CHRIST
(DEEMED TO BE UNIVERSITY)
DELHI-NCR, INDIA

School of Business and Management
Delhi NCR Campus

Syllabus

BBA FinTech (Honours)

2021-22

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Syllabus for

BBA Fintech (Honours)

Academic Year (2021-2022)

Programme Overview:

The undergraduate programme in Bachelor of Business Administration in Finance Technology (BBA Fin-Tech) honours is offered by the School of Business and Management at the Delhi NCR Campus to prepare young minds with a keen interest in finance to take up challenging positions in the financial segment. This industry led programme provides the platform to students aspiring to establish their presence in the Fin-Tech domain to train and equip to be able to meet with the challenges of a career in this sector that is witnessing a number of technological disruption led changes.

The Fin-Tech segment has evolved rapidly across the years, presenting exciting and challenging opportunities in domains spanning Banking, Capital Markets, Digital Finance and Alternative Finance. To meet this challenge and capitalise on these emerging opportunities the curriculum for the three year BBA Fin-Tech programme (6 Semesters), has been designed to enable the students to gain in-depth conceptual understanding and hands-on experience in the emerging Fin-Tech space as well as exposing them to the other functional areas of management. Students will be offered extensive industry exposure through various industry led and taught courses, rigorous internships in Financial Institutions, Fin-Tech start-ups, Advisory firms etc., which would be facilitated through our industry partner for this programme Edu Edge Pro Pvt Ltd and our widespread existing corporate network.

Students would be encouraged to pursue several value added courses to strengthen their knowledge of Finance and Technology meant to aid financial decision making. In addition to this they are also given the opportunity for interdisciplinary learning through various generic electives from the streams of Economics, Psychology, Sociology, Social Work, Law, Media Studies, Hotel Management and Computer Applications. Aimed at the holistic development of the students, the Department facilitates students' participation in various National and International fests besides conducting several curricular and co-curricular activities through clubs and associations. Students are also encouraged to participate in community development initiatives to sensitise them to the community needs.

Programme Objective:

- To provide high quality professional education in the domain of finance to management students.
- To prepare students to meet the challenges posed by the technological disruptions of the 21st century in the finance domain
- To focus on the holistic development of the student with conceptual clarity, analytical ability, critical thinking and communication skills.
- To prepare young minds with a positive attitude for excellence in academics and committed to serving the society
- To facilitate the professional journey of students by providing them with the in-depth of knowledge required to make a mark in the financial services sector.
- To develop Fin-Tech professionals who are able to leverage the knowledge acquired here to dive deep into the challenging world of Financial technology.

Programme Outcome:

- Holistically developed management graduates ready to meet the emerging challenges in the global economy in general and more specifically the financial segment
- Graduates who have conceptual clarity, analytical ability, critical thinking and communication skills
- Employable graduates with the Fin-Tech based skills
- Graduates who are confident and equipped with the right knowledge, skills and attitudes
- Graduates who are able to leverage their learning to occupy challenging roles as Financial Analyst, Cyber security Analyst, Block Chain Analyst, Risk Analyst, Compliance Analyst, Financial Consultant etc., in the Fin-Tech space

BBA FinTech Honours
Course Structure for the Batch 2021 – 2024
Semester I (Applicable to batch 2021-24)

Course Code	Course Title	Core/ Elective/ Project/ Ability Enhancement Course	Credits	Hrs/Wk	CIA	ESE	Max Marks	Duration
BBA131	Principles of Management	CC	4	4	70	30	100	2
BBA132	Financial Accounting	CC	4	4	70	30	100	2
BBA133	Micro Economics	CC	4	4	70	30	100	2
BBFT134N	Business Mathematics	PC	4	4	70	30	100	2
BBFT135N	Introduction to FinTech	PC	4	4	70	30	100	2
ENG121N	English	AECC	3	3	70	30	100	2
AEN121N	Language	AECC	3	3	50	50	100	2
HOL111	Holistic Education	SEC	1	1				
BBFT111N	Overview of Financial Markets and Capital Markets	SEC		2			Grade (100)	
Interdisciplinary course (One From The Following)								
BENG191A	Reading Technology in/and Science Fiction	GE	3	3	100		100	
BENG191B	Global Ethics for Contemporary Societies	GE	3	3	100		100	

BECO191A	Institutions and Informal Economy	GE	3	3	100		100	
BECO191B	Economics of Corruption	GE	3	3	100		100	
BMED191A	Media Literacy	GE	3	3	100		100	
BMED191B	Cinematography	GE	3	3	100		100	
BHIS191A	Encountering Histories: The Future of the Past	GE	3	3	100		100	
BPSY191A	Science of Wellness	GE	3	3	100		100	
BPSY191B	Advertisement Psychology	GE	3	3	100		100	
	Smart Studying	GE	3	3	100		100	
BPOL191A	Conflict Management and Peace	GE	3	3	100		100	
BPOL191B	Global Power and Politics	GE	3	3	100		100	
BPOL191C	State and Terrorism	GE	3	3	100		100	
BBS191A	Sustainable Development	GE	3	3	100		100	
BBS191B	A Life worth living – From health to well being	GE	3	3	100		100	
BBS191C	Mahabharatha and Modern Management	GE	3	3	100		100	
BBS191D	Introduction to Existentialism	GE	3	3	100		100	

BBS191E	Tourism, Culture and Sustainable Development	GE	3	3	100		100	
		Total	30	32			700	

Semester II (Applicable to batch 2021-24)

Course Code	Course Title	Core/ Elective /Project/ AECC	Credits	Hrs/Wk	CIA	ESE	Max Marks	Duration
BBA231	Organizational Behavior	CC	4	4	70	30	100	2
BBA232	Business Statistics	CC	4	4	70	30	100	2
BBA233	Macro Economics	CC	4	4	70	30	100	2
BBFT234N	Financial Institutions and Services	PC	4	4	70	30	100	2
ENG221N	English	AECC	3	3	70	30	100	2
AEN221N	Language	AECC	3	3	50	50	100	2
EVS221	Environment Studies	AECC	2					
HOL211	Holistic Education	SEC	1	1			Grade (50)	
BBFT211N	Foundations in Quantitative Finance	SEC		2			Grade (100)	
BBFT281N	Social Responsibility Project	SEC	1				Grade (50)	
BBFT212N	Working with Spreadsheets	SEC	3	2 (Synchronous) +1			Grade (100)	

				(asynch ronous)				
Interdisciplinary courses (One From The Following)								
BENG291B	Reading the Cyberspace: Public and the Private	GE	3	3	100		100	
BECO291A	Economics and Literature	GE	3	3	100		100	
BECO291B	Designing Policies for Sustainable Development	GE	3	3	100		100	
BMED291A	Inter-cultural Communication	GE	3	3	100		100	
BMED291B	Acoustic Phonetics	GE	3	3	100		100	
BBS291A	Applied Ethics-A Multicultural Approach	GE	3	3	100		100	
BBS291B	Global Leadership And Culture	GE	3	3	100		100	
BBS291C	Courtesy And Etiquettes	GE	3	3	100		100	
BPOL291A	Literature Review For Research	GE	3	3	100		100	
BPSY291A	Appreciating Aesthetics	GE	3	3	100		100	
BPSY291B	Human Engineering and Ergonomics	GE	3	3	100		100	
BHIS291A	The Politics of Memory: The Makings of Genocide	GE	3	3	100		100	
	Total		32	30			700	

Semester III (Applicable to batch 2020-23)

Course Code	Course Title	Core/ Elective/ Project/ AECC	Credits	Hr/Wk	CIA	ESE	Max Marks	Duration
BBA331	Financial Management	CC	4	4	70	30	100	2
BBA332	Human Resource Management	CC	4	4	70	30	100	2
BBA333	Marketing Management	CC	4	4	70	30	100	2
BBFT334N	Insurance and Risk Management	PC	4	4	70	30	100	2
BBFT351N	Python for Finance	PC	4	4	100		100	
BBFT311N	Structured Query Language	SEC	3	3	100		100	
HOL311	Holistic Education	SEC	1	1			Grade (50)	
BBFT 381N	Industry Review Project	SEC	1				Grade (50)	
Any ONE out of TWO								
BBFT 361A	Information Systems and e-business	GE	3	3	70	30	100	
BBFT 361B	Innovation and Creativity in Business	GE	3	3	70	30	100	
		Total	28	27			700	

Semester IV (Applicable to batch 2020-23)

Course Code	Course Title	Core/ Elective/ Project/ AECC	Credits	Hrs/Wk	CIA	ESE	Max Marks	Duration
BBA431	Cost and Management Accounting	CC	4	4	70	30	100	2
BBA432	Entrepreneurship Development	CC	4	4	70	30	100	2
BBA433	Research Methodology	CC	4	4	70	30	100	2
BBFT451N	Introduction to Business Analytics	PC	4	4	100		100	
BBFT434N	Security Analysis and Portfolio Management	PC	4	4	70	30	100	2
BBFT435N	FinTech Ethics and Risks	PC	4	4	70	30	100	2
HOL411	Holistic Education	SEC	1	1			Grade (50)	
BBFT411N	Financial Modelling	SEC		2	100		Grade (100)	
Any ONE of the TWO								
BBFT461AN	Fundamentals of AI and Machine Learning	GE	3	3	70	30	100	2
BBFT461B	Emotional Intelligence for managerial effectiveness	GE	3	3	70	30	100	2
		Total	28	30			700	

Semester V (Applicable to batch 2020-23)

Course Code	Course Title	Core/ Elective/ Project/ Ability Enhancement Course	Credits	Hrs/Wk	ESE	CIA	Max Marks	Duration
BBA531	Strategic Management	CC	4	4	70	30	100	2
BBA532	Taxation Laws	CC	4	4	70	30	100	2
BBFT581N	Internship	SEC	4				100	
Any TWO of the THREE								
BBFT541N	Financial Derivatives	DSE	4	4	70	30	100	2
BBFT542N	Trading Strategies	DSE	4	4	70	30	100	2
BBFT553N	Data Visualization	DSE	4	4	100		100	
BBFT511N	Cryptocurrencies and Payments	SEC		2			Grade (100)	
		Total	20	18			500	

Semester VI (Applicable to batch 2020-23)

Course Code	Course Title	Core/ Elective/ Project/ AECC	Credits	Hrs/Wk	CIA	ESE	Max Marks	Duration
BBA631	Operations Management	CC	4	4	70	30	100	2
BBA632	Business Law	CC	4	4	70	30	100	2
BBFT633N	FinTech Regulations &	PC	4	4	70	30	100	2

	RegTech							
BBFT 681N	Project	SEC	3				100	
IC631	Indian Constitution Laws	SEC	1				Grade	
Any TWO of the THREE								
BBFT641N	International Finance	DSE	4	4	70	30	100	2
BBFT642N	Block chain	DSE	4	4	70	30	100	2
BBFT653N	Advanced R Programming	DSE	4	4	100		100	
BBFT611N	Algorithmic trading and Robo-advisory	SEC		2			Grade (100)	
		Total	24	22			600	

Course Name: Principles of Management	**Course Code: BBA131**
Total number of hours: 60 Hours	**Credits: 4**

Course Description:

The dynamic business environment compels managers to perform a challenging role in steering the organizations' success to new heights. This comprehensive introductory course has been designed to provide valuable insights into the functions of modern-day managers. By tracing the historical evolution of management thought, it explores the basic concepts, principles and theories of management. It orients the learners towards basic understanding of managerial functions like planning, organizing, staffing, motivation, communication, controlling and supervision. By focusing on the contemporary challenges faced by organizations in recent years, it enables the proponents to gather knowledge about skills which would have a real time application in the corporate world.

Course Objectives:

- To outline the fundamental activities of managers
- To explain the basic concepts, principles and theories of management
- To examine the broad functions of management
- To identify the contemporary issues and challenges in the field of management
- To identify ethical workplace practices

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Demonstrate understanding of the role of managers in an organization
CLO2 Summarize the elementary concepts, principles and theories of management
CLO3 Examine the managerial functions having an impact on the organizational effectiveness
CLO4 Identify the contemporary issues and challenges in management
CLO5 Develop ethical workplace practices

Pedagogy: This course uses multiple pedagogies like interactive lecture, students' discussions and PPTs, case studies, role plays, and form of experiential learning.

Syllabus

UNIT I INTRODUCTION TO MANAGEMENT 10 Hrs
Level of Knowledge: Conceptual

Definition – nature, process and significance of management – Role of managers – Managerial Skills and Roles - Evolution of Management Thought: Classical Management Approaches, Behavioral Management Approaches, Quantitative Management Approach, Modern Management Approaches - Management as a Science or Art - Management as a profession- Administration and Management- Functions of Management – Functional Areas of Management.

UNIT II PLANNING AND DECISION MAKING 10 Hrs
Level of Knowledge: Conceptual

Planning - Nature and Importance of Planning- Types of Plans - Levels of Planning - Steps in planning - Making Effective Plans- Objectives and Management By Objective (MBO) –Management By Exception (MBE) - Policy and Strategy- Forecasting and Decision Making - Nature of decision making - Types of decisions – Decision Making Process – Rational Perspectives and Behavioral Aspects of decision making.

UNIT III ORGANIZING 10 Hrs
Level of Knowledge: Conceptual

Organizing - Nature and purpose - Principles of Organization - Types of Organization - Organizational Structure and Design – Line, Staff and functional authority – Conflict between Line and Staff – Overcoming the Line-Staff Conflict. Departmentation - Span of control – Authority, Responsibility and Accountability - Principles of Delegation - Steps - Centralization Vs Decentralization – Factors determining the degree of Decentralization of authority.

UNIT IV STAFFING **8 Hrs**
Level of Knowledge: Conceptual

Staffing - Nature and Purpose of staffing – Importance of staffing – Components of Staffing - Manpower planning - Recruitment and Selection - Training and Development - Performance Appraisal.

UNIT V DIRECTING **10 Hrs**
Level of Knowledge: Conceptual

Directing – Nature of Directing function - Principles – Importance of Effective Direction – Motivating people at work – Early motivational theories, Leadership and change - Effective Communication skills for directing – Barriers of communication.

UNIT VI CONTROLLING AND SUPERVISION **7 Hrs**
Level of Knowledge: Conceptual

Controlling - Concept, Nature and Importance - Essentials of Control - Requirements of an Effective Control System – Behavioral Implications of Control – Techniques of Managerial control - Co-ordination – Need for co-ordination – Types of Co-ordination - Techniques of Coordination - Cooperation. Supervision – Position of a supervisor – Qualities of good – Essential requirements of effective supervision.

UNIT VII CONTEMPORARY ISSUES AND CHALLENGES IN MANAGEMENT OF 21st CENTURY **5 Hrs**
Level of Knowledge: Conceptual

Total quality management, Work force diversity, Globalization and innovation, Enterprise mobility, how to manage and control virtual teams, creating an ethical workplace.

Core Text:

1. Stoner, Freeman, Gilbert Jr. (2014). Management (6th edition), New Delhi: Prentice Hall India.

Reference Books:

2. Daft, R. L. (2009). Principles of Management (1st edition), Cengage Learning.
3. Gupta, R.S., Sharma, B.D., & Bhalla. N.S. (2011). Principles & Practices of Management (11th edition). New Delhi: Kalyani Publishers.
4. Williams. Management, (International edition) South-western Cengage Learning.
5. John R. Schermerhorn. Management, Wiley-India
6. Koontz, H., & Weihrich, H. Essentials of Management, McGraw Hill Publishers.
7. L M Prasad, (2007). Principles and Practices of Management, Himalaya Publishing House
8. Rao, P.S. (2009). Principles of Management, Himalaya Publishing House.
9. Moshal, B.S. Principles of Management, Ane Books.

Course Name: Financial Accounting	**Course Code: BBA132**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: This course intends to introduce basic accounting principles and practices. It also deals with subsidiary books maintained in business organizations. The students will have knowledge about the fundamental accounting processes such as journalizing, ledger posting, preparation of trial balance and final accounts in sole trading business. It also deals with providing an overview of accounting standards and IFRS. This course will be useful for all those who are desirous of having an understanding and application of financial dynamics of the business and become successful financial managers/entrepreneurs.

Course Objectives:

- To provide an understanding of application of various principles and practice of Accounting.
- To demonstrate the knowledge on the process of accounting cycle and basic steps involved in Accounting.
- To extend the knowledge of systematic maintenance of books of accounts to real life business.
- To interpret Annual Financial statements of Sole proprietorship form of business.
- To outline the need for Accounting standards and IFRS.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Identify the application of various principles and practice of Accounting in preparation of accounting statements.
CLO2 Demonstrate the knowledge on the process of accounting cycle.
CLO3Extend the knowledge of systematic maintenance of books of accounts to real life business.
CLO4 Interpret Annual Financial statements of Sole proprietorship form of business.
CLO5Outline the need for Accounting standards and IFRS

Pedagogy: This course uses multiple pedagogies like interactive lecture, hands on preparation of financial statements, discussions & presentations and experiential learning of cash book preparation for kirana shops of the locality.

UNIT – I: Introduction to Accounting **6 Hrs**
Level of Knowledge: Conceptual
Meaning, Need for accounting, Internal and External users of accounting information, limitations of accounting, accounting Concepts and Conventions, Accounting Practices, Generally Accepted Accounting Principles.

Unit – II: Accounting systems & process **12 Hrs**
Level of Knowledge: Analytical
Nature of Accounting, Accounting equation - Systems of Accounting, Process of Accounting transactions- types of Accounts, Rules of Accounting. Journal - Meaning, features, simple and compound entries, Including recording of GST transactions, Capital and revenue expenditures, Capital and revenue receipts, Contingent assets and contingent liabilities, Preparation of ledgers and Trial balance.

Unit – III: Subsidiary books **10 Hrs**
Level of Knowledge: Analytical

Conceptual introduction to subsidiary books - Sales book, Sales return book, Purchases book, Purchase returns book, receivable book, payable book. Practical problems in Cash Book- Single column, double column, and three columnar cash book.

Unit – IV: Bank reconciliation statement **08 Hrs**
Level of Knowledge: **Analytical**
Need for reconciliation and preparation of bank reconciliation statement.

Unit – V: Rectification of Errors **08 Hrs**
Level of Knowledge: Analytical
Need for rectification of errors, types of errors, process of rectification and accounting entries of rectification.

Unit – VI: Final Accounts **12 Hrs**
Level of Knowledge: Analytical
Preparation of Trading and Profit and Loss account and Balance Sheet of sole trading concerns.

Unit – VII: Accounting standards and IFRS **04 Hrs**
Level of Knowledge: Conceptual
Types of Accounting standards, Need for IFRS, Ind AS and IFRS.

Essential Reading:
Jain S.P.,& Narang K L. (2020). *Basic Financial Accounting I*, New Dehli, Kalyani publishers.

Recommended Reading :

1. Maheshwari, S.N., &Maheshwari, S.K. (2020). *Advanced Accountancy1*, New Delhi: Jain Book Agency.
2. Shukla, M. (2020). *Advanced Accounts*, New Delhi, S Chand Group
3. Radhaswamy, M & Gupta, R.L. (2020).*Advanced Accountancy 2*, New Delhi, Sultan Chand & Sons.
4. Reddy, A. (2020). *Fundamentals of Accounting*, New Delhi, Himalaya Publishing House
5. Gupta, A. (2020). *Financial Accounting for Management: An Analytical Perspective*, Noida, Pearson Education.
6. Raman, B. S. (2014). *Financial Accounting (1st edi).I & II*, New Dehli:United Publishers.
7. Porter, G.A., & Norton, C.L. (2013). *Financial Accounting (IFRS update)(* 6th edi), Cengage Learning.
8. Jawahar Lal & Seema Srivastava (2013). Financial Accounting New Delhi:Himalaya Publishing House.
9. Arora M. N. (2013). *Accounting For Management.* New Delhi: Himalaya Publishing House.
   Bhattacharya .(2013). *Essentials of Financial Accounting* (Based on IFRS) (2nd edi), Prentice Hall India.

Course Name: Micro Economics	**Course Code: BBA133**
Total number of hours: 60 Hours	**Credits: 4**

Course Description:
This common core course helps students to think in the economic way of establishing a connection between unlimited wants and limited resources available to an individual, firm and the society. It deals with the application of economic analysis in formulation of business decisions. In this context, the course deals with demand, supply, pricing, theory of consumer choice, theories of production and market structures.

Course Objectives: This course aims to help students to:

- Describe how economic trade-offs and social values impact business decisions.
- Understand the causes and consequences of different market conditions.
- Explain the theory of consumer choice using the utility concepts.
- Make use of the concept of market equilibrium in business decisions.
- Analyse cost of production and revenue of business operations.
- Evaluate the market outcome(s) under different market structure.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Describe how economic trade-offs and social values impact business decisions.
CLO2 Understand the causes and consequences of different market conditions
CLO3 Explain the theory of consumer choice using the utility concepts.
CLO4 Make use of the concept of market equilibrium in business decisions.
CLO5 Analyse cost of production and revenue of business operations
CLO6 Evaluate the market outcome(s) under different market structure

Pedagogy: This course uses multiple pedagogies like interactive lecture, students' discussions and PPTs, case studies, role plays, and form of experiential learning.

Unit I Basic Concepts **6 Hrs**

Level of Knowledge: Conceptual

Ten Principles of Economics: How People Make Decisions - How people Interact - How the Economy as a Whole Works; Thinking Like an Economist - Role of Observations, Theory and Assumptions in Economics; Role of Economic models - The Circular Flow Diagram - Production Possibility Frontier - Opportunity Cost; Central Problems of an Economy; Microeconomics and Macroeconomics.

Unit II The Basics of Supply and Demand **10 Hrs**

Level of Knowledge: Conceptual

Markets and Competition; Demand - Law of Demand, Exceptions to the Law - Market Demand - Changes in Demand; Supply - Law of Supply, Exceptions to the Law - Market Supply - Changes in Supply; Equilibrium – Steps - Changes in Equilibrium.

Unit III Elasticity and its Application **7 Hrs**

Level of Knowledge: Conceptual

Elasticity of Demand - Price Elasticity and Its Determinants - Methods of Measurement - Degrees of Price Elasticity - Total Revenue and Price elasticity; Income Elasticity Demand; Cross Elasticity Demand; Elasticity of Supply-Determinants - Measurement and Degrees.

Unit IV Theory of Consumer Behaviour **10 Hrs**

Utility - Characteristics and Types - Cardinal and ordinal Utility analysis – Law of Diminishing Marginal utility; Budget Constraint; Indifference curves - Properties, Consumer's equilibrium - Price Effect - Income Effect and Substitution Effect.

Unit V Market Efficiency and Externalities5 Hours

Level of Knowledge: Conceptual

Consumers, Producers and the Efficiency of the Markets: Consumers surplus (Marshall) - Producer surplus and Market efficiency; Externalities and Market Inefficiency - Negative and Positive.

Unit VI Theory of Production and Cost **10 Hrs**

Level of Knowledge: Conceptual

Production Function; Law of Variable Proportions; Law of returns, Economies of Scale; Iso-quants and Iso-cost lines. Cost Function - Important Cost Concepts; Short Run and Long Run Cost Analysis (traditional theory) - Modern theory of cost; Long Run and short Run Revenue analysis.

Unit VII Market Structure and Competitive Strategy **12 Hrs**

Level of Knowledge: Conceptual

Market structure - Perfect Competition - Price and Output Determination - Role of Time Element in Market Price Determination; Monopoly - Price and output determination, Price Discrimination; Monopolistic Competition - Price and Output Determination-Selling Costs - Product Differentiation – Oligopoly - Duopoly Example - Price Determination (Collusive Pricing, Price Leadership).

Essential Reading:

Gregory Mankiw, N. (2016), *Principles of Economics, 8*th Edition, Cengage Learning India.

Recommended Reading

Robert S Pindyck and Daniel L Rubinfeld (2013), *Microeconomics*, 8th Edition, New York: Pearson.

Salvatore, D. (2011). *Managerial Economics in a Global Economy* (7th ed.). Oxford: Oxford University Press.

1. Sen, Anindy (2006). *Microeconomics: Theory and application (*2nd ed.). Oxford: Oxford University Press.

Course Name: Business Mathematics	Course Code: BBFT134N
Total number of hours: 60 Hrs	**Credits: 4**

Course description: This course aims at aiding the students in reaching a level of increased competence in business mathematics and expands understanding of the importance of mathematical concepts in business applications. Emphasis is placed upon learning mathematical concepts by examining some basic business problems.

Course objectives:
This course will help the learner to gain a familiarity with Mathematical ways to deal with problems related to commerce.
Apply matrix algebra, linear programming, differentiation and their applications in business and economics.

- To understand the concept of matrices and determinants, types of interests, annuities, limits and differentiation
- To apply the concepts of matrices, differentiation in commerce and economics
- To apply the concepts of Linear Programming Problem for a given scenario to optimize the solution
- To analyse the given transportation and assignment problem and evaluate the optimum transportation cost
- To evaluate the maximum and minimum value of a given function

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Demonstrate conceptual and working knowledge of Matrices and Determinants and apply them for various real time scenarios.
CLO2 Solve problems on simple interest, compound interest, annuities, sinking funds, etc.,
CLO3 Develop knowledge in formulating a linear programming problem and Solve it by graphical and simplex method
CLO4 Solve problems based on transportation and assignment of jobs.
CLO5 Solve problems based on limits and differentiation and apply them to solve problems related to commerce and economics

Pedagogy: Lecture and Problem-Solving approach.

Unit I: Matrices and Determinants: (13 Hrs)
Level of Knowledge: Basic, Conceptual and Analytical
Matrices and Determinants - addition of matrices – Multiplication of Matrices by a scalar – some special types of matrices – Multiplication of two matrices – Properties of Matrix Multiplication – determinants – Minors and co-factors – properties of determinants (statement only) – product of two determinants – inverse of Matrix (Simple Problems only). Applications of Matrices and Determinants – Matrix representation of data – Addition of matrices – Scalar multiple of a matrix – Applications – Multiplications of matrices – Applications – System of linear equations – Matrix inverse method – Cramer's Rule – Leontief's input and output model.

Unit II: Commercial Arithmetic: (12 Hrs)
Level of Knowledge: Conceptual and Analytical
Simple interest – Compound interest – Equivalent rate – Depreciation – Present value – Annuity – Sinking Fund.

Unit III– Linear Programming (10 Hrs)
Level of Knowledge: Basic, Conceptual and Analytical

Definition – Linear Programming Problem – Formulation – Solution by Graphical method – simplex method – minimization and maximization problems.

Unit IV– Transportation Problem **(10 Hrs)**

Level of Knowledge: Basic, Conceptual and Analytical

Nature and scope of transportation and allocation models, different methods for finding initial solution - N-W Corner Rule, Least Cost Method and VAM. Unbalanced TP, Test for optimality – MODI method, AP a variant of Transportation model, Hungarian method, Restricted Assignment problems.

Unit V – Differentiation **(15 Hrs)**

Level of Knowledge: Basic, Conceptual and Analytical

Limits – Differentiation – Methods of differentiation – Second order derivative – Maxima and Minima – Application to commerce and Economics – Revenue Function – Cost function – profit function – Elasticity of demand – Breakeven point.

Text Books:

1. D.C. Sancheti and V.K.Kapoor, *Business Mathematics,* 11th ed., Sultan Chand andSons, 2012.
2. U.K. Srivatsava, G.V.Shenoy and S.C.Sharma, *Quantitative Techniques for Managerial Decisions,* 3rd ed., New Age International Publishers, 2012.

References:

1. E. Don and J. J. Lerner, *Schaum's outlines of Basic Business Mathematics*, 2nd ed., McGraw-Hill, 2010.
2. J D Gupta, P K Gupta and M. Mohan, *Mathematics for Business and Economics,* Tata Mc Graw Hill Publishing Company Limited, 1987.
3. A.H. Mouhammed, *Quantitative methods for Business and Economics*, 3rd ed., Routledge, 2015.
4. D. R. Anderson, D. J. Sweeney, T. A. Williams, J. D. Camm, J. J. Cochran, M. J. Fry and J. W. Ohlmann, *Quantitative Methods for Business*, 12th ed., South-Western Cengage Learning, 2013.

Course Name: Introduction to FinTech	**Course Code: BBFT135N**
Total No of Hours per week: 4	**Credits: 4**

Course Description:

The objective of the course is to introduce the students to the FinTech sector and to understand how emerging technology is casing disruptions and innovations in finance sector. This course as a part of specialized business administration programme provides cutting edge fundamental knowledge in the frontiers of financial technology required for a budding professional in the banking & financial services industry.

Course Objectives:

CO1: To trace the evolutionary journey of financial technology
CO2: To explain the impact of financial technology on financial services
CO3: To provide an understanding of the technical intricacies of financial technology
CO4: To take stock of the technological trends sweeping the financial services sector

Learning Outcome:

At the end of the course, the students should be able to:
CLO1: Outline the evolution of the financial technology industry (PLO5.1)
CLO2: Illustrate how financial technology is reshaping financial services (PLO5.1)
CLO3: Illustrate the technical know-how of financial technology (PLO5.1)
CLO4: Outline the current global landscape of financial technology Industry (Fintech) (PLO 5.1)

Unit I: Introduction to FinTech (12 Hrs)

What is FinTech Industry? Evolution of FinTech, FinTech Evolution 1.0: Infrastructure, FinTech Evolution 2.0: Banking industry, FinTech Evolution 3.0 & 3.5: Startups and Emerging Markets, Importance of FinTech, Global FinTech Investment, Main FinTech Hubs

Unit II: FinTech Reshaping Financial Services Industry-I (10 Hrs)

FinTech in Payment Industry-Multichannel digital wallets, applications supporting wallets, onboarding and KYC application, FinTech in Lending Industry- Formal lending, Informal lending, P2P lending, POS lending, Online lending, Payday lending, Microfinance, Crowdfunding,

Unit 3 FinTech as disruptor empowering Financial Services Industry-II (10 Hrs)

FinTech in Wealth Management Industry-Financial Advice, Automated investing, Socially responsible investing, Fractional Investing, Social Investing. FinTech in Insurance Industry- P2P insurance, On-Demand Insurance, On-Demand Consultation, Customer engagement through Quote to sell, policy servicing, Claims Management, Investment linked health insurance.

Unit IV: Technology Disruptions enabling FinTech Innovations (10 Hrs)

4G and 5G networks fuelling FinTech Opportunities, transforming customer experience using Mobile Applications and smart phones, embedded sensors and social media, Cloud computing, Web 2.0, Rapid Web Design, JavaScript Technologies, IoT, Big Data, analytics and AI and Blockchain,

Unit V: The state of FinTech globally (12 Hrs)

US-The revolution starter, Europe and UK-The fintech hub, Germany, Sweden, France, China-The FinTech dragon awakens, India-The tiger is roaring, Africa-A young FinTech continent, Australia, New Zealand and Brazil-the emerging FinTech countries, Regulatory and Policy Assessment for Growth of Fintech. Fin Tech as disruptors, Financial institutions collaborating with FinTech companies, The new financial world

Unit VII: Case Studies in FinTech (6 Hrs)

PayTm, Aadhar, Credit Karma,eTORO , Robinhood, Policy Bazaar

Text Books

Parag Y Arjunwadkar (2018), FinTech: The Technology Driving Disruption in the financial service industry CRC Press.

Sanjay Phadke (2020), Fintech Future : The Digital DNA of Finance Paperback .Sage Publications

Pranay Gupta, T. Mandy Tham (2018). Fintech: The New DNA of Financial Services Paperback

RBI(2017). Report of working group on FinTech and Digital Banking

Reference Books

Arner D., Barbers J., Buckley R (2015) The evolution of FinTech: a new post crisis paradigm, University of New South Wales Research Series.

Susanne Chishti, Janos Barberis (2016). The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries (Wile01) Paperback, Wiley Publications

Richard Hayen (2016). FinTech: The Impact and Influence of Financial Technology on Banking and the Finance Industry

Course Name: Overview of Financial Markets and Capital Markets	**Course Code BBFT111N**
Total Teaching Hours for Semester: 30	**Credits: GRADE**

Course Objectives/Description:

The objective of this course is to provide comprehensive coverage of Financial Markets and Capital Markets from a global practical perspective

- To familiarize the students with the structure and various instruments of Financial and Capital markets from a global perspective.
- To enhance knowledge of the learners comprehensively in the forex market.
- To enrich the learners with the comprehensive knowledge about the Equity markets, Debt & Money Markets
- To enhance knowledge of the learners in analysing various asset classes including bond prices and yield curve analysis
- To augment the knowledge of the students related to global fund management industry

Course Learning Outcomes:

At the end of the course, the students will be able to:

- Demonstrate understanding of various Financial markets and investment avenues (RBTL2)
- Extend the concept of various Financial markets and investment avenues in the global market (RBTL2)
- Identify the use of derivatives to hedge Foreign exchange risk and global hedge funds. (RBTL3)
- Analyze fixed income securities in terms of bond Pricing and yield curve analysis from global perspectives. (RBTL4)
- Examine money market instruments from a global perspective. (RBTL5)
- Compare and contrast various managed funds in a global setting (RBTL5)

Unit I Overview of Financial Markets And Assets Classes (4 Hrs)

Cash and Money Markets, Bond markets, Foreign Exchange Markets, Equities Markets, Indices and Stocks, Derivatives Markets, Products and Settlement, Commodities Markets and Products, Saving and Investment Products, Mutual Fund and other Investment Products

Unit II Global Equities Markets and Instruments (9 Hrs)

Introduction to Equity Market-Introduction to Capital Markets, Equity Capital Markets, Raising

Equity Through IPO, Raising Equity Through Private Sources, Equity buybacks, de-listing and reversion to a 'private' company. **Equity Instruments & their characteristics-**Stock Prices and Corporate Actions, Preference Shares, Depository Receipts, Rights Issues & Warrants, Convertibles, Equity Structured Products. **Participants in the Equity Markets**-Introduction and Role of the Buy Side, Buy Side Participants, Introduction and Role of Sell Side. Services and Participants in the Sell Side, Market Makers. **Types of Equity Markets-**Exchanges and Indices in the Equity Markets, Indices and their roles, Understand the difference between exchange and OTC markets, Types of weighted index, other indices and global indices, Electronic and Hybrid Markets and Order and Quote Driven Markets, Global Equity Markets. **Trading of Equity Instruments-**Equity Investments and its benefits and risks, Stock Quotations, Delivery or cash trading, Long and short positions, Leverage and Margin, Investing, trading and hedging, Placing Orders-limit orders, stop loss orders and GTD/GTC orders, Online and Offline Trading , Introduction to Trade Life Cycle, Clearing and Settlement

Unit III Global Foreign Exchange Markets and Instruments (5 Hrs)

Introduction to Forex Market-What is foreign exchange market, Functions and purposes of the FX market, Introduction to types of Foreign Exchange Market. **Participants in the foreign exchange market**-Consumers & Travelers, Businesses, Investors & speculators, Commercial & Investment Banks, Government & Central Banks. **Theories governing foreign exchange**-Interest rate parity, Purchasing power parity, Nominal v/s real exchange rates, etc. **Spot Market**-Market organization, Quotation conventions, Direct and indirect prices, Cross rates, Value of a pip, Interpreting news and economic statistics, Delivery and operations. **Forward Forex Market-**Outright forward and swap deals, Relation between spot & forward markets, Quoting forward rates, Quoting swap points, Forward discounts and premiums, Forward forward transactions

Unit IV Global Fixed Income (Bond) Markets and Instruments (4 Hrs)

Overview of Debt Capital Markets-Characteristics of Debt Capital Markets, The differences between equity and debt products, The differences between loans and bonds, Hybrid securities, Securitization. **Bond-An Introduction**- Bond definition, Bond Issuer & Bond Investor, Types of bond, Bond characteristics, Zero Coupon Bond, Price/yield relationship, Government bond markets, The Eurobond market

Unit V Global Money Markets and Instruments (4 Hrs)

Overview to Money Markets-Objectives, Introduction to Money Markets, Components of Money Markets, Interest rates in the Money Markets, Market Participants in Money Market, Risks involved, **Money Markets Instruments**-Introduction, Coupon bearing instruments& features, Discount instruments & features. **Money Market Operation-**Fund Management, CRR Maintenance, Liquidity Management, Money Market Operations, Managing banks' surplus funds, Trading opportunities in Money market, Overnight Call Money Market, Repos and Reverse Repos, CBLOs, Marginal Standing Facilities

Unit VI Global Funds (4 Hrs)

Introduction -Potential advantages and disadvantages of collective investment, Difference between active and passive management .**Open-Ended/Mutual Funds-**Characteristics and different types of open-ended fund / mutual fund: • US • Europe , Purpose and principal features of the Undertakings for Collective Investment in Transferable Securities (UCITS) directive in European markets .**Closed-Ended Investment Companies-**Characteristics of closed-ended investment companies, share classes, Meaning of the discounts and premiums in relation to the pricing of closed-ended investment companies , How closed-ended investment companies' shares are traded. Off shore and

On-shore Global financial centers
Text Book • Financial Markets and Institutions 7th Edition By Anthony Saunders and Marcia Cornett, Ninth Edition, McGraw Hill Education
Reference Books • Notes to be provided by the industry partner

Course Name: Organisational Behaviour	**Course Code: BBA231**
Total number of hours: 60 Hrs	**Credits: 4**
Course Description: The course focuses on the basic elements that determine human behavior in an organizational context. It provides various theoretical frameworks to understand human behaviours at individual, group and organization level. The course provides insights into the foundation of human behaviours such as personality, learning, values, attitudes and perception. At the group level its characteristics in terms of size, status, norms, role and cohesiveness makes it functional or dysfunctional. Leaders who are able to influence the individual and group behaviours create positive organisations culture. Thus it is essential for manager to develop an understanding about human behaviours at the workplace and manage them for organizational effectiveness.	
Course Objectives: This course intends 1. To examine the impact of globalization, diversity and ethics on organizational behaviours. 2. To analyses the individual's work behaviours due to personality, attitudes and perceptions. 3. To assess the dynamics of group behaviours and its influence on group effectiveness. 4. To compare and contrast various leadership style as in classic and modern theories. 5. To determine practices that creates positive organisation culture.	
Course Learning Outcomes: On having completed this course student should be able to: CLO1 Identify the social and ethical issues emerging due to trends in environment. CLO2 Propose initiative to address the social and ethical issues at individual and organizational level CLO3 Demonstrate understanding personality traits and suitable occupation/job. CLO4 Evaluate various leadership styles that enhance group effectiveness. CLO5 Discuss practices that create positive organizational culture.	
Pedagogy: This course uses multiple pedagogies like interactive lectures, classroom discussions & presentations, case studies, research papers, movie review and role plays.	
Unit I Introduction to Organizational Behavior	**8 Hrs**

Level of Knowledge: Conceptual

Definition of Organizational Behavior, OB as systematic study, Contribution from other disciplines, Challenges and Opportunities in organizational behavior, OB Model/Framework- Individual, Group and Organisational Level.

Unit II Personality, Learning & Values **10 Hrs**
Level of Knowledge: Conceptual

Defining and Measuring Personality, Determinants of Personality, The Big Five Personality Model, Myers-Briggs Type Indicator, and Other Personality Traits like Authoritarianism, Locus of Control, Machiavellianism, Self Esteem, Risk Taking, Self-Monitoring and Achievement Oriented. Importance of values- instrumental and terminal values.
Meaning of Learning; Theories of Learning- Classical Conditioning, Operant conditioning, Cognitive theory, Social learning theory, Principles of learning, Schedule of Reinforcement.

Unit III Attitude **8 Hrs**
Level of Knowledge: Conceptual

Components of Attitude- ABC model, Function of Attitude, Cognitive Dissonance Changing Attitude, Work Attitudes- Job Satisfaction and Organisation Commitment.

Unit IV Perception **6 Hrs**
Level of Knowledge: Conceptual

Meaning, Factors influencing perception, Attribution Theory, Common short cuts in judging others.

Unit VI Group Dynamics **8 Hrs**
Level of Knowledge: Conceptual

Define Group and different type of Groups, Stages of Group Development, Group Properties-Roles, Norms, Status, Size, Cohesiveness; Group Decision making, Groupthink and Group Shift

Unit VI Leadership **10 Hrs**
Level of Knowledge: Conceptual

Concept of Leadership-Trait Theories-Behavioral Theories, Ohio & Michigan Studies - Managerial Grid; Contingency Theory-Situational Leadership and Path & Goal of leadership; Contemporary Theories-Transformational, Transactional, Charismatic Leadership, Ethical Leadership and Servant Leadership.

Unit VII Organization Culture **10 Hrs**
Level of Knowledge: Conceptual

Definition of organizational culture and its characteristics, Strong versus Weak culture, Function and Dysfunction of Culture, Creating & Sustaining Culture, -How employees learn culture-Creating Positive organizational culture.

Essential Reading:

1. Stephen P. Robbins, Timothy A. Judge and Neharika Vohra (2018), 18th Ed. *Organizational Behaviour.* Pearson Education Asia.

Recommended Reading

1. Aswathappa, K. (2016). *Organizational Behaviour (Text, Cases and Games), 12th Ed.* Bangalore: Himalaya Publication.
2. Fred Luthans (2017). *Organizational Behavior: An Evidence - Based Approach*, 12th Ed. McGraw Hill Education**.**
3. Gupta, C. B. (2014). *A textbook of organisational behaviour: With text and cases*. New Delhi: S Chand & Company.

Course Name: Business Statistics	**Course Code: BBA232**
Total number of hours: 60 Hours	**Credits: 4**

Course Description:
Business Statistics helps us to make business decisions under uncertainties. Such decisions must be objective and unbiased and based on quantitative data. This necessitates an analysis of data as well as understanding of statistical tools and models. With the business entities keen on making data-driven decisions it is essential for individuals working in this environment to possess skills to use appropriate statistical tools and techniques in order to make decisions backed by data.

Course Objectives:

- To demonstrate data handling skills and summarize data with clarity.
- To extend an understanding of application of relevant concepts of Statistics to a given context/business scenario.
- To demonstrate the knowledge on the process of organizing a problem/data and conduct statistical tests/treatment.
- To solve real world business problems by evaluating data with appropriate statistical techniques
- To explain trends exhibited by data.

Course Learning Outcomes: On having completed this course student should be able to:

CLO 1 Demonstrate data handling skills with clarity.
CLO2 Outline the relevant concepts of Statistics to a given context/business scenario
CLO3 Organize a problem/business data and conduct statistical treatment.
CLO4 Evaluate data with appropriate statistical techniques.
CLO5 Explain data trends using time series analysis

Pedagogy: This course uses multiple pedagogies like interactive lecture, students' discussions and PPTs, case studies, role plays, and form of experiential learning.

UNIT – I: Introduction to Statistics **06 Hrs**
Level of Knowledge: Conceptual

Meaning, Definition, Features, Importance and limitations of statistics. Meaning and difference between primary and secondary data, data collection methods. Classification and tabulation of data including tally marks, methods of classifying data - quantitative, qualitative, geographical, chronological, Discrete and continuous frequency distribution.

Unit – II: Measures of Central Tendency **10 Hrs**
Level of Knowledge: Application

Meaning, measures of Central Tendency- Arithmetic Mean, Weighted Arithmetic Mean, median, mode, geometric mean and harmonic mean (only theory) and partition values- quartiles, deciles, percentiles.

Unit – III: Measures of Dispersion and Skewness **10 Hrs**
Level of Knowledge: Application

Meaning, Definitions, Properties of dispersion - Range,Quartile Deviation,Mean Deviation from Mean and Median, Standard Deviation and coefficient of variation. Skewness-meaning, difference between dispersion and skewness, Karl Pearson's and Bowley's measures of skewness.

Unit – IV: Correlation and Regression **08 Hrs**
Level of Knowledge: Application

Meaning, Definition and Use of Correlation, Scatter diagram, Types of correlation, Karl Pearson's correlation coefficient, Spearman's Rank correlation, Probable Error. Regression- Meaning and utility of Regression analysis, Comparison between Correlation and Regression, regression lines –X on Y, Yon X, Regression Equations and Regression Coefficients.

Unit – V: Time Series **06 Hrs**
Level of Knowledge: Application

Meaning, Components of time series, Calculation of Secular Trend-Moving Average method – odd and even period moving average and method of Least Squares.

Unit – VI: Probability and Probability distributions **08 Hrs**
Level of Knowledge: Application

Introduction to Probability, Basic Concepts of Probability, Probability Distributions – Binomial, Poisson and Normal distributions, Expected Value.

Unit–VII: Sampling Distribution and Introduction to Inferential statistics **12 Hrs**
Level of Knowledge: Application

Introduction to testing of Hypothesis: Procedure for testing hypothesis - Setting of Hypothesis -Null and alternative hypotheses, Estimation, Computation of Test statistics, - Types of errors in hypothesis testing - Level of significance - Critical region and value - Decision making. Test of significance for Large and small sample tests, Z and t tests for mean and proportion, one-way ANOVA, Chi-square test for goodness of fit and independence of attributes.

Essential Reading:
Sharma J.K (2020) *Business Statistics 5th edition* Delhi: Vikas Publishing House

Recommended Reading:

1. Levin R. I.& Rubin D. S. (2014). *Statistics for Management*. Delhi: Pearson.
2. Pillai & Bagavathi (2016) *Statistics, Theory and Practice*, S Chand Publishing
3. SP Gupta (2017).*Statistical Methods*, Sultan Chand and Sons
4. SC Gupta (2018). *Fundamentals of Statistics,* Himalaya Publishing House

Course Name: Macro Economics	**Course Code: BBA233**
Total number of hours: 60 Hours	**Credits: 4**

Course Description:
The course aims at providing a systematic introduction to mainstream approaches to the study of macroeconomics in the current century. It has been designed in such a way that it stimulates awareness on macroeconomic challenges and policy management in progressive nations. It also aims at developing the ability for objective reasoning about macroeconomic issues.

Course Objectives:

- To demonstrate understanding of macroeconomic aggregates and measurement.
- To explain macroeconomic indices and interpreting them.
- To analyse economic growth and money market dynamics and its impact.
- To identify macroeconomic policies and its impact on the economy.
- To demonstrate the understanding of concepts related to Unemployment and market.
- To examine the relationship between macroeconomic variables and dynamics of the policies.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1: Explain the measurement of GDP and its components.

CLO2: Explain the methodology/stages of constructing the cost-of-living index and summarise the impact of such indices on the Economy.

CLO3: Analyse the economic growth and market for loanable funds and illustrate its impact on the economy.

CLO4: Summarise the concept of unemployment and its implication on the market.

CLO5: Identify the implications of monetary and fiscal policy.

CLO6: Examine the relationship between macroeconomic variables/polices with theoretical backing.

Pedagogy: This course uses multiple pedagogies like interactive lecture, students' discussions and PPTs, case studies, role plays, and form of experiential learning.

Unit I: Measuring a Nation's Income and Cost of Living **10 Hrs**

Level of Knowledge: Conceptual

Economy's Income and Expenditure-Measurement of GDP- Components of GDP- Real versus Nominal GDP- The GDP Deflator; The Consumer Price Index (CPI)-Calculation of CPI- GDP Deflator versus CPI- Correcting economic variables for the effects of inflation- Real and Nominal Interest Rates-Limitations

Unit II: Production and Growth **9 Hrs**

Level of Knowledge: Conceptual

Economic Growth around the world: Productivity: Its Role and Determinants-Economic Growth and Public Policy- Investment-Human Capital

Unit III: Goods and Money Market **9 Hrs**

Level of Knowledge: Conceptual

Saving and Investment in the National Income Accounts- The Market for Loanable Funds- Policy Changes and Impact on the Loanable fund Market; Money- Meaning and Functions-Money Supply; Full Reserve Banking and Fractional Reserve Banking- Central Bank Tools of Monetary Control; Classical Theory of Inflation- Classical Dichotomy and Monetary Neutrality- Velocity and Quantity equation- Fisher Effect- Costs of Inflation.

Unit IV: Unemployment **7 Hrs**

Level of Knowledge: Conceptual

Identifying Unemployment-Labour Force- Unemployment Rate- Labour Force Participation- Types of Unemployment-Unemployment Insurance- Minimum Wage Laws.

Unit V: Aggregate Demand, Aggregate Supply and Influence of Monetary and Fiscal Policy on Aggregate Demand **9 Hrs**

Level of Knowledge: Conceptual

Three Key Facts about Economic Fluctuations- Short run Economic Fluctuations-Aggregate Demand Curve, Aggregate Supply Curve, Two Causes of Economic Fluctuations; Monetary Policy Influence on Aggregate Demand- The Theory of Liquidity Preference; Fiscal Policy influence on Aggregate Demand- The Multiplier Effect- Crowding out effect- Stabilisation Policy; Active Versus Automatic Stabilizers

Unit VI: Short Run Tradeoff between Inflation and Unemployment **8 Hrs**

Level of Knowledge: Conceptual

The Philips Curve-Shifts in Philips Curve and the Role of Expectations-Shifts in Philips Curve and The Role of Supply Shocks; The Cost of Reducing Inflation Rational Expectations and the Possibility of Costless Disinflation

Unit VII: Six Debates over Macroeconomic Policy **8 Hrs**
Level of Knowledge: Conceptual

Economic Stabilization-Monetary vs. Fiscal Policy ; Handling Recession- Higher Spending vs. Tax Cuts; Monetary Policy-Rule vs. Discretion Based; Central Bank Goal: Zero vs. Non-zero Inflation; Government Budget- Balanced vs. Unbalanced; Tax Laws for Savings –Reformed vs. Not Reformed

Essential references:

1. N. Gregory Mankiw (2015), *Principles of Macroeconomics,* 7th Edition, Cengage Learning India.

Recommended references:

1. N. Gregory Mankiw (2019), *Principles of Economics,* 7th Edition, Cengage Learning India
2. Ackley, G. (1976) Macroeconomics, Theory and Policy, Macmillan Publishing Company, New York.
3. Ackley, G. (1976) Macroeconomics, Theory and Policy, Macmillan Publishing Company, New York.
4. Stanley Fischer and Rudiger Dornbusch (1981) Macro Economics, London: Mac Graw-Hill.
5. D.N Dwivedi (2010) Macroeconomics:Theory and Policy, Mac Graw-Hill: NewDelhi
6. C. Rangarajan and B.H Dholakia (1979) Principles of Macroeconomics Tata McGraw-Hill Education
7. Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London H. L Ahuja (2019) Principles of Microeconomics, S Chand Publishing, New Delhi

Course Name: Financial Institutions and Services	**Course Code BBFT234N**
Total Teaching Hours for Semester: 60	**Credits: 4**

Course Description: This course is to make students familiarize with various aspects of Indian financial system. This will provide the students with an overall understanding of various components of Indian financial system.

Course Objectives:

- To familiarize the students about the financial institutions and Services
- To make students understand about the money market and capital market operations
- To enhance the knowledge of the students about the roles of various financial institutions.
- To provide knowledge to the students related to the banking operations.
- To familiarize the students about various financial services.
- To make students understand about international financial markets.

Learning Outcome: By the end of the course the student will be able to:
1.Understand the structure of financial system and the functioning of specialised financial institutions and markets.
2.Explain the functioning of money markets and capital markets.

3.Identify the role of various financial institutions in the economy.
4.Understandthe different operations in the banking services.
5.Assess the role of various financial services in the economy.
6. Explain the functioning of International financial market.

Unit I: Introduction to financial system (10 Hrs)

Meaning-Structure- Functions-Components of financial system -Financial system and economic development- Reforms in Financial Sector in India

Unit II Capital Market (8 Hrs)

Meaning –Classification- Functions- Types-Primary market-Secondary market-functioning of various stock exchanges-NSE, BSE, OTCEI-Derivatives Market- Government Securities market- SEBI-Reforms in capital markets.

Unit III Money Market (6 Hrs)

Meaning-Significance-Structure-Features of money market—Money market instruments-Reforms in money market.

Unit IV Financial Institutions (10 Hrs)

Meaning & Functions -Banking institutions-Scheduled commercial banks and scheduled cooperative banks-Functions of commercial banks, Capital Structure of commercial banks, BASEL Norms.

Non-Banking Institutions-NBFCs and Development Finance institutions-Insurance and Housing Finance Companies -IRDA

RBI-Functions-Monetary policy-Credit Policy

Unit V: Banking Service (10 Hrs)

Deposit Schemes- Loan Schemes and Other Modern Services-Mechanism of E-Banking & Internet Banking, Mobile Banking & Telephone Banking, ATM & Electronic Money (Credit Cards) ,Electronic Funds Transfer System (RTGS and NEFT) & Modern Banking Services

Unit VI: Financial Services (10 Hrs)

Meaning-Types-Leasing- Hire purchase- Mutual funds- Factoring -Credit rating- Venture Capital-Recent developments in financial services industry, GIFT.

Unit VII: International Financial Markets (06 Hrs)

Nature, Organization and Participants- Offshore Financing Instruments- Foreign Exchange market – International Financial Tech Cities

Essential Reading:

Pathak, B. (2013) *Indian Financial System .* New Delhi: Pearson education.

Recommended Reading:

1) Desai, V. (2010)Indian Financial System. Mumbai: Himalaya publishers**.**
2) Gordon, N. (2014). *Indian Financial System.* Mumbai: Himalaya publishers.

3) Khan, M.Y. (2009). *Indian Financial System* . New Delhi: McGraw-Hill.
4) Sharma, G. (2014). *Indian Financial System.* Ludhiana: Kalyani publishers.
5) Singh, P. (2010). Dynamics of Indian Financial System: Markets, Insituttions and Services, ANE Books

Course Name: Foundations in Quantitative Finance	**Course Code BBFT211N**
Total Teaching Hours for Semester: 30	**Credits: Grade**

Course Objectives/Description:

The objective of this course is to provide comprehensive coverage of foundations in Quantitative Finance. This course covers the practical aspects of statistical analysis and modeling in Finance, building Financial Econometrics models, Portfolio Modeling and complex Time value concepts useful in Capital Budgeting and Corporate Finance.

- **Learning Outcomes:**

After the completion of the course, students will be able to;

1. Demonstrating understanding of financial mathematics
2. Apply the concepts of calculus in asset pricing
3. Analyze empirical distribution of financial dataset
4. Evaluate portfolios with the help of mathematical modelling
5. Proposing financial models with the application of econometrics

Unit I Introduction to Financial Mathematics (06 Hrs)

Time Value concepts, Present Value, Future Value, Net Present Value, IRR, Compounding, Practical applications to stock and bond valuations, Applications to Corporate Finance, Applications to Capital Budgeting

Unit II Introduction to Calculus (06 Hrs)

Taylor's Theorem, Application to Bond Pricing, Introduction to Stochastic Calculus

Unit III Statistics for Finance (06 Hrs)

Probability Distribution models in Finance, Statistical Finance concepts, Analyzing empirical financial distributions, Case Study – Empirical Analysis of Financial datasets, Factor Models

Unit IV Mathematics for Portfolio Modeling (06 Hrs)

Portolfio Mathematics, Portfolio Risk Calculations, Portfolio/Basket Correlation, Transition Matrix Calculations, Default Probability Mathematics , Portfolio Value-at-Risk

Unit V Essential Financial Econometrics (06 Hrs)

Modeling Asset Returns and Volatility, Term Structure Modeling, Multiple Regression in Financial Models, Problems and Solutions, Principal Component Analysis

Text Book and Reference Books:

- Market Risk Analysis, Quantitative Methods in Finance (Volume 1) by Carol Alexander, First Edition, John Wiley & Sons

Essential Reading/Recommended Reading:

- Market Risk Analysis, Practical Financial Econometrics (Volume 2) by Carol Alexander, First Edition, John Wiley & Sons
- Applied Quantitative Finance edited by Wolfgang Karl Härdle, Cathy Yi-Hsuan Chen, Ludger Overbeck, Third Edition, Springer
- Reading Material to be provided by industry partner

Course Name: Working with Spreadsheet	**Course Code: BBFT212N**
Total number of hours: 30 Hrs	**Credits:3**

Course Description: In this course you will learn the basic functions of excel through guided demonstration. Each week you will build on your excel skills and be provided an opportunity to practice what you've learned. Finally, you will have a chance to put your knowledge to work in a mini project. Please note, the content in this course was developed using a Windows version of Excel 2013.

The course of 3 credits. 2 hours will be delivered through synchronous mode 2 sessions per week of 1 hour each. The students will also complete a MOOC course on "Excel" of at least 15 hours.

Course Learning Outcomes: At the end of the course students are able to

1. Demonstrate an understanding of fundamentals of Excel. .(PLG5.1)
2. Apply different formulas and functions in Excel. (PLG5.1)
3. Build Charts to represent numeric data in multiple formats (5.1)
4. Analyse data using excel. (PLG5.3)

Unit I: Introduction to Spreadsheet (4 Hrs)
Level of Knowledge: Application

Understanding Microsoft Excel, Excel Workbook Windows, Basic Spreadsheet Skills, Excel Help System, Opening and Closing Workbooks, Understanding Workbook File Formats, Creating New Workbooks, Selecting Cells, Auto Sum and Auto Fill Function, Cell Referencing and Request, Formatting Cells, Formatting Numbers, Placing Cell Alignment, Cell, Rows and Columns, Understanding Worksheets

Unit II: Basic functions **(3 Hrs)**
Level of Knowledge: Application

Editing, Copying and Moving Cells, Page Layouts in Excel, Proofing Workbook, Basic Options, Ribbons and Toolbar, AutoFilter, Advanced Filters, Managing Windows, Multiple Windows, Splitting Windows, Freezing Panes, Linking Data, Basics' Assessment

Unit III: Charts **(3 Hrs)**
Level of Knowledge: Application

Understand Charts, Chart Design Options and Tools, Chart Format Tools, Combo Charts

Unit IV: Advanced Functions **(8 Hrs)**
Level of Knowledge: Application

Functions within Excel, Understanding Date Function, Super Power, Array Formulae, Advanced Range Names, What If analysis?, Information Functions, Logical Functions, Using Text to Columns, the Paste Special Function, Tracking Changes in Excel, Merging and Compare Excel Workbooks, Data Validation, Subtotals and Grouping, Consolidating Data

Unit V: Data Analysis **(12 Hrs)**

Level of Knowledge: Application

Data analysis in Excel using classic tools, such as pivot tables, pivot c harts, vlookup and slicers, solver, Excel data model, DAX expression, Power Query add-in in Excel 2019 , build an Excel data model from a single flat table.

REFERENCES:

1. https://www.tutorialspoint.com/advanced_excel/index.htm
2. https://www.reed.co.uk/courses/microsoft-excel-3-course-bundle--basic-intermediate-advanced-courses-only-24/67735

Course Name: Financial Management	**Course Code:** BBA331
Total number of hours: 60 Hrs	**Credits:** 4

Course Description: Financial Management is an introductory core course that is offered with intent to equip the students with the basic knowledge of finance theory and its application to develop relevant financial strategies pertinent to profit-seeking organisations. The theme of financial management is structured around three decision making financial areas: Investment- long term as well as working capital, Financing and Dividend policy. This imbibes students with analytical and decision-making skills in managing finance through application of theoretical questions and practical problems.

Course Objectives:

- To understand the basics of finance function and the concepts of financial management
- To apply the knowledge in taking finance decisions
- To develop analytical skills to identify financial management problems and solve them.
- To analyse the relationship among capital structure, cost of capital, dividend decisions, and value of the business.
- To assess a firm's requirement for long-term assets by applying capital budgeting techniques.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Demonstrate understanding of the principles and concepts of financial management.
CLO2 Summarise the motives behind financial decision making.
CLO3 Interpret the relevant theories and concepts of various practices of financial management.
CLO4 Analyze the relationship among capital structure, cost of capital, dividend decisions, and value of the business.
CLO5 Evaluate projects for profitability

Pedagogy: This course uses multiple pedagogies like interactive lecture, case analysis, and problem solving

Unit I: Introduction to financial management
Level of knowledge: Basic **06 Hrs**

Meaning of finance and financial management, Types of finance – public and private finance , classification of private finance – personal finance, business finance and finance of non-profit organization Importance and Scope of financial management, Approaches to finance function Relationship of finance with other business functions, Objectives of financial management – profit maximization and wealth maximization - merits and criticisms Financial decisions, Internal relation of financial decisions, Factors influencing financial decisions Functional areas of financial management, Functions of a finance manager.

Unit II: Sources of finance and Capitalization **09 Hrs**
Level of knowledge: Conceptual

Ownership securities – Equity shares, Preference shares, Deferred shares, No par stock/shares, Shares with differential rights, Sweat Equity Creditorship securities – Debentures – Zero coupon bonds, Zero interest bonds, Callable bonds, Deep discount bonds Internal financing or ploughing back of profit – factors affecting ploughing back of profits – merits and demerits Loan financing – short term and long term sources. Meaning of capitalization – Theories of capitalization – cost theory and earnings theory. Over capitalization and under capitalization – causes – effects and remedies, Watered stock, Over trading and under trading

Unit III: Capital Structure **10 Hrs**

Level of knowledge: Conceptual

Meaning of capital structure and financial structure, principles of capital structure, optimum capital structure, determinants of capital structure, theories of capital structure and EPS – practical problems. Point of indifference, capital gearing

Unit IV: Cost of capital and Leverages **12Hrs**

Level of knowledge: Conceptual / Analytical

Meaning of cost of capital, significance of cost of capital, components of cost of capital – computation of cost of capital and Weighted Average Cost of Capital – practical problems. Meaning of leverage, types of leverages – operating, financial and combined leverage, risk and leverage – practical problems

Unit V: Capital budgeting **10 Hrs**

Level of knowledge: Conceptual / Analytical

Meaning of capital budgeting, Importance, Need, Time value of money, capital budgeting process, project appraisal by using traditional methods and modern methods Practical problems on payback period, rate of return, NPV method , Profitability index, IRR methods

Unit VI: Dividend policy decisions **06 Hrs**

Level of knowledge: Conceptual/ Analytical

Meaning, Kinds, Bonus shares – merits and demerits, theories of dividend decisions, determinants of dividend policy decisions.(Theory only)

Unit VII: Management of working capital **07 Hrs**

Level of knowledge: Conceptual/ Analytical

Meaning of working capital, types of working capital, working capital cycle, adequate working capital, determinants of working capital, estimation of working capital. Management of cash. Management of inventory and debtors – theory only.

Core Text:

1. Khan, M, Y, & Jain, P, K (2018). *Financial Management.* Tata Mc Graw Hill.

Recommended references:

1. Chandra, P. (2019).*Financial Management*. New Delhi, India. Tata McGraw Hill Book Co.
2. Pandey,I.M.(2015). *Financial Management*. New Delhi, India. Vikas Publishing House.
3. Gupta, S, K., Sharma, R.K. & Gupta, N (2013). *Financial Management*. Kalyani Publishers.

Course Name: Human Resource Management	**Course Code: BBA332**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: This subject is a comprehensive learning on what management is all about and different schools of thoughts on management. It gives a clear understanding of management practices and the various functions of management and also gives away the principles of management developed by eminent management thinkers. The syllabus is structured to provide basic conceptual knowledge on the principles of planning, organizing, staffing, motivation, leadership, controlling and to offer orientation to the recent dynamics of managerial practice.

Course Objectives:

- To develop understanding of conceptual foundations of HRM
- To understand the processes and practices in HR functions
- To explain important labour laws and its implications
- To identify contemporary trends and challenges in the field of HRM
- To assess the application of appropriate HR intervention in conjunction with organization need.

Course Learning Outcomes: On having completed this course student will able to:

CLO1: Demonstrate conceptual clarity on various concepts, theories and frameworks in HRM
CLO2: Apply different HR techniques for effective human resource management
CLO3: Explain industrial relations and its implications
CLO4: Develop appropriate policies and procedures according to organisational requirements
CLO5: Outline ethical issues & other contemporary issues related to work place

Pedagogy: This course uses multiple pedagogies like interactive lecture, student discussions, peer learning & presentations, flip class, case studies and research article analysis, field study as well as a Guest Lecture by an industry practitioner.

Unit I Introduction **6 Hrs**
Level of knowledge: Conceptual

Concept of HRM, Evolution of HRM, Role of Human Resource Manager, Functions of HRM, HR Structure and Concept of Strategic HRM.

Unit II Job Analysis and Human Resource Planning **10 Hrs**
Level of knowledge: Conceptual

Concept of Job Analysis, Importance and Benefits of Job Analysis, Job Analysis Process, Job Description, Job Specification and other Job-related concepts- Job Enrichment, Job Enlargement, Job Rotation, Flexi timing, Telecommuting and Ergonomics.
Concept & Importance of HRP; Different stages of HR Planning Process; Action Plans in case of shortage and surplus of workforce.

Unit III Recruitment and Selection **8 Hrs**
Level of knowledge: Conceptual

Concept of Recruitment, Factors affecting Recruitments, Sources of Recruitment; Definition and Importance of Selection, Stages involved in Selection Process, Types of Selection Tests and Types of Interviews. Meaning and Benefits of Induction, Content of an Induction Program.

Unit IV Learning & Development and Career Mobility 8 Hrs
Level of knowledge: Conceptual

Meaning and Importance of Training and Development Programs, Stages involved in Training Process, On-the Job and Off-the-Job Training & Development Methods. Career Management Process, Models of Career Management, Role & Challenges of Career Development, Career Development Initiatives, Stages in Career Planning, Internal and External Mobility of Employees.

Unit V Performance Appraisal & Compensation Management 12 Hrs
Level of knowledge: Conceptual

Purpose of Performance Appraisal, Trait, Behavioural and Result Methods of Performance Appraisals, Process of Performance Appraisal, Components of compensation, incentive payments, scope of incentive schemes, types of incentives, group incentives, managing employee benefits and services

Unit VI Introduction to Industrial Relations & Labour laws 8 Hrs
Level of knowledge: Conceptual

Meaning of Industrial Relations, Theories of IR, Meaning and Sources of Employee Grievance, Grievance Handling Systems, Meaning & Process of Collective Bargaining, Indiscipline, Settlement Machinery of Industrial Conflicts. Labour laws related to social security measures

Unit VII Contemporary issues and trends in HRM 8 Hrs
Level of knowledge: Conceptual

Gig workers, Work from home, Ethical Issues in HRM, E-HRM, Introduction to International HRM

Essential references:

1. Gary Desler, Biju Varkkey (2018). Human Resource Management. Fifteenth Edition. Pearson

Recommended references:

1. L M Prasad. (2018).Human Resource Management. Sultan Chand & Sons
2. K Aswathappa. (2019). Human Resource Management: Text & Cases.Mc Graw Hill Educatrion (India) Private Limited.
3. Rao, S. (2018). Essentials of Human Resource Management & Industrial Relations: Text & Cases. New Delhi: Himalaya Publication.
4. Noe. Hollenbeck. Gerhart. Wright. (2019). 7th Edition. Fundamentals of Human Resource Management. Mc Graw Hill.

Course Name: Marketing Management	**Course Code: BBA333**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: Marketing a particularly stimulating subject for learners, since its practical application is visible every day. Old rules of marketing are no longer useful to those who want to influence these new consumer's choices. This course will lead the exploration of the leading edge of this paradigm shift that is now underway. This course introduces students to the concepts and processes of marketing and takes them deeper into the world of marketing.

Course Objectives: This course intends

- To identify target markets and environments by analysing demographics and consumer behaviour
- To create a detailed marketing plan and implementation schedule for a company, or critically evaluate existing marketing strategies and tactics.
- To develop a team-prepared written project and they can make a persuasive, effective presentation of their project.
- To develop the strategies used within each of the marketing mixes
- To list best practices for responsible marketing and how to manage marketing efforts

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Recognize how to identify target markets and environments by analysing demographics and consumer behaviour
CLO2 Students will be able to create a detailed marketing plan and implementation schedule for a company, or critically evaluate existing marketing strategies and tactics.
CLO3 Students can communicate effectively among team members to develop a team-prepared written project and they can make a persuasive, effective presentation of their project.
CLO4 Recall the strategies used within each of the marketing mixes
CLO5 List best practices for responsible marketing and how to manage marketing efforts

Pedagogy: This course uses multiple pedagogies like case study discussions, interactive lecture, presentations, review of research article, in class group exercises and activities.

Unit I Introduction to Marketing Fundamentals **8 Hrs**

Level of knowledge: Conceptual

Meaning Definition marketing, scope of marketing, core marketing concepts, Marketing and Customer Value.

Unit II Connecting with Customers **10 Hrs**

Level of knowledge: Conceptual

Models of Consumer Behavior, characteristics Affecting consumer Behavior, Types of Buying Decision Behavior, The Buyer Decision Process, The Buyer Decision Process for New Products; Business Buyer Behavior, The Business Buyer Decision Process, Institutional and Government Market. Segmentation, targeting and positioning for competitive advantage.

Unit III Product Decision **10 Hrs**

Level of knowledge: Conceptual

Product Levels, Product Characteristics and Classifications, New product development stages, categories of new product, reasons for launching new products and its failure. Product life cycle strategies and its extension, Ansoff's Matrix, BCG Matrix, meaning of services, unique characteristics of services, 7Ps of service marketing, Service delivery process.

Unit IV Pricing **8 Hrs**

Level of knowledge: Conceptual

Types of pricing, Pricing strategies: New product pricing strategies, Product mix pricing strategies, Price adjustment strategies, Price changes, Public policy and pricing.

Unit V Distribution Channels **8 Hrs**

Level of knowledge: Conceptual

Marketing channels, structure, types and criteria of selecting a channel, wholesaling, retailing, and physical distribution.

Unit VI Promotion **10 Hrs**

Level of knowledge: Conceptual

An overview, Advertising, sales promotion, personal selling and sales management. Public and customer relations, direct and online marketing, multilevel marketing-the new marketing model, Significance of Integrated Marketing Communication.

Unit VII Socially Responsible Marketing **6 Hrs**

Level of knowledge: Conceptual

Sustainable Marketing, Social Criticisms of Marketing, Marketing's Impact on Individual, Marketing's Impact on Society as a Whole, Marketing's Impact on Other Businesses, Actions to Promote Sustainable Marketing, Business Actions Toward Sustainable Marketing, Principles and Marketing Ethics.

Core Text:

1. Kotler.P, &Keller.K.L., Koshy & Jha (2020). Marketing Management, 20th edition, Pearson.

Reference Books:

1. Marshall & Johnston, Marketing Management, McGraw Hill
2. Kotler & Armstrong, 15th ed., Principles of Marketing Management, Pearson publication
3. Chernev & Kotler, 5th ed., Strategic Marketing Management, Brightstar Media
4. Stanton, Etzel, Walker, Fundamentals of Marketing, Tata-McGraw Hill, New Delhi.
5. Saxena, Rajan, Marketing Management, Tata-McGraw Hill, New Delhi.
6. McCarthy, E.J., (2016). Basic Marketing: A managerial approach. Irwin, New York.

Course Name: Insurance and Risk Management	**Course Code: BBFT334N**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description:

The course successfully integrates the relevant knowledge base from finance, quantitative analysis and management domains to prepare the student for absorption in the industry. It educates you on the legal, social and institutional environments related to the occurred losses.

Course Objectives: The very specialized program is designed

: To take the students through business risks in financial and insurance services.

: To enable the students to analyse the various types of insurance contracts.

: To understand the role of actuaries & regulators in India

: To enable the students to estimate the financial risks for global markets.

Learning Outcome:

By the end of this course, students are able to

: Understand the basics of business risks in financial and insurance services.

: Analyze various types of insurance contracts.

: Understand the role of actuaries & IRDA.

: Estimate the financial risks through various models.

Unit I Introduction to Insurance (10 Hrs)

Meaning and Importance of Insurance & Brief History of Insurance, Definition of risk and uncertainty; classification of risk; Sources of risk - external and Internal. Principles of life insurance. Contracts of Life Insurance: proposals and policy, assignment and nomination, title and claims, Life insurance products, pensions & Annuities.

Unit II Overview of Risk (10 Hrs)

Globalization of Insurance Sector, Reinsurance, Coinsurance, Assignment. Endowment.

Risk – Introduction, Definition (market, credit, liquidity, operational), more specifically on the identification of different forms of risk (currency, interest rate, equity, commodity), **Financial risk** - An Overview, Evolution, and the Environment.

Unit III Insurance Contract (10 Hrs)

Nature of Insurance Contract, Principle of Utmost Good Faith, Insurable Interest, proximate cause, contribution and subrogation, Indemnity, Legal Aspects of Insurance Contract, Types of Insurance, Fire and Motor Insurance, Health Insurance, Marine Insurance, Automobile Insurance.

Unit IV Role of Actuaries & IRDA (10 Hrs)

Control of Malpractices, Negligence Loss Assessment and Loss Control, Exclusion of Perils, Actuaries, Computation of Insurance Premium. Regulatory Framework of Insurance: Role, Power and Functions of IRDA, Composition of IRDA, IRDA Act'1999.

Unit V Quantitative Risk Measurement (7 Hrs)

Measures of Risk, Introduction to Value-at-Risk, Expected Shortfall, Other popular measures

Volatility Calculation and Forecasting, Expected/Unexpected Loss Estimation

Unit VI Risk Modeling in Global Markets (7 Hrs)

VaR concept, Trading limits, risk aggregation, Statistical measures of risk, Value at Risk (VaR) and its limitations, VaR models, Delta-normal (variance-covariance) VaR, Historical VaR, Monte Carlo VaR Exponential weighted average models

Unit VII Regulatory norms for Capital and Market Risk Calculations (6 Hrs)

Market Risk Capital Charge and RWA (Basel 2.5), Standardized Charges, Stressed VaR (SVaR), Incremental Risk Charge (IRC), Comprehensive Risk Measure (CRM), Basel 3, Capital ratios : Buffers and Procyclicality, Leverage Ratios, Liquidity Ratios : LCR and NSFR

Text and Reference Books:

- Insurance Principles and Practice, Mathew M.J, RBSA Publishers, Jaipur
- Insurance Principles and Practice, Mishra M.N, S.Chand& Company Ltd
- Insurance Fundamentals, Environment and Procedures, Dr.P.K.Gupta & K.P.Singh, Deep & Deep Publications, New Delhi
- Value-at-Risk, 3rd edition: The new benchmark for managing financial risk by Philip Jorion
- IRDAI website-www.irdai.gov.in
- New Insurance Law, Nandan Singh, University Book Publishers
- Principles of Insurance Law, M.N. Srinivasan & K.Kannan, Wadhwa Book Company

Course Name: Python For Finance	**Course Code: BBFT351**
Total Teaching Hours for Semester: 60	**Credits:4**

Course Objectives/Description:
The objective of this course is to provide comprehensive knowledge of python programming language
CO1 To explain the structure, syntax, and semantics of the Python language.
CO2 To explain how object-oriented programming concepts work in Python.
CO3 To explain how programs and applications can be developed for financial data analysis through Python
CO4 To explain the implementation of Statistical Finance and models using Python
CO5 To explain the Implementation of Portfolio Finance and models using Python

Learning Outcome: To help the student to:

CLO1 Understand the structure, syntax, and semantics of the Python language.
CLO2 Understand how object-oriented programming concepts work in Python.
CLO3 Create programs and applications for financial data analysis through Python
CLO4 Implementing Statistical Finance and models using Python
CLO5 Implementing Portfolio Finance and models using Python

Unit I: Introduction to Python (10 Hrs)

Installation and Working with Python, Python IDE, Python Shell , Identifiers, Keywords, Statements and Expressions, Variables, Operators, Precedence and Associativity, Data Types, Indentation, Comments, Reading Input, Print Output, Type Conversions, The type() Function and Is Operator, Dynamic and Strongly Typed Language, Strings, Creating and Storing Strings, Basic String Operations, Accessing Characters in String by Index Number, String Slicing and Joining, String Methods, Formatting Strings

Unit II: Control Flow Statements (5 Hrs)

The if Decision Control Flow Statement, The if…else Decision Control Flow Statement, The if…elif…else Decision Control Statement, Nested if Statement, The while Loop, The for Loop, The continue and break Statements, Catching Exceptions Using try and except Statement,

Unit III: Functions (5 Hrs)

Built-In Functions, Commonly Used Modules, Function Definition and Calling the Function, The return Statement and void Function, Scope and Lifetime of Variables, Default Parameters, Keyword Arguments, *args and **kwargs, Command Line Arguments.

Unit IV: Data Structures (10 Hrs)

Lists, Creating Lists, Basic List Operations, Indexing and Slicing in Lists, Built-In Functions Used on Lists, List Methods, The del Statement. Dictionaries, Creating Dictionary, Accessing and Modifying key value Pairs in Dictionaries, Built-In Functions Used on Dictionaries, Dictionary Methods, The del Statement, Tuples and Sets, Creating Tuples, Basic Tuple Operations, Indexing and Slicing in Tuples, Built-In Functions Used on Tuples, Relation between Tuples and Lists, Relation between Tuples and Dictionaries, Tuple Methods, Using zip() Function, Sets, Set Methods, Traversing of Sets, Frozenset.

Unit V: Handling Financial datasets (10 Hrs)

Handling financial datasets (import, getsymbols, batchgetsymbols). Multiple asset classes, indices, components and economic data. Different packages and importance

Unit VI: Statistical Finance using Python (10 Hrs)

Handling statistical data analysis in Python (correlation matrix, covariance, mean, Std, etc, data visualization graphs), Data cleaning, data frames, working with timestamps, Performing regression, multiple regression, detection of problems in OLS, GLS, Forecasting models, GARCH volatility forecasting, PCA, Neural networks, Classification models

Unit VII: Portfolio Modeling using Python (10 Hrs)

Portolio construction and Risk Management (Concept of beta, portfolio risk, portfolio return, efficient frontier, portfolio optimization , value at Risk), Monte Carlo simulations for portfolios

Text Book and Reference Books

- Kenneth A. Lambert, The Fundamentals of Python: First Programs, 2011, Cengage Learning, ISBN: 978-1111822705

Essential Reading/Recommended Reading

- Wesely J.Chun,Core Python Application Programming ,Prentice Hall,third edition 2015
- R.Padmanabhan, Programming with Python,Springer Publications,2016.

Course Name: Structured Query Language	Course Code: BBFT311N
Total Teaching Hours for Semester: 45	**Credits:3**

Course Objectives/Description:

This course provides a solid foundation of the SQL, a structured query language that enables students to build, query and manipulate databases.

CO1: To help the students understand basics of relational databases and SQL.
CO2: To help the students create SQL queries.

CO3: To enable students to update database content with SQL and transaction handling

CO4: To enable the students to create database, tables and perform complex queries.

Learning Outcome:

At the end of the course, the students will be able to:

CLO1 Understand the basics of Relational Databases and SQL
CLO2 Apply SQL queries to retrieve and summarize data.
CLO3 Outline technical design errors in Database
CLO4 Build multi-table database structure with data integrity, privileges and constraints

Unit I: Introduction to SQL **(6 Hrs)**

Database, DBMS, File System, Relational Database Model, ER diagrams, Logical and Physical Database Design, What is SQL, SQL Basics-Statement, Name, data types, constraints, Built in functions

Unit II: Retrieving Data in SQL **(15 Hrs)**

Simple Queries-SELECT, FROM, WHERE, sorting. Multitable queries-cartesian product with WHERE clause, set operations and Join(natural join, Outer Join, Inner Join). Aggregation functions like SUM, AVG, MIN, MAX, COUNT, DISTINCT And Grouped queries. Sub-queries-search conditions, Nested, Correlated subqueries.

Unit III: Data Updation in SQL **(12 Hrs)**

Database Updates-Adding data to database, deleting data from database, Modifying data in the database. Data integrity-Validity checking, Entity integrity, referential integrity. Transactions processing-commit, rollback. Locks in DBMS. Trigger

Unit IV: Database Structure **(12 Hrs)**

Creating a database, creating a table, removing a table, changing a table structure. Views-Creating views, using a view, dropping a view. Privileges-Grant privileges, revoke privileges. Constraint, Alias, Indexes. Access, Authorization (Hierarchy) and Security

Reference Book:

Groff J. SQL, The Complete Reference. Third Edition. Publisher:McGrawHill

Hector Garcia-Molina, Jeff Ullman, and Jennifer Widom's Database Systems: The Complete Book 2nd Edition.Publisher:Pearson

Elmasri, Navathe, Fundamentals of Database Management. Fifth Edition.Publisher: Addison-Wesley Available at: http://www.mim.ac.mw/books/Elmasri-Navathe-Fundamentals-of-Database-Systems-5th-Editi.pdf

Recommended Reading:

SQL Tutorial. Available at: https://www.w3schools.com/sql/

Course Name: Information Systems and e- business	**Course Code: BBFT361A**
Total number of hours: 45 Hours	**Credits: 3**

Course Description: The objective of the course is to make students aware about how information systems work in different functional areas and provide information according to the needs of different management levels. This course covers basic concepts and its understanding would help students to learn most recent developments in the area of information systems and e-commerce. After going through this course, student will be able to leverage information systems and e-commerce to manage the organizations more efficiently. They will learn about security issues and how to safeguard organizational information.

- To provide students with basic concepts in information system and the benefits with these systems in modern society.
- To expose students to real application of Business Information System.
- To understand systems definition, systems requirements, and information needed for decision-making and to address business problems.
- To examine the legal aspects of Information Technology, the opportunities available in the business, and the challenges faced by the businesses.
- To understand several ethical issues in information system.

Course Learning Outcome:

CLO1 Demonstrate understanding of the concepts related to Business information system (PLO5.1).

CLO2 Apply basic Information Technology principles to various areas of businesses (PLO2.4).

CLO3 Analyze how technology like Strategic Information System, E-business, Enterprise Resource Planning (ERP), Decision Support Systems (DSS), Artificial Intelligence (AI), and Expert System, and affects businesses, so that we can take better decisions and address business problems (PLO 2.4)

CLO4 Identify the ethical and societal issues involved in Fintech in E-commerce (PLO5.2)

Pedagogy: This course uses multiple pedagogies like interactive lecture, student's discussions & presentations, case studies and roll play.

Unit I Foundation **Concepts of Information System** **(5 Hrs)**

Level of Knowledge: Conceptual

Concept of Business Information System, DIKW pyramid, Pyramid structure of BIS, Architecture of BIS, Types of BIS, Challenges for BIS is a multinational organization, Information System Activities, Strategic use of Information Systems

Unit II Relational Data Base Management System **(5 Hrs)**

Level of Knowledge: Conceptual

DBMS Introduction, structure of DBMS, components of DBMS, functions of DBMS, Master data, Transaction data, Data Dictionary, users and access permissions, introduction to RDBMS.

Unit III Decision Support Systems **(8 Hrs)**

Level of Knowledge: Conceptual

Classical, Administrative and Political Decision making Model, Herbert Simon's Model, Structured Vs Unstructured Decisions, Types of Decision Support Systems, Group Decision Support System, Executive Information System, Knowledge Based Expert Systems and Artificial Intelligence.

Unit IV Development of Business Information System **(5 Hrs)**

Level of Knowledge: Conceptual

Overview of Information System Development Methods, SDLC - Requirement Analysis, System Design, Systems Development, Software Testing, Implementation & Evaluation. Agile software development, Business Continuity Plan and Disaster Recovery.

Unit V Strategic Information Systems & Financial Technology **(7 Hrs)**

Level of Knowledge: Application

Cloud Computing, Grid Computing, Knowledge Management Systems, Pervasive Computing, Financial Technology & Block chain Technology, Robotic Process Automation.

Unit VI Functional Information Systems **(5 Hrs)**

Level of Knowledge: Conceptual

Enterprise resource planning (ERP), Modules under ERP - Marketing, Material Management, Finance, Accounts, HRM and Production management. Security threats to BIS and remedial measures, Business Process Reengineering.

Unit VII E- Commerce and Fintech (10 Hrs)

Level of Knowledge: Conceptual

E - Commerce activities – marketing, purchasing, payments, publishing and governance, E-commerce architecture, E-commerce Business models- B2b & B2C, E-Commerce Success Factors, , Fintech Trend evolving Ecommerce-online payments, mobile payments, digital money, and online shopping, Regulatory and Ethical challenges of Fintech in E-Commerce.

Essential Reading

1. Joshi, G. (2013). 1st Edition, Management Information Systems. Oxford University Press

Recommended Reading

1. Kenneth C. Laudon and Jane Price Laudon, (2016). Management Information Systems – Managing the digital firm, PHI Learning. Pearson Education, PHI, Asia
2. James A O'Brien and George M Marakas, (2017), 10th edition. Management Information Systems, Tata McGraw Hill Publishers
3. Justice Yatindra Singh, (2012), 4th edition. Cyber Laws, Universal Law Publishing Co, New Delhi.
4. Rekha Chandulal, (2015), 1st edition, Ecommerce Unmasked: Hidden Secrets to fight Online Battles.
5. Effy Oz, (2008), 6th edition. Management Information Systems, Course Technology Publishers

Course Name: Innovation and Creativity in Business	**Course Code: BBFT361B**
Total number of hours: 45 Hrs	**Credits: 3**

Course Description:
Actual business context requires a degree of adaptation to change which requires the acquisition of new skills and abilities to seize opportunities and improve productivity and economic performance. This course deals with the study of innovation and creativity. Students are expected to understand and identify strategies to promote ideas on innovative /creative products or services and necessary actions to implement them successfully.

Course Objectives:
- To infer the concept of innovation and creativity, their components and differences.
- To identify the tools used for formulation of an innovation strategy for a product/business/industry.

- To explain the key planning elements in idea generation process for business as well as societal issues.
- To assess the role of a business leader in facilitating creativity within the organization.
- To discuss a framework for the design and implementation of a systematic innovation strategy.

Course Learning Outcomes:

On having completed this course student should be able to:

CLO1 Compare and contrast the different forms and types of innovation.

CLO2 Apply the tools used for formulation of innovation strategies for a product/business/industry.

CLO3 Demonstrate the key planning elements in idea generation for business as well as societal issues.

CLO4 Evaluate the role of a business leader in facilitating creativity within the organization.

CLO5 Develop a framework for the design and implementation of a systematic innovation strategy.

Pedagogy:

This course uses multiple pedagogies like interactive lecture, students' discussions & presentations, case studies and article analysis, and experiential learning through building new innovative and creative businesses.

Unit-I Introduction to the Process of Innovation: (9 Hrs)

Incremental and Radical Innovation, Factors that favours incremental innovation, Innovation in processes, Service innovations. The concept of S-curve: Three lessons, Where do you stand on the S-curve, Limits to these lessons.

Unit-II Idea Generation (9 Hrs)

New Knowledge, Tapping the ideas of customers, Learning from the lead users, Empathetic design, Invention factories and Skunkworks, Open market innovation, The role of mental preparation, How management can encourage idea generation, Two idea generating techniques.

Unit III Recognizing opportunities and Moving innovation to market (9 Hrs)

A method for opportunity recognition, Rough -cut business evaluation. The idea funnel, Stage-gate systems, A caution on funnels and stage-gate systems, Financial issues, Extending innovation through platforms.

Unit IV Creativity and creative groups (9 Hrs)

Myths about creativity, three components of individual creativity, Characteristics of creative groups, Handling conflicts in groups, Time pressure and creativity. Enhancing creativity: enriching the organization and workplace, Organizational enrichment, Enriching the physical workplace.

Unit V Role of Leaders in promoting innovation (9 Hrs)

Develop an innovation -friendly culture, establish strategic direction, be involved with innovation, be open but skeptical, Improve the idea-to-commercialization process, apply portfolio thinking, put people with the right stuff in charge, and create an ambidextrous organisation.

Essential reading:

1. Richard Luecke (2003). *Guide to Managing Creativity and Innovation,* Harvard Business Press.

Books for Reference:

2. P. Rizwan Ahmed (2015). *Creative & Innovation Management,* Margham Publications.
3. R. Keith Sawyer (2014). *Explaining Creativity: The Science of Human Innovation,Oxford University Press*

Course Name: Industry Review Project	**Course Code: BBFT381N**
Total number of hours: 30 Hrs	**Credits: 1**

Course Description: Industry Review Project work is aimed at preparing the BBA student, in understanding the application value of the principles and paradigms studied as part of the BBA programme.

Course objectives:

- To provide an understanding of the industry.
- To identify the individual company profile.
- To examine and analyse Product Profile, Client profile, Organization structure, Present market share, Future strategies, Financial Information and achievements of the company.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 To understand different areas of knowledge of the industry.
CLO2 To identify and evaluate ideas and information related to the company.
CLO3 To learn on their own, reflect on their learning and improve upon it by examining and analysing information related to the company.

Unit I: **(2 Hrs/week)**

Introduction to the Industry (500 words)

Level of Knowledge: Basic, Conceptual and analytical

Unit II: **(2 Hrs/week)**

Company Profile (1000 words)

Level of Knowledge: Basic, Conceptual and analytical

a) Company 1 b) Company 2 c) Company 3

Unit III: **(2 Hrs/week)**

Research Methodology (300 words)

Level of Knowledge: Basic, Conceptual and analytical

Unit IV: **(2 Hrs/week)**

Comparative Analysis (of three companies from the industry) 4 Ps (500 words)

Level of Knowledge: Basic, Conceptual and analytical

Unit V: **(2 Hrs/week)**

Findings and Conclusion, Bibliography and Annexure (300 words)

Level of Knowledge: Basic, Conceptual and analytical

References:

1. Newspapers
2. Magazines
3. Internet
4. Journals
5. Company websites
6. Reports
7. Bajpal, N. (2017). Business research methods . New Delhi: Pearson
8. Kothari, C. R. (2019). Research Methodology Methods & Techniques, New Age International Publishers

Course Name: Cost and Management Accounting	**Course Code: BBA431**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: This course covers the fundamental concepts and various aspects in and of cost as well as management accounting. This course discusses how to prepare cost sheet, costing for materials, labour cost and overheads. This course also talks about financial statement analysis using various tools like comparative and common size Income Statements and Balance Sheet, Trend Analysis, Ratio Analysis, Cash Flow Statement, Budgets and Budgetary Control. It also throws some light on Management Reporting in general. And thus this course as a part of Business administration programme provides fundamental knowledge and basic understanding on various methods, tools and techniques of cost and management accounting helpful for financial decision making required for a budding professional in the domain of accounting and finance.

Course Objectives:

- To familiarize the learners with the basic concepts and processes used to determine product costs.
- To make known the students in ascertaining Material, Labour and Overhead cost
- To enrich the knowledge of the learners in knowing and applying various tools like ratio analyis, cash flow statemet, marginal costing for analysing the financial statements for managerial information
- To provide with the basic understanding of budgetary control
- To develop the knowledge of the learners to understand and prepare a management report

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Interpret the relevant theories of cost and management accounting and prepare cost sheet and quotations.
CLO2 Ascertain Material and Labor cost
CLO3 Ascertain, allot and apportion of the overheads.
CLO4 Assess and interpret the financial statements for managerial decision making.
CLO5 Examine and understand management reports.

Pedagogy: This course uses multiple pedagogies like interactive lecture, students discussions, PPTs and problem solving

Unit-I

Introduction to Cost and management accounting **8 Hrs**

Level of knowledge: Conceptual

Definitions, features, objectives, functions, scope, advantages and limitations. Relationship and differences between Cost accounting, Management accounting and Financial accounting.

Cost Concepts-Cost classification – Elements of cost - Preparation of cost sheet and quotation.

Unit-II: Material, Labor and Overheads **10 Hrs**

Level of knowledge: Application

Material Cost: direct and indirect material cost, Inventory control techniques-stock levels, EOQ, ABC analysis. Issue of materials to production- pricing methods-FIFO, LIFO and Average methods.

Labor cost: direct and indirect labour cost-methods of payment of wages including incentive plans - Halsey and Rowan plans, Tailors Piece Rate method.

Overheads: features, classification, methods of allocation and apportionment of overheads, primary and secondary distributions (Repeated & step ladder method only).

UNIT III: Marginal Costing **8 Hrs**

Level of Knowledge: Analytical

Marginal Costing-Meaning - Importance - Marginal Cost Equation - Difference between Marginal costing and Absorption costing - Break Even Analysis-Meaning and Importance - Break even chart-P/V ratio - Cost Volume Profit Analysis- Margin of Safety-Angle of Incidence- Problems in Marginal costing.

UNIT-IV Budgetary control **7 Hrs**

Budgets - Meaning and importance - Budgetary Control-Meaning and Importance-Types of Budgets, practical problems - Flexible Budget and cash Budget,

UNIT-V: Financial Statement Analysis **10 Hrs**

Level of Knowledge: Analytical

Comparative Income Statements and Balance Sheets- Common size Income Statements and Balance Sheet analysis- Trend Analysis. Ratio Analysis – Introduction, Classification & Interpretation of Ratios.

UNIT-VI: Cash flow statement **13Hrs**

Level of Knowledge: Analytical

Introduction- Concept of Cash- Sources of cash flow Cash from operation- cash from Financing and cash from investment- Inflow and outflow of cash- Preparation of cash flow statements with adjustments

UNIT VII: Management Reports **4 Hrs**

Level of Knowledge: Conceptual

Management Reporting – Meaning and Definitions of reports- Objectives and purpose-Reports to top level management – Reports to lover level management- Sample Reports

Essential Reading:

1. Arora,M.N (2019).*Cost and Management Accounting*, New Delhi: Himalaya Publishing House.

Recommended Reading:

1. Jain, S.P., & Narang, K.L. (2018). *Cost Accounting.* New Delhi: Kalyani Publishers.
2. Kishor, R.M. (2013). *Cost and Manegement Accounting.* New Delhi: Taxman Allied Services.
3. Pillai, R.N.S. (2013). *Cost Accounting.* New Delhi: Sultan Chand.
4. Arora,M.N (2018). *Management Accounting*, New Delhi: Himalaya Publishering House
5. Lal, J. (2013). *Cost Accounting.* New Delhi: Tata Mcgraw Hill Education

Course Name: Entrepreneurship Development	**Course Code: BBA432**
Total number of hours: 60 Hrs.	**Credits: 4**

Course Description:

From the perspective of a country's economic development, entrepreneurship is a necessary ingredient for stimulating economic growth and employment opportunities. In the developing world, successful small businesses are the primary engines of job creation & income growth. In this direction, this course on entrepreneurship development, educates an individual about the efforts taken by the government broadly to encourage entrepreneurship. From the perspective of development of an individual's entrepreneurial ability, entrepreneurship education becomes critical as the goal of the course is to help the youth start to think about what dreams or ideas they have and how they can develop and fulfil them. It is also a way to learn how to interact and cooperate with other people, be creative and find tools for how to develop themselves and their ideas. The course aims to motivate an individual to take up an entrepreneurship to attain self-reliance and growth.

Course Objectives:

- To demonstrate an understanding of the need for entrepreneurship development.
- To identify critical success factors for taking up entrepreneurship
- To evaluate factors influencing the entrepreneurial activities in different contexts.
- To analyze functional strategies required for entrepreneurial success
- To develop business plans for entrepreneurial opportunities

Course Learning Outcomes:

CLO1. Demonstrate an understanding of the need entrepreneurship development

CLO2. Identify Critical success for taking up entrepreneurship

CLO3. Evaluate factors influencing the entrepreneurial activities in different contexts

CLO.4 Analyze functional strategies required for entrepreneurial success

CLO5. Develop business plans for entrepreneurial opportunities

Pedagogy: This course uses multiple pedagogies like case study discussions, interactive lecture, presentations, review of research article, in class group exercises and activities.

UNIT I –Introduction to Entrepreneurship **10 Hrs**.

Level of Knowledge: Conceptual

Evolution of the Concept of Entrepreneurship; Theories of Entrepreneurship- Innovation Theory, Harvard School Theory, Theory of High Achievement, Theory of Profits, Theory of Adjustment of Price-Entrepreneurship Today; Types of Entrepreneurs; Intrapreneurship; Difference Between a Manager and an Entrepreneur; Entrepreneurial Competencies; Capacity Building for Entrepreneurs; Women's Entrepreneurship, Challenges Faced by Women Entrepreneurs; Characteristics of a Family-owned Business in India; Various Types of Family Businesses; Challenges Faced by Family-owned Businesses.

UNIT II – Entrepreneurship Development in India **10 Hrs.**

Level of Knowledge: Conceptual

Entrepreneurial Environment; Global Entrepreneurship Environment; Business Climate in India; Environmental Factors Affecting Entrepreneurial Growth; Creating a Favorable Environment for

Entrepreneurship; Models of Entrepreneurial Development; The Process of Entrepreneurial Development; Role and Importance of Micro, Small, and Medium Enterprises; Concepts and Definitions of MSME; The MSMED Act, 2006; Government Policy Initiatives; Current Schemes for MSME; Problem Faced by MSME Sector; Role of Clusters in Promoting MSME.

UNIT III – Creativity & Innovation **10 Hrs.**

Level of Knowledge: Conceptual

The creative process, Search for Business ideas, Selection of Product/Service, Product innovation; Services Industries-Human side of an enterprise; Identification of Business Opportunities; Mobility of Entrepreneurs; Geographical Mobility of Entrepreneurs; Occupational Mobility; Business Opportunities in India; Models for Opportunity Evaluation; The RAMP Model ; Mullins's Seven-domain Framework

UNIT IV– Business Plans **10 Hrs.**

Level of Knowledge: Conceptual

Purpose of a Business Plan; Contents of a Business Plan- Management Summary; Marketing Plan; Operations Plan; Financial Plan; Procedure for Setting Up an Enterprise; Selection of a Project; Decide on the Constitution Obtain Registration; Obtain Clearances from Departments as Applicable; Arrange for Land/Shed; Arrange for Plant and Machinery; Arrange for Infrastructure; Prepare Project Report; Apply for and Obtain Finance; Implement the Project and Obtain Final Clearances.

UNIT V–Institutional Support to entrepreneurs **10 Hrs.**

Level of Knowledge: Conceptual

Institutions Supporting Business Enterprises; Central-level Institutions; National Board for Micro, Small, and Medium Enterprises (NBMSME) The Khadi and Village Industries Commission (KVIC) The Coir Board MSME-DO; National Small Industries Corporation (NSIC); National Science and Technology Entrepreneurship Development Board (NSTEDB) National Productivity Council (NPC) Entrepreneurship Development Institute of India (EDI) National Research Development Corporation of India (NRDCI) National Entrepreneurship Development Institutes; State-level Institutions ; State Directorate of Industries and Commerce ; District Industries Centers (DIC) ; State Financial Corporation (SFC); State Industrial Development Corporation (SIDC) State Industrial Area Development Board (SIADB); Other Institutions National Bank for Agriculture and Rural Development (NABARD) Housing and Urban Development Corporation (HUDCO); Technical Consultancy Organization (TCO); Small Industries Development Bank of India (SIDBI) ; Export Promotion Councils (EPCs) Industry Associations Non-Governmental Organization (NGOs) Business Incubators.

UNIT VI – Project Management & Financing **10 Hrs.**

Level of Knowledge: Conceptual

Introduction, Project Manager ; Project Life Cycle , Project Scheduling -Gantt Charts, Network Techniques ; Project Management Software; Capital Budgeting; Generating an Investment Project Proposal; Project Analysis; Market Analysis, Technical Analysis, Financial Analysis, Economic Analysis, Project Evaluation and Selection ; The Payback Period; Accounting Rate of Return (ARR) Net Present Value (NPV) Internal Rate of Return (IRR) ; Benefit-Cost Ratio (BCR) Project Financing Equity Financing; Angel Investing ; Debt Financing ; Miscellaneous Sources; Project Implementation Phase; Capital Structure and Cost of Capital; Detailed Project Report; Ecological Analysis.

Essential Reading:

1. Poornima M Charanthimath (2020) "Entrepreneurship Development and Small Business Enterprises", 3rd Edition, Pearson Publication.

Recommended Reading :

2. David, H. (2013). "Entrepreneurial Development" (5th edition), Prentice Hall
3. Desai, V. (2014).The Dynamics of Entrepreneurial Development and Management (6thedition).Himalaya Publishing House.
4. Gupta, C.B., &Srinivasan, N.D. (2012) Entrepreneurship Development. New Delhi Sultan Chand & Sons.
5. Robert D Hisrich, Mathew J. Manimala, Michael Peter, Dean A Shepherd. (2013) "Entrepreneurship" (8th edition). Tata McGraw Hill

Course Name: Research Methodology	**Course Code: BBA433**
Total number of hours: 60 Hrs	**Credit : 4**

Course Description: Research in common parlance refers to a search for knowledge in any stream or a discipline finding solutions or inputs for questions raised. Students will be provided with basic concepts of research and its process. Course focuses on inculcating research culture among students through hands on learning experience. This course will equip the students with required skill sets for identification, analysis and interpretation of business problems. This process will helps in informed business decision making. The course is designed to provide experiential learning in all the modules.

Course Objectives:

- To understand the concepts, tools and terminologies used in research world;
- To identify the methods best suited for investigating different types of problems and questions;
- To demonstrate hands on experience on different tools used in a research;
- To construct research questions that are based on and build upon a critical appraisal of existing research;
- To develop a research design and analysis the results to provide suggestions based on research findings.

Course Learning Outcomes: Students should be able to:

CLO1 - Demonstrate ability to understand different research terminologies.
CLO2 - Identify research problems and questions
CLO3 - Develop methodology for research problems
CLO4 - Analyse data required for business decision-making.
CLO5 - Propose suggestions based on the findings from the research.

Pedagogy: This course uses multiple pedagogies like in classroom activities, interactive lecture, students discussions & presentations, article analysis, participation in industrial discussion forums , guest lectures from researchers.

Unit I Introduction to Business Research **6 Hrs**

Level of Knowledge: Conceptual

Meaning, Objectives, purpose, types, scope and significance of research in business and industry. Criteria for Good research, Ethics in research.

Unit II Research Process **8 Hrs**

Level of Knowledge: Conceptual

Research Process - Steps in research, identification and formulation of research problem, extensive literature review, Research gap, statement of the problem, need for the study, Variables- meaning and types. Theoretical framework, research questions. Deductive and inductive logic

Unit III Formulation of Research Problem and Hypotheses **10 Hrs**

Level of Knowledge: Application

Identifying and formulating research problem, Diagnosis of symptoms and problem. Setting research objectives. Doing review of literature – purpose, methods. Hypothesis – Meaning, Purpose, Sources, characteristics of hypotheses, types of hypothesis, Formulation of hypothesis.

Unit IV Measurement Scales and Sampling Techniques **10 Hrs**

Level of Knowledge: Conceptual

Sample design, steps in sampling process, sampling methods – probability Sampling and non-probability sampling, sampling error, Criteria for good sample, determining sample size (infinite and finite). Measurement – Types of Scales, Scaling techniques.

Unit V Data Collection **10 Hrs**

Level of Knowledge: Application

Data sources - primary and secondary data, Data Collection methods- Survey, observation, Interview, focus group technique. Data collection instruments, construction of Questionnaire, schedule, characteristics of good instrument, and errors in measurement, Reliability and validity of research instruments.

Unit VI Data Analysis **12 Hrs**

Level of Knowledge: Application

Data processing – Editing, coding, tabulation, normality and stationary test, pictorial and graphical presentation of Data, Parametric and non-parametric hypothesis testing, hypothesis testing using statistical tools such as descriptive, Chi–square, t- test, ANOVA, Correlation and Regression.

Unit VII Report Writing and Presentation of Results **4 Hrs**

Level of Knowledge: Application

Classification and tabulation, Research presentation, Types of report - Research proposal, research report. Format of a report- Layout, Precautions. Citation and referencing (APA 6th edition)

Essential Readings:

1. Kothari, C. R. (2019). Research Methodology Methods & Techniques (2 ed.). New Delhi: Vishwa Prakashan.

Recommended Readings:

1. Bryman, Alan and Bell, Emma (2011), Business Research Methods, 3/e, Oxford University Press
2. Chawla, D., &Sondhi, N. (2011). Research Methodology: Concepts and cases. New Delhi: Vikas Publishing House
3. Gupta, S. L and Gupta, Hitesh (2012), Business Research Methods, McGraw Hill Education (India) Private Limited, New Delhi
4. Krishnaswamy, K.N., Sivakumar, A.I., Mathirajan, M (2007), Management Research Methodology, Pearson, New Delhi
5. Kothari, C. R. (2009). Research Methodology Methods & Techniques (2 ed.). New Delhi: VishwaPrakashan.
6. Krishnaswami, O., &Ranganatham, M. (2013). Methodology of Research in Social Sciences. Mumbai: Himalaya Publishing House.
7. Majhi, P. R., &Khatua, P. K. (2013). Research Methodology (Concepts, Methods, Techniques and SPSS). Mumbai: Himalaya Publishing House.
8. Srivastava. T. N and RegoShailaja (2012), Business Research Methodology, Tata McGraw Hill Education Private Limited, New Delhi.
9. Bajpal, N. (2017). Business research methods. New Delhi: Pearson.

Course Name: Introduction to Business Analytics	**Course Code: BBFT451N**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: Business Analytics is the process of converting data into insights. It is "the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions." With the increase in the availability of data, Analytics has now become a major differentiator in both the top line and the bottom line of any organization. It is hence not surprising that research has shown that data-driven companies perform 5%-6% better per annum. As data analytics skills are essential for all managers today, even those who are not looking to become hard core data analysts will benefit from this course. This course is a must for professionals looking to learn data analytics, as well as students who are looking to pursue data science as a career.

Course Learning Outcomes: On having completed this course student should be able to:

CL01 Demonstrate understanding of a business problem, articulate and convert it into a viable Analytics question (PLO 2.1)

CLO2Apply Data visualization for exploratory analysis and communicate effectively to diverse audience (PLO5.3)
CLO3 Analyze a business problem using the most appropriate data mining technique. (PLO 5.3)
CL04 Utilize R programming to perform regression for addressing financial problem.(PLO5.3)

Pedagogy: In general, the teaching approach of this course is based on the notion of sustained, deep learning by applying knowledge through programming, hands-on practices, project and assignments.

Unit I Introduction to Analytics (10 Hrs)

Data – Information – Intelligence – Knowledge Approach, Types of Analytics, Types of Digital Data, Source of Data, Importance of Data Quality, Looking Data from many perspective, evolution of Business Analytics and Role of DSS, EIS and Digital Dashboards, Business Analytics Tools and Software, Role of Business Analyst in Business & Society, Business Analytics Process, Business Analytics Architecture & Framework.

Unit II Data Warehouse & Data Mining (8 Hrs)

Introduction to OLTP and OLAP, Data Mart, Data Lake, Data Warehouse Architecture & Data Warehouse Design, Extract Transform Load (ETL), Data Mining Concepts, Architectural aspects of Data Mining, Data Mining Techniques, Data Mining & Big Data application in Business.

Unit III Application of Analytics (10 Hrs)

Analytics in Business Support Functions, Analytics in Industries – Telecom, Retail, Healthcare, Governance, Supply Chain, Marketing, Finance, Retail & Human Resource, Sports Analytics, Social Media Analytics, Social Networking Analytics, Recommendation Systems.

Unit IV: Business Analytics Tool (TABLEAU - Practical) (13 Hrs)

Introduction to Business Intelligence, Components of BI architecture, Querying Data, Data Reporting and Visualization Tools, Tableau - Introduction, Interface, Connecting to Data, Descriptive Analytics – Bar charts, Scatterplots, Histogram, Geographical Maps, Heatmaps, Pareto Charts, Swap Axis, Dual Axis, Word Cloud, Waterfall Chart, Dynamic Control Charts, Actions – Sort, Hierarchy, Filters, Calculations – Numeric Calculations, String Calculations, Date Calculations, Building Storyboards, Data Analysis Techniques to generate insights, Case Studies

Unit V: Dashboard (Power BI - Practical) (14 Hrs)

Overview of Power BI Desktop, Data Sources in Power BI Desktop, Connecting to a data Sources, Query Editor in Power BI, Clean and Transform your data with Query Editor, Create calculated tables and measures, Combining Data – Merging and Appending, Cleaning irregularly formatted data, Visual Analytics with PowerBI , Navigation Hierarchy and Aggregation, Refining and Transforming Visualizations, Modeling Data and Managing Data Relationship, Dashboarding with PowerBI

Unit VI: Case Study / Use Case (5 Hrs)

Case Studies on Credit Risk Analytics – Time Series Analysis, Cross – Sell or Up –Sell & Customer Life Time Value Analytics in Marketing, Prediction of Job Attrition in HR and Talent Analytics

Text Books

1. R N Prasad and Seema Acharya (2018), "Fundamentals of Business Analytics", Second Edition, Wiley India Pvt. Ltd
2. Dinesh Kumar U (2017), "Business Analytics- The Science of Data-Driven Decision Making", Wiley Publication

Reference Books

1. James Evans (2016), "Business Analytics" Pearson Publishers, 2nd Edition
2. Jiawei Han and Michelin Kamber (2015), "Data Mining: Concepts and Techniques", Morgan Kaufmann Publication
3. Kimball, R. and Ross, M (2006), "The Data Warehouse Toolkit: The Complete Guide to Dimensional Modelling", John Wiley & Sons
4. Kimball, R., and Caserta, J (2004), "The Data Warehouse ETL Toolkit: Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data", John Wiley & Sons
5. Turban E, Armson, JE, Liang, TP & Sharda (2007), "Decision support and Business Intelligence Systems", 8th Edition, John Wiley & Sons
6. Michael J. A. Berry and Gordon S. Linoff (2004), "Data Mining Techniques for marketing, Sales and CRM", John Wiley & Sons

Course Name: Security Analysis and Portfolio Management	**Course Code: BBFT434N**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: The course aims at familiarizing the students with an environment in which investment decisions are made. This includes having fair knowledge of different financial markets and the financial instruments which facilitate appropriate investment decisions. The investor needs to know the mechanics of investing and the methods of risk-return trade-off through different sources of information which include the broad framework of the economy, the industry structure, and the company structure. The course also aims at providing insights to the students to understand the significance of regulatory agencies that promote transparency, good governance in the stock market functioning which builds investors' confidence in the construction of the appropriate portfolio.

Course Objectives:

- To familiarize students with the different investment environments, financial markets, and instruments available in India and foreign markets.
- To understand the tools, techniques, and strategies used in security analysis.
- To understand the security valuation of models and the decision-making process.
- To comprehend the portfolio construction, revision, and risk-return trade-off.

Course Learning Outcomes: On having completed this course student should be able to:

- CLO1 Understand the investment environment, financial markets, and instruments for making rational investment decisions.
- CLO2 Demonstrate knowledge about fundamental and technical analysis for investment decision-making.
- CLO3 Analyse the financial instruments, equity, and bonds for appropriate valuation and decision making.
- CLO4 Analyse different financial instruments, construct an appropriate portfolio, and its management.

Pedagogy: This course uses multiple pedagogies like an interactive lecture, students' discussions & presentations, case analysis, and a virtual trading platform through simulation.

Unit I – Introduction **(8 Hrs)**

Level of Knowledge: Conceptual
Financial Meaning of investment - the significance of savings and investment - understanding of security, portfolio, speculation, gambling, and arbitrage mechanisms - Risk- systematic risk and unsystematic risk-Interest rate risk, inflation risk etc.-financial and business risk, Legal framework of the securities market, Comparison between investment and speculation and its significance in Indian financial system, Profile of Indian investors and factors influencing investment decisions. Financial positions, tax positions, risk perception and attitude - Risk-Return relationship

Unit II – Investment avenues & attributes **(8 Hrs)**

Level of Knowledge: Conceptual / Analytical
Investments options in India and foreign markets - characteristics features of financial instruments - company shares, debentures, bonds, convertible securities, hybrid securities, fixed deposits, gilt-edged securities, post office schemes, company and public provident funds, Other investment schemes and their features real estate, and insurance schemes. Investment attributes - risk, return, security, marketability, liquidity, and convenience.

Unit III – Security analysis: Fundamental Analysis **(8 Hrs)**

Level of Knowledge: Conceptual / Analytical
Fundamental analysis – company, industry, and economic analysis - Tools for economic analysis- analysis of GDP-Monetary policy, Inflation Interest rates International influences- links between economy and industry sectors-prediction about market behavior-tools.

Unit IV – Security analysis: Technical Analysis **(10 Hrs)**

Level of Knowledge: Conceptual / Analytical
Technical Analysis of stock -points and figures chart, bar chart, contrary opinions theory, confidence index RSA, RSI, Moving average analysis, Japanese Candlesticks – Bond valuation (Basic and Advanced Problems).

Unit V – Security Pricing & Valuation **(10 Hrs)**

Level of Knowledge: Conceptual / Analytical
Factors influencing valuation - methods of equity valuation - Earning Valuation modal - use of P/E ratio, Dividend model - Zero and constant growth modals. Intrinsic value method, Calculation of present, and forecasted price of the stock:
Valuation of fixed income instruments – Bond Portfolio Management Strategies: present and future value - Calculation of simple, holding period and maturity yield, annuities. Calculation of portfolio net-worth

Unit VI – Portfolio management **(10 Hrs)**

Level of Knowledge: Conceptual / Analytical
Meaning, return on a portfolio, risk on a portfolio, portfolio managers, SEBI guidelines for portfolio managers, portfolio management services. Efficient Market Hypotheses, Portfolio theory - contribution of William Sharpe and Harry Markowitz,- Single index model, capital asset pricing model, and arbitrage pricing theory

Unit VII – Performance Measurement of Managed Portfolios **(6 Hrs)**

Level of Knowledge: Conceptual / Analytical
Structure of Mutual funds – Features of Mutual Funds – Classification of Mutual funds - Net Asset Value – Management performance evaluation: Sharpe's performance measure, Treyner's performance measure, Jensen's model.

Text Book:
Singh, P. (2013). *Investment Management.* New Delhi: Himalaya.
Reference Books:
Madhumati, R.M. (2008). *Investment Analysis and Portfolio Management.* New Delhi: Pearson Education.
Avadhani, V.A. (2008). *Security Analysis and Portfolio Management.* New Delhi: Himalaya Publications.
Bhalla, V.K. (2008). *Investment Management.* New Delhi: S. Chand.
Fischer, D. (2008). *Security Analysis and Portfolio Management.* New Delhi: Pearson Education.
Fischer D.E. (2009). *Security Analysis and Portfolio Management. Pearson Education*

Course Name: FinTech Ethics and Risks	**Course Code: BBFT435N**
Total Teaching Hours for Semester: 60	**Credits: 4**

Course Objectives/Description:

FinTech has started a global revolution in the financial services industry, and the transformation will only increase in coming years. There are many ways in which FinTech can improve the lives of people around the world; however, those same technologies can also be used to enslave, coerce, track, and control people. Accordingly, it is appropriate and necessary to consider the implications of the introduction of these technologies so that they are utilized properly, regulated sufficiently, and their adoption does not come at the expense of societal growth.

CO1: To explain the ethical issues inherent in finance and financial technology

CO2: To help the students understand in depth the ethical implications of blockchain and cryptocurrencies, Artificial Intelligence (AI) and machine learning, and payment solutions

CO3: To enable the students to spot potentially risky situations in financial technology

CO4: To evaluate the ethical merits and demerits in given business situations

Learning Outcome:

At the end of the course, the student should be able to:

CLO1: Understand the ethical and risk elements of finance, emerging technologies, and financial technology

CLO2: Infer the ethical implications of blockchain and cryptocurrencies, Artificial Intelligence (AI) and machine learning, and payment solutions

CLO3: Identify potential risk scenarios of financial technology

CLO4: Examine the ethical issues involved in given business situations

Unit I Introduction (10 Hrs)

Introduction to Business Ethics, Key Ethical principle- Trust, Proximity, Accountability, Cultural Lag, Privacy. Technologies and Ethics, Ethical concerns in Finance, Assessing ethical concerns of digital finance, Importance of Ethics in FinTech.

Unit II Block Chain Ethical Design Framework (8 Hrs)

The approach, Root issues-governance, identity, verification and authentication, access, data ownership, security, Ethical impacts of blockchain-Microlevel, Meso level and Macro-Level

Unit III Micro-financial, Macro-financial Risks (8 Hrs)

Micro-Financial Risks- -Maturity Mismatch, Liquidity Mismatch, Leverage Mismatch, Macro Financial Risk-Contagion, Procyclicality, excess volatility, Systemic Risks

Unit IV Operational Risks (8 Hrs)

Operational Risks-Governance/process control, Cyber risks (Data privacy Breach, fraud, DDOS attacks), Third party and fourth party concentration risks, legal/regulatory risk, Business Risk,

Unit V Potential Risk Cases-I (8 Hrs)

Retail Payments, Digital Wallets and Shadow Banking, FinTech Credit, Robo Advisor

Unit VI Potential Risk Cases-II (8 Hrs)

DLT based Wholesale payment system, Digital currency, Crowdfunding, AI and Machine learning in financial services

Unit VII Case Studies (10 Hrs)

Sony Hack, Apple vs FBI, Well Fargo, Social credit system in China, Aadhar

Text Book:

- Bishop, D. L., Lee, D., Ferrel, O. C., Fraedrich, J., & Ferrell, L. (2019). *Business Ethics: Ethical Decision Making and Cases*, *An Asia Edition*, 1st Edition. Cengage Learning Asia.

Reference Books:

- Chishti, S., & Barberis, J. (2016). The FinTech book: the financial technology handbook for investors, entrepreneurs and visionaries. John Wiley & Sons.

- Marshall, K. P. (1999). Has Technology Introduced New Ethical Problems? *Journal of Business Ethics*, 19(1), 81-90.
- Scott, B. (2017). Hard Coding Ethics into Fintech. *Finance & The Common Good*.
- Cara Lapointe & Lara Fishbane (n.d.) The Blockchain Ethical framework, Beek Centre of Social impact and innovation at George Town University
- Bostrom, N. (2014). *Superintelligence: Paths, dangers, and strategies*. Oxford: Oxford University Press.
- Müller, J., & Kerényi, Á. (2019). The Need for Trust and Ethics in the Digital Age–Sunshine and Shadows in the FinTech World. *Financial and Economic Review*, *18*(4), 5-34.
- Dierksmeier, C., Seele, P. Cryptocurrencies and Business Ethics. J Bus Ethics 152, 1–14 (2018).
- Buckley, R. (2016). The Changing Nature of Banking and Why It Matters. In R. Buckley, E. Avgouleas, & D. Arner (Eds.), Reconceptualising Global Finance and its Regulation (pp. 9-27). Cambridge: Cambridge University Press. doi:10.1017/CBO9781316181553.002
- Financial Stability Board (2017) Financial Stability Implications from FinTech, June.
- Bogusz, C. I. (2018). Digital traces, ethics, and insight: Data-driven services in FinTech. In *The Rise and Development of FinTech (Open Access)* (pp. 207-222). Routledge.
- Shevlin R. (Oct, 2019)Are Fintech Startups More Ethical Than Banks?
- Vijayaprasad Gopichandran et al. Ethical challenges of digital health data in India. Bulletin of the World Health Organization; Type: Lessons from the field Article ID: BLT.19.237123
- Jain M. (May, 2019). The Aadhaar Card: Cybersecurity Issues with India's Biometric Experiment.
- Tang, Y., Xiong, J., Becerril-Arreola, R. and Iyer, L. (2019), "Ethics of blockchain: A framework of technology, applications, impacts, and research directions", *Information Technology & People*, Vol. 33 No. 2, pp. 602-632.
- AFME(2018). Considerations on ethical use of AI in capital markets. Available at: https://www.fintech2019.eu/wp-content/uploads/2019/02/afme-tao-ai-considerations-on-the-ethical-use-of-ai-30-nov-2018.pdf
- EBF(2019). EBF position paper on AI in banking industry. Available at: https://www.ebf.eu/wp-content/uploads/2020/03/EBF-AI-paper-_final-.pdf
- European Commission (2019). Ethics guidelines for trustworthy AI. Available at: https://ec.europa.eu/digital-single-market/en/news/trustworthy-ai-brochure

Course Name: Financial Modelling	**Course Code: BBFT411N**
Total Teaching Hours for Semester: 30	**Credit: Grade**

Course Description:

The objective of this course is to provide hands-on and practical implementation of Financial Modeling in Excel. The course will attempt to teach perform scenario and sensitivity analysis in Finance, Statistics for Finance in Excel, deal with VBA programming concepts for building financial applications, how to apply valuation techniques such as DCF, Transaction multiples and integrated financial modeling and forecasting mechanics. The course will give an in-depth knowledge of practically working with excel.

CO1 To explain to perform advanced searches, lookups, filters and aggregations on financial datasets - Skill (PLO 4.1,4.2,4.3,4.4, 5.2)

CO2 Explain to analyse financial datasets in Excel

CO3 Explain how to create financial dashboards - Skill

CO4 Explain how to perform advanced functions in Finance

CO 5 Explain how to create macros in VBA financial applications

CO 6 Explain how to create an integrated financial modelling and forecasting mechanics

Learning Outcome:

CLO1 Demonstrate understanding of advanced searches, lookups, filters and aggregations on financial datasets

CLO2 Experiment with financial datasets in Excel

CLO3 Analyze financial data using aggregation techniques

CLO4 Examine financial data using various optimization techniques

CLO 5 Create macros in VBA financial applications

CLO 6 Building integrated financial models

Unit I Advanced Excel Functions on financial datasets (4 Hrs)

Lookups and Searches (within table, across tables), Multiple Lookups and Reverse Lookups, Applications of Sumifs and Countifs, Conditional Sumproducts and dashboarding, Usefuls functions - string / statistical / date-time / financial, Error Handling Functions, Formula Auditing

Unit II Advanced Lookups and Searches on financial datasets (4 Hrs)

Reverse lookups, dynamic searches, Multiple Lookups with applications to financial data sets, Multi-dimensional searches in Excel, Applications on financial time series and datasets

Unit III Data Aggregation techniques in Excel for financial datasets (4 Hrs)

Data Aggregation methods, Dynamic modeling using Named Ranges, Using Tables as a powerful way to build dynamic formulae, Aggregation using Pivot Tables & Techniques, Filtering Techniques, Conditional aggregation techniques (using datasets)

Unit IV Using Excel for Advanced functionalities in Finance (4 Hrs)

Solver & Optimization Techniques, Scenario Analysis, Sensitivity Analysis, Goal Seek, Examples from various finance and banking domains on applications of above principles

Unit V Dashboard creation (4 Hrs)

Applications from Finance for aggregating financial datasets and financial time series, Writing Complex Logic and applied examples

Unit VI Macros (5 Hrs)

Introduction to VBA environment, Programming elements, Control Structures for building financial applications, Creating macros for complex logic, Writing user-defined Functions (UDF) for building financial pricing libraries, Debugging Techniques

Unit VII Building Integrated Financial Model (5 Hrs)

Understanding and creating a financial model template, Calculating Growth Drivers and Future Assumptions, Revenue Build-Up - Projecting the Future Revenues, Cost Build-Up - Projecting the Future Cost, Modeling historical & projected financial statements - P&L and B/S, Building cash flow statement, Asset and Depreciation Schedule, Debt and Interest Schedule, Building an integrated model for valuation using DCF, Sensitivity/Scenario Analysis, Incorporating other accounting details like revenue recognition, deferred taxes etc.

Text Books:

- Simon Benninga – Financial Modeling with Excel (4th edition), MIT Press Cambridge, Massachusetts

London, England

Reference Books:

- Chandan Sengupta - Financial Analysis and Modeling Using Excel and VBA (2nd edition), John Wley & Sons
- Jackson and Staunton – Advanced Modeling in Finance using Excel and VBA, (1st edition), John Wley & Sons

Course Name: Fundamentals of AI and Machine Learning	**Course Code: BBFT461A**
Total Teaching Hours for Semester: 45	**Credits: 3**

Course Objectives/Description:

This course as a part of specialized business administration programme provides cutting edge fundamental knowledge in the frontiers of artificial technology and machine learning required for a budding professional in the banking & financial technology industry.

CO1: To trace the evolution and development of Artificial Intelligence
CO2: To help the students spot the different intelligent agents operating in financial technology
CO3: To explain the fundamental concepts of Machine Learning to the students
CO4: To make the students appreciate the revolutionary changes being brought about by Artificial Intelligence and Machine Learning in the business of financial services

Learning Outcome:

At the end of the course, the students will be able to:

CLO1: Outline the evolutionary journey of Artificial Intelligence as a functional discipline
CLO2: Understand the different intelligent agents at play in the financial technology field
CLO3: Understand the role of Machine Learning as an applied science
CLO4: Understand how Artificial Intelligence are reshaping financial services
CLO5: Analyze how machine learning is reshaping financial services

Unit I: Introduction to Artificial Intelligence (6 Hrs)

Definition of Artificial Intelligence, History of Artificial Intelligence, Evolution of Artificial Intelligence

Unit II Types of Artificial Intelligence (6 Hrs)

Types of AI-Logic Based, Knowledge Based AI, Contemporary AI

Unit III Intelligent Agents (8 Hrs)

Rationality, Intelligent Agent, PEAS Framework, Task Environment, Types of Agents, Problem solving agents, Uninformed search strategies, Informed search strategies

Unit IV Machine Learning-I (9 Hrs)

Machine Learning, Types of Machine Learning, Supervised Learning-Linear regression, Classification-Decision Trees, Random Forest, Neural Networks using Python

Unit V Machine Learning-II (6 Hrs)

Unsupervised Learning-Clustering, Association, Reinforcement learning, Natural Language Processing using Python

Unit VI AI and Machine Learning in Financial Services-I (5 Hrs)

Customer focused uses-credit scoring, insurance and client facing chatbots, Trading and portfolio management-Robo-Advisory, Algorithmic Trading Using Python

Unit VII AI and Machine Learning in Financial Services-II (5 Hrs)

Operation focused uses-Capital optimization, model risk management and stress testing, market impact analysis using Python

Text Books:

- Artificial Intelligence: A Modern Approach (2nd edition) by Stuart J. Russell, Peter Norvig, Prentice Hall, (2010)
- Artificial Intelligence and Machine Learning for Business: A No- Nonsense Guide to Data Driven Technologies, Steven Finlay, Relativistic, (2017).

References:

- FSB(2017), Artificial Intelligence and machine learning in financial services, Financial Stability Board, https://www.fsb.org/wp-content/uploads/P011117.pdf
- WEF(2018), The new physics of financial services, http://www3.weforum.org/docs/WEF_New_Physics_of_Financial_Services.pdf

- WEF(2020), Transforming paradigms-A global AI in financial services survey http://www3.weforum.org/docs/WEF_AI_in_Financial_Services_Survey.pdf
- Artificial Intelligence applications in Financial services, https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/dec/ai-app-in-fs.pdf
- Buchanan B.G.(2019), Artificial Intelligence in Finance, Alan Turing Institute, https://www.turing.ac.uk/sites/default/files/2019-04/artificial_intelligence_in_finance_-_turing_report_0.pdf
- Artificial Intelligence in Finance , https://sigmoidal.io/real-applications-of-ai-in-finance/
- Patrick, Wan & Katie(2016) The evolution of analytics-Opportunities and challenges for machine learning in business. https://www.sas.com/content/dam/SAS/en_us/doc/whitepaper2/evolution-of-analytics-108240.pdf Publisher: O'Rielly
- https://www.sas.com/en_us/insights/analytics/machine-learning.html

Course Name: Emotional Intelligence for Managerial Effectiveness	**Course Code: BBFT461B**
Total number of Teaching hours: 45	**Credit:3**

Course Description: Technological disruptions are changing the landscape of organisations. The new context demands new mindsets from people within the organisations, especially the managers. Emotional intelligence has emerged as one quality that is essential for developing such a mindset and eventually managerial success. This course helps students understand, use and manage their own emotions as well as others. This course is thus aimed at educating learners on leading and working effectively in teams, influencing people and fostering meaningful change.

Course Learning Outcomes: On having completed this course student should be able to:

CL01 Demonstrate understanding of their emotions and its impact on themselves and others

CL02 Examine impact of emotional intelligence on personality

CL03 Develop leadership skills needed to distinguish themselves as effective leaders with emotional competence

CL04 Assess strategies for maintaining collaborative relationships and conflict management in teams

CL05 Determine solutions to business and social issues using emotional intelligence

Pedagogy: This course uses multiple pedagogies like in classroom activities, interactive lecture, students' discussions & presentations, case studies, HBR case and article analysis.

Unit I Introduction to emotions & emotional intelligence (12 Hrs)

Emotions: meaning, positive and negative emotions, emotions and physical and mental health, self-awareness, developing high self-awareness, self-mastery, characteristics of emotionally intelligent people. Concept of emotional intelligence, Why shift from IQ to EQ, theories of emotional intelligence, emotion quotient, assessing emotional intelligence, Emotional intelligence and personality

Unit II Emotional intelligence and Interpersonal relations (10 Hrs)

Effective communication skills, art of influencing others, collaboration, teams and groups, developing interpersonal expertise, helping others help themselves. Applying key emotional intelligence skills.

Unit III: Emotional Intelligence in leaders/managers - (8 Hrs)

Importance of emotional intelligence in leadership, building emotional intelligence in leaders/ managers, communicate with empathy, leadership failure, strategies to avoid leadership failure.

Unit IV: Managing Emotionally intelligent organisation (10 Hrs)

Impact of emotions at work, building team's conflict resolution skills with emotional and social intelligence, strategies to manage team's difficult emotions and role of leaders as collaborators and change agents. Managing stress in individuals and teams.

Unit V: Emotional intelligence and organizations (5 Hrs)

The emotionally intelligent organization, measuring organizational emotional intelligence. Applying emotional intelligence for fostering business and social change and improving organizational efficiency.

References

Goleman, D. (1998). Working with Emotional Intelligence. London: Bloomsbury.

Hughes, M., Thompson, H.L., and Terrell, J.B. (2009). Handbook for Developing Emotional and Social Intelligence: Best Practices, Case Studies, and Strategies. Wiley.

Lamberton, L.H. and Minor, L. (2010). Human Relations: Strategies for Success. New York, NY: McGraw Hill.

Landy, F. and Conte, J.M. (2013). Work in the 21st Century: An Introduction to Industrial and Organizational Psychology (4th Edition). USA: John Wiley & Sons.

Pahl, N. (2009). The Role of Emotional Intelligence in Leadership. Grin Publishing.

Kay, F. and Kite, N. (2011). Understanding Emotional Intelligence Strategies for Boosting Your EQ and using it in the Workplace. Hong Kong: Kogan Page.

Singh, D. (2015). Emotional Intelligence at Work: A Professional Guide. India: Sage Publications.

Weisinger, H. (2006). Emotional Intelligence at Work: New Delhi: Wiley-India.

Course Name: Strategic Management	Course Code: BBA531
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: An Organization consists of different departments and processes. Managers at all level must understand how a company's departments and processes "fit" together to achieve its goal. It focuses on all the functional areas of business and presents a cohesive strategic management model from a strategic perspective. The subject provides an insight on the strategy adopted by the companies in response to environmental change. The course provides a comprehensive and integrated presentation of current strategic management thinking in a clear and succinct format.

Course Objectives:

1. To understand the fundamentals of crafting strategies
2. To equip students with skills of strategic management for agile businesses
3. To enhance decision making skills from a strategic perspective

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Apply models and tools of analysis to address diverse business needs in an everchanging world

CLO2 Critically think and find alternative solutions for business problems

CLO3 Craft strategies to solve business problems

Pedagogy: This course uses multiple pedagogies like case study discussions, interactive lecture, presentations, review of research article, in class group exercises and activities.

Syllabus

Unit I Introduction to Strategic Management (10 Hrs)

Meaning and Definition of Strategic management, Key terms, stages, strategic management model, benefits and pitfalls, comparing business and military strategies, vision and mission analysis, process of developing vision and mission statement, characteristics and components, evaluating and writing mission statements.

Unit II Types of Strategies (08 Hrs)

Long term objectives, levels, integration, intensive, diversification, defensive strategies, generic strategies, means for achieving strategies, tactics to facilitate strategies, strategic management in non-profit, government and small firms.

Unit III Internal Audit (08 Hrs)

Nature of Internal audit, integrating strategy and culture, Management, marketing, finance and accounting, production/operation, research and development, MIS, Value chain analysis, benchmarking, Internal factor evaluation matrix.

Unit IV External Audit (08 Hrs)

Purpose and Nature of External audit, PESTEL, Porter's five forces analysis, sources of external information, forecasting tools and techniques, external factor evaluation matrix and the competitive evaluation matrix.

Unit V Strategy Generation and Selection (9 Hrs)

The strategy analysis and choice process, strategy formulation analytical framework, SWOT and SPACE, BCG, Internal-External matrix, grand strategy matrix, QSPM, culture and politics of strategy analysis and choice.

Unit VI Strategy Execution (9 Hrs)

Transitioning from formulating to implementing strategies, need for clear annual objectives, policies, allocation of resources and conflict management, matching structure and strategy, types of organizational structure, Do's and Don'ts in developing organizational charts, strategic production and operation issues, strategic human resource issues.

Unit VII Strategy Monitoring (8 Hrs)

The strategy evaluation process, criteria and methods, three strategy evaluation activities, balanced scorecard, characteristics of an effective strategy evaluation system, contingency planning, auditing, 21st century challenges in strategic management, guidliens for effective strategic management.

Text Books:

1. Fred R David and Forest R David, Strategic Management- Concept and cases, Pearson, Sixteenth Edition

Reference Books:

1. Charles Hill and Gareth. R. Jones, Strategic Management: An Integrated Approach, biztantra, sixth edition
2. Alex miller, Strategic Management, Irwin Mc graw hill, third edition
3. Lawrence R. Jauch, William F Glueck, Business Policy and strategic management, Mc Graw Hill international editions, Fifth edition

Course Name- Taxation Laws	**Course Code: BBA532**
Total number of hours: 60 Hours	**Credits: 4**

Course Description: India has a well-developed tax structure with a three-tier federal structure, comprising the Union Government, the State Governments and the Urban/Rural Local Bodies. The power to levy taxes and duties is distributed among the three tiers of Governments, in accordance with the provisions of the Indian Constitution. The study of tax laws is of a great importance for Management students as it exposes students to the tax environment in India. This course is introduced as part of BBA program to give an overall idea about the theoretical and practical aspects of direct and indirect taxes in India. The content of the course is arranged in such a manner that it gives an outline of the Income tax law and GST Law in an analytical and simple manner.

Course Learning Outcomes: On completion of this course students are expected to :-

CLO 1: To understand the Income tax regime in India.

CLO 2: To apply concepts of taxation in computation of Gross Taxable income, from various heads of income.

CLO 3: To demonstrate knowledge in savings, investment schemes and other payments eligible for income tax exceptions.

CLO 4: To assess Total income, compute Income tax payable and able to file e-returns.

CLO 5: To interpret the effect of Goods and Service Tax and Customs law in India in business transactions.

Pedagogy: This course uses multiple pedagogies like interactive lecture, practical problem solving, case study, discussions, presentations and written assignments.

Unit I: Introduction to Income Tax (7 Hrs)

Meaning and types of Taxes, Difference between direct and indirect taxes. Legal enactments governing Income Tax in India, Basic Concepts in Taxation - Assessee, Person, Assessment Year, Previous Year, Agricultural Income, Income, GTI, Total Income, Determination of residential status, Kinds of income, incidence of tax. Practical problems. Tax free incomes or Exempted incomes. Capital and Revenue Expenditure. Comparison between Income Tax structure in India and other countries.

Unit II: Income from Salary (12 Hrs)

Salary meaning, chargeability, Treatment of Various Allowances, Perquisites and their Valuation, Treatment of Provident Funds, Leave salary and Pension, Deductions from Gross Salary Computation of Taxable salary.

Unit III: Income from House property (7 Hrs)

Annual value and NAV, Deductions from NAV under u/s 24, Practical problems

Unit IV: Profits and Gains from Business and Profession (8 Hrs)

Meaning of Business and Profession, Incomes Chargeable under this head, Allowed and disallowed expenses, Expenditure on scientific Research, Computation of Taxable Income from business and profession.

Unit V: Capital Gains and Income from Other source (6 Hrs)

Meaning of Short term and Long term capital gain, Transfer of assets, cost of acquisition of capital assets, Computation of capital gains, Exemptions from LTCG- only deductions u/s 54, 54B, 54EC and 54F. Incomes taxable under the head Income from other sources, Various incomes taxable as Income from Other source.

Unit VI: Gross Total Income, Deductions from GTI, Total income and Tax liability (10 Hrs)

Computation of GTI, Deductions from GTI, Section 80C to 80U (only deductions applicable to individuals 80 C and CCC, D, DD, DDB, G, 80TTA, 80TTB, 80E, 80EEA, 80GGB and U), Taxable Income, Computation of tax for individual assesses, Procedure for e-returns filing.

Unit VII: Overview on GST and Customs Law **(10 Hrs)**

Meaning of Goods and Service Tax, Persons liable for GST registration/ Procedure of Registration, Liability to pay GST, Taxable event for GST, Tax invoice, GST Council of India, Rates of GST, Services exempted from GST, Non- resident taxable person, TDS under GST
Customs Law, Basic concepts, Types of Customs duty, taxable event for the levy of Customs duty.

Text Books

1. Gaur, V.P. & Narang, B.K. (2020), Income Tax Law and practice. Kalyani Publishers, New Delhi,

Reference Books:

1. Singhania,(2020) Income tax law and practice , Taxman publishers, NewDelhi
2. Income tax law and Practice (2020), Dr. Mehrotra and Goyal, Sahitya bhavan Publications
3. 3. Datey V S (2020), GST Laws and Practice with Customs and Foreign Tax Practice, Taxman Publications, New Delhi
4. Singhania,(2020) Income tax law and practice , Taxman publishers, NewDelhi
5. Income tax law and Practice (2020), Dr. Mehrotra and Goyal, Sahitya bhavan Publications
6. Datey V S (2020), GST Laws and Practice with Customs and Foreign Tax Practice, Taxman Publications, New Delhi.

Course Name: Internship	**Course Code: BBFT581**
	Credits: 4

Course Description and Course Objectives

The internship is a 4 credit 3 month long hands-on experiential learning opportunity that allows students to tackle a business issue or opportunity while applying in real time the key concepts of the fintech innovation process they are learning in the classroom. Students will be assigned a challenge or they will identify areas for improvement in a particular financial process, service or product within a business where the student will work individually for about twelve weeks. During this time students will apply the theories they have learnt to a substantial, live project and at the end of the project they will deliver a written report and presentation.

- CO1 To expose and acclimatize the students to real time working environment in an organization
- CO2 To enable the students to make effective business decisions based on data
- CO3 To provide an opportunity to be in and on the job work setting where they have clearly defined targets and timelines
- CO4 To improve the critical problem-solving skills required while entering the job
- CO5 To develop interpersonal skills required to excel in the corporate

Learning Outcome:

At the end of the project work students will be able to

- CLO1 To identify issues, challenges or areas for improvement and formulate business problems
- CLO2 To conduct data analysis to generate insights.
- CLO3 To propose recommendations based on their analysis of the business and the relevant data.

- CLO4 To create project reports and presentations

Unit 1

The students will have to choose a reputed organization and study a specific business problem associated with it. The specific role that the student will be playing in the organization and the scope of their work in the company will have to be finalized in consultation with the corporate mentor and with the approval of the academic mentor. The students are required to submit a final report in the specific format detailing their learning in the organization in addition to apprising their academic mentor of the weekly progress.

Essential References

NA

R**ecommended References**

NA

Evaluation

Project Report – 50 marks

Presentations – 50 marks

Course Name: Financial Derivatives	**Course Code: BBFT541**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description:

This course presents and analyzes derivatives, such as forwards, futures, and options. These instruments have become extremely popular investment tools over the past several decades, as they allow one to tailor the amount and kind of risk one takes, be it risk associated with changes in interest rates, exchange rates, stock prices, commodity prices, inflation, weather, etc. They are used by institutions as well as investors, sometimes to hedge (reduce) unwanted risks, sometimes to take on additional risk motivated by views regarding future market movements. The evolution of this subject has been attracting the interest of both practitioners and academia. Therefore, the course is a blend of theory and application. Real data analysis is an important part of this course. A student successfully completing this course will be familiar with the main current practices of derivatives and risk management techniques.

Objectives:

1. To understand the concepts of both financial and commodity derivatives.
2. To hedge risk and practice risk management using derivatives.
3. To explain the use of options and futures contracts for tactical portfolio strategies purpose

4. To analyze pricing of derivatives, including familiarity with some central techniques, like the binomial model, and the Black-Scholes model, swaps, options and VaR.

Course Outcome:

At the end of the course, the students are able to:

1. Understand concepts of derivatives.
2. Analyze the risk management process using derivatives.
3. Explain the pricing of options and futures contracts.
4. Evaluate swaps as hedging technique and prepare margins for cash segment and derivatives.

Unit I Derivatives - Introduction (6 Hrs)

Derivatives - Introduction, economic benefits of derivatives - Types of derivatives - Features of derivatives market - Factors contributing to the growth of derivatives - functions of derivative markets - Exchange traded versus OTC derivatives - traders in derivatives markets - Derivatives market in India. (Only Theory)

Unit II Forwards and Futures (12 Hrs)

Difference between forwards and futures -valuation of futures, valuation of long and short forward contract. Mechanics of buying & selling futures, Hedging using futures - specification of futures - Commodity futures, Index futures, interest rate futures – arbitrage opportunities. (Practical Problem)

Unit III Interest rate markets (6 Hrs)

Type of rates, Determining Zero rates, Forward rate agreements (FRA), and Interest rate derivatives. (Practical Problem)

Unit IV Swaps (8 Hrs)

Swaps **-** features and uses of swaps **-** Mechanics of interest rate swaps – valuation of interest rate swaps – currency swaps – valuation of currency swaps. (Practical Problem)

Unit V Options (14 Hrs)

Types of options, option pricing, factors affecting option pricing – call and put options on dividend and non- dividend paying stocks put-call parity - mechanics of options - stock options - options on stock index - options on futures – interest rate options. Concept of exotic option. Hedging & Trading strategies involving options, valuation of option: basic model, one step binomial model, Black and Scholes Model, option Greeks. Arbitrage profits in options. (Practical Problem)

Unit VI Value at Risk (VaR)&Margins (8 Hrs)

Measure, Historical simulation, Model building approach, linear approach, Quadratic model, Monte Carlo simulation, stress testing and back testing. (Only Theory). Margins: Types of Margins, Valuation of Margins using cash segment, future contracts, option contracts and VaR (Practical Problems).

Unit VII Commodity derivatives (6 Hrs)

Commodity futures market-exchanges for commodity futures in India, Forward Market Commissions and regulation-commodities traded – trading and settlements – physical delivery of commodities. (Only Theory)

Text Books:

1. Options Futures & Other Derivatives - John C. Hull, 6/e, Pearson Education.
2. An introduction to derivatives and risk management, Chance, Cengage, 9thedition.

Reference Books:

1. Derivatives, Principles and Practice, Sundaram & Das, Mc Graw Hill,2016

2. Risk Management, Vaijanath Babshetti& Prakash B. Yaragol, 1st edition, Kalyani Publishers,2014.
3. Introduction to Derivatives and Risk Management – Don M. Chance, Cenage Learning,2008.
4. Financial Derivatives- Bishnupriya Mishra and Sathya Swaroop Debashish, Excel BOOKS,2007.
5. Options & Futures –Edwards & Ma, 1/e, McGrawHill.
6. Derivatives- Valuation & Risk Management – Dubofsky & Miller, Oxford University Press,2005

Course Name: Trading Strategies	**Course Code: BBFT542**
Total Teaching Hours for Semester: 60	**Credits:4**

Course Description:

This course as a part of specialized business administration programme provides cutting edge fundamental knowledge in the frontiers of financial technology required for a budding professional in the banking & financial services industry.

This as a basic course on Trading Strategies which discusses the fundamental concepts and various aspects about trading strategies. This course also covers various dimensions of trading such as microstructure, strategic and sequential trade models under asymmetric information, different orders and bidding with uncertain execution, back-testing strategies and behavioural anomalies in trade.

The course also includes a 20 hour practical implementation of trading strategies and algorithmic trading, that would develop an understanding of important market trends, market regimes & build your ability to conceptualize trading strategies spanning multiple asset classes using our professional trading framework. The students would learn key trading strategies, trend identification, robust risk management techniques & effective position management that would help the participant time the markets effectively.

Learning Outcome:

At the end of the course, the students will be able to;

- Demonstrate understanding of strategic and sequential trade models of asymmetric information (RBTL2)
- Make use of Limit and dealer orders and bidding with uncertain execution (RBTL3)
- Apply ideas and back-testing (RBTL3)
- Analyse different quantitative trading strategies (RBTL4)
- Examine the impact of behavioural anomalies on trading strategies (RBTL4)
- Evaluate Price action based trading strategies on multiple asset classes and securities (RBTL5)
- Adapt Algorithmic Trading platform (RBTL6)

Unit I Market Microstructure: An Overview (8 Hrs)

Sources of value and reasons for trade, Mechanisms in economic settings, Multiple characterizations of prices, "Liquidity", The long-term dynamics of security prices - Macroeconomic models of asset prices, Martingales in microstructure analyses, Sequential trade models of asymmetric information – Overview, A simple sequential trade model, Extensions - Fixed transaction costs, Price-sensitive liquidity traders and market failures, Event uncertainty, Orders of different sizes, Orders of different types, Empirical implications

Unit II Various Trade Models and Execution (8 Hrs)

Strategic trade models of asymmetric information - Strategic trade models of asymmetric information - The informed trader's problem, The market maker's problem, Properties of the solution, The multi-period model – Setup, Solution, Analysis of solution, Numerical example, Autocorrelation in trades, Increasing the number of auctions (when total noise trading remains unchanged), Problems based on the single-period model, Limit orders and dealer quotes – Overview, Limit order placement when faced with incoming orders of varying size, Empirical evidence, Introduction of a dealer/specialist, Bidding and offering with uncertain execution - Expected utility, Setting the bid for a single risky security, Setting the bid with correlated risky assets, Limit order submission strategies

Unit III Automated Trading and Risk Management (8 Hrs)

Fishing for Ideas - How to Identify a Strategy That Suits You, A Taste for Plausible Strategies and Their Pitfalls, Back-testing - Common Back-testing Platforms, Finding and Using Historical Databases, Performance Measurement, Common Back-testing Pitfalls to Avoid, Transaction Costs, Strategy Refinement, Execution Systems - What an Automated Trading System Can Do for You, Minimizing Transaction Costs, Testing Your System by Paper Trading, Why Does Actual Performance Diverge from Expectations? Money and Risk Management - Optimal Capital Allocation and Leverage, Risk Management, Psychological Preparedness

Unit IV Various Trading Strategies (8 Hrs)

Special Topics in Trading Strategies - Mean-Reverting versus Momentum Strategies, Regime Switching, Stationarity and Co-integration, Factor Models, What Is Your Exit Strategy? High-Frequency Trading Strategies, Is It Better to Have a High-Leverage versus a High-Beta Portfolio? Short sale strategy-zero investment portfolio, Margin trading strategy, Mispricing.

Unit V Behavioural Models and Trade (8 Hrs)

Rational Bubbles and Learning - Rational Bubbles, Tests of Rational Bubbles, Intrinsic Bubbles, Learning, Behavioural Finance and Anomalies - Key Ideas, Beliefs and Preferences, Survival of Noise Traders, Anomalies, Behavioural Models - Simple Model, Optimizing Model of Noise Trader Behaviour, Shleifer–Vishny Model: Short-Termism, Contagion, Beliefs and Expectations, Momentum and News watchers, Style Investing, Prospect Theory:

Unit VI Price Action Strategies – Live markets (15 Hrs)

Real examples of price action from various asset classes such as Equities, Commodities and FX, high probability trades by being able to identify tops and bottoms in the making, kind of Option Trading strategies to employ in various market regimes, timing your strategies using legging concepts an dynamically managing positions.

Unit VII Algorithmic Trading – Live markets (5 Hrs)

Practical introduction to Algorithmic Trading platform through - Conceptualization of trading strategy, Trading Performance Indicators, Back testing Trading strategy, Strategy Optimization, Creating Portfolio strategy basket, Simulating markets and strategies.

Text Books:

- Joel Hasbrouck – Empirical Market Microstructure, 1st Edition, Oxford University Press
- Ernest P. Chan - Quantitative Trading, 1st Edition, John Wiley & Sons
- Keith Cuthbertson and Dirk Nitzsche – Quantitative Financial Economics1st Edition, John Wiley & Sons

Reference Books:

- Market Microstructure in Practice – Charles-Albert Lehalle and Sophie Laruelle, 1st Edition, World Scientific, Singapore Press
- Market Microstructure – Maureen O'Hara, 1st Edition, Blackwell Publisher

Course Name: Data Visualization	**Course Code: BBFT543**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: This course introduces undergraduate students to Data Visualization. This course is intended to teach students how to create meaningful charts and figures that can simultaneously convey useful information and be pleasing to the eye. Students will learn to use TABLEAU, programming language R to develop graphics. The course is divided into three general themes 1. Generating Meaningful and Insightful Graphics using TABLEAU 2. Statistical Programming in R 3. Data Visualization & Dashboard using R & TABLEAU. The course aims to offer an interactive environment where students feel comfortable to generate and share ideas. Students will be motivated to discuss topics reviewed in class and to critically assess how others have used data visualization to convey the results of their analyses.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Explore data using various statistical graphs
CLO2 Understand the principles of data visualization
CLO3 Build static & interactive visualization reports
CLO4 Develop a model with live data visualization dashboards

Pedagogy: In general, the teaching approach of this course is based on the notion of sustained, deep learning by applying knowledge through programming, hands-on practices, project and assignments.

Unit I Working with Data using TABLEAU (8 Hrs)

Introduction & need for data visualization, classification of data visualization, granularity of the data, data Types, derived variables, univariate analysis, joins and blends – joining tables, Cross database joins, blending data sources, filtering data, data transformation

Unit II Data Visualization using TABLEAU (8 Hrs)

Different types of Chart (Scatterplot, Corrplot, Heatmap, Stackbar, Treemap, Sunburst) Network Graphs, Animated chart using gganimate, tweenr, segmented analysis, correlation analysis, crosstab analysis, multivariate analysis.

Unit III Dashboard & Story Telling using TABLEAU (8 Hrs)

Designing dashboards in Tableau, tiled versus floating, manipulating objects on the dashboard, building the views, creating the dashboard framework, implementing actions to guide the story, interlude – context filtering, Designing for different displays and devices.

Unit IV: Statistical Data Analysis using R (9 Hrs)

Descriptive statistics, summarization of different types of data, hypothesis testing, parametric test & non-parametric data, multivariate analysis.

Unit V Visualizing Data with R (9 Hrs)

Loading tables and CSV Files, loading excel files, exporting data, the grammar of graphics, Basic plots and data structures, Intermediate plotting with ggplot2, Time series with dygraphs, Interactive ggplots with ggiraph, data manipulation verbs from dplyr and tidyr, gathering data, cleaning data, and tidying data

Unit VI Dashboard using R (9 Hrs)

Introduction to R Shiny, Static report using flexdashboard package, understanding input elements, building simple interactive visuals, filtering charts using input controls, automatically creating visuals for any input data, advanced interactivity using observe functions, guidelines for visuals & dashboard

Unit VII Visualization using Text Data (9 Hrs)

Creating word cloud using Text data, plotting simple maps using Online API, layered grammar of graphics.

Text Book:

Sinha, C. (2017). *Tableau 10 for Beginners,* Ohio Computer Academy.

Reference Book:

Milligan, Joshua N. (2019). *Learning Tableau 2019,* 3rd Edition, Packt Publishers.

Course Name: Cryptocurrencies and Payments	Course Code: BBFT511
Total Teaching Hours for Semester: 30	**Credits: GRADE**

Course Objectives/Description:

The objective of this course is to provide hands-on and practical implementation of Cryptocurrencies and Bitcoin, Blockchain Technology and Payments.

CO1 To explain how to navigate investments in cryptocurrencies.
CO2 To help students understand Payments, digital wallets, RTGS, new payment stacks and emerging technology in payments
CO3 To help students understand frameworks for understanding both Cryptocurrency and Blockchain.
CO4 To help students develop a deep understanding of the realities of Cryptocurrency, the intricacies of Blockchain technology, and an effective strategy for incorporating Cryptocurrency into your investment plans.
CO5 To explain analyze the foundations of digital signatures and blockchain technology in cryptocurrency
CO6 To help student assess the risks of cryptocurrency in a modern investment portfolio

Learning Outcome:

CLO1 Learn how to navigate investment in cryptocurrencies (PLO 5.1)
CLO2 Understand Payments, digital wallets, RTGS, new payment stacks and emerging technology in payments (PLO 5.1)
CLO3 Understand frameworks for understanding both Cryptocurrency and Blockchain (PLO 5.1)
CLO4 Develop an effective strategy for incorporating Cryptocurrency into your investment plans (PLO5.2)
CLO5 Analyse the foundations of digital signatures and blockchain technology in cryptocurrency (PLO 5.3)
CLO6 Assess the risks of cryptocurrency in a modern investment portfolio (PLO 5.4)

Unit I Introduction to Cryptocurrency (6 Hrs)

Define Bitcoin and understand its popularity as a currency, Discuss the methodology behind transacting with Bitcoin, and Gain a deep understanding of the definition of currency and the critical importance of a shared common belief behind a unit of currency, Clearly defined understanding of why cryptocurrency and bitcoin is used as a cash-alternative method, and How Bitcoin derives its potential value in the current market.

Unit II Rules and Structure of Bitcoin (6 Hrs)

Analyze the problems that a decentralized currency must solve in order to be successful, and how, Bitcoin meets these challenges using cryptology and blockchain technology, How Bitcoin utilizes digital signatures in their transactions to ensure privacy for individuals, Examine how blockchain technology employs Hash Functions to detect tampering attempts, Explore the creation and concept of Distributed Consensus Protocol and how Proof of Work incentivizes honest trading and stable currency creation.

Identify the importance of digital signatures, Blockchain, and Proof of Work in the stability of Bitcoin as a currency.

Unit III Cryptocurrency as an Asset Class (6 Hrs)

Examine Cryptocurrency as an asset class, and delve deeper into whether Cryptocurrency has a place in individual investment portfolios. Understand the risks and returns on Bitcoin and its place in a more stable and predictable portfolio. Learn about the Capital Asset Pricing Model, and key concepts of Modern Portfolio Theory such as Tangency Portfolio and the Sharpe Ratio. Estimate and analyze the values of Beta and Alpha in Cryptocurrency, and effectively optimize utility in incorporating Cryptocurrency as an asset for your portfolio.

Unit IV The Blockchain Ecosystem (6 Hrs)

Explore the Blockchain Ecosystem and the numerous use cases for Blockchain in different industries. , Discover how Blockchain is built. Learn about the difference between Proof of Work and Proof of Stake, and the two interoperability of Blockchain. Through analyzing the different types of crypto finance, explore the different use cases of Blockchain in business, gaming, and investing. Build a deeper understanding of the fundamentals of Blockchain, be able to utilize Blockchain in many different contexts, and assess how Blockchain will affect both business and society in the future.

Unit V Payments (6 Hrs)

Understand Digital wallets, Understand Individual Payments, Learn about Developing Countries and DFS: Regulation of Mobile Money, Develop understanding of RTGS Systems, Understand the ABCDs of Alternative Finance and Digital Finance, Learn the benefits from New Payment Stacks

Text Book

- Bitcoin and Cryptocurrency Technologies – A Comprehensive Introduction Hardcover by Arvind Narayanan (Author), Joseph Bonneau (Author), Edward Felten (Author), Andrew Miller (Author), Steven Goldfeder (Author). Publisher: Princeton University Press

Reference Books

- Mastering Bitcoin: Unlocking Digital Cryptocurrencies by Andreas M. Antonopoulos. Publisher: O'Reilly

Course Name: Operations Management	**Course Code: BBA631**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: Operations Management (OM) is concerned with the management of resources and activities that produce and deliver goods and services for customers. Efficient and effective operations can provide an organization with major competitive advantages since the ability to respond to customer and market requirements quickly, at a low cost, and with high quality, is vital to attaining profitability and growth through increased market share. The course focuses on the basic concepts, issues, and techniques for efficient and effective operations.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Understand the key concepts and issues of operations management in manufacturing and service organizations.

CLO2 Analyze the strategic role of operations management in attaining competitive advantage for a firm.
CLO3 Apply and relate operations management with other key departments of a firm.

CLO4 Understand emerging and important topics related to production and operations management.

CLO5 Understand, design, plan, manage and control the best processes so that value-addition occurs in the most efficient and effective way.

Pedagogy: This course uses multiple pedagogies like interactive lecture, students' discussions & presentations, HBR case and article analysis, and a field visit in the form of experiential learning.

Unit I: Introduction to Production and Operations Management (9 Hrs)
Introduction, Historical Development, Concept of Production, Production System, Classification of Production System, Production Management. Objectives of Production Management, Concept of Operations. Distinction between Manufacturing Operations and Service Operations. Operations Management, A Framework for Managing Operations. Objectives of Operations Management, Managing Global Operations, Scope of Production and Operations Management.

Unit II: Plant Location and Plant Layout (9 Hrs)
Introduction and meaning Need for selecting a suitable location, Factors influencing plant location/Facility location. General locational factors, and Specific locational factors for manufacturing organization and for Service organization. Objectives, principles and Types of plant layout. Process layout, Product Layout, Combination layout, Fixed position layout, Group layout. Physical Facilities.

Unit III: Materials Management (9 Hrs)
Introduction and Meaning, Scope or functions of Materials Management, Material planning and control, Purchasing, Stores Management. Inventory control, Standardization, Simplification, Value analysis. Just in time, Ergonomics.

Unit IV: Material Handling (8 Hrs)
Introduction and Meaning, Objectives and Principles of Material Handling, Selection of Material Handling Equipment, Evaluation of Material Handling system, Material Handling equipment's, Guidelines for Effective Utilization of Material Handling Equipment, Relationship between Plant Layout and Material Handling.

Unit V: Production Planning and Control (8 Hrs)
Introduction and Meaning, Need, Objectives, Phases of Production Planning and Control, Functions of Production Planning and Control, Operations Planning and Scheduling Systems, Aggregate Planning, Master Production Schedule (MPS), Material Requirement Planning (MRP), Capacity Planning, Routing, Scheduling.

Unit VI: Quality Control (9 Hrs)
Introduction to Quality, Fundamental factors affecting quality, Control, need for controlling, Quality Inspection, Types of Quality Control, Steps in Quality control, Objectives of Quality Control, Benefits of Quality Control, Seven Tools for Quality Control, Causes of Variation in Quality, Statistical Process Control, Quality circles. Total Quality Management.

Unit VII: Maintenance Management and Waste Management (8 Hrs) Introduction, Objective, types, maintenance planning and scheduling, Modern Scientific Maintenance Methods- Six Sigma Maintenance, Enterprise Asset Management (EAM), Lean Maintenance, Computer Aided

Maintenance. Introduction and Meaning of Waste Management, Reasons for Generation and Accumulation of Obsolete, Surplus and Scrap Items, Identification and Control of Waste, Disposal of Scrap.

Text Books:

1. Kumar, S.A & Suresh, N. (2013). *Production and Operations Management*, New age International publishers.

Reference Books:

2. Aswathappa, K. & Reddy, G.S., Reddy, M.K. (2012). *Production and Operations Management*, Himalaya Publishers.
3. Khann, R.B. (2007). Production and Operations Management. New Delhi: PHI Learning Pvt.
4. Krajewski, Lee J., Ritzman, Larry P., and Manoj K. Malhotra (2013). Operations Management: Processes and Value Chains, 8/e; New Delhi: Pearson Education.
5. Richard, B. Chase, Ravi Shankar, F. Robert, Jacobs and Nicholas, J. Aquilano (2010). Operations and Supply Management 12/e; New Delhi: Tata McGraw-Hill
6. Singh, S.P. (2014) Production and Operations Management, a1/e, New Delhi: Vikas Publishing House.

Course Name: Business Law	**Course Code: BBA632**
Total number of hours: 60 Hrs	**Credits: 4**

Course Description: This course covers important components of Business Laws such as Contract Law, Intellectual Property Law, Consumer Protection Law, Competition Law, Law of Sale of Goods and Cyber Law.

Course Objectives: This course attempts to enable students to apply relevant theories and concepts to various aspects of Business Laws. It further aims to help the students to be comfortable in application of Legal concepts used in various Business entities.

Course Learning Outcomes: On having completed this course student should be able to:

CLO1 Identify the role and importance of Contracts Laws.
CLO2 Demonstrate the meaning and provisions of Special Contracts.
CLO3 Interpret the role and nature of Intellectual Property Right Laws.
CLO4 Examine the importance of Competition Laws in Modern Commerce.
CLO5 Assess the relevance of Sale of Goods and Negotiable Instruments.
CLO6. Explore the evolution of Consumer Protection Laws.
CLO7. Delve into role of Cyber Laws in understanding technological growth.

Pedagogy: This course uses multiple pedagogies like interactive lecture, students discussions and PPTs, research article, a field visit, and form of experiential learning.

Unit I Introduction to Law of Contracts (12 Hrs)

Meaning and Scope of Business Law – Sources of Indian Business Law. The Indian Contracts Act, 1872: Definition – types of contracts- Essentials of a Contracts. Discharge of a contract and remedies for breach of contract. Government Contracts: Article 299: Constitution of India. Concept of Equity, Fairness and

Reasonableness, Doctrine of Promissory Estoppel vs. Executive Necessity, No person liability. E-Contracts: Meaning & need for Digital Goods, Unfair terms in E-contract. Indian Evidence Act: Basic Concepts.

Unit II Contract of Guarantee (5 Hrs)

Distinction between Indemnity and Guarantee, Kinds of Guarantee, Rights of Surety, Liability of Surety, and Discharge of Surety.

Unit III Intellectual Property Law (10 Hrs)

Meaning and scope of intellectual properties – The Patent Act of 1970 and its amendments as per WTO agreement, back ground, objects, definition, inventions, patentee, true and first inventor, procedure for grant of process and product patents, WTO rules as to patents, rights to patentee – infringement – remedies. The Copyright Act, 1957- Meaning – Its uses and rights. The Trade Marks Act, 1999 - meaning, registration, procedures – infringement – Authorities concerned –Remedies.

Unit IV Competition Law (8 Hrs)

The Competition Act, 2002- Concept of Competition, Development of Competition Law, overview of MRTP Act 2002, Anticompetitive Agreements, Abuse of dominant position, combination, regulation of combinations, Competition Commission of India; Appearance before Commission, Compliance of Competition Law. Types of Offence and penalty.

Unit V Law of Sale of Goods and Negotiable Instruments Law (10 Hrs)

The Sale of Goods Act, 1930- Definition of Goods, Sale and Agreement to Sell, Conditions and Warranties, Rights & Liabilities of a Buyer & Seller, Rights of an Unpaid Seller. The Negotiable Instruments Act, 1881- Statutory definitions, promissory note, bill of exchange or cheque payable. Dishonor of Negotiable Instrument. Types of Offences and penalty.

Unit VI Law of Consumer Protection (10 Hrs)

Consumer Protection Act 1986: Back ground – definitions – consumer, consumer dispute, Complaint Procedure, defect, deficiency, and service, Remedies, Consumer Protection Council, Consumer Redress Agencies, District Forum, State Commission and National Commission.

Unit-VII Cyber Laws (5 Hrs)

Information Technology Act, 2000: Objectives, definitions and salient features, provisions pertaining to piracy and related offences and personalities.

Text Books:

1. Kapoor, N.D (2012.). Elements of Mercantile Law, Sultan Chand & Sons, New Delhi.
2. Padmanabhan, A. (2012. Intellectual property rights: Infringement and remedies, LexisNexis Butterworth's, Nagpur.
3. Tulsian, P.C. (2013). Business Laws, 5th Edition), Tata-McGraw Hill Education Limited, New Delhi

Reference Book:

1. Gulshan, S.S. (2013). Business & Corporate Law, Excel Books, New Delhi.
2. Anson, W. R. (2009). Law of contract (29th edition), Oxford University Press, Oxford, New Delhi.
3. Avtar, S. (2011). Principles of Mercantile Law (9th Edition), Eastern Book Company, New Delhi.

Course name: FinTech Regulations and RegTech	Course Code: BBFT633
Total Teaching Hours for Semester: 60	Credits:4

Course Objectives/Description: The objective of the course is to introduce to the students the FinTech regulations and RegTech.

- CO1 To explain the evolution of FinTech regulation and RegTech
- CO2 To explain the regulations governing FinTech in India
- CO3 To explain Regulatory sandbox
- CO4 To explain the challenges associated with adoption of RegTech

Learning Outcome: At the end of the course, students should be able

- CLO1 To understand the evolution of FinTech regulation and RegTech (PLO 5.1)
- CLO2 To analyse the regulations governing FinTech in India (PLO5.3)
- CLO3 To understand Regulatory sandbox (PLO5.1)
- CLO4 To assess challenges associated with adoption of RegTech (PLO5.4)

Unit I Introduction to FinTech regulation and RegTech (12 Hrs)

FinTech Regulation, Evolution of RegTech- RegTech 1.0, RegTech 2.0, RegTech 3.0, RegTech ecosystem-Financial institutions, start-ups, and regulators. The future of Regtech and the technologies impacting it.

Unit II Regulations governing FinTech in India-I (6 Hrs)

Regulation of mobile money, Regulation of smart contracts, Regulation of Robo-Advisory services, legal and regulatory implications of cryptocurrencies, Payment and Settlements System Act 2007, Master direction on Issuance and operation of prepaid payments instruments

Unit III Regulations governing FinTech in India-II (6 Hrs)

NPCI guidelines governing UPI payments, Master direction-NBFC, Guidelines regulating P2P lending platforms, payment aggregators/intermediaries, payment banks, Anti money-laundering regulations, Data privacy and protection.

Unit IV Regulatory Sandboxes -I (6 Hrs)

Introduction, what is regulatory sandbox-Covered FinTech products and eligible participants, parameters, regulatory safe harbour, Post sandbox engagement. Benefits-Participant-regulator dialogue, reduced time and cost of market penetration, stronger appeal to stakeholders, market signalling. Shortcoming-Multi-tiered regimes, Pre-judging innovative value, scalability, race to the bottom.

Unit V Regulatory Sandboxes-II (8 Hrs)

Regulatory sandbox in India, China, USA, Europe and other countries.

Unit VI Challenges and Future Trends (8 Hrs)

Risks and challenges of RegTech adoption-Procurement and approval process, Preference for large and established players, Fragmented markets, Regulatory uncertainty, Concentration risk, Data protection security and cyber threats

Future Trends in RegTech-Quantitative Regulation, Machine readable regulation, Agile Regulation, Regulatory Sandboxes, International regulation

Unit VII Use Cases in RegTech **(14 Hrs)**

Compliance, Identity management and control, risk management, Regulatory reporting, Transaction monitoring, Trading in markets

Text Books:

1. Jelena Madi(2019) FinTech: Law and Regulation: Publisher: Edward Elgar Pub
2. Consultation paper on crowd funding in India. Available at https://www.sebi.gov.in/sebi_data/attachdocs/1403005615257.pdf
3. Enabling Framework for regulatory sandbox Available at https://www.rbi.org.in /Scripts/PublicationReportDetails.aspx?UrlPage=&ID=938

Reference Books:

1. Sethi, Vivek. Fintech & Regtech - your definitive guide on the convergence of finance, technology and regulation (p. 3). Max Krish Publishers. Kindle Edition.

2. Douglas W. Arner, Jànos Barberis & Ross P. Buckley, FinTech, RegTech, and the Reconceptualization of Financial Regulation, 37 Nw. J. Int'l L. & Bus. 371 (2017). Retrieved from: https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1817&context=njilb

3. Magnuson, W. J., (2017). Regulating Fintech. *Vanderbilt Law Review*, Forthcoming; Texas A&M University School of Law Legal Studies Research Paper No. 17-55. Retrieved from https://ssrn.com/abstract=3027525

4. Zetzsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2017), From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance. *University of Hong Kong Faculty of Law Research Paper No. 2017/007*. Retrieved from http://dx.doi.org/10.2139/ssrn.2959925

5. Ren, D. (2018). Tightening Regulations Make FinTechs Easy Takeover Targets for Banks Stepping Up Digitalisation Drive. *SCMP*. Retrieved from https://www.scmp.com/business/companies/article/2159718/tightening-regulations-make-fintechs-easy-takeover-targets-banks

Course Name: International Finance	**Course Code: BBFT641**
Total Teaching Hours for Semester: 60	**Credits: 4**
Course Description:	

The players in the foreign market are increasing in numbers with the presence of the much more liberalized policies and regulations. Students need to acquire knowledge on the functioning of trade globally and its financial implications. Knowledge of foreign exchange activities and the hedging of foreign exchange exposures while operating in the global economy shall be imparted.

Course Objectives

The objectives are:

- CO1 To introduce students to the purpose and scope of multinational companies and the foreign exchange market.
- CO2 To impart a sound blend of knowledge of foreign exchange economics, evolution of global exchange rate system.
- CO3 To understand the causes of important financial crisis that took place in the history of various world economies.
- CO4 To introduce the students to the methods of hedging foreign exchange exposures and other aspects of risk coverage that can be considered undertaking business internationally.
- CO5 To impart knowledge on international corporate strategies in diversified international financial markets.
- CO6 To provide an overview of functioning of international financial institutions and features of international financial instruments.
- CO7 To blend sound theoretical knowledge of foreign exchange economics with practical and procedural aspects of institutions connected with foreign exchange.

Learning Outcome:

- CLO1 Demonstrate an understanding of the objectives and scope of MNCs and the purpose of foreign exchange market. [RBTL2] (PLO 2.1)
- CLO2 Exhibit conceptual understanding of effects of economic variables on the foreign exchange. [RBTL2] (PLO 2.2)
- CLO3 Demonstrate the knowledge of the evolution of the global exchange rate system. [RBTL2] (PLO 2.1)
- CLO4 Identify the causes behind major financial crisis that took place in the different economies of the world. [RBTL3] (PLO 4.2)
- CLO5 Understand the concept of balance of payment. [RBTL2] (PLO 2.1)
- CLO6 Choose the appropriate methods of hedging risk in foreign exchange market. [RBTL5] (PLO 4.4)
- CLO7 Analyse international corporate strategies in diversified financial markets. [RBTL4] (PLO 2.4)
- CLO8 Demonstrate the Knowledge of global financial instruments. [RBTL2] (PLO 2.1)
- CLO9 Understand the functioning and purpose of recognized world financial institutions. [RBTL2] (PLO 2.1)

Unit I Introduction (4 Hrs)

Meaning, Features, Need, Internationalization of Financial Markets. The evolution of Multinational Corporation, Role, and Functions of a multinational financial manager, Issues and Challenges of International Business Finance.

Unit II International Monetary System (14 Hrs)

Evolution- Bimetallism, Classical Gold standard (1821-1914), Interwar period, Bretton Woods system (1946-1971), the post Bretton Woods (1971 – Present), IMF, The current exchange rate agreements, Fixed Versus Flexible Exchange Rate regime, European Monetary system, IMF, Emerging Market Currency Crisis- Mexican Peso Crisis (1994-1995), Asian Crisis (1997), Russian Crisis (1998), the Brazilian Crisis

(1998-1999) The currency Crisis of September 1992, Global Financial crisis, LIBOR scandal, the impact of COVID 19 pandemic on Global Business Finance.

Unit III Balance of Payment (6 Hrs)

Trade and Balance of payment, Current items, Capital Items, Disequilibrium of balance of payments and rectification.

Unit IV Foreign Exchange Market (12 Hrs)

The structure of the FOREX markets, Functions of Foreign exchange markets, The foreign exchange rates, Quotations, Bid-ask spreads, Arbitrage, Covered Interest Rate Arbitrage, The Spot Rate, Cross Rates – Spot Market, Forward Market- Currency Derivatives. Parity Conditions- Purchasing Power Parity, Interest Parity Theory, international Fisher Effect.

Unit V Foreign Exchange Risk Management (12 Hrs)

Concepts- Measuring Foreign Exchange Exposure- Transaction Exposure, Translation Exposure. Managing Foreign Exchange Exposure- Forward Market Hedge, Money Market hedge, Exposure Netting, Exposure Matching, Lead and Lag Payments, Risk Shifting, Currency Risk Sharing, Currency Collars, Cross Hedging.

Unit VI Foreign Direct Investment and Corporate Strategy (6 Hrs)

Foreign Direct Investment- Meaning, Importance, Theory of Multinational Corporation, the strategy of multinationals, Designing a global expansion strategy.

Unit VII International Financial Institutions and Instruments (6 Hrs)

Basic Concepts: Meaning, Importance and Development. World Bank, International Monetary Fund, Asian Development Bank. Global Depository Receipts, American Depository Receipts, External Commercial Borrowings, Foreign Currency Convertible Bonds.

Text Book

- Shapiro Alan. C., *Multinational Financial Management*, Prentice Hall, New Delhi.

Reference Books:

- Jeevanandam. C. *Foreign Exchange and Risk Management.* New Delhi: Sultan Chand & sons.
- Apte P.G, *International Financial Management*, Tata McGraw Hill, New Delhi.
- Rajwade A.V., *Foreign Exchange Risk Management*, Prentice Hall of India.
- Vij, M. *International Financial Management.* New Delhi: Excel Books.

Course Name: Blockchain	**Course Code: BBFT642**
Total Teaching Hours for Semester: 60	**Credits: 4**
Course Objectives/Description:	

This course aims to provide conceptual understanding of the Blockchain Technology, its applications, challenges and future prospects.

CO1 Explain the blockchain technologies and their core components

CO2 Explain the challenges and disruptive aspects of blockchain technologies

CO3 Explain the blockchain applications.

CO4 Explain the emerging use cases of blockchain

Course Learning Outcome: The student should be able to:

CLO1 To understand the blockchain technologies and their core components (PLO5.1)

CLO2 To apply blockchain concepts to finance sector (PLO5.2)

CLO3 To analyze the challenges and disruptive aspects of blockchain technologies (PLO5.3).

CLO4 To examine the emerging use cases of blockchain.(PLO 5.4)

Unit I Introduction (8 Hrs)

Introduction, Blockchain-Definition, Network view of blockchain, Generic structure of blockchain, Generic elements of blockchain, features of blockchain, how blockchain accumulates blocks, Tier of blockchain, Types of blockchain,

Unit II BlockChain (6 Hrs)

CAP theorem in Blockchain, Decentralisation, Platforms for decentralization, Consensus in Blockchain, Benefits of blockchain, Challenges and limitations of blockchain- Scalability, Security, Privacy and confidentiality

Unit III How Blockchain Works (6 Hrs)

Hash functions, Puzzle friendly Hash, Collison resistant hash, digital signatures, public key crypto, verifiable random functions, Zero-knowledge systems

Unit IV Blockchain 1.0: Bitcoin (8 Hrs)

Issues with Digital Cash- Double spend and Byzantine Generals computing problem, Bitcoin blockchain, how a cryptocurrency works, The challenges-crypto security, merchant acceptance of crypto-currency, regulatory status

Unit V Blockchain 2.0: Contracts (10 Hrs)

Financial Services, Crowdfunding, Bitcoin Prediction markets, Smart Contracts, Smart Property, Blockchain 2.0 protocol projects, Wallet development projects, Blockchain Development Platforms, Blockchain Ecosystem, Ethereum, Dapps-Decentralized applications, DAOs/DACs-Decentralized autonomous organisations, DAS-Decentralized autonomous societies, Automatic markets

Unit VI Blockchain 3.0 **(10 Hrs)**

Hyperledger Project, Applications of blockchain in Science, Digital identity, Law, Governance, Healthcare, Online learning, Academic Publishing,

Unit VII Block Chain Use cases in Finance **(12 Hrs)**

Trusted Data Transfer, Trade Markets, Capital Markets, Supply chain Financing, Insurance, Trade Finance

Text Book

1. Bashir I. (2017) Mastering Blockchain. Packt Publishing.
2. Swan M. (2015) Blockchain. Publisher O' Rielly.

Reference Books:

1. Crosby et al. (2015) Blockchain Technology, Sutardja Center for Entrepreneurship & Technology Technical Report. Available at: https://scet.berkeley.edu/wp-content/uploads/BlockchainPaper.pdf
2. Yaga et al. (2018). Blockchain Technology overview. Available at: https://nvlpubs.nist.gov/nistpubs/ir/2018/NIST.IR.8202.pdf
3. PwC(n.d.) Blockchain a new catalyst for insurance. Available at: https://www.pwc.com/gx/en/insurance/assets/blockchain-a-catalyst.pdf
4. Deloitte (2016). What is Blockchain.? Available at: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/Innovation/deloitte-uk-what-is-blockchain-2016.pdf
5. Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. Available at: https://bitcoin.org/bitcoin.pdf
6. Popper, N. (2018). Confused About Blockchains? Here's What You Need to Know. *The New York Times*. Retrieved from: https://www.nytimes.com/2018/06/27/business/dealbook/blockchains-guide-information.html
7. Davies, S., & Likens, S. (2018). Blockchain is Here. What's Your Next Move? *PwC*. Retrieved from https://www.pwc.com/blockchainsurvey
8. Blockchain the India strategy. https://niti.gov.in/sites/default/files/2020-01/Blockchain_The_India_Strategy_Part_I.pdf
9. Cryptocurrencies: Looking Beyond the Hype. (2018). *Bank for International Settlements Annual Report 2018*, 91-109. Retrieved from https://www.bis.org/publ/arpdf/ar2018e.pdf

Course Name: Advanced R Programming	**Course Code: BBFT643**
Total Teaching Hours for Semester: 60	**Credits:4**

Course Objectives/Description:

The objective of this course is to provide comprehensive knowledge of python programming language

CO1 To analyze stock price using R programming.
CO2 To analyse individual and portfolio returns using R programming.
CO3 To analyze the Risk and Risk Adjusted portfolio performance using R programming
CO4 To explain the implementation of factor models using R programming.
CO5 To explain the Implementation of option pricing model using R programming.
CO6 To explain the Implementation of Markowitz Mean Variance Optimization using R programming.

Learning Outcome: To help the student to:

CLO1 Analyze the stock price using R programming.
CLO2 Analyse individual returns and portfolio returns using R programming.
CLO3 Analyze the Risk and Risk Adjusted portfolio performance using R programming
CLO4 Implement factor models using R programming.
CLO5 Implement option pricing model using R programming
CO6 Implement Markowitz Mean Variance Optimization using R programming

Unit I Analysing Stock Price (8 Hrs)

Importing Stock price Data, Plotting the data, Summary statistics, Comparing capital gains of multiple securities over time, Trend analysis, Volatility analysis, Relative strength index

Unit II Individual Stock returns and Portfolio Returns (8 Hrs)

Price returns, total returns, logarithmic total returns, Cumulating Multi-Day Returns, Weekly returns, Monthly returns, comparing performance of multiple securities, constructing portfolio returns, constructing benchmark portfolio returns

Unit III Risk (6 Hrs)

Risk-Return tradeoff, Individual security risk, portfolio risk, Value-At risk, Expected Shortfall, Alternative risk measures

Unit IV Risk Adjusted portfolio performance measure (6 Hrs)

Portfolio and Bench mark data, Sharpe ratio, Roy's Safety first ratio, Treynor ratio, Sortino ratio, Information ratio,

Unit V Factor Models (12 Hrs)

CAPM, Market model, Rolling Window regression, Fama French three factor model, Event Studies

Unit VI Markowitz Mean Variance Optimization (6 Hrs)

Two assets, multiple assets, Effect of short selling

Unit VII: Options (6 Hrs)

Obtaining option chain data, Option pricing model, Pull-call parity, Implied Volatility, Gauging Market risk

Text Books

- Clifford S. Ang (2015). Analysing financial data and implementing financial model using R. Publisher: Springer

Reference Books

- Ruey S. Tsay (2014). An Introduction to Analysis of Financial Data with R. Publisher: Wiley

Course name: Algorithmic Trading and Robo-advisory	Course Code: BBFT611
Total Teaching Hours for Semester: 30	Credits: GRADE

Course Objectives/Description:

The objective of this course is to provide hands-on and practical implementation of Algorithmic Trading and Robo advisory models.

CO1 Explain Markets structures, evolution of Algorithmic trading, types of different algorithmic trading and the typical architecture of an Algorithmic trading system, Algorithmic Trading lifecycle, Order Book Dynamics and Market Microstructure
CO2 Explain different Algorithmic trading strategies are employed by Fund Managers and Hedge Funds
CO3 Explain how to perform Strategy Conceptualization & understand various Trade Approaches
CO4 Explain AFL Programming Language to build algorithms, how to various modules in a trading algorithm and how to backtest and optimize your strategy
CO5 Explain how to create your own trading algorithms
CO6 Explain how to implement Robo advisory frameworks

Learning Outcome:

CLO1 To understand Markets structures, evolution of Algorithmic trading, types of different algorithmic trading and the typical architecture of an Algorithmic trading system, Algorithmic Trading lifecycle, Order Book Dynamics and Market Microstructure (PLO5.1)
CLO2 To compare different Algorithmic trading strategies employed by Fund Managers and Hedge Funds (PLO5.3)
CLO3 To apply Strategy Conceptualization using various Trade Approaches (PLO5.2)
CLO4 To apply AFL Programming Language to build algorithms (PLO5.2)
CLO5 To Create your own trading algorithms (PLO5.5)
CLO6 To implement Robo advisory frameworks (PLO5.5)

Unit I Concept of Algorithmic Trading (5 Hrs)

Markets structures, Algorithmic system architecture, evolution of Algorithmic trading, overview of different types of different algorithmic trading, Lifecycle of Algorithmic Trading & Algorithmic Trading Architecture

Unit II Types of Algorithmic Trading Strategies and Robo Advisory (5 Hrs)

Price Action based Strategies, Momentum and Mean Reversion Strategies, Quantitative Portfolio Strategies, Volatility Trading Strategies, Statistical Arbitrage Strategies, Asset Allocation Strategies, Rebalancing Strategies

Unit III Strategy Conceptualization & Trade Approaches (5 Hrs)

Overview of Trading Approaches, Order Types, Order Management, Position Sizing and Management, Concept of Back-testing and Optimization, Simulation on markets, Trade Management

Unit IV Writing Algorithms (10 Hrs)

Putting a Trading Strategy into a Code, Pseudo-code Development, Basics of Algorithmic Coding, AFL Language and how to use for building algorithms, Development of Strategy module, Order Management Module, Risk Management Module, Position Sizing Module, Take-Profit and Stop-Loss Targeting

Unit V Backtesting and Optimization (6 Hrs)

How to assess back-tested strategies, Back-Testing Algorithms, Decoding Reward-to-Risk Trading Performance Indicators, Understanding the Capital Curve and Concepts Sharpe or other measures?

Unit VI Deploying Trading Algorithms in Financial Markets (4 Hrs)

Creating a Testing Plan, Operational considerations and pitfalls, Transaction Cost AnalysisError Handling, Algorithmic Deployment, Contingency Planning

Text Books

- Leshik and Cralle – An Introduction to Algorithmic Trading: Basic to Advanced Strategies. Publisher: Wiley

Reference Books

- Joel Hasbrough –Market Microstructure. Publisher: Oxford University Press
- Sebastien Donadio, Sourav Ghosh , Learn Algorithmic Trading: Build and deploy algorithmic trading systems and strategies using python and advanced data analysis. Publisher: Packt Publishing
- Perry J. Kaufman, A Guide to Creating A Successful Algorithmic Trading Strategy. Publisher: Wiley