



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

School of Business and Management  
Delhi NCR Campus

**Syllabus**  
**BBA FinTech (Honours)**  
2020-21

CHRIST(Deemed to be University)  
Delhi NCR Campus  
[www.ncr.christuniversity.in](http://www.ncr.christuniversity.in)

**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

### Semester I

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)	
<i>Interdisciplinary course (One From The Following )</i>								
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			28	32			700	

## Semester II

Course Code	Course Title	Core/ Elective /Project/ AECC	Credits	Hrs/Wk	CIA	ESE	Max Marks	Duratio n
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)	
BBFT281	Social Responsibility Project	SEC	1				Grade (100)	
BBFT212N	Working with Spreadsheets	SEC	3	2 (Synchr onous ) +1			Grade (100)	

				(asynchronous)				
<i>Interdisciplinary courses (One From The Following)</i>								
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		30	30			700	

**Semester III**

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	2
BBFT311N	Structured Query Language	SEC	3	3	100		100	2
HOL311	Holistic Education	SEC	1	1			Grade (50)	2
BBFT 381N	Industry Review Project	SEC	1				Grade (50)	2
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**

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
BBFT434N	Introduction to Business Analytics	PC	4	4	70	30	100	2
BBFT435N	Security Analysis and Portfolio Management	PC	4	4	70	30	100	2
BBFT436N	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								
BBFT461A	Fundamentals of AI and Machine Learning	GE	3	3	70	30	100	2
BBFT461B	Emotional Intelligence for managerial success	GE	3	3	70	30	100	2
Total			28	30			700	

**Semester V**

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		100	
Any TWO of the THREE								
BBFT541	Financial Derivatives	DSE	4	4	70	30	100	2
BBFT542	Trading Strategies	DSE	4	4	70	30	100	2
BBFT553	Data Visualization	DSE	4	4	100		100	2
BBFT511N	Cryptocurrencies and Payments	SEC		2			Grade (100)	
Total			20	18			500	

**Semester VI**

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 & RegTech	PC	4	4	70	30	100	2

BBFT 681N	Project	SEC	3				100	
IC631	Indian Constitution Laws	SEC	1				Grade	
Any TWO of the THREE								
BBFT641	International Finance	DSE	4	4	70	30	100	2
BBFT642	Block chain	DSE	4	4	70	30	100	2
BBFT643	Advanced R Programming	DSE	4	4	70	30	100	2
BBFT611N	Algorithmic trading and Robo-advisory	SEC		2			Grade (100)	
Total			24	22			600	

<b>Course Name: Principles of Management</b>	<b>Course Code: BBA131</b>
<b>Total number of hours: 60 Hours</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> 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.</p>	
<p><b>Course Objectives:</b> This course attempts to introduce the basic concepts, functions and processes of management and it enables students to develop competencies and knowledge to become an effective manager.</p>	
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:</p> <p>On having completed this course student should be able to:</p> <p>CLO1 Identify the basic activities which any manager will conduct in the organization.</p> <p>CLO2 Describe the role of general management for the success of an organization.</p> <p>CLO3 Analyze the managerial issues one has to tackle in the competitive environment.</p> <p>CLO4 Develop their managerial ability and professional skills.</p> <p>CLO5 Adapt to the contemporary trends in the field of management..</p>	
<p><b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, students' discussions and PPTs, case studies, role plays, and form of experiential learning.</p>	

## **Syllabus**

### **Unit I Introduction To Management**

**(10 Hrs)**

Definition - nature, process and significance of management - Role of managers - Managerial Skills and Roles - Evolution of Management Thought : Classical Management Approaches, Behavioural Management Approaches, Quantitative Management Approaches, 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)**

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 Behavioural Aspects of decision making.

### **Unit III Organizing**

**(10 Hrs)**

Organizing - Nature and purpose - Principles of Organization - Types of Organization - Organisational Structure and Design - Line, Staff and functional authority - Conflict between Line and Staff - Overcoming the Line-Staff Conflict. Committees, 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**

**(10 Hrs)**

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**

**(9 Hrs)**

Directing - Nature of Directing function - Principles - Importance of Effective Direction - Motivating people at work - Motivation theories: Early theories, Contemporary theories - Morale Building - Job Satisfaction - Effective Communication skills for directing - Barriers of communication.

### **Unit VI Controlling and Supervision**

**(7 Hrs)**

Controlling - Concept, Nature and Importance - Essentials of Control - Requirements of an Effective Control System - Behavioural 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 a good supervisor - Key Man - Man in the middle - Middle marginal man - Human relations specialist - Essential requirements of effective supervision.

### **Unit VII Contemporary Issues and Challenges in Management of 21<sup>st</sup> Century** (4 Hrs)

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

**Text Books:**

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

**Reference Books:**

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

<b>Course Name: Financial Accounting</b>	<b>Course Code: BBA132</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> Any organization which deals with money or money's worth needs to record every transaction that it enters into. This course is essential for all individuals exposed to financial information in the workplace and involved in the preparation or use of company financial statements. It 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.</p>	
<p><b>Course Objectives:</b></p> <ul style="list-style-type: none"> <li>• To provide an understanding of application of various principles and practice of Accounting.</li> <li>• To demonstrate the knowledge on the process of accounting cycle and basic steps involved in Accounting.</li> <li>• To extend the knowledge of systematic maintenance of books of accounts to real life business.</li> <li>• To interpret Annual Financial statements of Sole proprietorship form of business.</li> <li>• To outline the need for Accounting standards and IFRS.</li> </ul>	
<p><b>Course Learning Outcome:</b></p> <p>CLO1 Identify the application of various principles and practice of Accounting in preparation of accounting statements.</p> <p>CLO2 Demonstrate the knowledge on the process of accounting cycle.</p> <p>CLO3 Extend the knowledge of systematic maintenance of books of accounts to real life business.</p> <p>CLO4 Interpret Annual Financial statements of Sole proprietorship form of business.</p> <p>CLO5 Outline the need for Accounting standards and IFRS</p>	
<p><b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, hands on preparation of financial statements, discussions &amp; presentations and experiential learning of cash book preparation for kirana shops of the locality.</p>	
<p><b>Unit - I: Introduction to Accounting</b> <span style="float: right;"><b>(6 Hrs)</b></span></p> <p><b>Level of Knowledge:</b> Conceptual</p> <p>Meaning, Need for accounting, Internal and External users of accounting information, limitations of accounting, accounting Concepts and Conventions, Accounting Practices, Generally Accepted Accounting Principles.</p>	

<b>Unit - II: Accounting systems &amp; process</b>	<b>(12 Hrs)</b>
<b>Level of Knowledge:</b> 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.	
<b>Unit - III: Subsidiary books</b>	<b>(10 Hrs)</b>
<b>Level of Knowledge:</b> 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.	
<b>Unit - IV: Bank reconciliation statement</b>	<b>( 08 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Need for reconciliation and preparation of bank reconciliation statement.	
<b>Unit - V: Rectification of Errors</b>	<b>(08 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Need for rectification of errors, types of errors, process of rectification and accounting entries of rectification.	
<b>Unit - VI: Final Accounts</b>	<b>(12 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Preparation of Trading and Profit and Loss account and Balance Sheet of sole trading concerns.	
<b>Unit - VII: Accounting standards and IFRS</b>	<b>(04 Hrs)</b>
<b>Level of Knowledge:</b> Conceptual	
Types of Accounting standards, Need for IFRS, Ind AS and IFRS.	
<b>Essential Reading:</b>	
Jain S.P.,&Narang K L. (2020). <i>Basic Financial Accounting I</i> , New Dehli, Kalyani publishers.	
<b>Recommended Reading :</b>	
1. Maheshwari, S.N., &Maheshwari, S.K. (2020). <i>Advanced Accountancy1</i> , New Delhi: Jain Book Agency.	
2. Shukla, M. (2020). <i>Advanced Accounts</i> , New Delhi, S Chand Group	
3. Radhaswamy, M & Gupta, R.L. (2020). <i>Advanced Accountancy 2</i> , New Delhi, Sultan Chand & Sons.	
4. Reddy, A. (2020). <i>Fundamentals of Accounting</i> , New Delhi, Himalaya Publishing House	
5. Gupta, A. (2020). <i>Financial Accounting for Management: An Analytical Perspective</i> , Noida, Pearson Education.	
6. Raman, B. S. (2014). <i>Financial Accounting (1<sup>st</sup>edi).I&amp; II</i> , New Dehli:United Publishers.	
7. Porter, G.A., & Norton, C.L. (2013). <i>Financial Accounting (IFRS update)( 6<sup>th</sup>edi)</i> , Cengage Learning.	
8. Jawahar Lal & Seema Srivastava (2013). <i>Financial Accounting</i> NewDelhi:Himalaya Publishing House.	
9. Arora M. N. (2013). <i>Accounting For Management</i> . New Delhi: Himalaya Publishing House.	
Bhattacharya .(2013). <i>Essentials of Financial Accounting (Based on IFRS) (2<sup>nd</sup>edi)</i> , Prentice Hall India.	

<b>Course Name: Microeconomics</b>	<b>Course Code: BBA133</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> This course intends to provide the basis for understanding microeconomics concepts and theories that influences the decisions of consumers and business firms.</p> <ul style="list-style-type: none"> <li>• To provide students with an understanding of various concepts and theories of microeconomics and their application to business operations (CO1)</li> <li>• To describe how economic trade-offs and social values impact business decisions (CO2)</li> <li>• To understand the causes and consequences of different market conditions (CO3)</li> <li>• To explain the theory of consumer choice using the utility concepts (CO4)</li> <li>• To apply the concept of equilibrium to firms (CO5)</li> <li>• To apply the theory of production and cost while making business decisions (CO6)</li> <li>• To evaluate the efficiency and inefficiency of the markets from the point of view of consumers and the producers (CO7)</li> </ul>	
<p><b>Course Learning Outcomes:</b> This course intends to provide the students understanding of various microeconomic variables that determine business decisions and consumer's purchase decisions. Specifically, the syllabus aims to develop fundamental economic principles, theories and concepts useful to business managers.</p> <p>CLO1 Illustrate society's trade-offs by using Production Possibility Frontier and identify the fundamental problems faced by an economy</p> <p>CLO2 Explain how consumers maximise total utility within a given income using the utility concepts</p> <p>CLO3 Demonstrate the effect of shifts in market supply and demand curves on price and quantity produced by firms</p> <p>CLO4 Demonstrate how elasticity, efficiency, revenue, cost and production functions are derived</p> <p>CLO5 Examine the effects of negative and positive externalities and examine the real-world externality situations</p> <p>CLO6 Compare and contrast the pricing mechanism and output determination under different market conditions.</p> <p>CLO7 Comprehend the foundations of microeconomics and their applications</p>	
<p><b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, student discussions and PPTs and case studies.</p>	
<p><b>Unit I: Basic Concepts (10 Hrs)</b></p> <p>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.</p>	
<p><b>Unit II: Theory of Consumer Choice (9Hrs)</b></p> <p>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.</p>	
<p><b>Unit III: Market Equilibrium (9 Hrs)</b></p> <p>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.</p>	

**Unit IV: Elasticity and Its Application****(7 Hrs)**

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 V: Market Efficiency and Externalities****(7 Hrs)**

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****(9 Hrs)**

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: Product Pricing****(9 Hrs)**

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 references:**

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

**Recommended references:**

1. N. Gregory Mankiw (2019), Principles of Economics, 7th Edition, Cengage Learning India.
2. Lipsey, R.G. and K.A. Chrystal (1999), Principles of Economics (IX Ed.), Oxford University Press, Oxford
3. Ramsfield, E. (1997), Micro Economics (IX edition), W.W Norton and company, New York
4. Ray, N.C. (1975), An introduction to Microeconomics, Macmillan company of India Ltd. New Delhi
5. Samuelson, PA and W.D. Hague (1972), A textbook of Economic Theory, ELBS Longman group, London.
6. Pindyek and Rubinfeld (2017) Micro Economics (Pearson Education).
7. H. L Ahuja (2019) Principles of Microeconomics, S Chand Publishing, New Delhi

<b>Course Name: Business Mathematics</b>	<b>Course Code: BBFT134</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
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*, 11<sup>th</sup> ed., Sultan Chand and Sons, 2012.
2. U.K. Srivatsava, G.V.Shenoy and S.C.Sharma, *Quantitative Techniques for Managerial Decisions*, 3<sup>rd</sup> ed., New Age International Publishers, 2012.

**References:**

1. E. Don and J. J. Lerner, *Schaum's outlines of Basic Business Mathematics*, 2<sup>nd</sup> 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*, 3<sup>rd</sup> 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*, 12<sup>th</sup> ed., South-Western Cengage Learning, 2013.

<b>Course Name: Introduction to FinTech</b>	<b>Course Code: BBFT135</b>
<b>Total No of Hours per week: 4</b>	<b>Credits: 4</b>
<b>Course Description:</b>	
<p>The objective of the course is to introduce the students to the FinTech sector and to understand how emerging technology is causing 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 &amp; financial services industry.</p>	
<b>Course Objectives:</b>	
<p>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            CO5: To forecast the futuristic scenario of financial technology</p>	
<b>Learning Outcome:</b>	
<p>At the end of the course, the students should be able to:            CLO1: Outline the evolution of the financial technology industry            CLO2: Illustrate how financial technology is reshaping financial services            CLO3: Analyze the technical know-how of financial technology            CLO4: Analyze the current landscape of financial technology            CLO5: Predict the future of financial technology</p>	

<b>Unit I: Introduction to FinTech</b>	<b>(12 Hrs)</b>
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	
<b>Unit II: FinTech Reshaping Financial Services Industry-I</b>	<b>(6 Hrs)</b>
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,	
<b>Unit III: FinTech Reshaping Financial Services Industry-II</b>	<b>(6 Hrs)</b>
FinTech in Wealth Management Industry-Financial Advice, Automated investing, Socially responsible investing, FinTech in Insurance Industry- P2P insurance, On-Demand Insurance, On-Demand Consultation, Customer engagement through Quote to sell, policy servicing, Claims Management	
<b>Unit IV: Technology Disruptions enabling FinTech Innovations</b>	<b>(13 Hrs)</b>
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,	
<b>Unit V: The state of FinTech globally</b>	<b>(14 Hrs)</b>
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	
<b>Unit VI: The future of FinTech</b>	<b>(3 Hrs)</b>
Fin Tech as disruptors, Financial institutions collaborating with FinTech companies, The new financial world	
<b>Unit VII: Case Studies in FinTech</b>	<b>(6 Hrs)</b>
PayTm, Aadhar, Credit Karma,eTORO	
<b>Text Books</b>	
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	
<b>Reference Books</b>	
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

<b>Course Name: Overview of Financial Markets and Capital Markets</b>	<b>Course Code BBFT111</b>
<b>Total Teaching Hours for Semester: 30</b>	<b>Credits: GRADE</b>
<b>Course Objectives/Description:</b>	
<p>The objective of this course is to provide comprehensive coverage of Financial Markets and Capital Markets from a global practical perspective</p> <ul style="list-style-type: none"> <li>▪ To familiarize the students with the structure and various instruments of Financial and Capital markets from a global perspective.</li> <li>▪ To enhance knowledge of the learners comprehensively in the forex market.</li> <li>▪ To enrich the learners with the comprehensive knowledge about the Equity markets, Debt &amp; Money Markets</li> <li>▪ To enhance knowledge of the learners in analysing various asset classes including bond prices and yield curve analysis</li> <li>▪ To augment the knowledge of the students related to global fund management industry</li> </ul>	
<b>Course Learning Outcomes:</b>	
<p>At the end of the course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate understanding of various Financial markets and investment avenues (RBTL2)</li> <li>• Extend the concept of various Financial markets and investment avenues in the global market (RBTL2)</li> <li>• Identify the use of derivatives to hedge Foreign exchange risk and global hedge funds. (RBTL3)</li> <li>• Analyze fixed income securities in terms of bond Pricing and yield curve analysis from global perspectives. (RBTL4)</li> <li>• Examine money market instruments from global perspective. (RBTL5)</li> <li>• Compare and contrast various managed funds in a global setting (RBTL5)</li> </ul>	
<b>Unit I Overview of Financial Markets And Assets Classes</b>	<b>(4 Hrs)</b>
<p>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</p>	
<b>Unit II Global Equities Markets and Instruments</b>	<b>(9 Hrs)</b>
<p><b>Introduction to Equity Market</b>-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. <b>Equity Instruments &amp; their characteristics</b>-Stock Prices and Corporate Actions, Preference Shares, Depository Receipts, Rights Issues &amp; Warrants, Convertibles, Equity Structured Products. <b>Participants in the Equity Markets</b>-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. <b>Types of Equity Markets</b>-Exchanges and Indices in the Equity Markets, Indices and their roles, Understand the difference</p>	

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

**Text Book**

- Financial Markets and Institutions 7<sup>th</sup> Edition By Anthony Saunders and Marcia Cornett, Ninth Edition, McGraw Hill Education

**Reference Books**

- Notes to be provided by the industry partner

<b>Course Name: Organisational Behaviour</b>	<b>Course Code: BBA231</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b> The course focuses on the basic elements that determine human behavior in an organization. It provides the fundamentals of organizational behavior at individual, group and organization level. The course develops understanding organizational effectiveness by effectively managing its people's behaviours at the workplace.	
<b>Course Learning Outcomes:</b> On having completed this course student should be able to: CLO1 Demonstrate understanding of the dynamics of individual and group behavior. CLO2 Analyses the implication of human behavior in organization functioning. CLO3 Apply concepts from OB in managing human behaviours at workplace.	
<b>Pedagogy:</b> This course uses multiple pedagogies like interactive lectures, classroom discussions & presentations, HBR case, article analysis, movie review and role plays.	
<b>Unit I Introduction to Organizational Behavior (8Hrs)</b> Meaning, Definition of Organizational Behavior, Contribution from other disciplines, OB Model, Challenges and Opportunities in organizational behavior.	
<b>Unit II Personality, Learning &amp; Values (10 Hrs)</b> Definition, The Big Five Model, Myers-Briggs Type Indicator, Other Personality Traits like Authoritarianism, Locus of Control, Machiavellianism, Self Esteem, Risk Taking, Self-Monitoring and Achievement Oriented. Meaning of learning; Theories of learning- Classical Conditioning, Operant conditioning, Cognitive theory, Social learning theory, Principles of learning, Schedule of Reinforcement; Importance of values- instrumental and terminal values.	
<b>Unit III Attitude (8 Hrs)</b> Meaning, Formation of attitudes, ABC model, Function of Attitude, Cognitive Dissonance, Changing attitudes; Work Attitudes- Job Satisfaction and Organization Commitment.	
<b>Unit IV Perception (6Hrs)</b> Meaning, Factors influencing perception, Attribution Theory, Common short cuts in judging others,	
<b>Unit V Group Dynamics (8 Hrs)</b> Meaning and Types of groups, Stages of Group Development, Group Properties-Norms, Roles, Status, Cohesiveness, Diversity, Size; Group Decision making - Groupthink, Group Shift, Techniques.	
<b>Unit VI Leadership (10 Hrs)</b> Concept of Leadership-Trait Theories-Behavioral Theories, Ohio & Michigan Studies - Managerial Grid; - Contingency Theory-Situational Leadership and Path & Goal of leadership, Transformational, Transactional, Charismatic leaders, Ethical Leadership and Servant Leadership.	
<b>Unit VII Organization Culture (10 Hrs)</b> Definition of organizational culture-Culture as a descriptive term- Strong versus Weak culture-Culture's Function-Creating and Sustaining culture-How employee learn culture-creating positive organizational culture.	

**Essential Reading:**

- Stephen P. Robbins, Timothy A. Judge and Neharika Vohra (2019), 18<sup>th</sup> Ed. *Organizational Behaviour*. Pearson Education Asia.

**Recommended Reading**

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

<b>Course Name: Business Statistics</b>	<b>Course Code: BBA232</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> 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.</p>	
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:            CLO 1 To apply the relevant concepts of Statistics to a given context/business scenario            CLO 2 To articulate a vague business problem by analysing data through Statistical techniques            CLO 3 To comprehend and interpret the results of statistical tests and make statistically relevant conclusions/decisions</p>	
<p><b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, case study discussions &amp; presentations and by conducting a mini research project</p>	
<p><b>UNIT - I: Introduction to Statistics (06 Hrs)</b>  <b>Level of Knowledge:</b> 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 (problems)</p>	
<p><b>Unit - II: Measures of Central Tendency (10 Hrs)</b>  <b>Level of Knowledge:</b> Analytical  <b>Level of knowledge: Analytical</b>            Meaning, measures of Central Tendency- Arithmetic Mean, median, mode, geometric mean and harmonic mean (only theory) and partition values- quartiles, deciles, percentiles.</p>	
<p><b>Unit - III: Measures of Dispersion and Skewness (10 Hrs)</b>  <b>Level of Knowledge:</b> Analytical            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.</p>	

**Unit - IV: Correlation and Regression****(08 Hrs)****Level of Knowledge: Analytical**

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  $Y$ ,  $Y$  on  $X$ , Regression Equations and Regression Coefficients.

**Unit - V: Time Series****(06 Hrs)****Level of Knowledge: Analytical**

Meaning, Components of time series, Calculation of Secular Trend-Moving Average method (2, 3, 4 & 5 years) and method of Least Squares.

**Unit - VI: Sampling distribution and estimation****(06 Hrs)****Level of Knowledge: Analytical**

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

**Unit - VII: Introduction to Inferential statistics****(14 Hrs)****Level of Knowledge: Conceptual**

Introduction to testing of Hypothesis: Procedure for testing hypothesis - Setting of Hypothesis -Null and alternative hypotheses, - 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,( Excel) Chi-square test for goodness of fit and independence of attributes. Simple problems only.

**Essential Reading:**

1. Sharma,J.K (2014) *Business Statistics 4<sup>th</sup> edition* Delhi: Vikas Publishing House
2. Pillai &Bagavathi( 2015) *Statistics*, S Chand

**Recommended Reading :**

1. Levin, R. I., & Rubin, D. S. (2014). *Statistics for management*. Delhi: Pearson.

<b>Course Name: Macroeconomics</b>	<b>Course Code: BBA233</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b>	
<ul style="list-style-type: none"> <li>• To provide a strong base of macroeconomic principles and concepts relevant in managerial decision making.</li> <li>• To enable the students to apply the knowledge in managerial decision making process.</li> <li>• To enable the students to prescribe policies in the light of changing macroeconomic scenario.</li> </ul>	
<b>Course Learning Outcomes:</b>	
This course intends to provide the basics of macroeconomic theory and polices in order to understand the influence of external environment in doing business. The students are expected to understand the various macroeconomic variables that determine income, output and employment.	

**Pedagogy:** This course uses multiple pedagogies like interactive lecture, student discussions and PPTs and case studies.

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

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 (9Hrs)**

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)**

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)**

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)**

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)**

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)**

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*, 7<sup>th</sup> Edition, Cengage Learning India.

**Recommended references:**

1. N. Gregory Mankiw (2019), *Principles of Economics*, 7<sup>th</sup> 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: New Delhi
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

<b>Course Name: Financial Institutions and Services</b>	<b>Course Code BBFT234</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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.	
<b>Course Objectives:</b>	
<ul style="list-style-type: none"> <li>• To familiarize the students about the financial institutions and Services</li> <li>• To make students understand about the money market and capital market operations</li> <li>• To enhance the knowledge of the students about the roles of various financial institutions.</li> <li>• To provide knowledge to the students related to the banking operations.</li> <li>• To familiarize the students about various financial services.</li> <li>• To make students understand about international financial markets.</li> </ul>	
<b>Learning Outcome:</b> By the end of the course the student will be able to:	
<ol style="list-style-type: none"> <li>1. Understand the structure of financial system and the functioning of specialised financial institutions and markets.</li> <li>2. Explain the functioning of money markets and capital markets.</li> <li>3. Identify the role of various financial institutions in the economy.</li> <li>4. Understand the different operations in the banking services.</li> <li>5. Assess the role of various financial services in the economy.</li> <li>6. Explain the functioning of International financial market.</li> </ol>	
<b>Unit I: Introduction to financial system</b>	<b>(10 Hrs)</b>
Meaning-Structure- Functions-Components of financial system -Financial system and economic development- Reforms in Financial Sector in India	
<b>Unit II Capital Market</b>	<b>(8 Hrs)</b>
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.	
<b>Unit III Money Market</b>	<b>(6 Hrs)</b>
Meaning-Significance-Structure-Features of money market – Money market instruments-Reforms in money market.	

<b>Unit IV Financial Institutions</b>	<b>(10 Hrs)</b>
<p>Meaning &amp; Functions -Banking institutions-Scheduled commercial banks and scheduled cooperative banks-Functions of commercial banks, Capital Structure of commercial banks, BASEL Norms.</p> <p>Non-Banking Institutions-NBFCs and Development Finance institutions-Insurance and Housing Finance Companies -IRDA</p> <p>RBI-Functions-Monetary policy-Credit Policy</p>	
<b>Unit V: Banking Service</b>	<b>(10 Hrs)</b>
<p>Deposit Schemes- Loan Schemes and Other Modern Services-Mechanism of E-Banking &amp; Internet Banking, Mobile Banking &amp; Telephone Banking, ATM &amp; Electronic Money (Credit Cards) ,Electronic Funds Transfer System (RTGS and NEFT) &amp; Modern Banking Services</p>	
<b>Unit VI: Financial Services</b>	<b>(10 Hrs)</b>
<p>Meaning-Types-Leasing- Hire purchase- Mutual funds- Factoring -Credit rating- Venture Capital-Recent developments in financial services industry, GIFT.</p>	
<b>Unit VII: International Financial Markets</b>	<b>(06 Hrs)</b>
<p>Nature, Organization and Participants- Offshore Financing Instruments- Foreign Exchange market - International Financial Tech Cities</p>	
<b>Essential Reading:</b>	
<p>Pathak, B. (2013) <i>Indian Financial System</i> . New Delhi: Pearson education.</p>	
<b>Recommended Reading:</b>	
<ol style="list-style-type: none"> <li>1) Desai, V. (2010) <i>Indian Financial System</i>. Mumbai: Himalaya publishers.</li> <li>2) Gordon, N. (2014). <i>Indian Financial System</i>. Mumbai: Himalaya publishers.</li> <li>3) Khan, M.Y. (2009). <i>Indian Financial System</i> . New Delhi: McGraw-Hill.</li> <li>4) Sharma, G. (2014). <i>Indian Financial System</i>. Ludhiana: Kalyani publishers.</li> <li>5) Singh, P. (2010). <i>Dynamics of Indian Financial System: Markets, Insitutions and Services</i>, ANE Books</li> </ol>	

<b>Course Name: Foundations in Quantitative Finance</b>	<b>Course Code BBFT211</b>
<b>Total Teaching Hours for Semester: 30</b>	<b>Credits: Grade</b>
<b>Course Objectives/Description:</b>	
<p>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.</p>	

- **Learning Outcomes:**

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

1. Demonstrating understanding of financial mathematics (RBTL2)
2. Apply the concepts of calculus in asset pricing (RBTL3)
3. Analyze empirical distribution of financial dataset (RBTL4).
4. Evaluate portfolios with the help of mathematical modelling (RBTL5)
5. Proposing financial models with the application of econometrics. (RBTL6)

**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)**

Portfolio 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

<b>Course Name: Working with Spreadsheet</b>	<b>Course Code: BBFT212</b>
<b>Total number of hours: 30 Hrs</b>	<b>Credits:3</b>
<p><b>Course Description:</b> 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.</p> <p>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.</p>	
<p><b>Course Learning Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Students are able to demonstrate simple arithmetic calculations directly in a cell as well as by referring to another cell.</li> <li>2. Students are able to compare and contrast between formulas and functions in Excel.</li> <li>3. Students are able to examine and interpret data using the database functions of Excel.</li> <li>4. Students are able to model the chart function of Excel to represent numeric data in multiple formats.</li> <li>5. Students are able to develop critical report on data in a list using PivotTables,</li> <li>6. Students are able to incorporate built-in functions into a worksheet, work with controls and record macros.</li> </ol>	
<p><b>Unit I: Introduction to Spread Sheet (4 Hrs)</b>  <b>Level of Knowledge: Application</b></p> <p>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</p>	
<p><b>Unit II: : Basic functions (3 Hrs)</b>  <b>Level of Knowledge: Application</b></p> <p>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</p>	
<p><b>Unit III: Charts (3 Hrs)</b>  <b>Level of Knowledge: Application</b></p> <p>Understand Charts, Chart Design Options and Tools, Chart Format Tools, Combo Charts</p>	

<p><b>Unit IV: Advanced Functions</b> <span style="float: right;"><b>(8 Hrs)</b></span></p> <p><b>Level of Knowledge: Application</b></p> <p>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</p>
<p><b>Unit V: Data Analysis</b> <span style="float: right;"><b>(12 Hrs)</b></span></p> <p>Level of Knowledge: Application</p> <p>Data analysis in Excel using classic tools, such as pivot tables, pivot charts, vlookup and slicers, solver, Excel data model, DAX expression, Power Query add-in in Excel 2013, build an Excel data model from a single flat table, import multiple tables from a SQL database, Create a mash-up between data from text-files and data from a SQL database.</p>
<p><b>REFERENCES:</b></p> <ol style="list-style-type: none"> <li>1. <a href="https://www.tutorialspoint.com/advanced_excel/index.htm">https://www.tutorialspoint.com/advanced_excel/index.htm</a></li> <li>2. <a href="https://www.reed.co.uk/courses/microsoft-excel-3-course-bundle--basic-intermediate-advanced-courses-only-24/67735">https://www.reed.co.uk/courses/microsoft-excel-3-course-bundle--basic-intermediate-advanced-courses-only-24/67735</a></li> </ol>

<b>Course Name: Financial Management</b>	<b>Course Code: BBA331</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> Financial Management is a core course offered in the third semester to students across all specializations. 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. Course covers topics pertinent to profit-seeking organizations. The main purpose of the course is to imbibe analytical and decision-making skills in managing finance through application of theoretical questions and practical problems.</p>	
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:</p> <p>CLO1 Understand the principles and concepts of financial management.</p> <p>CLO2 Demonstrate the motives behind financial decision making.</p> <p>CLO3 Interpret the relevant theories and concepts of various practices of financial management.</p> <p>CLO4 Analyze the relationship among capital structure cost of capital, dividend decisions, and value of the business.</p> <p>CLO5 Evaluate and decide on the long term assets which are profitable to the business applying capital budgeting techniques</p>	

**Pedagogy:** This course uses multiple pedagogies like interactive lecture, article reviews, case analysis, and flip classes

**Unit I: Introduction to financial management (6 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 Functions areas of financial management, Functions of a finance manager.

**Unit II: Sources of finance and Capitalization (9 Hrs)**

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)**

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: (12 Hrs)**

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)**

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 (6 Hrs)**

Meaning , Kinds , Bonus shares – merits and demerits, theories of dividend decisions, determinants of dividend policy decisions

**Unit VII – Management of working capital (7 Hrs)**

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.

**Essential Reading**

Gupta,S,K.,Sharma,R.K.,& Gupta ,N(2013).*Financial Management*. KalyaniPublishers.

**Recommended Reading**

Khan, M.Y. & Jain, P.K.(2011). *Financial Management*. New Delhi, India. Tata McGraw Hill.  
 Chandra, P.(2008).*Financial Management*.New Delhi, India. Tata McGraw Hill Book Co.  
 Pandey,I.M.(2009). *Financial Management*. New Delhi, India. Vikas Publishing House.

<b>Course Name: Human Resource Management</b>	<b>Course Code: BBA332</b>
<b>Total number of hours: 60 Hours</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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.	
<b>Course Objectives:</b> <ul style="list-style-type: none"> <li>To understand the role and activities of human resource management function.</li> <li>To explain the human resource management practices that can be adopted by organization in competitive business environment.</li> <li>To assess the application of appropriate HR intervention in conjunction with organization need.</li> </ul>	
<b>Course Learning Outcomes:</b> On having completed this course student should be able to: <ul style="list-style-type: none"> <li>CLO1 To learn how different HR process and procedures are carried out in the organization.</li> <li>CLO2 To identify HR process that address organization requirements.</li> <li>CLO3 To apply HR concept in resolving issues faced by organization</li> </ul>	
<b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, students' discussions and PPTs, case studies, role plays, and form of experiential learning.	
<b>Unit I Introduction</b>	<b>( 6 Hrs)</b>
<b>Level of Knowledge:</b> Conceptual	
Concept of HRM, Evolution of HRM, Role of Human Resource Manager, Functions of HRM, HR Structure and Concept of Strategic HRM.	
<b>Unit II Human Resource Planning and Job Analysis</b>	<b>(10 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Concept & Importance of HRP; Different stages of HR Planning Process; Action Plans in case of shortage and surplus of workforce.	
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.	
<b>Unit II Recruitment</b>	<b>(8 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Concept of Recruitment, Factors affecting Recruitments, Sources of Recruitment;	

<b>Unit IV Selection &amp; Induction</b>	<b>(8 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
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.	
<b>Unit V Performance Appraisal &amp; Career Management</b>	<b>(12 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Purpose of Performance Appraisal, Trait, Behavioural and Result Methods of Performance Appraisals, Process of Performance Appraisal.	
Career Management Process, Models of Career Management, Role & Challenges of Career Development, Career Development Initiatives.	
<b>Unit VI Training and Development</b>	<b>(8 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Meaning and Importance of Training and Development Programs, Stages involved in Training Process, On-the Job and Off-the-Job Training & Development Methods.	
<b>Unit VII-Conflict Management:</b>	<b>(8 Hrs)</b>
<b>Level of Knowledge:</b> Analytical	
Meaning and Sources of Employee Grievance, Grievance Handling Systems, Meaning & Process of Collective Bargaining, Indiscipline, Settlement Machinery of Industrial Conflicts	
<b>Essential Reading:</b>	
1. Gary Desler, Biju Varkkey (2017). <i>Human Resource Management</i> . Fifteenth Edition. Pearson	
<b>Recommended Reading:</b>	
2. L M Prasad. (2018). <i>Human Resource Management</i> . Sultan Chand & Sons	
3. K Aswathappa. (2019). <i>Human Resource Management: Text &amp; Cases</i> . Mc Graw Hill Education (India) Private Limited.	
4. Rao, S. (2018). <i>Essentials of Human Resource Management &amp; Industrial Relations: Text &amp; Cases</i> . New Delhi: Himalaya Publication.	
5. Noe, Hollenbeck, Gerhart, Wright. (2019). 7 <sup>th</sup> Edition. <i>Fundamentals of Human Resource Management</i> . Mc Graw Hill.	

<b>Course Name: Marketing Management</b>	<b>Course Code: BBA333</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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	

<p>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.</p>
<p><b>Course Objectives:</b></p> <ol style="list-style-type: none"> <li>1. To understand the application of Marketing concepts and techniques</li> <li>2. To analyse marketing from a managerial perspective, including the critical analysis of functions of marketing opportunity assessment</li> <li>3. To enhance team decision making skills and communication skills from a Marketing perspective</li> </ol>
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:</p> <p>CLO1 Recognize how to identify target markets and environments by analysing demographics and consumer behaviour</p> <p>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.</p> <p>CLO3 Students can communicate effectively among team members to develop a team-prepared written project and (b) they can make a persuasive, effective presentation of their project.</p> <p>CLO4 Recall the strategies used within each of the marketing mixes</p> <p>CLO5 List best practices for responsible marketing and how to manage marketing efforts</p>
<p><b>Pedagogy:</b> This course uses multiple pedagogies like case study discussions, interactive lecture, presentations, review of research article, in class group exercises and activities.</p>
<p><b>Syllabus</b></p> <p><b>Unit I Introduction To Marketing Fundamentals (10 Hrs)</b></p> <p>Meaning Definition marketing, scope of marketing, core marketing concepts, Company Orientation toward the Marketplace; Developing Marketing Strategies and Plans, Marketing and Customer Value, Corporate and Division Strategic Planning, Business Unit Strategic Planning, Ansoff's Matrix, BCG Matrix, Marketing Plan Criteria; Capturing market insight.</p> <p><b>Unit II Connecting With Customers (09 Hrs)</b></p> <p>Model 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 and Brand Equity.</p> <p><b>Unit III Product Decision (08 Hrs)</b></p> <p>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, meaning of services, unique characteristics of services, 7Ps of service marketing, Service delivery process, service encounters and Moments of Truth.</p> <p><b>Unit IV Pricing (08 Hrs)</b></p> <p>Types of pricing, consideration and approaches, Pricing strategies: additional consideration, New product pricing strategies, Product mix pricing strategies, Price adjustment strategies, Price changes, Public policy and pricing.</p>

<b>Unit V Distribution Channels</b>	<b>(08 Hrs)</b>
Marketing channels, structure, types and criteria of selecting a channel, wholesaling, retailing, and physical distribution.	
<b>Unit VI Promotion</b>	<b>(09 Hrs)</b>
An overview. Advertising, sales promotion, personal selling and sales management. Public and customer relations, direct and online marketing, multilevel marketing-the new marketing model.	
<b>Unit VII Responsible Marketing</b>	<b>(08 Hrs)</b>
Sustainable Marketing, Social Criticisms of Marketing, Marketing's Impact on Individual, Consumers Marketing's Impact on Society as a Whole Marketing's Impact on Other Businesses Consumer Actions to Promote Sustainable Marketing Business Actions Toward Sustainable Marketing, Principles and Marketing Ethics.	
<b>Core Text:</b>	
1. Kotler.P, & Keller.K.L. (2016). <i>Marketing Management</i> , 17 <sup>th</sup> edition, Pearson.	
<b>Reference Books:</b>	
1. Marshall & Johnston, <i>Marketing Management</i> , McGraw Hill	
2. Kotler & Armstrong, 15th ed., <i>Principles of Marketing Management</i> , Pearson publication	
3. Chernev & Kotler, 5th ed., <i>Strategic Marketing Management</i> , Brightstar Media	
4. Stanton, Etzel, Walker, <i>Fundamentals of Marketing</i> , Tata-McGraw Hill, New Delhi.	
5. Saxena, Rajan, <i>Marketing Management</i> , Tata-McGraw Hill, New Delhi.	
6. McCarthy, E.J., (2016). <i>Basic Marketing: A managerial approach</i> . Irwin, New York.	

<b>Course Name: Insurance and Risk Management</b>	<b>Course Code: BBFT334</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b>	
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.	
<b>Course Objectives: The very specialized program is designed</b>	
: 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.	

<b>Learning Outcome:</b>	
By the end of this course, students are able to	
: Understand the basics of business risks in financial and insurance services. [RBTL2] (PLO 2.1)	
: Analyze various types of insurance contracts. [RBTL4] (PLO 5.2)	
: Understand the role of actuaries & IRDA. [RBTL2]( PLO 2.1)	
: Estimate the financial risks through various models. [RBTL6]( PLO 5.3)	
<hr/>	
<b>Unit I Introduction to Insurance</b>	<b>(10 Hrs)</b>
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.	
<b>Unit II Overview of Risk</b>	<b>(10 Hrs)</b>
Globalization of Insurance Sector, Reinsurance, Coinsurance, Assignment. Endowment.	
<b>Risk</b> - Introduction, Definition (market, credit, liquidity, operational), more specifically on the identification of different forms of risk (currency, interest rate, equity, commodity), <b>Financial risk</b> - An Overview, Evolution, and the Environment.	
<b>Unit III Insurance Contract</b>	<b>(10 Hrs)</b>
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.	
<b>Unit IV Role of Actuaries &amp; IRDA</b>	<b>(10 Hrs)</b>
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.	
<b>Unit V Quantitative Risk Measurement</b>	<b>(7 Hrs)</b>
Measures of Risk, Introduction to Value-at-Risk, Expected Shortfall, Other popular measures	
Volatility Calculation and Forecasting, Expected/Unexpected Loss Estimation	
<b>Unit VI Risk Modeling in Global Markets</b>	<b>(7 Hrs)</b>
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	
<b>Unit VII Regulatory Capital and Market Risk Calculations - Basel</b>	<b>(6 Hrs)</b>

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, 3<sup>rd</sup> edition: The new benchmark for managing financial risk by Philip Jorion
- IRDAI website-[www.irdai.gov.in](http://www.irdai.gov.in)
- New Insurance Law, Nandan Singh, University Book Publishers
- Principles of Insurance Law, M.N. Srinivasan & K.Kannan, Wadhwa Book Company

<b>Course Name: Python</b>	<b>Course Code: BBFT351</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits:4</b>
<p><b>Course Objectives/Description:</b>  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</p> <p>Learning Outcome: To help the student to:</p> <p>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</p>	
<p><b>Unit I: Introduction to Python</b> <span style="float: right;"><b>(10 Hrs)</b></span>  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</p>	
<p><b>Unit II: Control Flow Statements</b> <span style="float: right;"><b>(5 Hrs)</b></span>  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,</p>	
<p><b>Unit III: Functions</b> <span style="float: right;"><b>(5 Hrs)</b></span>  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.</p>	
<p><b>Unit IV: Data Structures</b> <span style="float: right;"><b>(10 Hrs)</b></span>  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.</p>	
<p><b>Unit V: Handling Financial datasets</b> <span style="float: right;"><b>(10 Hrs)</b></span>  Handling financial datasets (import, getsymbols, batchgetsymbols). Multiple asset classes, indices, components and economic data. Different packages and importance</p>	

**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)**

Portfolio 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

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

<b>Course Name: SQL</b>	<b>Course Code: BBFT311</b>
<b>Total Teaching Hours for Semester: 45</b>	<b>Credits:3</b>
<p><b>Course Objectives/Description:</b></p> <p>This course provides a solid foundation of the SQL, a structured query language that enables students to build, query and manipulate databases.</p> <p>CO1: To help the students understand basics of relational databases and SQL. <span style="float: right;">CO2:</span> To help the students create SQL queries.</p> <p>CO3: To enable students to update database content with SQL and transaction handling</p> <p>CO4: To enable the students to create database, tables and perform complex queries.</p> <p><b>Learning Outcome:</b></p> <p>At the end of the course, the students will be able to:</p> <ul style="list-style-type: none"> <li>CLO1 Understand the basics of Relational Databases and SQL</li> <li>CLO2 Apply SQL queries to retrieve and summarize data.</li> <li>CLO3 Examine database for technical design errors</li> <li>CLO4 Create multi-table database structure with data integrity, privileges and constraints.</li> </ul>	

**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/>

<b>Course Name: Information Systems and e- business</b>	<b>Course Code: BBFT361A</b>
<b>Total number of hours: 45 Hours</b>	<b>Credits: 3</b>
<p><b>Course Description:</b> 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.</p> <ul style="list-style-type: none"> <li>To provide students with basic concepts in information system and the benefits with these systems in modern society.</li> <li>To expose students to real application of Business Information System.</li> </ul>	

- 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 Explain various terminologies used in the field of Business Information System.

CLO2 Apply basic Information Technology principles to various areas of businesses.

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

CLO4 Examine the legal aspects of Information Technology (IT Law and Cyber Law) and how to deal with problems like hacking, digital forgery, cyber stalking, cyber terrorism, cyber defamation, cyber pornography etc., the business opportunities available, and the challenges to be addressed.

CLO5 Discuss the ethical and societal issues involved in Business Information System.

**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**

**(8 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 in a multinational organization, Information System Activities, Strategic use of Information Systems

**Unit II Relational Data Base Management System**

**(12 Hrs)**

**Level of Knowledge:** Application / Practical

DBMS Introduction, structure of DBMS, components of DBMS, functions of DBMS, Master data, Transaction data, Data Dictionary, users and access permissions, introduction to RDBMS. Structured Query Language (SQL) – DDL, DML and DCL. –Queries and Sub-queries – Examples Joins and unions.

**Relational Database Management & SQL (Practical)**

- DDL, DML and DCL Commands.
- Join Queries.
- Built in functions.
- Nested Queries.
- Aggregate Functions.

**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****(8 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****(8 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****(8 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 IT Act****(8 Hrs)****Level of Knowledge:** Conceptual

E - Commerce activities - marketing, purchasing, payments, publishing and governance, e-commerce architecture, Business models- B2b & B2C, Challenges, Information Technology Act

**Essential Reading**

1. Joshi, G. (2013). 1<sup>st</sup> 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), 10<sup>th</sup> edition. Management Information Systems, Tata McGraw Hill Publishers
3. Justice Yatindra Singh, (2012), 4<sup>th</sup> edition. Cyber Laws, Universal Law Publishing Co, New Delhi.
4. Rekha Chandulal, (2015), 1<sup>st</sup> edition, Ecommerce Unmasked: Hidden Secrets to fight Online Battles.
5. Effy Oz, (2008), 6<sup>th</sup> edition. Management Information Systems, Course Technology Publishers

<b>Course Name: Innovation and Creativity in Business</b>	<b>Course Code: BBFT361B</b>
<b>Total number of hours: 45 Hrs</b>	<b>Credits: 3</b>
<p><b>Course Description:</b> 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.</p> <p><b>Course Objectives:</b></p> <ul style="list-style-type: none"> <li>• To infer the concept of innovation and creativity, their components and differences.</li> <li>• To identify the tools used for formulation of an innovation strategy for a product/business/industry.</li> <li>• To explain the key planning elements in idea generation process for business as well as societal issues.</li> <li>• To assess the role of a business leader in facilitating creativity within the organization.</li> <li>• To discuss a framework for the design and implementation of a systematic innovation strategy.</li> </ul>	
<p><b>Course Learning Outcomes:</b></p> <p>On having completed this course student should be able to:</p> <p>CLO1 Compare and contrast the difference between creativity and innovation in terms of its types and how creativity leads to innovation.</p> <p>CLO2 Apply the tools used for formulation of an innovation strategy for a product/business/industry.</p> <p>CLO3 Demonstrate the key planning elements in idea generation for business as well as societal issues.</p> <p>CLO4 Evaluate the role of a business leader in facilitating creativity within the organization.</p> <p>CLO5 Develop a framework for the design and implementation of a systematic innovation strategy.</p>	
<p><b>Pedagogy:</b></p> <p>This course uses multiple pedagogies like interactive lecture, students' discussions &amp; presentations, case studies and article analysis, and experiential learning through building new innovative and creative businesses.</p>	
<p><b>Unit-I Introduction to the Process of Innovation: (9 Hrs)</b></p> <p>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.</p>	
<p><b>Unit-II Idea Generation (9 Hrs)</b></p> <p>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.</p>	
<p><b>Unit III Recognizing opportunities and Moving innovation to market (9 Hrs)</b></p>	

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

<b>Course Name: Cost and Management Accounting</b>	<b>Course Code: BBA431</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> This as a basic course on Cost and Management Accounting 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.</p>	
<p><b>Course Objectives:</b></p> <ul style="list-style-type: none"> <li>• To familiarize the learners with the basic concepts and processes used to determine product costs.</li> <li>• To make known the students in ascertaining Material, Labour and Overhead cost</li> <li>• To enrich the knowledge of the learners in knowing and applying various tools like ratio analysis, cash flow statemet, etc., for analysing the financial statements</li> <li>• To provide with the basic understanding of budgetary control</li> <li>• To develop the knowledge of the learners on how to read and prepare a management report</li> </ul>	
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:</p> <p>CLO1 Interpret the relevant theories of cost and management accounting and can prepare cost sheet and quotations.</p>	

CLO2 Ascertain Material and Labor cost

CLO3 Ascertain, allot and apportion 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 and PPTs, problem solving

**Unit-I Introduction to Cost and management accounting (8 Hrs)**

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 Overhead (10 Hrs)**

**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 (13 Hrs)**

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 lower level management- Sample Reports

**Essential Reading:**

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 Management 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 Publishing House
5. Lal, J. (2013). *Cost Accounting*. New Delhi: Tata Mcgraw Hill Education

<b>Course Name: Entrepreneurship Development</b>	<b>Course Code: BBA432</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> Entrepreneurship plays a significant role in stimulating economic growth and employment opportunities. In the developing world, entrepreneurial energy and effort are the primary engines of job creation, and income growth. This course intends to introduce the students to the challenges and opportunities before aspiring entrepreneurs in the emerging domestic and international arenas of possibilities. This course attempts to present various aspects of entrepreneurship in its theoretical and practical dimensions to enable a prospective entrepreneurial to move forward with visionary confidence.</p>	
<p><b>Course Objectives:</b></p> <ul style="list-style-type: none"> <li>• To gain an introduction to the concepts and theories related to entrepreneurship practice</li> <li>• To give exposure to creativity tools and techniques in the context of entrepreneurial practice</li> <li>• To get familiarized with the family business ecosystem and its contribution to economic development to knowledge and information about the source of help, incentives and subsidies available from government up the project and other sources of funding</li> <li>• To gain insights on developing a business Plan</li> </ul>	
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:</p> <ul style="list-style-type: none"> <li>• CLO1 Entrepreneurship has emerged as a profession. Hence the need to familiarize the students with respective traits of Entrepreneurship and inculcate the spirit of entrepreneurship in students and make them job creators instead of job seekers</li> <li>• CLO2: Ability to recognize a business opportunity that fits the individual student</li> <li>• CLO3: Demonstrate the understanding of how to launch the individual's entrepreneurial career</li> <li>• CLO4: Initiate interest for start ups</li> <li>• CLO5: Correlate the case studies with the theories discussed in classes</li> </ul>	
<p><b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, students discussions and PPTs, research article, a field visit, and form of experiential learning.</p>	
<b>Unit I – Entrepreneurial Journey</b>	<b>(8 Hrs)</b>

Biographical sketches of entrepreneurs, Interview with entrepreneurs.

**Unit II Introduction to Entrepreneurship**

**(8 Hrs)**

The concept of Entrepreneurship, Entrepreneurship-theories, Entrepreneurial competencies, Challenges faced by Entrepreneurs, types of Entrepreneurs. Differences between Manager and Entrepreneur, The role of Entrepreneurship in economic development, Intrapreneurship.

**Unit III Creativity and Innovation**

**(10 Hrs)**

Creativity, The creative process, Ideation: sources for Business ideas, Creative Problem Solving: Brainstorming, Heuristics, Synectics, Creative exercises, Innovation vs. Invention, The S curve of innovation, New Product Development.

**Unit IV Establishing an Enterprise**

**(8 Hrs)**

Project identification, Project formulation, Feasibility analysis - Market Feasibility, Technical Feasibility, Financial feasibility and Economic feasibility. Registration process and approvals.

**Unit V Institutional Support to Entrepreneurs**

**(8 Hrs)**

Entrepreneurship development in India, Need for institutional support, Government schemes and Initiatives, Sources of funds: Private capital, Private equity and venture capital, Going public.

**Unit VI - Introduction to Family Business**

**(8 Hrs)**

History of family business in India, Types, Relevance to Indian economy, Structure/ownership patterns, Governance, Pitfalls, strategies to improve family business in an era of globalization.

**Unit VII Business Plan**

**(10 Hrs)**

Meaning and importance. Essentials of a business plan. Drafting a business plan.

**Text Books:**

1. Hisrich, Robert D, Manimala, J. Mathew, Peters, Michael P. and Shepherd, Dean A, (2015). Entrepreneurship. New Delhi: Tata-McGraw-Hill
2. Desai, V. (2014). The Dynamics of Entrepreneurial Development and Management (6ed.) Himalaya Publishing House.

**Reference Books:**

- David, H. (2013). Entrepreneurial Development (5ed.), Prentice Hall
- Gupta, C.B., & Srinivasan, N.D. (2012) Entrepreneurship Development, New Delhi:Sultan Chand & Sons.

<b>Course Name: Research Methodology</b>	<b>Course Code: BBA433</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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 help 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.

**Course Learning Outcomes:**

On having completed this course student 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 Construct suggestions based on the findings from the research.

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

**Unit I – Introduction To Business Research**

**(6 Hrs)**

**Level of Knowledge:** Basic / 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:** Basic / 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 –Testing of Hypotheses**

**(6 Hrs)**

**Level of Knowledge:** Basic / Conceptual / Analytical

Hypothesis – Meaning, Purpose, Sources, characteristics of hypotheses, types of hypothesis, procedure for hypothesis testing,

**Unit IV - Measurement Scales & Sampling Technique**

**(10 Hrs)**

**Level of Knowledge:** Basic / Conceptual / Analytical

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)**

<p><b>Level of Knowledge:</b> Basic / Conceptual / Analytical</p> <p>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.</p> <p><b>Unit VI - Data Analysis (12 Hrs)</b></p> <p><b>Level of Knowledge:</b> Basic / Conceptual / Analytical</p> <p>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.</p> <p><b>Unit VII- Report Writing and Presentation of Results (8 Hrs)</b></p> <p><b>Level of Knowledge:</b> Basic / Conceptual / Analytical</p> <p>Classification and tabulation, Research presentation, Types of report - Research proposal, research report. Format of a report- Layout, Precautions. Citation and referencing (APA 6<sup>th</sup> editions)</p>
<p><b>Text Books</b></p> <ol style="list-style-type: none"> <li>1. Bajpal, N. (2017). <i>Business research methods</i> . New Delhi: Pearson.</li> </ol> <p><b>Reference Books</b></p> <ol style="list-style-type: none"> <li>2. Bryman, Alan and Bell, Emma (2011), <i>Business Research Methods</i>, 3/e, Oxford University Press</li> <li>3. Chawla, D., &amp; Sondhi, N. (2011). <i>Research Methodology: Concepts and cases</i>. New Delhi: Vikas Publishing House</li> <li>4. Gupta, S. L and Gupta, Hitesh (2012), <i>Business Research Methods</i>, McGraw Hill Education (India) Private Limited, New Delhi</li> <li>5. Krishnaswamy, K.N., Sivakumar, A.I., Mathirajan, M (2007), <i>Management Research Methodology</i>, Pearson, New Delhi</li> <li>6. Kothari, C. R. (2009). <i>Research Methodology Methods &amp; Techniques</i> (2 ed.). New Delhi: Vishwa Prakashan.</li> <li>7. Krishnaswami, O., &amp; Ranganatham, M. (2013). <i>Methodology of Research in Social Sciences</i>. Mumbai: Himalaya Publishing House.</li> <li>8. Majhi, P. R., &amp;Khatua, P. K. (2013). <i>Research Methodology (Concepts, Methods, Techniques and SPSS)</i>. Mumbai: Himalaya Publishing House.</li> <li>9. Srivastava. T. N and Rego Shailaja (2012), <i>Business Research Methodology</i>, Tata McGraw Hill Education Private Limited, New Delhi</li> </ol>

<b>Course Name: Introduction to Business Analytics</b>	<b>Course Code: BBFT434</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> 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</p>	

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 Understand and articulate a business problem and convert it into a viable Analytics question

CLO2 Apply Data visualization for exploratory analysis and communicate effectively to diverse audience

CLO3 Evaluate various analytical approaches and select the most appropriate for the given problem

CL04 Apply knowledge and develop solutions across a range of functional areas like Marketing Finance, HR and Operations.

**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 (10 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 - Linear Regression, Logistic Regression, Cluster Analysis, Classification, Association, Decision Tree, Data Mining Issues & Challenges, Big Data, 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) (5 Hrs)**

Data Visualization, Data importing (live vs. extract), Connecting to Real Time Database, Continuous and discrete data, Different kinds of plots and their usage (bar chart, line chart, scatter, histogram, dual axis), Heat Map, Filters, Parameters, Functions and calculated field, Row and aggregate calculations, Table calculations

**Unit V: Dashboard (TABLEAU / Power BI - Practical) (5 Hrs)**

Dashboard and interactive plots, Cross Database Joins & Data Blending, Data interpretation, finding hidden meanings, Effective ways of presentation, Capstone and analytics of real world data

**Unit VI: Business Analytics Tool (R / R Studio Programming - Practical) (15 Hrs)**

Introduction to R, Features of R, R - Packages, R-Data Types, R - Variables, R - Operators, R- Decision Making, R - Graphs, R - Function, R - Looping, Correlation, Regression

<b>Unit VII: Case Study / Use Case</b>	<b>(5 Hrs)</b>
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	
<b>Text Books</b>	
<ol style="list-style-type: none"> <li>1. RN Prasad and Seema Acharya (2018), "Fundamentals of Business Analytics", Second Edition, Wiley India Pvt. Ltd</li> <li>2. Dinesh Kumar U (2017), "Business Analytics- The Science of Data-Driven Decision Making", Wiley Publication</li> </ol>	
<b>Reference Books</b>	
<ol style="list-style-type: none"> <li>1. James Evans (2016), "Business Analytics" Pearson Publishers, 2<sup>nd</sup> Edition</li> <li>2. Jiawei Han and Michelin Kamber (2015), "Data Mining: Concepts and Techniques", Morgan Kaufmann Publication</li> <li>3. Kimball, R. and Ross, M (2006), "The Data Warehouse Toolkit: The Complete Guide to Dimensional Modelling", John Wiley &amp; Sons</li> <li>4. Kimball, R., and Caserta, J (2004), "The Data Warehouse ETL Toolkit: Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data", John Wiley &amp; Sons</li> <li>5. Turban E, Armson, JE, Liang, TP &amp; Sharda (2007), "Decision support and Business Intelligence Systems", 8<sup>th</sup> Edition, John Wiley &amp; Sons</li> <li>6. Michael J. A. Berry and Gordon S. Linoff (2004), "Data Mining Techniques for marketing, Sales and CRM", John Wiley &amp; Sons</li> </ol>	

<b>Course Name: Security Analysis and Portfolio Management</b>	<b>Course Code: BBFT435</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> The course aims at familiarizing the students with 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 frame work 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 which promote transparency, good governance in the stock market functioning which build investors' confidence in the construction of appropriate portfolio.</p> <p><b>Course Objectives:</b></p> <ul style="list-style-type: none"> <li>• To familiarize students with the different investment environment, financial markets and instruments available in India and foreign markets.</li> <li>• To understand the tools, techniques and strategies used in security analysis.</li> <li>• To understand the security valuation of models and decision making process.</li> <li>• To comprehend the portfolio construction, revision and risk return trade off.</li> </ul>	

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

- CLO1 Understand the investment environment, financial markets and instruments for taking rational investment decisions. (PLO 2.1)
- CLO2 Demonstrate the knowledge about fundamental and technical analysis for investment decision making. (PLO 2.2)
- CLO3 Analyse the financial instruments, equity and bonds for appropriate valuation and decision making. (PLO 4.4)
- CLO4 Evaluate different financial instruments, construct appropriate portfolio and its management. (PLO 5.2)

**Pedagogy:** This course uses multiple pedagogies like 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 - 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 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 its 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 economy 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. 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 Models)

### **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 portfolio, risk on 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 modal and arbitrage pricing theory: Treynor portfolio performance measure: Jensen Portfolio Performance measure.

**Unit VII – Portfolio management****(6 Hrs)****Level of Knowledge:** Conceptual / Analytical

International Portfolio Investment and management - Theories, Risk and return in international diversification.

**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: Peasons Education.

Fischer D.E. (2009). *Security Analysis and Portfolio Management*. Pearson Education

<b>Course Name: FinTech Ethics and Risks</b>	<b>Course Code: BBFT436</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits: 4</b>
<b>Course Objectives/Description:</b>	
<p>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.</p> <p>CO1: To explain the ethical issues inherent in finance and financial technology</p> <p>CO2: To help the students understand in depth the ethical implications of blockchain and cryptocurrencies, Artificial Intelligence (AI) and machine learning, and payment solutions</p>	

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	
<b>Learning Outcome:</b>	
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	
<b>Unit I Introduction</b>	<b>(10 Hrs)</b>
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.	
<b>Unit II Block Chain Ethical Design Framework</b>	<b>(8 Hrs)</b>
The approach, Root issues-governance, identity, verification and authentication, access, data ownership, security, Ethical impacts of blockchain-Microlevel, Meso level and Macro-Level	
<b>Unit III Micro-financial, Macro-financial Risks</b>	<b>(8 Hrs)</b>
Micro-Financial Risks- -Maturity Mismatch, Liquidity Mismatch, Leverage Mismatch, Macro Financial Risk-Contagion, Procyclicality, excess volatility, Systemic Risks	
<b>Unit IV Operational Risks</b>	<b>(8 Hrs)</b>
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,	
<b>Unit V Potential Risk Cases-I</b>	<b>(8 Hrs)</b>
Retail Payments, Digital Wallets and Shadow Banking, FinTech Credit, Robo Advisor	
<b>Unit VI Potential Risk Cases-II</b>	<b>(8 Hrs)</b>
DLT based Wholesale payment system, Digital currency, Crowdfunding, AI and Machine learning in financial services	
<b>Unit VII Case Studies</b>	<b>(10 Hrs)</b>
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>

<b>Course Name: Financial Modelling</b>	<b>Course Code:BBFT411</b>
<b>Total Teaching Hours for Semester: 30</b>	<b>Credit: Grade</b>
<b>Course Description:</b>	

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 (PLO 4.1,4.2,4.3,4.4, 5.2)

CO3 Explain how to create financial dashboards - Skill (PLO 4.1,4.2,4.3,4.4, 5.2)

CO4 Explain how to perform advanced functions in Finance (PLO 2.3,4.1,4.2,4.3,4.4, 5.2)

CO 5 Explain how to create macros in VBA financial applications (PLO 4.1,4.2,4.3,4.4, 5.2)

CO 6 Explain how to create an integrated financial modelling and forecasting mechanics(PLO 2.1,4.1,4.2,4.3,4.4,5.2)

**Learning Outcome:**

CLO1 Demonstrate understanding of advanced searches, lookups, filters and aggregations on financial datasets (RBTL2)

CLO2 Experiment with financial datasets in Excel (RBTL3)

CLO3 Analyze data aggregation techniques (RBTL4)

CLO4 Examine various optimization techniques in banking & finance (RBTL4)

CLO 5 Create macros in VBA financial applications (RBTL6)

CLO 6 Propose financial modelling and forecasting mechanics (RBTL6)

**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, Useful 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)

<p><b>Unit IV Using Excel for Advanced functionalities in Finance (4 Hrs)</b></p> <p>Solver &amp; Optimization Techniques, Scenario Analysis, Sensitivity Analysis, Goal Seek, Examples from various finance and banking domains on applications of above principles</p> <p><b>Unit V Dashboard creation (4 Hrs)</b></p> <p>Applications from Finance for aggregating financial datasets and financial time series, Writing Complex Logic and applied examples</p> <p><b>Unit VI Macros (5 Hrs)</b></p> <p>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</p> <p><b>Unit VII Building Integrated Financial Model (5 Hrs)</b></p> <p>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 &amp; projected financial statements - P&amp;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.</p>
<p><b>Text Books:</b></p> <ul style="list-style-type: none"> <li>• Simon Benninga – Financial Modeling with Excel (4th edition), MIT Press Cambridge, Massachusetts London, England</li> </ul>
<p><b>Reference Books:</b></p> <ul style="list-style-type: none"> <li>• Chandan Sengupta - Financial Analysis and Modeling Using Excel and VBA (2nd edition), John Wley &amp; Sons</li> <li>• Jackson and Staunton – Advanced Modeling in Finance using Excel and VBA, (1<sup>st</sup> edition), John Wley &amp; Sons</li> </ul>

<p><b>Course Name: Fundamentals of AI and Machine Learning</b></p>	<p><b>Course Code: BBFT461A</b></p>
<p><b>Total Teaching Hours for Semester: 45</b></p>	<p><b>Credits: 3</b></p>
<p><b>Course Objectives/Description:</b></p> <p>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 &amp; financial technology industry.</p>	

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: Identify the different intelligent agents at play in the financial technology field
- CLO3: Identify the role of Machine Learning as an applied science
- CLO4: Assess how Artificial Intelligence and Machine Learning are reshaping financial services

<b>Unit I: Introduction to Artificial Intelligence</b>	<b>(6 Hrs)</b>
Definition of Artificial Intelligence, History of Artificial Intelligence, Evolution of Artificial Intelligence	
<b>Unit II Types of Artificial Intelligence</b>	<b>(6 Hrs)</b>
Types of AI-Logic Based, Knowledge Based AI, Contemporary AI	
<b>Unit III Intelligent Agents</b>	<b>(8 Hrs)</b>
Rationality, Intelligent Agent, PEAS Framework, Task Environment, Types of Agents, Problem solving agents, Uninformed search strategies, Informed search strategies	
<b>Unit IV Machine Learning-I</b>	<b>(9 Hrs)</b>
Machine Learning, Types of Machine Learning, Supervised Learning-Linear regression, Classification-Decision Trees, Random Forest, Neural Networks using Python	
<b>Unit V Machine Learning-II</b>	<b>(6 Hrs)</b>
Unsupervised Learning-Clustering, Association, Reinforcement learning, Natural Language Processing using Python	
<b>Unit VI AI and Machine Learning in Financial Services-I</b>	<b>(5 Hrs)</b>
Customer focused uses-credit scoring, insurance and client facing chatbots, Trading and portfolio management-Robo-Advisory, Algorithmic Trading Using Python	
<b>Unit VII AI and Machine Learning in Financial Services-II</b>	<b>(5 Hrs)</b>
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](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](http://www3.weforum.org/docs/WEF_AI_in_Financial_Services_Survey.pdf)
- Artificial Intelligence applications in Financial services, <https://www.oliverwyman.com/content/dam/oliverwyman/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](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](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](https://www.sas.com/en_us/insights/analytics/machine-learning.html)

<b>Course Name: Emotional Intelligence for Managerial Success</b>	<b>Course Code: BBFT461B</b>
<b>Total number of Teaching hours: 45</b>	<b>Credit:3</b>
<b>Course Description:</b> Social and emotional learning, or SEL, programs have flourished in schools during the last decade. In this course the instructor (Emily Price) introduces you to the history and framings of social and emotional learning preK-12 curricula, as well as various elementary, middle, and high school SEL programs and associated research.	
<b>Course Learning Outcomes:</b> On having completed this course student should be able to:  CL01 Students are able to identify your own challenges in maintaining positive environments and collaborative relationships	

CL02 Students are able to analyze practical tools and skills for communicating effectively, assertively, and collaboratively	
CL03 Students are able to conclude how to choose perceptions and behaviors that will lead to positive outcomes.	
CL04 Students are able to adapt skills for conflict management and dealing with difficult situations	
<b>Pedagogy:</b> This course uses multiple pedagogies like in classroom activities, interactive lecture, students' discussions & presentations, HBR case and article analysis.	
<b>Unit I Social Emotional Well-Being for Students</b>	<b>(6 Hrs)</b>
Implementing restorative justice practices that help students process, learn, and grow from challenging encounters. Training students in mindfulness, and incorporating social and emotional learning into classroom curriculum	
<b>Unit II The Field of SEL: Purposes and Origins</b>	<b>(6 Hrs)</b>
Behavior Management and SEL, Culture, Context of SEL, Examining "Success": Goals, Measurement, and Outcomes in SEL, A Critical Examination of the Self Competencies	
<b>Unit III SEL Program Formats and Characteristics of Effective Programs -</b>	<b>(6 Hrs)</b>
Background information on SEL and its benefits, A summary of the evidence base for each of the 25 programs, Recommendations for adapting the programs for OST settings	
<b>Unit IV: Dimensions of Emotional Intelligence and Self-regulation</b>	<b>(6 Hrs)</b>
Five dimensions of emotional intelligence are self-awareness, self-regulation, motivation, empathy, and relationship management. Physical, emotional and cognitive self-regulation.	
<b>Unit V: Motivation and Empathy</b>	<b>(4 Hrs)</b>
Theories of motivation, self-motivation, peer-motivation, importance of motivation, Value of empathy, techniques for incorporating empathetic listening, empathetic body language, tactics for empathetic connection.	
<b>Unit VI: Social skills and Assessment</b>	<b>(2 Hrs)</b>
Cross cultural communication, adaptive thinking, empathetic design, using social skills in our day to day lives	
<b>References</b>	
<ol style="list-style-type: none"> <li>1. <a href="http://softskillsmalaysia.com.my/emotional-intelligence.html">http://softskillsmalaysia.com.my/emotional-intelligence.html</a></li> <li>2. <a href="https://www.businesstrainingworks.com/search-results/?wpv_post_search=social+skills">https://www.businesstrainingworks.com/search-results/?wpv_post_search=social+skills</a></li> <li>3. <a href="https://www.edx.org/course/empathy-emotional-intelligence-work-uc-berkeleyx-gg203x">https://www.edx.org/course/empathy-emotional-intelligence-work-uc-berkeleyx-gg203x</a></li> </ol>	

4. <https://www.skillsyouneed.com/ips/social-skills.html>

<b>Course Name: Strategic Management</b>	<b>Course Code: BBA531</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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.	
<b>Course Objectives:</b> <ol style="list-style-type: none"><li>1. To understand the fundamentals of crafting strategies</li><li>2. To equip students with skills of strategic management for agile businesses</li><li>3. To enhance decision making skills from a strategic perspective</li></ol>	
<b>Course Learning Outcomes:</b> 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	
<b>Pedagogy:</b> This course uses multiple pedagogies like case study discussions, interactive lecture, presentations, review of research article, in class group exercises and activities.	
<b>Syllabus</b>	
<b>Unit I Introduction to Strategic Management</b>	<b>(10 Hrs)</b>
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.	
<b>Unit II Types of Strategies</b>	<b>(08 Hrs)</b>
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.	
<b>Unit III Internal Audit</b>	<b>(08 Hrs)</b>

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, 21<sup>st</sup> century challenges in strategic management, guidelines 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

<b>Course Name- Taxation Laws</b>	<b>Course Code: BBA532</b>
<b>Total number of hours: 60 Hours</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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	

<p>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.</p>	
<p><b>Course Learning Outcomes:</b> On completion of this course students are expected to :-</p> <p>CLO 1: To understand the Income tax regime in India.</p> <p>CLO 2: To apply concepts of taxation in computation of Gross Taxable income, from various heads of income.</p> <p>CLO 3: To demonstrate knowledge in savings, investment schemes and other payments eligible for income tax exceptions.</p> <p>CLO 4: To assess Total income, compute Income tax payable and able to file e&gt;Returns.</p> <p>CLO 5: To interpret the effect of Goods and Service Tax and Customs law in India in business transactions.</p>	
<p><b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, practical problem solving, case study, discussions, presentations and written assignments.</p>	
<p><b>Unit I: Introduction to Income Tax</b></p>	<p><b>(7 Hrs)</b></p>
<p>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.</p>	
<p><b>Unit II: Income from Salary</b></p>	<p><b>(12 Hrs)</b></p>
<p>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.</p>	
<p><b>Unit III: Income from House property</b></p>	<p><b>(7 Hrs)</b></p>
<p>Annual value and NAV, Deductions from NAV under u/s 24, Practical problems</p>	
<p><b>Unit IV: Profits and Gains from Business and Profession</b></p>	<p><b>(8 Hrs)</b></p>
<p>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.</p>	
<p><b>Unit V: Capital Gains and Income from Other source</b></p>	<p><b>(6 Hrs)</b></p>
<p>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.</p>	
<p><b>Unit VI: Gross Total Income, Deductions from GTI, Total income and Tax liability (10 Hrs)</b></p>	

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.

<b>Course Name: Internship</b>	<b>Course Code: BBFT581</b>
	<b>Credits: 4</b>
<p><b>Course Description and Course Objectives</b></p> <p>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.</p> <ul style="list-style-type: none"> <li>• CO1 To expose and acclimatize the students to real time working environment in an organization</li> <li>• CO2 To enable the students to make effective business decisions based on data</li> <li>• CO3 To provide an opportunity to be in and on the job work setting where they have clearly defined targets and timelines</li> <li>• CO4 To improve the critical problem-solving skills required while entering the job</li> <li>• CO5 To develop interpersonal skills required to excel in the corporate</li> </ul>	

**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

**Recommended References**

NA

**Evaluation**

Project Report - 50 marks

Presentations - 50 marks

<b>Course Name: Financial Derivatives</b>	<b>Course Code: BBFT541</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b>	
<p>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.</p>	

**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, 9th edition.

**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, Cengage 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 - Dufresne & Miller, Oxford University Press, 2005

<b>Course Name: Trading Strategies</b>	<b>Course Code: BBFT542</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits:4</b>
<p><b>Course Description:</b></p> <p>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 &amp; financial services industry.</p> <p>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.</p> <p>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 &amp; 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 &amp; effective position management that would help the participant time the markets effectively.</p> <p><b>Learning Outcome:</b></p> <p>At the end of the course, the students will be able to;</p> <ul style="list-style-type: none"> <li>❖ Demonstrate understanding of strategic and sequential trade models of asymmetric information (RBTL2)</li> <li>❖ Make use of Limit and dealer orders and bidding with uncertain execution (RBTL3)</li> <li>❖ Apply ideas and back-testing (RBTL3)</li> <li>❖ Analyse different quantitative trading strategies (RBTL4)</li> <li>❖ Examine the impact of behavioural anomalies on trading strategies (RBTL4)</li> <li>❖ Evaluate Price action based trading strategies on multiple asset classes and securities (RBTL5)</li> </ul>	

❖ 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 and 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, 1<sup>st</sup> Edition, Oxford University Press
- Ernest P. Chan - Quantitative Trading, 1<sup>st</sup> Edition, John Wiley & Sons
- Keith Cuthbertson and Dirk Nitzsche - Quantitative Financial Economics 1<sup>st</sup> Edition, John Wiley & Sons

**Reference Books:**

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

<b>Course Name: Data Visualization</b>	<b>Course Code: BBFT543</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<p><b>Course Description:</b> 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 &amp; Dashboard using R &amp; 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.</p>	
<p><b>Course Learning Outcomes:</b> On having completed this course student should be able to:</p> <p>CLO1 Explore data using various statistical graphs          CLO2 Understand the principles of data visualization          CLO3 Build static &amp; interactive visualization reports          CLO4 Develop a model with live data visualization dashboards</p>	
<p><b>Pedagogy:</b> 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.</p>	
<p><b>Unit I Working with Data using TABLEAU</b> <span style="float: right;"><b>(8 Hrs)</b></span></p>	

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 ganimate, 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*, 3<sup>rd</sup> Edition, Packt Publishers.

<b>Course Name: Cryptocurrencies and Payments</b>	<b>Course Code: BBFT511</b>
<b>Total Teaching Hours for Semester: 30</b>	<b>Credits: GRADE</b>
<p><b>Course Objectives/Description:</b></p> <p>The objective of this course is to provide hands-on and practical implementation of Cryptocurrencies and Bitcoin, Blockchain Technology and Payments.</p> <p>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</p> <p>Learning Outcome:</p> <p>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)</p>	
<p><b>Unit I Introduction to Cryptocurrency (6 Hrs)</b></p> <p>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.</p>	
<p><b>Unit II Rules and Structure of Bitcoin (6 Hrs)</b></p> <p>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.</p>	

**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

<b>Course Name: Operations Management</b>	<b>Course Code: BBA631</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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.	
<b>Course Learning Outcomes:</b> 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.

<b>Course Name: Business Law</b>	<b>Course Code: BBA632</b>
<b>Total number of hours: 60 Hrs</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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.	
<b>Course Objectives:</b> 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.	
<b>Course Learning Outcomes:</b> 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.	
<b>Pedagogy:</b> This course uses multiple pedagogies like interactive lecture, students discussions and PPTs, research article, a field visit, and form of experiential learning.	
<b>Unit I Introduction to Law of Contracts</b>	<b>(12 Hrs)</b>
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.

<b>Course name: FinTech Regulations and RegTech</b>	<b>Course Code: BBFT633</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits:4</b>
<p><b>Course Objectives/Description:</b> The objective of the course is to introduce to the students the FinTech regulations and RegTech.</p> <ul style="list-style-type: none"> <li>• CO1 To explain the evolution of FinTech regulation and RegTech</li> <li>• CO2 To explain the regulations governing FinTech in India</li> <li>• CO3 To explain Regulatory sandbox</li> <li>• CO4 To explain the challenges associated with adoption of RegTech</li> </ul> <p><b>Learning Outcome: At the end of the course, students should be able</b></p> <ul style="list-style-type: none"> <li>• CLO1 To understand the evolution of FinTech regulation and RegTech (PLO 5.1)</li> <li>• CLO2 To analyse the regulations governing FinTech in India (PLO5.3)</li> <li>• CLO3 To understand Regulatory sandbox (PLO5.1)</li> <li>• CLO4 To assess challenges associated with adoption of RegTech (PLO5.4)</li> </ul>	
<p><b>Unit I Introduction to FinTech regulation and RegTech (12 Hrs)</b></p> <p>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.</p>	
<p><b>Unit II Regulations governing FinTech in India-I (6 Hrs)</b></p> <p>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</p>	
<p><b>Unit III Regulations governing FinTech in India-II (6 Hrs)</b></p> <p>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.</p>	
<p><b>Unit IV Regulatory Sandboxes -I (6 Hrs)</b></p> <p>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.</p>	
<p><b>Unit V Regulatory Sandboxes-II (8 Hrs)</b></p> <p>Regulatory sandbox in India, China, USA, Europe and other countries.</p>	
<p><b>Unit VI Challenges and Future Trends (8 Hrs)</b></p>	

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](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, János 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. Zetsche, 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>

<b>Course Name: International Finance</b>	<b>Course Code: BBFT641</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits: 4</b>
<b>Course Description:</b> 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.

<b>Unit III Balance of Payment</b>	<b>(6 Hrs)</b>
Trade and Balance of payment, Current items, Capital Items, Disequilibrium of balance of payments and rectification.	
<b>Unit IV Foreign Exchange Market</b>	<b>(12 Hrs)</b>
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.	
<b>Unit V Foreign Exchange Risk Management</b>	<b>(12 Hrs)</b>
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.	
<b>Unit VI Foreign Direct Investment and Corporate Strategy</b>	<b>(6 Hrs)</b>
Foreign Direct Investment- Meaning, Importance, Theory of Multinational Corporation, the strategy of multinationals, Designing a global expansion strategy.	
<b>Unit VII International Financial Institutions and Instruments</b>	<b>(6 Hrs)</b>
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.	
<b>Text Book</b>	
<ul style="list-style-type: none"> <li>Shapiro Alan. C., <i>Multinational Financial Management</i>, Prentice Hall, New Delhi.</li> </ul>	
<b>Reference Books:</b>	
<ul style="list-style-type: none"> <li>Jeevanandam. C. <i>Foreign Exchange and Risk Management</i>. New Delhi: Sultan Chand &amp; sons.</li> <li>Apte P.G, <i>International Financial Management</i>, Tata McGraw Hill, New Delhi.</li> <li>Rajwade A.V., <i>Foreign Exchange Risk Management</i>, Prentice Hall of India.</li> <li>Vij, M. <i>International Financial Management</i>. New Delhi: Excel Books.</li> </ul>	

<b>Course Name: Blockchain</b>	<b>Course Code: BBFT642</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits: 4</b>
<b>Course Objectives/Description:</b>	
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, Collision 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,

<b>Unit VII Block Chain Use cases in Finance</b>	<b>(12 Hrs)</b>
Trusted Data Transfer, Trade Markets, Capital Markets, Supply chain Financing, Insurance, Trade Finance	
<b>Text Book</b>	
<ol style="list-style-type: none"> <li>1. Bashir I. (2017) Mastering Blockchain. Packt Publishing.</li> <li>2. Swan M. (2015) Blockchain. Publisher O' Rielly.</li> </ol>	
<b>Reference Books:</b>	
<ol style="list-style-type: none"> <li>1. Crosby et al. (2015) Blockchain Technology, Sutardja Center for Entrepreneurship &amp; Technology Technical Report. Available at: <a href="https://scet.berkeley.edu/wp-content/uploads/BlockchainPaper.pdf">https://scet.berkeley.edu/wp-content/uploads/BlockchainPaper.pdf</a></li> <li>2. Yaga et al. (2018). Blockchain Technology overview. Available at: <a href="https://nvlpubs.nist.gov/nistpubs/ir/2018/NIST.IR.8202.pdf">https://nvlpubs.nist.gov/nistpubs/ir/2018/NIST.IR.8202.pdf</a></li> <li>3. PwC(n.d.) Blockchain a new catalyst for insurance. Available at: <a href="https://www.pwc.com/gx/en/insurance/assets/blockchain-a-catalyst.pdf">https://www.pwc.com/gx/en/insurance/assets/blockchain-a-catalyst.pdf</a></li> <li>4. Deloitte (2016). What is Blockchain.? Available at: <a href="https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/Innovation/deloitte-uk-what-is-blockchain-2016.pdf">https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/Innovation/deloitte-uk-what-is-blockchain-2016.pdf</a></li> <li>5. Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. Available at: <a href="https://bitcoin.org/bitcoin.pdf">https://bitcoin.org/bitcoin.pdf</a></li> <li>6. Popper, N. (2018). Confused About Blockchains? Here's What You Need to Know. <i>The New York Times</i>. Retrieved from: <a href="https://www.nytimes.com/2018/06/27/business/dealbook/blockchains-guide-information.html">https://www.nytimes.com/2018/06/27/business/dealbook/blockchains-guide-information.html</a></li> <li>7. Davies, S., &amp; Likens, S. (2018). Blockchain is Here. What's Your Next Move? <i>PwC</i>. Retrieved from <a href="https://www.pwc.com/blockchainsurvey">https://www.pwc.com/blockchainsurvey</a></li> <li>8. Blockchain the India strategy. <a href="https://niti.gov.in/sites/default/files/2020-01/Blockchain_The_India_Strategy_Part_I.pdf">https://niti.gov.in/sites/default/files/2020-01/Blockchain_The_India_Strategy_Part_I.pdf</a></li> <li>9. Cryptocurrencies: Looking Beyond the Hype. (2018). <i>Bank for International Settlements Annual Report 2018</i>, 91-109. Retrieved from <a href="https://www.bis.org/publ/arpdf/ar2018e.pdf">https://www.bis.org/publ/arpdf/ar2018e.pdf</a></li> </ol>	

<b>Course Name: Advanced R Programming</b>	<b>Course Code: BBFT643</b>
<b>Total Teaching Hours for Semester: 60</b>	<b>Credits:4</b>
<b>Course Objectives/Description:</b>	
<p>The objective of this course is to provide comprehensive knowledge of python programming language</p> <p>CO1 To analyze stock price using R programming.</p> <p>CO2 To analyse individual and portfolio returns using R programming.</p> <p>CO3 To analyze the Risk and Risk Adjusted portfolio performance using R programming</p> <p>CO4 To explain the implementation of factor models using R programming.</p> <p>CO5 To explain the Implementation of option pricing model using R programming.</p> <p>CO6 To explain the Implementation of Markowitz Mean Variance Optimization using R programming.</p>	

**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

<b>Course name: Algorithmic Trading and Robo-advisory</b>	<b>Course Code: BBFT611</b>
<b>Total Teaching Hours for Semester: 30</b>	<b>Credits: GRADE</b>
<p><b>Course Objectives/Description:</b></p> <p>The objective of this course is to provide hands-on and practical implementation of Algorithmic Trading and Robo advisory models.</p> <p>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</p> <p>CO2 Explain different Algorithmic trading strategies are employed by Fund Managers and Hedge Funds</p> <p>CO3 Explain how to perform Strategy Conceptualization &amp; understand various Trade Approaches</p> <p>CO4 Explain AFL Programming Language to build algorithms, how to various modules in a trading algorithm and how to backtest and optimize your strategy</p> <p>CO5 Explain how to create your own trading algorithms</p> <p>CO6 Explain how to implement Robo advisory frameworks</p> <p><b>Learning Outcome:</b></p> <p>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)</p> <p>CLO2 To compare different Algorithmic trading strategies employed by Fund Managers and Hedge Funds (PLO5.3)</p> <p>CLO3 To apply Strategy Conceptualization using various Trade Approaches (PLO5.2)</p> <p>CLO4 To apply AFL Programming Language to build algorithms (PLO5.2)</p> <p>CLO5 To Create your own trading algorithms (PLO5.5)</p> <p>CLO6 To implement Robo advisory frameworks (PLO5.5)</p>	
<p><b>Unit I Concept of Algorithmic Trading (5 Hrs)</b></p> <p>Markets structures, Algorithmic system architecture, evolution of Algorithmic trading, overview of different types of different algorithmic trading, Lifecycle of Algorithmic Trading &amp; Algorithmic Trading Architecture</p> <p><b>Unit II Types of Algorithmic Trading Strategies and Robo Advisory (5 Hrs)</b></p> <p>Price Action based Strategies, Momentum and Mean Reversion Strategies, Quantitative Portfolio Strategies, Volatility Trading Strategies, Statistical Arbitrage Strategies, Asset Allocation Strategies, Rebalancing Strategies</p> <p><b>Unit III Strategy Conceptualization &amp; Trade Approaches (5 Hrs)</b></p> <p>Overview of Trading Approaches, Order Types, Order Management, Position Sizing and Management, Concept of Back-testing and Optimization, Simulation on markets, Trade Management</p>	

<b>Unit IV Writing Algorithms</b>	<b>(10 Hrs)</b>
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	
<b>Unit V Backtesting and Optimization</b>	<b>(6 Hrs)</b>
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?	
<b>Unit VI Deploying Trading Algorithms in Financial Markets</b>	<b>(4 Hrs)</b>
Creating a Testing Plan, Operational considerations and pitfalls, Transaction Cost Analysis, Error Handling, Algorithmic Deployment, Contingency Planning	
<b>Text Books</b>	
<ul style="list-style-type: none"> <li>• Leshik and Cralle - An Introduction to Algorithmic Trading: Basic to Advanced Strategies. Publisher: Wiley</li> </ul>	
<b>Reference Books</b>	
<ul style="list-style-type: none"> <li>• Joel Hasbrough -Market Microstructure. Publisher: Oxford University Press</li> <li>• Sebastien Donadio, Sourav Ghosh , Learn Algorithmic Trading: Build and deploy algorithmic trading systems and strategies using python and advanced data analysis. Publisher: Packt Publishing</li> <li>• Perry J. Kaufman, A Guide to Creating A Successful Algorithmic Trading Strategy. Publisher: Wiley</li> </ul>	