for each semester would be of tests and of class participation, Project, case study analysis, caselets, power point presentations, group discussion, book review, research paper, article analysis and any other mode depending on the nature and scope of the course. Continuous Internal Evaluation (CIE), to be conducted by the subject teacher all through the semester. The total mark break up would be suitably divided and the total marks scored by the learner would be submitted to the Controller of Examination	
Semester End Examination (SEE)	**60 marks**
TOTAL	**100 marks**

Question Paper Pattern (Practical Courses)

Maximum Marks: 60

Questions to be set: 04

Duration: 2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No.	Particular	Marks
Q1.	Practical Question	15 Marks
	OR	
Q1.	Practical Question	15 Marks
Q2.	Practical Question	15 Marks
	OR	
Q2.	Practical Question	15 Marks
Q3.	Practical Question	15 Marks
	OR	
Q3.	Practical Question	15 Marks
Q4.	Practical Question	15 Marks
	OR	
Q4.	Practical Question	15 Marks

Note: Full length question of 15 marks may be divided into two sub questions of 08 and 07 marks.

Sr. No.	Particular
1	**Standard of Passing:** The learner to pass a course shall have to obtain a minimum of 40% marks in aggregate for each course where the course consists of Continuous Internal Evaluation and Semester End Examination. The learner shall obtain minimum 40% marks (i.e. 16 out of 40) in the Internal Assessment and 40% marks in Semester End Examination (i.e. 24 out of 60) separately, to pass the course and minimum Grade D in the project component, wherever applicable to pass a particular semester. A learner will be said to have pass a particular course if the learner passes the Continuous Internal Evaluation and Semester End Examination together
2	**ATKT Rules:** 1) A learner shall be allowed to keep term for Semester II irrespective of number of courses of failure in Semester I 2) A learner shall be allowed to keep term for Semester III irrespective of number of courses of failure in Semester I and II 3) A learner shall be allowed to keep term for Semester IV irrespective of number of courses of failure in Semester I, II and III However the marksheet for semester IV shall be given only after he/she passes the first three semesters.

QUESTION PAPER PATTERN SEM III & IV

Evaluation scheme

Scheme of Examination: The performance of the learners will be evaluated in two components. One component will be the Internal Assessment component carrying 40% marks and the second component will be the Semester End Examination component carrying 60% marks.

Internal Assessment: The Internal Assessment will consist of one class test of 40 marks for each course excluding projects. The pattern will be shown as below:

Internal Assessment (**I.A.)- 40**

Marks (I) Class test: 20 Marks.

Question Paper Pattern of IA

Maximum Marks: 20 marks

Questions to be set: 02

Duration: 2 hour

Question No	Particular	Marks
Q1.	Objective Questions	05 marks
Q2.	Concept based short questions /case study Students to answer 3 sub questions out of 5 sub questions.	15 marks

(II) Assignment: 20 Marks

May Include Case studies, Research Papers, Oral presentation, Collaborative learning Activity, Article Review, Company analysis, Real world examples etc. in aligned with the learning objective of the individual course.

Semester End Examination (SEE)- 60 Marks

Question Paper Pattern of SEE

Maximum Marks: 60

Questions to be set: 04

Duration: 2Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question no.	Particulars	Marks
Q1	A) Full length Questions Or B) Full length Questions	15
Q2	A) Full length Questions Or B) Full length Questions	15
Q3	A) Full length Questions Or B) Full length Questions	15
Q4	A) Full length Questions Or B) Full length Questions	15

Note: Full length question of 15 marks may be divided into two sub questions of 08 and 07 marks or 05 and 10 marks or 05, 05 and 05 marks.

Introduction: 100 marks project work each semester

Inclusion of project work in the course curriculum of the M.Com. programme is one of the ambitious aspects in the programme structure. The main objective of inclusion of project work is 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 methodology of formulation, preparation and evaluation pattern of the project work.

• There are two modes of preparation of project work

1. Project work based on research methodology in the study area

2. Project work based on internship in the study area

Guidelines for preparation of Project Work

Work Load

Work load for Project Work is 01 (one) hour per batch of 15-20 learners per week for the teacher. The learner (of that batch) shall do field work and library work in the remaining 03 (three) hours per week.

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

- The project topic may be undertaken in any area of Elective Courses.
- Each of the learners has to 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.
- University/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 shall be bounded.

- The project report should be 60 to 80 pages

Structure to be followed to maintain the uniformity 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

2. Guidelines for Internship based project work

- Minimum 20 days/ 100 hours of Internship with an Organization/ NGO/ Charitable Organization/ Private firm.
- The theme of the internship should be based on any study area of the elective courses
- Project Report should be of minimum 50 pages
- Experience Certificate is Mandatory
- A project report has to be brief in content and must include the following aspects:
  - ✔ **Executive Summary:** A bird's eye view of your entire presentation has to be precisely offered under this category.
  - ✔ **Introduction on the Company:** A Concise representation of company/ organization defining its scope, products/ services and its SWOT analysis.
  - ✔ **Statement and Objectives:** The mission and vision of the organization need to be stated enshrining its broad strategies.
  - ✔ **Your Role in the Organization during the internship:** The key aspects handled, the department under which you were deployed and brief summary report duly acknowledged by the reporting head.
  - ✔ **Challenges:** The challenges confronted while churning out theoretical knowledge into practical world.
  - ✔ **Conclusion:** A brief overview of your experience and suggestions to bridge the gap between theory and practice.

- The project report based on internship 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 shall be bounded.

Evaluation pattern of the project work

The Project Report shall be evaluated in two stages viz.	
• **Evaluation of Project Report (Bound Copy)**	**60 Marks**
Introduction and other areas covered	20 Marks
Research Methodology, Presentation, Analysis and interpretation of data	30 Marks
Conclusion & Recommendations	10 Marks
• **Conduct of Viva-voce**	40 Marks
In the course of Viva-voce, the questions may be asked such as importance / relevance of the study, objective of the study, methodology of the study/ mode of Enquiry (question responses)	10 Marks
Ability to explain the analysis, findings, concluding observations, recommendation, limitations of the Study	20 Marks
Overall Impression (including Communication Skill)	10 Marks

Note:

- The guiding teacher along with the external evaluator appointed by the University/ College for the evaluation of project shall conduct the viva-voce examination as per the evaluation pattern

Passing Standard

- Minimum of Grade D in the project component
- In case of failing in the project work, the same project can be revised for ATKT examination.
- Absence of student for viva voce: If any student fails to appear for the viva voce on the date and time fixed by the department such student shall appear for the viva voce on the date and time fixed by the Department, such student shall appear for the viva voce only along with students of the next batch.

Question Paper Pattern

(Theoretical Courses)

Maximum Marks: 60

Questions to be set: 04

Duration: 2 Hrs.

All Questions are Compulsory Carrying 15 Marks each.

Question No.	Particular	Marks
Q1.	Practical Question	15 Marks
	OR	
Q1.	Practical Question	15 Marks
Q2.	Practical Question	15 Marks
	OR	
Q2.	Practical Question	15 Marks
Q3.	Practical Question	15 Marks
	OR	
Q3.	Practical Question	15 Marks
Q4.	Practical Question	15 Marks
	OR	
Q4.	Practical Question	15 Marks