JECRC™ UNIVERSITY

BUILD YOUR WORLD

School of Management

Syllabi and Course Structure

**Bachelor of Business Administration
Business Analytics (IoA)**

Academic Programmes

Batch (2022-2025)

Semester	1st	2nd	3rd	4th	5th	6th	Total	Min. Credit req. for degree
Credit	25	28	26	21	24	24	148	*10% Relaxation on MOOC, NPTEL, and SWAYAM.

Type	Foundation	Core	Specialization	Interdisciplinary	General
Total Credit	20	34	42	22	30

Semester I

FIRST SEMESTER						
Sub Code	Sub Name	L	T	P	C	Type
BBA615A	Principles of Management	3	1	-	4	F
BBA616A	Business Mathematics & Statistics	3	1	-	4	S
BBA617B	Business Economics	4		-	4	F
BBA618A	Fundamentals Of Management Accounting	3	1	-	4	ID
BBA619A	Fundamentals Of Financial Accounting	3	1	-	4	ID
DEN001A	Communication Skills	3		-	3	C
DIN001A	Culture Education – 1	2	-	-	2	G
	TOTAL	19	4	-	25	

Semester II

SECOND SEMESTER						
Sub Code	Sub Name	L	T	P	C	Type
BBA620A	Organization Behaviour	4		-	4	F
BBA621A	Principles of Marketing Management	4		-	4	F
BBA622A	Human Resource Management	4	-	-	4	C
BBA623A	Managing Finance in A Digital World	3	1	-	4	D
BBA624B	Excel Foundations	2	-	2	3	S
DEN002A	Professional Skill	3	-	-	3	G
DIN002A	Cultural Education – 2	2	-	-	2	G
DCH001	Environmental Studies (EVS)	3	-	2	4	F
	TOTAL	20	1	4	28	

Semester III

THIRD SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA625A	**Statistics with R**	2	1	2	4	S
BBA626A	**Structured Query Language**	1	1	4	4	S
BBA627A	Research Methodology	3	1	-	4	C
BBA628A	Human Resource Development	3	-	-	4	ID
BBA629A	Comp. Applications III (MS Project)	3	-	-	3	ID
***	Open Elective	3	-	-	3	G
DEN003A	Life skill – 1	-	-	2	2	G
DIN003A	Value education-1	2	-	-	2	G
	TOTAL	**16**	**3**	**8**	**26**	

Semester IV

FOURTH SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA630A	Operation Management	4	-	-	4	C
BBA631A	Python Programming	2	1	2	4	S
BBA632A	SaS and Tableau	2	1	2	4	S
BBA633A	Corporate governance and social responsibility	3	-	-	3	C
***	Open Elective	3	-		3	G
DEN004A	Life Skills - 2 (Aptitude)	-	-	2	2	G
DIN004A	Value Education – 2	3	-	-	1	G
	TOTAL	**17**	**2**	**6**	**21**	

FIFTH SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA634A	International Business Management	4	-	-	4	C
BBA635A	Legal Environment for Business	3	-	-	3	ID
BBA636A	Corporate Strategy	3	-	-	4	C
BBA637A	Machine Learning and Artificial Intelligence	2	1	2	4	S
BBA638A	Big Data Analytics	2		4	4	S
BBA699A	Summer Training	-		10	05	G
	TOTAL	**14**	**1**	**16**	**24**	

Semester VI

SIXTH SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA639A	Customer relationship management	4	-	-	4	C
BBA640A	Project Management	4	-	-	4	C
BBA641A	Leadership Skills	3	-	-	3	S
BBA642A	Natural Language Processing	2	-	4	4	S
BBA643A	Social Media Analytics	2	-	4	4	S
BBA644A	Project Work	-	-	6	5	G
	TOTAL	**15**	**-**	**14**	**24**	

Program Objectives

POb1: To educate students on comprehensive business administration concepts alongside business analytics specialization so as to develop them to be a business leader and successfully manage organizations.

POb2: To imbibe and train the students in the required analytical, technical, entrepreneurial, business skills to be an effective management professional.

POb3: To equip the students with the professional competence in the field of business analytics along with the several technologies and tools associated with it.

POb4: To prepare and develop the students technically and analytically with regards to various business domains and hone their managerial competencies and business acumen while attaining a holistic understanding.

POb5: To inculcate the view of the industrial and organizational establishments and their functionalities for taking viable decisions.

Program Outcomes

PO1: Develop as an individual with the conceptual as well as practical knowledge in the field of analytics, comprising of business studies and metrics, statistics, information technology and management.

PO2: Develop the ability to adapt to the rapidly changing industry with the newly learned applied skills in the domains of analytics and business studies.

PO3: Develop critical thinking skills to take up the role as Business Analysts and Professionals in the Business Domains.

PO4: Apply analytics to analyze and interpret data using latest analytical tools to solve complex business problems pertaining to Finance, Marketing, Commerce, etc.

PO5: Perform Descriptive, Predictive and Prescriptive Analysis based on structured, semi-structured and unstructured data types.

PO6: Classify and employ the use of various tools and programming languages such as SQL, SAS, Python and R Programming to implement and deploy analytical models and algorithms.

PO7: Articulate, illustrate and demonstrate the ability to develop advanced analytical models based on specialized domains such as Social Media Analytics, Big Data Analytics, Machine Learning, etc.

PO8: Compare, evaluate and report the inferences obtained from different machine learning algorithms and gain the ability to incorporate them so as to achieve proper decision making with regards to the said business domain such as Finance, Marketing, Accounting, Commerce, etc.

PO9: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO10: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO11: Elicit views of others, mediate disagreements and help reach conclusions in group settings

PO12: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering

BBA – Detailed Syllabus

Semester 1

FIRST SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA615A	Principles of Management	3	1	-	4	F
BBA616A	Business Mathematics & Statistics	3	1	-	4	S
BBA617B	Business Economics	4		-	4	F
BBA618A	Fundamentals Of Management Accounting	3	1	-	4	ID
BBA619A	Fundamentals Of Financial Accounting	3	1	-	4	ID
DEN001A	Communication Skills	3		-	3	C
DIN001A	Culture Education – 1	2	-	-	2	G
	TOTAL	19	4	-	25	

PRINCIPLES OF MANAGEMENT

SUBJECT CODE: BBA615A
CREDITS: 4

Objective: The objective is to provide an understanding of basic concepts, principles and practices of management. The aim is to inculcate the ability to apply multifunctional approach to organizational objectives.

Unit I

Management: Concept and Need, Managerial Functions – An overview; Coordination: Essence of Management. Evolution of Management Thought, Classical Approach – Taylor, Fayol, Neo-Classical and Human Relations Approaches – Mayo, Hawthorne Experiments, Behavioural Approach, Systems Approach, Contingency Approach, MBO, Hammer and Champy- Business Process Re-engineering, Porter's Five-forces' Model.

Unit II

Types of Plan; Strategic planning – Concept, process, Importance and limitations; Environmental Analysis and diagnosis (Internal and external environment) – Definition, Importance and Techniques (SWOT/TOWS/WOTSUP, BCG Matrix, Competitor Analysis); Decision-making: Process and Techniques; Perfect rationality and bounded rationality

Unit III

Concept and process of organizing – An overview, Span of management, Different types of authority (line, staff and functional), Decentralization, Delegation of authority; Formal and Informal Structure; Principles of Organizing; Network Organisation Structure. Emerging types..

Unit IV

a. Staffing: Concept of staffing - Recruitment and Selection; Orientation; Training and Development; Career Development; Performance Appraisal. b. Motivation & Leadership: Concept, Importance, extrinsic and intrinsic motivation; Major Motivation theories - Maslow's Need-Hierarchy Theory; Hertzberg's Two-factor Theory, Vroom's Expectancy Theory. Leadership: Concept and Importance; Leadership Styles; c. Communication: Concept, purpose, process; Oral and written communication; Formal and informal communication networks, Barriers to communication, Overcoming barriers to communication. Emerging trends in communication.

Unit V

Concept, Process, Limitations, Principles of Effective Control, Major Techniques of control - Accounting Ratio Analysis, HR Metrics, ROI, Budgetary Control, EVA, PERT/CPM. Emerging issues in Management.

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Business Mathematics & Statistics
SUBJECT CODE: BBA616A
CREDITS: 4

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Course Objective :
The Objective is to provide, to expose students to basic statistical and mathematics concepts, to organize and present numerical data, to understand the Venn Diagrams, Sets, Intervals, Matrices, Vector Algebra and to compute correlation, interpret and to understand the construct various index numbers.

Unit 1 - Set Theory
Introduction to Sets, Sets and their Representation, Tabular or Roster Method, Rule Method or Set Builder, Empty or Void or Null Set, Finite sets and Infinite sets, Proper Subset, Improper Subset, Power Set, Universal Set, Open Interval, Closed Interval, Semi-Open or Semi Closed intervals, Infinite Intervals, Venn Diagrams, Operations on Sets, Union, Intersection of Sets, Disjoint Sets, Difference of Sets, Symmetric Difference of Sets, Complement of a Set, Laws of Algebra of Sets.

Unit 2 - Matrices and Determinants
Definition of a Matrix, Addition & Subtraction of Matrices, Multiplication of Matrices, Transpose of a Matrix. System of linear equations, Gauss elimination method, Inverse of a Matrix, Determinants, Determinants of order one and more, Properties of Determinants, Multiplication of two Determinants, Minors and Cofactors, Cramer's rule for solution of linear equations, Adjoint of a Matrix, Rank of a Matrix.

Unit 3 - Vector Algebra
Vectors, Types of Vectors, Operations on Vectors, Addition of Vectors, Properties of Operation of Addition, Subtraction, Properties of Operation of Subtraction, Multiplication by a scalar, Orthonormal Bases, Product of Two Vectors, Scalar Product or Dot Product of Two Vectors, Properties of Scalar Product, Vector Product or Cross Product, Properties of Vector Product.

Unit 4 - Statistics
Introduction to Statistics, Scale of Measurement, Nominal, Ordinal, Interval & Ratio. Frequency Distribution, Bar Chart, Pie Chart, Histogram, Frequency Polygon, Ogive, Pareto Chart, Stem-and-leaf Chart, Scatter Plot, Measure of Central Tendency, Properties, Advantages and Disadvantages of Arithmetic Mean, Geometric Mean, Harmonic Mean. Positional Averages, Median, Quartiles, Deciles, Percentiles & Mode. Measure of Dispersion, Range, Interquartile Range, Standard Deviation.

Unit 5 - Probability
Introduction to Probability, Experiment, Event, Compound Event, Independent and Dependent Events, Mutually Exclusive Events, Equally Likely Events, Marginal, Union, Joint, Conditional Probability, Basic Probability Rules, General Rule of Addition, General Rule of Multiplication, Concept of Bayes' Theorem.

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Business Economics
SUBJECT CODE: BBA617A
CREDITS: 4

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Course Objective:

The Objective is to provide, to understand the key concepts of macroeconomic concepts of business, to know the factors determining supply and demand in various market structure, to know the various cost and revenue concepts under the functioning of various types of industries and to know main financial markets and institutions in facilitating commerce & development.

UNIT1 – Macro Economic context of business

Determination of macroeconomic phenomena – equilibrium national income – growth in national income, price, inflation, unemployment, trade deficits and surpluses – stages of trade cycle – principles of public finance –effects of changes in the economic growth rate, interest rates. Government expenditure and taxation – index numbers

Concept of balance of payments – free trade and protectionists instruments policy, impact of exchange rate policies on business

UNIT2 – Institutional context of business

Nature of globalisation and factors driving it (improved communications, political realignments, growth of global industries and institutions, cost differentials). Major institutions promoting global trade and development - Principal institutions encouraging international trade – globalisation of business – offshoring – industrial relocation – emergence of growth markets – main trading agreements and trading blocks. Identify the impacts of economic and institutional factors using the PESTEL framework.

UNIT3 – Micro Economic And Organisational Context Of Business

Types of organisations – public, private & mutually owned organisations – types of Not for Profit Organisations – shareholders wealth management – principal – agent problem and its impact on the decisions of the organisation. Price mechanism – determinants of demand and supply – price elasticity of demand – effects of price elasticity of demand on Total revenue curve#. Souces of internal and external economies of scale- outsourcing decisions and costs – minimum and maximum price policies in good and factor markets.

UNIT4 – Informational context of business

Data & information, graphs, charts and diagrams – scatter graphs, histograms, bar graphs, ogives. Big data and data analytics in business applications – time series analysis – correlation co-efficient – regression equation to predict the dependent variables – forecasting

Unit5 – Financial Context of Business

Financial intermediaries – commercial banks – financial assets and financial markets – foreign exchange markets. Financial mathematics – simple & compound interests – annuities & perpetuities – Discounting techniques – NPV and IRR. Interest rates – interest rate changes on market demand – concepts of forwards, futures and options

BBA I SEM
Fundamentals of Management Accounting
SUBJECT CODE: BBA618A
CREDITS: 4

Course Objective:

The objective is to familiarise the students with the mechanics of to understand the management accounting, students learn the methods of costing, overheads and ascertain the various types of budget and approaches to analyse the profits.

Unit1 - The Context Of Management Accounting

Purpose of management accounting and the role of the Management Accountant-need for management accounting-characteristics of financial information for operational, managerial and strategic levels within organisations- role of the management accountant-relationships between the management accountant and the organization's managers- The Global Management accounting principles. Role of CIMA as a professional body for Management Accountants-role of CIMA in developing the practice of management accounting

Unit2 - Costing

Cost identification and classification-classification of costs in relation to output classification of costs in relation to activity level appropriate costs having identified cost behaviour- classification of costs in relation to decisions – segregation of fixed and variable costs from semi-variable costs – relevant and irrelevant costs.

Overheads – overhead cost estimates – treatment of direct and indirect costs – overhead absorption rate – under and over absorption of overheads – Marginal cost pricing and full cost pricing.

Unit3 – Planning And Control

Preparation of budgets for planning and control-need for the preparation of forecasts and Plan-Preparation of functional budget- budget statements-impact of budgeted cash surpluses and shortfalls on business operations-preparation of flexible budget-Calculate budget variances – concepts of Zero based Budget, Incremental budgeting, Rolling Budget.

Application of variance analysis to reconcile budgeted and actual profits in a marginal Format-Principles of standard costing-Calculation of variances for materials, labour, variable overheads, sales prices and sales volumes-Preparation of a statement that reconciles budgeted profit with actual profit calculated using marginal costing- reasons for variances and the inter-relationships between variances

Unit4 – Performance Measurement And Reporting

Calculation of appropriate financial and non-financial performance measures-need for appropriate performance measures-Calculation appropriate financial and nonfinancial performance measures in a variety of contexts

Preparation of accounts and reports for manager-integration of the cost accounts with the financial accounting system-Prepare a set of integrated accounts, showing standard cost variances- preparation of accounts related to Job and batch costing-Cost accounting statements for management information in manufacturing, service and not-for-profit organisations.

Unit5 - Decision Making

Risk and uncertainty - use of expected values and joint probabilities in decision making-calculate summary measures of central tendency and dispersion for both grouped and ungrouped data-Arithmetic mean, median, mode, range, variance, standard deviation and coefficient of variation for both ungrouped and grouped data-Graphs/diagrams and use of normal distribution tables – decision tree approach.

Short term decision making - The use of appropriate techniques for short-term decision making-breakeven charts, profit volume graphs, breakeven point, target profit, margin of safety- Make or buy Decisions-Calculate the profit maximizing sales mix after using limiting factor analysis-

Use of appropriate techniques for long-term decision making - The time value of money-financial mathematics - Discounting, compounding, annuities and perpetuities-Calculate the net present value, internal rate of return and payback for an investment or project

Fundamentals of Financial Accounting
SUBJECT CODE: BBA619A
CREDITS: 4

Course Objective

To understand the basics of accounting and concepts of double entry system. The students understand book keeping and preparation of final accounting statements for business organizations.

Unit1 - Accounting Principles, Concepts And Regulations

The principles and concepts of financial accounting - need for accounting records; Identify the needs of different user groups; Distinguish between the financial and management accounts; capital and revenue, cash and profit, income and expenditure, assets and liabilities; the underlying assumptions, policies; the accounting equation.

Unit2 - Recording Accounting Transactions

Accounting records; Prepare the books of prime entry; Applications the principles of double- entry Bookkeeping; nominal ledger accounts; the trial balance; the nature of accounting errors,prepare accounting entries for the correction of errors; Prepare accounting entries for noncurrent assets; Prepare a non-current asset register.

Unit3 - Accounting Reconciliations

Bank reconciliation statements; Prepare petty cash statements under an imprest system; Prepare sales and purchase ledger control account reconciliations.

Unit4 - Preparation Of Accounting Entries For Specific Transactions

Calculate sales of tax; Prepare accounting entries for sales tax; Prepare accounting entries for payroll; Prepare accounting entries for the issue of shares.

Unit5 - Preparation Of Financial Statements For Single Entities And Its Analysis

Prepare accounting adjustments. Prepare accounting entries for accruals and prepayments; Prepare accounting entries for irrecoverable debts and allowances for receivables; Prepare accounting entries for inventories.
Prepare basic manufacturing accounts. Prepare financial statements from a trial balance; Prepare financial statements from incomplete records; Prepare a statement of cash flows. Identify information provided by accounting ratios the information provided by the calculation of accounting ratios reasons for the changes in accounting ratios.
Calculation of profitability ratios, liquidity ratios, risk ratios.

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Communication Skills
SUBJECT CODE: DEN001A
CREDITS: 3

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BBA. (common to all disciplines)-I Semester

Course Objectives

1. To enhance English language competence in reading, writing, listening and speaking.
2. Switch the approach from teacher-centred to student-centred one.
3. Minimize the Grammar Translation Method of ELT while trying to replace it with Direct Method.
4. Introducing the Communicative Method of ELT and focusing the teaching pedagogy on the student-centred learning rather than on the teacher-centred learning.
5. To link communication skills with the organizational behaviour.
6. To inculcate skills that are very much required for employability and adjust in the professional Environment.

Course Outcomes (CO):
At the end of this course students will have:
CO1: Ability to design a language component or process to meet desired need within realistic, Constraints such as economic, environmental, social, political, ethical, scenario CO2: Ability to analyze the usage of English words in different contexts.
CO3: An understanding of technical and academic articles' comprehension.
CO4: The ability to present oneself at multinational levels knowing the type of different standards of English

Syllabus: Theory

UNIT 1	Basics of Organizational Communication: Communication: Meaning, Elements, Process, Types, Flows of Communication and Barriers to communication, basics of professional communication and professional ethics including Time-management, Respect for deadlines and corporate culture
UNIT 2	Basic Writing Skills: Parts of Speech, Elements of Sentences, Sentence types based on meaning and structure, Tenses, Voice, Narration
UNIT 3	Composition:, Basics of Letter Writing, Email Writing, Précis Writing, Essay Writing,
UNIT 4	Vocabulary Building: Word Formation from one word form to another, Origin of Words, Affixes, Synonyms, Antonyms
UNIT 5	Professional and Technical Communication : Basics of Drafting a CV/Resume, Basics of Telephonic Interview and Online Interview, Basics of PPT presentation

Syllabus: Lab

UNIT 1	Basics of Organizational Communication: Role Plays and presentations related to different corporate related matters- How to greet, how to deny politely, how to handle different types of problems related to the types of communication, how to avoid grapevine and use it in a positive manner, how to keep positive mindset during work pressure, Activities to teach Time Management, Following Deadlines etc
UNIT 2	Write Dialogue from the different contexts of corporate culture: Employee and

	Employer, Customer and Service Provider, Customer and Product Review, How to react on Day to day corporate interactions- Memo, Notice, Email, Circular etc
UNIT 3	Composition:, Letter Writing, Email Writing, Précis Writing, Essay Writing, Practice sessions by using Ms Word- Following the process of DraftingRedrafting, Proof Reading, Editing etc
UNIT 4	Vocabulary Building: Word Formation from one word form to another, Origin of Words, Affixes, Synonyms, Antonyms- Using video clips and comprehension passages to find out the difference between words, similarity between words, origin of words, neologism concepts etc
UNIT 5	Professional and Technical Communication : Drafting a CV/Resume, Practice Sessions on Telephonic Interview and Online Interview, Presenting projects, proposals etc through PPT Making,

Methodology for Evaluation

1. Internal Assessment (Theory)
a) Home Assignments: One from each Unit   : 15 Marks
b) In Semester Tests (Minimum two)   : 30 Marks
c) Attendance   : 05 Marks
2. Term End (Theory)   : 50 Marks
3. Internal Assessment (Lab)
(a) Daily Performance in the Lab   : 50 Marks
4. Term End (Lab)   : 50 Marks

Suggested Reading:

1. Practical English Usage. Michael Swan. OUP. 1995
2. Remedial English Grammar. F.T. Wood. Macmillan. 2007
3. Raymond V. Lesikar and Marie E. Flatley. Basic Business Communication, Tata McGraw Hill Pub. Co. New Delhi. 2005. Tenth Edition.
4. On Writing Well. William Zinsser. Harper Resource Book. 2001
5. Study Writing. Liz Hamp-Lyons and Ben Heasly. Cambridge University Press. 2006
6. Communication Skills. Sanjay Kumar and PushpLata. Oxford University Press. 2011.
7. Exercises in Spoken English. Parts. I-III, Hyderabad. Oxford University Press
8. Syamala, V. Speak English in Four Easy Steps, Improve English Foundation Trivandrum: 2006

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Cultural Education I
SUBJECT CODE: DIN001A
CREDITS: 2

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Course Objectives
1. To make the students feel gratitude towards the rich religious and cultural heritage of
India.
2. To understand the role of great personalities and movements in the progress of India.
Course Outcomes (CO):
At the end of this course students will have:
CO1: Ability to acknowledge and appreciate the richness of Indian Culture
CO2: Ability to represent the culture ethics in real life

UNIT-I Holy Scriptures-A

1. Introduction to Vedanta and Bhagavad Gita, Goals of Life – Purusharthas, Introduction to different Dhram Granthas (Various religious scriptures from Hindu, Muslim, Christian, Bodh, Jain religions)
2. Introduction to Yoga, Overview of Patanjali's Yoga Sutras

UNIT-II Society and Culture-I

3. Introduction to Indian Culture and Major Symbols of Indian Culture
4. Major Indian Cultural and Ethical Values- Respect, Compassion, Kindness, Forgiveness, Introspection, Honesty, Justice, Loyalty, Devotion, Self Sacrifice, Hospitality, Vasudhev Kutumbkum

UNIT-III India in Progress-I

5. Education , Science and Technology in Ancient India
6. Values from Indian History- War of Mahabharta,War of Kalinga, Freedom Struggle of india Major Farmer Movements, Major Religious and Social Upliftment Movements

UNIT-IV Great Indian Personalities-I

7. Life and works of the Great People of Ancient India- Sushruta, Dadhichi, Ashtvakra, Anusuya, Panini, Charaka, Kalidas, Aryabhatta, Samudragupta, Ashoka, Chandragupt Mourya, Porus, Satyabhama, Dhruv, Prahlad,Chankya,Varahmihira, Bhism, Karan, Dronacharya, MeeraBai, Surdas, Dadudayal, Kabir, Mahatma Budhha, Mahavir,Guru Nanak Dev, Guru Gobind Singh, Mohammad Saheb, Jesus Christ, Veer Shivaji, MaharanaPratap, Maharani LaxmiBai, MaharaniPadmini, Hadi Rani ShalKanwar, PannaDhai

*Each student shall write a detailed Report/ Critique on one topic from section -A to C and one Great Personality from Section- D leading to publication of Newspaper/ Magazine article or a review paper in a Research Journal. In addition to s/he will be required to make a Power Point Presentation on the learning and face Viva-voce by committee of teachers.

Suggested Reading:

1. Glory of Indian Culture (English) Paperback byGiriraj Shah
2. Historicity of Vedic and Ramayan Eras: Scientific Evidences from the Depths of Oceans to the Heights of Skies by SarojBala , Kulbhushan Mishra
References
https://knowindia.gov.in/culture-and-heritage/lifestyle-values-and-beliefs.php

Semester II

SECOND SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA620A	Organization Behaviour	4		-	4	F
BBA621A	Principles of Marketing Management	4		-	4	F
BBA622A	Human Resource Management	4	-	-	4	C
BBA623A	Managing Finance in A Digital World	3	1	-	4	D
BBA624B	Excel Foundations	2	-	2	3	S
DEN002A	Professional Skill	3	-	-	3	G
DIN002A	Cultural Education – 2	2	-	-	2	G

DCH001	Environmental Studies (EVS)	3	-	2	4	F
	TOTAL	**20**	**1**	**4**	**28**	

ORGANIZATIONAL BEHAVIOUR
SUBJECT CODE: BBA620A
CREDITS: 4

Course Objective:
Understand how the organisations can be managed effectively considering the behaviour of various stakeholders of an organisation and analysing the skills required for the future advantage of an organisation.

Unit 1: Organization behaviour – an introduction

Meaning of organizations – Nature of organization behaviour – Basics of organization behaviour – Scope and evolution of organizational behaviour – Organizational arrangements and Organization behaviour – Key terminologies in Organization Behaviour - Organizational Behaviour Model (OB Model)

Unit 2: Individual behaviour, intelligence and personality

Meaning of individual behaviour – personal and environmental factors – Models of individual behaviour – nature and types of intelligence – theories and measurement of intelligence – Intelligence factors – intelligence in the context of organizational behaviour.

Nature and determinants of personality – Personality traits – Personality in the context of Organization Behaviour

Unit 3: Motivation and work stress

Nature and importance of motivation – challenges and theories of motivation – Motivation and organizational culture – quality of work life – rewards and behaviour modification – problem employees – employee engagement

Meaning of work stress – work stress model – stress management – Stress and organizational behaviour

Unit 4: Group and team behaviour

Nature and types of groups – Group dynamics and Organization behaviour – determinants of group dynamics – Importance of group dynamics in an organization – group development strategies – Group motivation – Group structuring and decision making.

Meaning of team – differences between group and team – Types and benefits of teams – effective team management – team conflicts and resolution – Team development and Organizational Behaviour

Unit 5: Organizational culture and leadership

Meaning of leadership – leadership vs management – leadership styles and theories – formal and informal leadership – Ethics and leadership – leadership and organizational culture – Sustaining culture – changing organizational culture – workplace behaviour – Ethics of power.

Course outcomes:
CO 1: Understand the basic of organizational behaviour in the context of the dynamic environment.

CO 2: Understanding the role of individual behaviour, intelligence and personality in the context of organizational development.
CO 3: Understanding importance of rewarding and motivating the stakeholders and managing the stress to effectively manage the organizational performance
CO 4: Understand the role of group and team dynamics in the current organizational environment
CO 5: Understand the importance of perception into organizational culture, leadership and ethics in an organizational development.

Principles of Marketing Management
SUBJECT CODE: BBA621A
CREDITS: 4

Course Objective:

To provide a holistic orientation of emerging marketing trends with the practical skills required to analyze consumer data, create marketing campaigns, develop digital/social media content and make successful marketing decisions and to equip students to be innovative, technically competent, and think critically through experiential and student-centric teaching approach.

Unit 1: Fundamentals of Marketing Management

Meaning & Definition of marketing -Role of Marketing -Relationship of Marketing with other functional areas -Market Concepts -Product concept -Selling concept -Marketing concept -Societal marketing concept -Approaches to marketing management -Functions of marketing -Scope of marketing: goods, services, events, organizations, etc. -Emerging trends in marketing.

Unit 2: Marketing Plan

Marketing Environment: Concept -Macro-environmental forces -The changing marketing environment -Analyzing needs and trends in Macro-Environment: Economic Environment, Technical Environment, Political, Environment and Socio-cultural Environment. Introduction to The Marketing Plan –Definition –Nature –Objectives -Structure of The Marketing Plan -The Process of marketing plan -Critical elements of external and internal analysis of Marketing Plan -Implementation of Marketing Plan.

Unit 3: Marketing Mix

Introduction to marketing mix -Marketing mix implementation: short term and long term tactics – Product: meaning, elements, product mix -Product mix strategies -Product line -Product lifecycle Product planning -New product development -Failure of new product -Product branding -Branding strategy and packaging –Pricing: Objectives -Factors influencing pricing policy -Methods of pricing - Pricing strategy. Physical Distribution: Meaning -Factors affecting channel selection -Types of marketing channels –Promotion: Meaning and significance of promotion – Personal selling & advertising (meaning only).

Unit 4: Buyer behavior

Market Segmentation: Levels and patterns of market segmentation -Bases for segmenting markets - Market segmentation - Targeting - Product Positioning - Types and bases of positioning - Product Differentiation -Meaning of consumer, customer, consumer behaviour and buying motives -Factors influencing buyer

behavior -Factors that influence consumer purchasing decisions -Buying process -Stages of the consumer buying behavior -Business to Business (B2B) buying process -Key factors influencing B2B purchasing decisions -Differences between Consumer goods and Industrial goods

Unit 5: Digital Marketing

Introduction to Digital Marketing –Concept of Digital Marketing -Difference between traditional marketing and digital marketing -Trends and scenarios of the industry -Planning and Creating a

Website -Search Engine Optimization (SEO), Search Engine Marketing (SEM), of Social Media Marketing, Blogging, Content Strategy, Email Marketing.

Course outcomes:
CO1: To understand the role and importance of marketing
CO2: Develop a marketing plan to generate better sales and profits
CO3: Formulate the product and price mix based to serve consumer needs.
CO4: Identify the factors influencing consumer behavior and purchase decision
CO5: Outline the digital tools to develop marketing strategies for the new age consumer

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Human Resources Management
SUBJECT CODE: BBA622A
CREDITS: 4

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Course Objective:

The objective of the subject is to understand the importance of effective and efficient management of human people in an organization to help the business gain a strategic and competitive advantage.

Unit1 Human Resource Management (HRM) - Introduction

Meaning of Human resources – Meaning of HRM – nature and functions of HRM – HR Manager – qualities and qualifications – Strategic Huma Resource Management – Strategic management – corporate level strategies – Strategic HR issues – Organizational and HR strategies -

Unit2 Job Analysis, team analysis and Job Environment

Meaning of HR terms – Job design, job rotation, job enlargement, job enrichment, team work – Need for job analysis and team analysis – Job description – job specification – job sharing – ergonomics – employee empowerment – Job redesign

Unit3 Human Resource Planning

Meaning, features and scope of Human Resource Planning – process of and steps in Human Resource Planning – Barriers to effective implementation of Human Resource Planning – Human Resource Planning Vs Strategic planning – Human resource planning through people, finance and technology.

Unit4 Performance appraisal and compensation management

Meaning, need and purposes of performance appraisal – methods of performance appraisal – Group appraisal –Behavioral aspects of performance appraisal – Concept of MBO – the balanced score card – managerial appraisal – challenges of performance appraisal.

Concepts of transfer, promotion and demotion – types of promotions – types of transfer – reasons for demotion – concept of absenteeism – calculation and causes of absenteeism rate – measures to reduce absenteeism – concept of labour turnover – types and causes of labour turnover.

Unit- 5 Training and Development

Assessment of training needs – training methods - Apprenticeship, understudy, job rotation, vestibule training, case study, role playing, sensitivity training, In-basket, management games, conferences and seminars, coaching and mentoring, management development programs; Training process outsourcing.

Course Outcomes:
CO1: Understand the role and importance of Human resource Management in effectively managing the human capital in an organization.
CO2: Understand the key terminologies in the context of Human Resource Management and their scope and benefits in a practical environment
CO3: Understand the importance of Human resource planning in the context of people, technology and finance
CO4: Understand the importance of performance appraisal and other concepts in the area of Human resource management
CO5: Understand the methods and purposes of training and development activities to gain a strategic advantage

Managing Finance in a Digital World
SUBJECT CODE: BBA623A
CREDITS: 4

Course Objective

To understand the central role that finance plays in an organisation, and how and why technologies used impact the finance function, how to use and examine data collected and processed by machines to create and preserve value for organisations and how the finance function is structured and shaped, and how it interacts with other parts of the organisation to achieve the objectives of the whole organisation.

Unit1 - ROLE OF FINANCE FUNCTION
Different types of organisations – functions of an organisation – the roles of finance function – enabling value creation through planning, forecasting and resource allocation – data collection – types of analysis to produce insight – potential impact of technology - How finance communicates to influence key stakeholders

Unit 2 – TECHNOLOGY IN DIGITAL WORLD
Characteristics and Dynamics of Fourth Industrial Revolution – Cloud Computing – Big Data Analytics – Process Automation – Artificial Intelligence – Data Visualisation – Block chain – Internet of things – Mobile – 3-D Printing – New areas of Finance to focus on – Areas of Finance susceptible to automation – Digital mindsets for Finance – Ethics of the use of technology

Unit 3 - DATA AND INFORMATION IN A DIGITAL WORLD
Using Data for: Decision making, Understanding the customer, Developing-customer value proposition, Enhancing operational efficiency, Monitoring data, Ethics of Data usage – Assessment of Data needs – Extraction, Transformation and Loading (ETL) Systems - Business Intelligence (BI) systems – Big Data Analytics – Data visualization

Unit 4 – SHAPE AND STRUCTURE OF FINANCE FUNCTION
Structure of Finance function from the roles that generate information to the roles that turn information into insights and communicate insights to decision makers – Hierarchical shape of Finance function – Shared Services and Outsourcing of Finance Function – Retained Finance – Automation & Diamond shape of Finance Function – Finance operation to generate information and preliminary insight – FP & A , Taxation, corporate reporting, decision support to produce insights – Business partnering to influence organisations to make appropriate decisions – Leading Finance team to create the required impact for the organisation.

Unit 5 – FINANCE INTERACTING WITH ORGANISATIONS:
Process management – product and service management – supply chain management Market segmentation – big data analytics in marketing – channel management – sales forecasting & management Staff acquisition – staff development – performance management – motivation and reward systems IT infrastructure – IT systems support – cost and benefits of IT systems

Course Outcome:

CO1: To understand how the finance function enables, shapes and narrates value creation thorough planning, forecasting, resource allocation, performance management and financial reporting.

CO2: To understand key technologies and their impact on an organisation including, cloud computing, big data, data analytics, process automation, artificial intelligence, data visualisation, block chain, internet of things.

CO3: To understand how the finance function can use data and information to assist operations in enhancing operational efficiency.

CO4: To understand the contemporary transformation of the finance function in the digital era from roles that generate information to roles that turn information into insight and how finance communicates that insight to decision-makers.

CO5: To understand how the finance function helps manage operations, marketing and Sales, HR and IT functions in creating and preserving value.

Excel Foundations
Subject Code: BBA624A
CREDITS: 3

Course Objective:

This module will enable the students to learn and start working with MS Excel right from the basics to Tables, Templates and Printing of their work. Excel being the most extensive tool used for analysis, this module will equip students with hands-on skills on excel operations.

Unit 1: Introduction
Workbooks and Worksheets, Moving Around a Worksheet, Ribbon tabs, Types of commands on the Ribbon, Using Shortcut Menus, Working with Dialogue Boxes, Task Panes, Getting started on your worksheet, Creating a chart, Printing your worksheet, Saving your worksheet, Exploring Data Types, Modifying Cell Contents, Deleting, Replacing, Editing of a cell. Some handy data entry techniques, Number Formatting.

Unit 2: Worksheet Operations

Moving and resizing windows, Switching among windows, Activating a worksheet, Adding, Deleting a worksheet, Changing a sheet tab color, Rearranging your worksheets, Hiding, un-hiding a worksheet, Worksheet View, Comparing sheets side by side, Selecting ranges, complete rows and columns, noncontiguous ranges, multi-sheet ranges, special types of cells. Copying or Moving Ranges. Paste Special dialogue box, Adding comments to cells.

Unit 3: Tables and Formatting

Creating a Table, Changing the Look of a Table, Navigating in a Table, Selecting parts of a Table, Adding, Deleting new rows or columns, Moving a Table, Working with the Total Row, Removing duplicate rows from a table. Sorting and filtering a table, Converting Table into Range. Formatting tools on the Home tab, Mini Toolbar, Fonts, Text Alignment, Wrapping text to fit a cell, Colors and Shading, Borders and Lines. Naming Styles.

Unit 4: Excel Files and Templates

Creating a New Workbook, Filtering filenames, Saving and Auto Recovery, Password-Protecting a Workbook, Recovering unsaved work, Protect Workbook options, Checking Compatibility. Creating Excel Templates, Modifying a template, Custom Excel Templates, Default Templates, Editing your Template, Resetting the default workbook, Saving your Custom Templates, Getting ideas for creating Templates.

Unit 5: Excel Views and Printing

Normal, Page Layout, Page Break View, Choosing your printer, Specifying what you want to print, Changing Page Orientation, Specifying paper size, Adjusting page margins, Inserting a page break, Removing manual page breaks, Printing Row and Column Titles, Scaling printed output, Header or Footer Options, Preventing certain cells, Objects from being printed, Creating Custom Views of your Worksheet. Creating PDF files.

Course outcomes:
CO 1: Understand and comprehend the concepts of workbooks, worksheets and basics operations under Excel.
CO 2: Understand and implement the moving, resizing of windows, switching among windows and activating worksheets.
CO 3: Employ the use different techniques for creating tables, navigating in a table, and data selection.
CO 4: Employ the use of various techniques in Excel such as creating a page, workbook, data filtering, saving, auto-recovery and password-protection.
CO 5: Classify and categorize different print views under Excel, understanding and adjusting margins, page-breaks and customizing views.

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcome	Program Outcome						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	M		L				
CO2		L	M			M	
CO3	M		M				
CO4			M	M		M	
CO5		L					M

H = Highly Related; M = Medium; L = Low

References:
1. John Walkenbach, *Excel Bible,* Wiley.
2. Winston, *Microsoft Excel,* PHI.
3. Hector Guerrero, *Excel Data Analysis – Model and Simulation*, Springer.
4. Bernd Held, *Excel Functions and Formulas,* BPB.
5. Dr. Renjini D., *Data Analysis for Business Decisions using Excel*, Bharti.

Professional Skills
Subject code: DEN002A
Credits: 3

Course Objectives
1. To enhance Professional competence in reading, writing, listening and speaking.
2. Switch the approach from providing information about the language to use the language.
3. Minimize the Grammar Translation Method of ELT while trying to replace it with Direct Method.
4. Introduce Communicative Method of ELT and focusing the teaching pedagogy on the student-centred learning rather than on the teacher-centred learning.
5. Ability to master three major forms of communications which are vital in academic and professional settings namely professional presentations, interviews and group communications respectively.
6. Providing a deep insight into the techniques for delivering effective presentations, winning job interviews, and actively participating in various forms of group communication.

Course Outcomes (CO):
At the end of this course students will have:
CO1: Ability to design a language component or process to meet desired need within realistic, Constraints such as economic, environmental, social, political, ethical, scenario
CO2: Ability to analyze the usage of English words in professional scenario.
CO3: An understanding of technical and academic articles' comprehension.
CO4: The ability to present oneself at multinational levels as per the demand of the corporate culture
Syllabus: Theory
UNIT 1 Professional Grooming and Professional Culture:
Basics of corporate culture, Dressing sense-personal hygiene, Cultural adaptability, Body language components: undesirable and desirable body language, Team-ship, Leadership, Stress and Conflict management
UNIT 2 Advanced Grammar: Common errors related to prepositions, articles, models, Conditionals, Determiners etc, Punctuation, Proof-reading and Editing of Documents
UNIT 3 Composition:, Memo, Notice, Circular, Book Review, Research Article, Reports
UNIT 4 Vocabulary Building: Words often misspelt, One Word Substitution, Phrasal Verbs, Idioms
UNIT 5 Reading Comprehension: Reading different types of documents including Passages, Reports, Technical Essays, Speeches, Research Articles, Newspaper articles, Interviews etc-Skimming and Scanning-Inference and Deduction

Syllabus: Lab

UNIT 1 Professional Culture:
Role plays and Activities on Dressing sense-personal hygiene, Cultural adaptability, Body language components: undesirable and desirable body language, Team-ship, Leadership, Stress and Conflict management
UNIT 2 Advanced Grammar:
Exercise Sessions for Common errors related to prepositions, articles, models , Conditionals, Determiners etc, Punctuation, Proof-reading and Editing of Documents
UNIT 3 Composition:,
Memo, Notice, Circular, Book Review, Research Article, Reports – Giving Assignments based on practical applications, Practice sessions on different topics
UNIT 4 Vocabulary Building: Words often misspelt, One Word Substitution, Phrasal Verbs, Idioms-Activities related to the appropriate use of words
UNIT 5 Reading Comprehension: Practice Reading Unseen Paragraphs- Finding Suitable title, Summarizing, Analyzing, Finding new words etc
Methodology for Evaluation
1. Internal Assessment (Theory)
a) Home Assignments: One from each Unit : 15 Marks
b) In Semester Tests (Minimum two) : 30 Marks
c) Attendance : 05 Marks
2. Term End (Theory) : 50 Marks
3. Internal Assessment (Lab)
(a) Daily Performance in the Lab : 50 Marks
4. Term End (Lab) : 50 Marks

Suggested Readings:
1. FelixaEskey. Tech Talk, University of Michigan. 2005
2. Michael Swan. Practical English Usage, Oxford University Press. 2005
3. Anderson, Paul. Technical Communication: A Reader Centered Approach, V Edition, Hercourt, 2003.
4. Thampi, G. Balamohan. Meeting the World: Writings on Contemporary Issues. Pearson, 2013.
5. Lynch, Tony. Study Listening. New Delhi: CUP, 2008.
6. Kenneth, Anderson, Tony Lynch, Joan Mac Lean. Study Speaking. New Delhi: CUP, 2008.

7. Marks, Jonathan. English Pronunciation in Use. New Delhi: CUP, 2007.
8. Syamala, V. Effective English Communication For You (Functional Grammar, Oral and Written Communication): Emerald, 2002.

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Cultural Education II
Subject Code: DIN002A
Credits: 2
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Objectives
1. To make the students feel gratitude towards the rich religious and cultural heritage of India.
2. To understand the role of great personalities and movements in the progress of India.
Course Outcomes (CO):
At the end of this course students will have:
CO1: Ability to acknowledge and appreciate the richness of Indian Culture
CO2: Ability to represent the culture ethics in real life

UNIT-I Holy Scriptures-II
1. Bhagavad Gita and Life Management
2. Highlights of Indian Scriptures - Major Incidents and terms from various religious scriptures including Ramayana, Mahabharta, Guru Granth Saheb, Bible, Quran, Jain Scriptures, Bodh Scriptures
3. Historicity of Ramayana and Mahabharata
UNIT-II Society and Culture-II
4. Indian Society: Its Strengths and Weaknesses
5. Health and Lifestyle related issues
6. Conservation of cultural heritage
UNIT-III India in Progress-II
7. Role & Position of Women in Indian Society- Rituals like Sati, Dakin, Kanyavadh, Pardah, Devdasi, Child Marriage, Measures of Women Empowerment including Education, Constitutional and other Rights
8. Indian Models of Economy, Business and Management
UNIT-IV Great Indian Personalities-II
9. Life and works of the Great People of Modern India- Raja Ram Mohan Roy, Swami Vivekananad, Madan Mohan Malviya, Ishwarchand VidyaSagar, JyotibaPhule, HomiBhabha, B.R. Ambedkar, Mahatma Gandhi, Chandra Shekhar Aazad, Abdul Hamid, Badshah Khan, Bhagat Singh, Ashfaqullah, Vir Sawarkar, Vir Banda Bahadur, Vir Haqiqat Rai, Subhash Chandra Bose, Mother Teresa, Jagdish Chandra Basu, JRD Tata, Ratan Tata, Dada Saheb Phalke, Major Dhayan Chand, A P J Abdul Kalaam, Kailash Satyarthi, Aruna Roy, Mahasweta Devi, Udaya Kumar, Narayan Murthy, Azim Premji
***Each student shall write a detailed Report/ Critique on one topic from section -A to C and one Great Personality from Section- D leading to publication of Newspaper/ Magazine article or a review paper in a Research Journal. In addition to s/he will be required to make a Power Point Presentation on the learning and face Viva-voce by a committee of teachers.

Suggested Reading:
1. Glory of Indian Culture (English) Paperback by Giriraj Shah
2. Historicity of Vedic and Ramayan Eras: Scientific Evidences from the Depths of Oceans to the Heights of Skies by Saroj Bala , Kulbhushan Mishra

References
https://knowindia.gov.in/culture-and-heritage/lifestyle-values-and-beliefs.php

ENVIRONMENTAL STUDIES
SUBJECT CODE: DCH001A
CREDITS: 4

Objectives:
Environmental studies deals with every issue that affects an organism. It is essentially a multidisciplinary approach that brings about an appreciation of our natural world and human impacts on its integrity. It is an applied science as its seeks practical answers to making human civilization sustainable on the earth's finite resources. Its components include biology, geology, chemistry, physics, engineering, sociology, health, anthropology, economics, statistics, computers and philosophy. As we look around at the area in which we live, we see that our surroundings were originally a natural landscape such as a forest, a river, a mountain, a desert, or a combination of these elements. Most of us live in landscapes that have been heavily modified by human beings, in villages, towns or cities. But even those of us who live in cities get our food supply from surrounding villages and these in turn are dependent on natural landscapes such as forests, grasslands, rivers, seashores, for resources such as water for agriculture, fuel wood, fodder, and fish.

The basis objective of this course is to provide basic understanding to the students with the nature and the environment.

UNIT I
The **Multidisciplinary** nature of environmental studies Definition; Scope and importance, Need for public awareness.

UNIT II
Natural Resources: Renewable and non-renewable resources: Natural resources and associated problems.
a) Forest resources: Use and Over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems.
c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, Case studies.
f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources. - Equitable use of resources for sustainable lifestyles.

UNIT III
Concept of an ecosystem- Structure and function of an ecosystem.Producers, consumers and decomposers.Energy flow in the ecosystem.Ecological succession.Food chains, food webs and ecological pyramids. Introduction, types, characteristic features, structure and function of the following ecosystem:
a. Forest ecosystem
b. Grassland ecosystem
c. Desert ecosystem
d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).

UNIT IV
Biodiversity and its Conservation
- Introduction-Definition: genetic, species and ecosystem diversity.
- Bio-geographical classification of India.
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- Biodiversity at global, National and local levels.

- India as a mega-diversity nation.
- Hot-spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India.
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT V
Environmental Pollution:
Definition, Causes, effects and control measures of: -
a. Air pollution
b. Water pollution
c. Soil pollution
d. Marine pollution
e. Noise pollution
f. Thermal pollution
g. Nuclear hazards
- Solid waste Management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution. Pollution case studies. - Disaster management: floods, earthquake, cyclone and landslides

UNIT-VI: Social Issues and the Environment
- From Unsustainable to Sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation.
- Consumerism and waste products.
- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and Control of Pollution) Act.
- Wildlife Protection Act. - Forest Conservation Act.
- Issues involved in enforcement of environmental legislation.
- Public awareness.

UNIT-7: Human Population and the Environment
- Population growth, variation among nations. Population explosion-Family welfare Programme. Environment and human health. Human Rights. Value Education. HIV/AIDS. Women and Child Welfare.
- Role of information Technology in Environment and human health.
- Case Studies.
UNIT-8: Field Work (Practical).
- Visit to a local area to document environmental assets-river/forest/grassland/ hill/mountain.
- Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc.
Course outcomes(CO)
I   CO1: It deals with every issue that affects the organization.
II   CO 2: To understand the multidisplinary nature of environmental studies.
III   CO3:To understand about the renewable and non renewable resources.
IV   CO4: Knowing about the concept of the ecosystem.
V   CO5: To know impact of population on environment.

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcome	Program Outcome						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1		H			M	M	
CO2			H		M	M	
CO3			M		H	L	L
CO4		M		H		M	L
CO5			L		M	L	

H = Highly Related; M = Medium L = Low

Reference Books:
1. Agarwal K.C. 2001 Environmental Biology, Nidi publ. Ltd. Bikaner.
2. BharuchaErach, The Biodiversity of India, Map in Publishing Pvt. Ltd. Ahemdabad-380013, India, E-mail: Mapincenet, net.
3. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc.480p.
4. Clark R.S., Marine pollution, Clanderson Press Oxford.
5. Cunningham, W.P.Cooper, T.H.Gorhani, E & Hepworth, M.T. 2001, Environmental & Encyclopedia, Jaico Publ. House, Mumbai, 1196p
6. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
7. Down to Earth, Centre for Science and Environment
8. Gleick, H.P. 1993. Water in crisis, Pacific Institute for Studies in Dev.,Environpment& Security. Stockholm Env. Institute. Oxford Univ. Press, 473p
9. Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay .
10. Heywood, V.H & Watson, R. T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press1140p
11. Jadhav, H &Bhosale, V.M.1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284p
12. Mckinney, M.L. &Schoeb, R.M. 1996. Environmental Science systems & solutions, Web enhanced edition 639p.
13. Mhaskar A.K. Matter Hazardous. Techno-Science Publications.
14. Miller T.G. Jr., Environmental Science, Wadsworth Publishing Co.
15. Odium, E.P. 1971. Fundamentals of Ecology, W.B.Saunders Co. USA. 574p
16. Rao M.N. &Datta, A.K. 1987. Waste Water Treatment. Oxford & IBH Publ .Co. Pvt. Ltd. 345p.
17. Sharma B.K., 2001. Environmental Chemistry Goel Publ. House, Meerut.
18. Townsend C.,Harper J, and MichealBegon, Essentials of Ecology, Blackwell Science
19. Trivedi R.K., Handbook of Environmental Laws, Rules, Guidelines, Compliances and standards, Vol I an II, Enviro Media
20. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science Publications
21. Wagner K.D., 1998. Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p

THIRD SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA625A	Statistics with R	2	1	2	4	S
BBA626A	Structured Query Language	1	1	4	4	S
BBA627A	Research Methodology	3	1	-	4	C
BBA628A	Human Resource Development	3	-	-	4	ID
BBA629A	Comp. Applications III (MS Project)	3	-	-	3	ID
***	Open Elective	3	-	-	3	G
DEN003A	Life skill – 1	-	-	2	2	G
DIN003A	Value education-1	2	-	-	2	G
	TOTAL	**16**	**3**	**8**	**26**	

Statistics with R
SUBJECT CODE: BBA625A
CREDITS: 4

Course Objective:
The objective of this module is to make students exercise the fundamentals of statistical analysis in an R environment. They would be able to analyze data for the purpose of exploration using descriptive and inferential statistics. Students will understand probability and sampling distributions and learn the creative application of linear regression in multivariate context for predictive purpose.

Module 1: Introduction to R Programming
R and R Studio, Logical Arguments, Missing Values, Characters, Factors and Numeric, Help in R, Vector to Matrix, Matrix Access, Data Frames, Data Frame Access, Basic Data Manipulation Techniques, Usage of various apply functions – apply, lapply, sapply and tapply, Outliers treatment.

Module 2: Descriptive Statistics
Types of Data, Nominal, Ordinal, Scale and Ratio, Measures of Central Tendency, Mean, Mode and Median, Bar Chart, Pie Chart and Box Plot, Measures of Variability, Range, Inter-Quartile-Range, Standard Deviation, Skewness and Kurtosis, Histogram, Stem and Leaf Diagram, Standard Error of Mean and Confidence Intervals.

Module 3: Probability, Probability & Sampling Distribution
Experiment, Sample Space and Events, Classical Probability, General Rules Of Addition, Conditional Probability, General Rules For Multiplication, Independent Events, Bayes' Theorem, Discrete Probability Distributions: Binomial, Poisson, Continuous Probability Distribution, Normal Distribution & t-distribution, Sampling Distribution and Central Limit Theorem.

Module 4: Statistical Inference and Hypothesis Testing
Population and Sample, Null and Alternate Hypothesis, Level of Significance, Type I and Type II Errors, One Sample t Test, Confidence Intervals, One Sample Proportion Test, Paired Sample t Test, Independent Samples t Test, Two Sample Proportion Tests, One Way Analysis of Variance and Chi Square Test.

Module 5: Correlation and Regression
Analysis of Relationship, Positive and Negative Correlation, Perfect Correlation, Correlation Matrix, Scatter Plots, Simple Linear Regression, R Square, Adjusted R Square, Testing of Slope, Standard Error of Estimate, Overall Model Fitness, Assumptions of Linear Regression, Multiple Regression, Coefficients of Partial Determination, Durbin Watson Statistics, Variance Inflation Factor.

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Structured Query Language
SUBJECT CODE: BBA626A
CREDITS: 4

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Course Objective:
This module will help students gain much needed knowledge pertaining to Relational Database Management Systems, Data Models, SQL query processing, Normalization along with an introduction to No SQL Database systems using Mongo DB.

Module 1: Introduction to Database Management Systems
Introduction-Database System Applications, Purpose of Database Systems, Views of Data, Data Abstraction, Instances and Schemas, Data Models, Database Languages, DDL, DML, Database Architecture, Database Users and Administrators, Database Design, ER Diagrams, Entities, Attributes and Entity Sets, Relationships and Relationship sets, Integrity Constraints, Views.

Module 2: SQL Operators and Relational Theorems
Relational Algebra and Calculus, Selection and Projection, Set Operations, Renaming, Joins, Division, Relational calculus, Tuple Relational Calculus, Domain Relational Calculus, Forms of Basic SQL Query, Nested Queries, Comparison Operators, Aggregate Operators, NULL values, Logical connectives, AND, OR and NOT, Outer Joins, Triggers.

Module 3: Normalization
Problems Caused by Redundancy, Decompositions, Functional Dependencies, Normal Forms, First, Second, Third Normal forms, BCNF, Properties of Decompositions, Loss less Join Decomposition, Dependency Preserving Decomposition, Multi Valued Dependencies, Fourth Normal Form, Join Dependencies, Fifth Normal Form.

Module 4: Transactions
Transaction Management, Transaction Concept, Transaction State, Implementation of Atomicity and Durability, Concurrent, Executions, Serializability, Recoverability, Implementation of Isolation, testing for serializability, Concurrency Control, Lock, Timestamp Based Protocols, Validation Based Protocols, Recovery, Failure Classification, Storage Structure, Atomicity, Log Based Recovery, Remote Backup Systems.

Module 5: No SQL
Overview of No SQL, Types of No SQL Databases, No SQL Storage Architecture, CRUD Operations in MongoDB, Querying, Modifying and Managing No SQL Databases, Indexing and Ordering, Migrating from RDBMS to No SQL, No SQL in Cloud, Database Administration.

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Research Methodology
SUBJECT CODE: BBA627A
CREDITS: 4

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Course Objective:
This module enables learners to develop the basic principles of research methods. The learners focus how to do research, with an emphasis on student-centered activities and problem solving. Learners

will develop insights the key concepts as the scientific method; operationalizing constructs; independent and dependent variables, data types and ways of measurement, confounding variables experimental and non-experimental design questionnaire construction; developing and testing hypotheses; descriptive statistics and describing data graphically; and the ethics of research.

Module 1: Research Formulation and Design
Motivation and objectives-Research methods and methodology. Types of research Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical, concept of applied and basic research process, criteria of good research. Defining and formulating the research problem, selecting the problem, necessity of defining the problem, importance of literature review in defining a problem, literature review-primary and secondary sources, reviews, monograph, patents, research databases, web as a source, searching the web, critical literature review, identifying gap areas from literature and research database, development of working hypothesis.

Module 2: Data Collection and Analysis
Accepts of method validation, observation and collection of data, methods of data collection, sampling methods, data processing and analysis strategies and tools,data analysis with statically package (Sigma STAT,SPSS for student t-test, ANOVA, etc.), hypothesis testing.

Module 3: Statistical Softwares
Computer and its role in research, Use of statistical software SPSS, GRETL etc. in research. Introduction to evolutionary algorithms - Fundamentals of Genetic algorithms, Simulated Annealing, Neural Network based optimization, Optimization of fuzzy systems.

Module 4: Research Ethics and Scholarly Publishing
Ethics-ethical issues, ethical committees (human & animal); IPR- intellectual property rights and patent law, commercialization, copy right, royalty, trade related aspects of intellectual property rights (TRIPS); scholarly publishing- IMRAD concept and design of research paper, citation and acknowledgement, plagiarism, reproducibility and accountability.

Module 5: Interpretation and Report Writing
Meaning of Interpretation, Technique of Interpretation, Precaution in Interpretation, Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Oral Presentation, Mechanics of writing Research Report Precautions for writing Research Reports, Conclusions.

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Human Resource Development
SUBJECT CODE: BBA628A
CREDIT: 4

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Course Objective:
This module will enable the learners to develop strong understanding and key skills which are required for human resource professionals. Learners will be able to understand the importance of human resource development and their role in effectively managing the personnel within the organization. Learners will develop insights into the fast-growing and emerging trends of Human Resource Development (HRD) in globalized economy.

Module 1: Human Resource Development (HRD) -Macro Perspective
Understand HRD Concept, Origin and Need of HRD, HRD as a Total System, Approaches to HRD; Human Development and HRD; HRD at Macro and Micro Climate

Module 2: HRD–Micro Perspective
Understand areas of HRD, HRD Interventions Performance Appraisal, Potential Appraisal, Feedback and Performance Coaching, Training, Career Planning, OD or Systems Development, Rewards, Employee Welfare and Quality of Work Life and Human Resource Information; Staffing for HRD:

Roles of HR Developer; Physical and Financial Resources for HRD; HR Accounting; HRD Audit, Strategic HRD

Module 3: Instructional Technology for HRD
Learning and HRD; Models and Curriculum; Principles of Learning; Group and Individual Learning; Transactional Analysis; Assessment Centre; Behaviour Modeling and Self Directed Learning; Evaluating the HRD

Module 4: Human Resource Training and Development
Concept and Importance of training and development; Assessing Training Needs; Designing and Evaluating T&D Programmes; Role, Responsibilities and challenges to Training Managers

Module 5: Training Methods
Training within Industry (TWI): On the Job & Off the Job Training; Management Development: Lecture Method; Role Play; In-basket Exercise; Simulation; Vestibule Training; Management Games; Case Study; Programmed Instruction; Team Development; Sensitivity Training; Globalization challenges and Strategies of Training Program, Review on T&D Programmes in India

<div align="center">

Comp. Applications III (MS Project)
SUBJECT CODE: BBA629A
CREDITS: 3

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Course Objective:
The goal of this module is to help students explore MS Project application, providing information on relevant project management concepts while also offering specific procedures to build and track a Project Schedule. The students will gain expertise towards the MS Project application by learning about the tasks and dependencies, estimating durations, and working with project Views. They will also understand the advanced customizations and reporting elements under MS Project application.

Module 1: Introduction
MS Project Application, Project Family, Features in Project 2016 & 2019, Comparative study on MS Project Versions (2013, 2016 & 2019), The Project Interface, Backstage View, Ribbons and Tabs, Views, Reports, Defining Project Manager, Starting a Project, Task Master, Co-dependent Nature of Tasks, Estimating Task Time, Introducing the Work Breakdown Structure (WBS).

Module 2: Scheduling Basics
Starting a New Plan and Setting its Start Date, Setting Non-Working Days in the Project Calendar, Entering Plan's Title and Other Properties, Entering Task Names, Task Durations, Milestone Task, Creating Summary Tasks to Outline the Plan, Task Dependencies with Links, Switching Task Scheduling from Manual to Automatic, setting up Resources, Work Resources Names and Maximum Capacity, Pay Rates, Adjusting Working Time in Resource Calendar.

Module 3: Resources Assignment and Plan Sharing
Assigning Work Resources to Tasks, Controlling Work when Adding or Removing Resource Assignments, Assigning Cost Resources to Tasks, Checking the Plan's Duration, Cost & Work, Customizing Gantt Chart View, Customizing Timeline View, Customizing Reports, Copying and Printing Views & Reports, Saving Plan Baseline, Tracking a Plan as Scheduled through a Specific Date, Entering a Task's Completion Percentage and Actual Values for Tasks.

Module 4: Advanced Scheduling Techniques
Viewing Task Relationships with Task Path, Adjusting Task Link Relationships, Setting Task Constraints, Interruptions, Work Time Adjustments, Controlling Task Scheduling using Task Types, Setting Resource Availability at Different Times, Applying Contours, Pay Rates and Material Resources to Tasks & Assignments, Examining Resource Allocations, Levelling Overallocated

Resources, Sorting-Grouping-Filtering Project Details, Creating New Tables & New Views, Tracking Progress on Tasks and Assignments, Viewing and Reporting Project Status.

Module 5: Advanced Formatting and Customizations

Formatting Gantt Chart View, Timeline View, Network Diagram View, Calendar View, Printing and Exporting Views, Formatting Tables & Charts in a Report, Sharing Custom Elements between Plans, Recording & Editing Macros, Copying Project Data to other Programs, Opening & Saving to other File Formats from MS Project, Creating a Resource Pool, Viewing Assignment Details in a Resource Pool. Updating Assignments in a Sharer Plan, Updating a Resource's Information and Plan's Working Times in a Resource Pool, Linking New Plans to a Resource Pool, Creating Dependencies between Plans.

<mark>Open Elective</mark>

Life Skills-I

SUBJECT CODE: DEN003A

CREDIT: 2

COURSE OBJECTIVE

CO1: Ability to use appropriate language while communicating with the people ranging from personal to professional settings in order to meet the desired needs of economic, environmental, social, political, ethical fields.

CO2: Ability to learn by doing it practically in the classroom.

CO3: Ability to learn by creating an environment and adapting to the environment.

CO4: The ability to prepare the students as per the need of the Multi-cultural scenario around.

Syllabus: Theory

UNIT 1	Basics of Debates / Speeches / Addressing the public / Extempore/Group Discussion Basics of Narrating and describing things
UNIT 2	Telephonic Etiquette: Casual and formal Telephonic Communication, Telephonic Interview CV/Resume Drafting and HR Interview advance theory Basics of Video Interviews and Video Profiles for Job
UNIT 3	Types of listening, advantages and disadvantages
UNIT 4	Basics of Group Discussion, Presenting New Idea/Concept/Proposal/ Project/ Report
UNIT 5	Types of personalities, Perspective towards things, ideas, views, codes, Life skills related to Multicultural environment and emotional intelligence like- Self-confidence, Self-esteem, Self-motivation, Decision making, Resourcefulness, Risk Taking, Conflict management, Stress management, Team Building etc

Syllabus: Lab

UNIT 1	Debates / Speeches / Addressing the public / Extempore/Group Discussion Describing a hypothetical situation / theme / surroundings / appearance/personality traits/company/ a professional Concept/New Idea, / New Project through PPT and video aids
UNIT 2	Telephonic Etiquette: Casual and formal Telephonic Communication, Telephonic Interview CV/Resume Drafting and HR Interview practice sessions elaborating the points as per the CV and industry demand Video Interviews and Video Profiles for Job-Practice session for Online Interviews
UNIT 3	Listening to variety of audio/video conversations including interviews, news, reports, reports, GDs, dialogues from body language, logic, wit and vocabulary perspectives
UNIT 4	Group Discussion-Practice sessions, Presenting New Idea/Concept/Proposal/ Project/ Report
UNIT 5	Activities on how to be a strong Personality, Motivation, Case studies for Resourcefulness and out of the box thinking, Role plays and Case studies on Risk taking, Self confidence and Self-esteem, Decision Making, Emotion Management, Cultural Adaptablity, Multicultural Perspective towards things, ideas, views, codes etc

Methodology for Evaluation

1. Internal Assessment (Theory)

a) Home Assignments: One from each Unit   : 15 Marks

b) In Semester Tests (Minimum two)   : 30 Marks

c) Attendance : 05 Marks 2. Term End (Theory) : 50 Marks

3. Internal Assessment (Lab)

(a) Daily Performance in the Lab   : 50 Marks

4. Term End (Lab)   : 50 Marks

Suggested Readings:

1. A Communicative Grammar of English: Geoffrey Leech and Jan Svartvik. Longman, London.

2. Adair J (1986) - "Effective Team Building: How to make a winning team", London, U.K: Pan Books.

3. Gulati S (2006) - "Corporate Soft Skills", New Delhi, India: Rupa& Co.

4. The Hard Truth about Soft Skills, by Amazone Publication.

5. 101 Great Answers to the Toughest Interview Questions. Ron Fry. High Bridge Company. 1996.

6. Michael Swan. Practical English Usage, Oxford University Press.

Value Education and Ethics I

SUBJECT CODE: DIN003A

CREDIT: 2

Course Outcomes (CO):

At the end of this course students will have:

CO1: Ability to acknowledge and appreciate the ethical beauty of India

CO2: Ability to incorporate the values of human lives in real life applications

Lessons from the Ramayana

Introduction to Ramayana, the first Epic in the world – Influence of Ramayana on Indian values and culture – Storyline of Ramayana – Study of leading characters in Ramayana – Influence of Ramayana outside India – Relevance of Ramayana for modern times.

Lessons from the Mahabharata

Introduction to Mahabharata, the largest Epic in the world – Influence of Mahabharata on Indian values and culture – Storyline of Mahabharata – Study of leading characters in Mahabharata – Kurukshetra War and its significance - Relevance of Mahabharata for modern times.

Lessons from the Upanishads

Introduction to the Upanishads: Sruti versus Smrti - Overview of the four Vedas and the ten Principal Upanishads - The central problems of the Upanishads – The Upanishads and Indian Culture – Relevance of Upanishads for modern times – A few Upanishad Personalities: Nachiketas, Satyakama Jabala, Aruni, Shvetaketu.

Message of the Bhagavad Gita

Introduction to Bhagavad Gita – Brief storyline of Mahabharata - Context of Kurukshetra War – The anguish of Arjuna – Counsel by Sri. Krishna – Key teachings of the Bhagavad Gita – Karma Yoga, Jnana Yoga and Bhakti Yoga - Theory of Karma and Reincarnation – Concept of Dharma – Concept of Avatar - Relevance of Mahabharata for modern times.

Life and Message of Swami Vivekananda

Brief Sketch of Swami Vivekananda's Life – Meeting with Guru – Disciplining of Narendra - Travel across India - Inspiring Life incidents – Address at the Parliament of Religions – Travel in United States and Europe – Return and reception India – Message from Swamiji's life.

Life and Teachings of Spiritual Masters India

Sri Rama, Sri Krishna, Sri Buddha, Adi Shankaracharya, Sri Ramakrishna Paramahamsa, Swami Vivekananda.

Insights into Indian Arts and Literature

The aim of this course is to present the rich literature and culture of Ancient India and help students appreciate their deep influence on Indian Life - Vedic culture, primary source of Indian Culture – Brief introduction and appreciation of a few of the art forms of India - Arts, Music, Dance, Theatre.

*Each student shall write a detailed Report/ Critique on one topic leading to publication of Newspaper/ Magazine article or a review paper in a Research Journal. In addition to s/he will be required to make a Power Point Presentation on the learning and face Viva-voce. Alternatively a Student may undertake a Project on any one of the topics and submit a detail Project Report leading to publication of Newspaper/ Magazine article or a review paper in a Research Journal. If the topic is related to Performing Arts including Yoga, the performance on stage may be given instead of PPT. In case of Fine Arts, an exhibition or a portfolio may be presented in place of PPT.

On the basis of the above points, a panel of experts from the department will award the credits.

<u>**Semester IV**</u>

FOURTH SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA630A	Operation Management	4	-	-	4	C
BBA631A	Python Programming	2	1	2	4	S
BBA632A	SaS and Tableau	2	1	2	4	S
BBA633A	Corporate governance and social responsibility	3	-	-	3	C
***	Open Elective	3	-	l	3	G
DEN004A	Life Skills - 2 (Aptitude)	-	-	2	2	G
DIN004A	Value Education – 2	3	-	-	1	G
	TOTAL	**17**	**2**	**6**	**21**	

Operation Management
SUBJECT CODE: BBA630A
CREDITS:4

Course Objective:
The objective is to provide the basic understanding of the methods and techniques of production and the economics of effective utilization of resources and the techniques employed to ensure the optimum use of resources.

Module 1: Introduction to Operations Management
Definition – differences between operations management and production management – operations and productivity – operations strategy in global environment – using software for productivity analysis – Ethics, social responsibility and sustainability – developing missions and strategies – achieving competitive advantage through operations – strategic planning, core competencies and outsourcing – global operations strategy options.

Module 2: Designing operations
Design of goods and services – product life cycle – generating new products – issues for product design – robust design, modular design, CAD and CAM, virtual reality technology, value analysis, sustainability and life cycle assessment (LCA) - product development continuum – acquisition, joint

ventures and strategic alliances – defining a product – make or buy decisions, group technology – documents for production – service design – process chain network analysis (PCN), documents for service – application of decision tree to product design.

Module 3: Quality Management
Defining quality – quality and strategy – total quality management (TQM) – continuous improvement, six sigma, benchmarking, JIT, Taguchi concepts – Tools of TQM – scatter diagrams, cause-and-effect diagrams – pareto charts – flowcharts – histograms – statistical process controls (SPC) – process capability ratio, process capability index – using software in SPX - role of inspection – TQM in services.

Module 4: Supply Chain Management
Importance of supply chain strategies – six sourcing strategies – many suppliers, few suppliers, vertical integration, joint ventures, keiretsu networks, virtual companies – supply chain risks – managing integrated supply chain – building the supply base – negotiations, contracting, centralized purchasing, e-procurement – logistics management – distribution management – ethics and sustainable supply chain management – measuring supply chain performance – asset committed to inventory, benchmarking the supply chain.

Module 5: Lean operations
Lean Operations – elimination of wastages, throughput analysis and improving throughput – lean and just in time – lean layout, lean inventory, lean scheduling, lean quality – lean and the Toyota production system – continuous improvement, respect for people, processes and standard work practice – lean organizations – building a lean organization, lean sustainability – lean in services.

Course Outcomes:
CO1: This course introduces the students with the concept and importance of operations management in an organization
CO2: The students will learn different techniques with regard to designing process for a product or a service
CO3: The students will get deep insight into the role of quality and the techniques available in the current age to manage the quality vis-à-vis managing the operations
CO4: The students will be able analyze and evaluate the importance of supply chain management in the current age of digital transformation
CO5: The student will be able understand the growing concept of Lean and lean management and the application in managing the operations in an organization

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcome	Program Outcome						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1							
CO2							
CO3							
CO4							
CO5							

H = Highly Related; M = Medium L = Low

Textbooks:
1. Operations Management – Sustainability and supply chain management – Jay Heizer, Barry Render, Chuck Munson and Amit Sachan – Pearson Education

2. Operations and Supply Chain Management – F Robert Jacobs & Richard Chase – Mc Graw Hill Education
3. Operations Management – processes and supply chains – J Krajewski Le and K Malhotra Manoj – Pearson Education

Reference Books:
1. Supply Chain Management – Sunil Chopra – Pearson Education
2. Lean Management Systems handbook – Rich Charron, James Harrington, Frank Voehl and Hal Viggin - CRC Press
3. Statistical Process Control in automated manufacturing – Bert Keats and Norma Faris Hubele – CRC Press
   Total quality management – Besterfield Dale & Besterfield Carol – Pearson Education

Python Programming
SUBJECT CODE: BBA631A
CREDITS: 4

Course Objective:
This module will help students gain much needed knowledge pertaining to Python Programming, so as to prepare them for the advanced modules such as ML. Python scripting is user-friendly and is the most used language in industry when it comes to designing and scripting applications with respect to Emerging Technologies.

Module 1: Introduction
History of Python, Need of Python Programming, Applications Basics of Python Programming Using the REPL(Shell), Running Python Scripts, Variables, Assignment, Keywords, Input-Output, Indentation.

Module 2: Types, Operators and Expressions
Types - Integers, Strings, Booleans; Operators- Arithmetic Operators, Comparison (Relational) Operators, Assignment Operators, Logical Operators, Bitwise Operators, Membership Operators, Identity Operators, Expressions.

Module 3: Data Structures and Control Flow
Lists, Operations, Slicing, Methods, Tuples, Sets, Dictionaries, Sequences, Comprehensions, Conditional blocks using If, Else and El-if, For Loop, For loop using Ranges, String, list and Dictionaries, While Loop, Loop Manipulation using Pass, Continue, Break and Else, Conditional and Loops Block.

Module 4: Functions Modules and Packages
Defining Functions, Calling Functions, Passing Arguments, Keyword Arguments, Default Arguments, Variable-length arguments, Anonymous Functions, Function Returning Values, Scope of the Variables in a Function - Global and Local Variables. Creating modules, Name Spacing, Introduction to PIP, Installing Packages via PIP, Using Python Packages.

Module 5: Object Oriented Programming & Exception Handling
Classes, Self-Variable, Methods, Constructor Method, Inheritance, Overriding Methods, Data Hiding, Difference between an Error and Exception, Handling Exception, Try Except Block, Raising Exceptions, and User Defined Exceptions.

Course Outcomes:
CO1: To understand why Python is a useful scripting language.
CO2: To learn how to use lists, tuples, and dictionaries in Python programs.
CO3: To learn how to write loops and decision statements in Python.
CO4: To learn how to design object-oriented programs with Python classes.
CO5: To learn how to use exception handling in Python applications for error handling.

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcome	Program Outcome						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1				M			M
CO2	M		M		H	M	
CO3	H		H				
CO4	M		H		M		
CO5			M		H		H

H = Highly Related; M = Medium L = Low

Textbooks:
1. R.Nageswara Rao, 2018, Core Python Programming, Dreamtech.
2. John Hearty, 2016, Advanced Machine Learning with Python, Packt.

References:
1. Jake VanderPlas, 2016, Python Data Science Handbook: Essential Tools for Working with Data, O'Reilly.
2. Mark Lutz, 2010, Programming Python, O'Reilly.

SaS and Tableau
SUBJECT CODE: BBA632A
CREDITS: 4

Course Objective:
This course will provide students and exposure towards SaS, Tableau and its usability in the field of analytics. The course comprises an introduction to SaS, its procedures, visualizations along with Tableau application usage and visualization basics.

Module 1: Introduction to SaS
Overview of SaS university edition, Deploying SaS Studio on virtual platform, File Management, SaS libraries, importing data, Structure of Data and Data Types, Program Syntax, saving data, PROC IMPORT and PROC CONTENTS, Displaying Data and Generating Logs, List Input.

Module 2: SaS Programming
Variables and Syntax Rules, Data Set Options, Operators, In-File Statement, Input Styles, Select Statements, Leave and Continue, Decision Making via SaS, Where Statement, Looping Constructs, SaS Functions, Arrays and Array Processing, Modifying and Combining Data Sets.

Module 3: SaS Procedures
Proc Data, Proc Sort, Proc Means Sort, Proc Means, Proc Univariate, Proc Freq, Proc Plot, Proc Sgplot, Proc Summary, Proc Contents, Proc Append, Proc Copy, Proc SQL, Proc Delete, Proc Format, Proc Import, Proc Export, Proc Transpose, Proc GChart, Proc GPlot, Proc Report.

Module 4: Visualization with Tableau -I
Tableau Software Ecosystem, Toolbar Icons, Data Window and Aggregation, Tableau Data Source, Data Extract, Connect to Data, Measure Names, Number of Records & Measures, Heat Maps, Tree maps, Bar Chart, Line Chart, Area Fill Charts, Pie Chart, Scatter Plot, Circle View, Bullet Graph,

Packed Bubble, Histogram, Boxplot and Gantt Chart, Sorting Data, Enhancing Views with Filters, Sets, Groups & Hierarchies.

Module 5: Visualization with Tableau – II
Cross-tabulation, Dashboard Designing, Dashboard Actions, Joining Database, Functions in Tableau, Aggregate Functions, Numeric Functions, Date Functions, Stories, Advanced Mapping, Advanced Parameters, Tableau Best Practices, Combining Multiple Dashboards into Stories, Publishing Stories and Dashboards.

Course Outcomes:
CO1: Deploy SaS in a virtual environment and import data for analysis.
CO2: Prepare and manipulate datasets for analysis in SaS.
CO3: Perform exploratory data analysis within SaS environment using various procedures and functions.
CO4: Understand Tableau Interface, Panes and Implement Visualization Techniques.
CO5: Prepare, Deploy and Publish Stories, Dashboards based on Analytical Cases.

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcome	Program Outcome						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1		M		M			M
CO2			M		H	M	
CO3	M		H		M	H	
CO4	M				M	M	
CO5			M			M	H

H = Highly Related; M = Medium L = Low

Textbooks:
1. Ron Cody, 2018, An Introduction to SaS University Edition, SaS Institute.
2. Ron Cody, 2018, Learning SaS by Example, SaS Institute.
3. Deepti Gupta. 2018, Applied Analytics through Case Studies Using SaS, Apress.

References:
1. Joshua N. Milligan, 2015, Learning Tableau, Packt.
2. Ben Jones, 2014, Communication Data with Tableau: Designing, Developing and Delivering Data Visualization, O'Reilly.

Corporate governance and Social responsibility
SUBJECT CODE: BBA633A
CREDITS: 3

Course Objective:
This course aims to provide students with a thorough grounding in a number of key introductory and advanced topics of corporate governance and its relevance for corporate social responsibility. Content includes relevant applied theories, current research, and practice.

Module 1: **Introduction**
Definitions and the evolution of Corporate Governance Basic definitions in the field of Corporate Governance and the historical development of Corporate Governance from the Wall Street Crash until nowadays will be discussed.

Module 2: Parties involved in Corporate Governance
Corporate Governance is based on the relationship of many players (such as shareholders, management and board of directors, stakeholders) involved in governing a corporation. This meeting is devoted to discussing their rights, duties and responsibilities.

Module 3: Corporate Governance Theories
Organizational Theories (including Stewardship, Resource and Institutional Theory), Economic Theories (such as Agency, Finance and Managerial Theory) and the Stakeholder Theory will be presented on this meeting

Module 4: Corporate Social Responsibility (CSR)
 CSR is about how business takes account of its economic, social and environmental impacts in the way it operates – maximizing the benefits and minimizing the downsides. The course discussion will be based on these issues, Corporate Social Responsibility in India, Recent developments

Module 5: The International Environment for Corporate Governance
International Corporate Governance. OECD and BIS Principles. Implementation. Pitfalls. Final Review. The International Environment for CG

Course Outcomes:
CO1: Distinguish the various expectations and demands that emanate from stakeholders in business firms.
CO2: Corporate Governance is based on the relationship of many players.
CO3: Define governance in business and recognize the legitimacy of business as an institution in a global society.
CO4: Describe the ethical and current social responsibility issues and the influence of these issues on society.
CO5: International Corporate Governance

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcome	Program Outcome						
	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1							
CO2							
CO3							
CO4							
CO5							

H = Highly Related; M = Medium L = Low

Textbooks:
1. Harsh Srivastava, `` The business of social responsibility,'' books for change
2. CV. Baxi and Ajit Prasad, `` Corporate social responsibility – concepts and cases," Excel
3. Dr. M. Mahmoudi, Global strategic management," Deep & Deep Publications Pvt. Ltd.

Reference Books:
1. S K. Bhatia, `` International Human resource management – Global perspective," Deep & Deep Publications Pvt. Ltd.
2. J.P. Sharma, ``Governance, Ethics and Social responsibility of business, 'Ane books Ltd.
3. Kotler Philip and Lee Nancy, `` Corporate social responsibility; doing the best for your company,'' John Wiley
4. Simpson, Justine and Taylor, John R, `` Corporate Governance Ethics and and CSR,'' Kogan Page Publishers 8. Velasquez Manuel G, Business Ethics: Concepts and Cases, Pearson
5. Fernando A.C.: Business Ethics, Pearson Education

==Open Elective==

Life Skills-2 (Aptitude)
Subject Code: DEN004A
Credits: 2

Course Objectives:

1. Students will be able to interpret and communicate quantitative information and mathematical and statistical concepts using language appropriate to the context and intended audience.

2. Students will be able to make sense of problems, develop strategies to find solutions, and persevere in solving them.

3. Students will be able to reason, model, and draw conclusions or make decisions with mathematical, statistical, and quantitative information.

4. Students will be able to critique and evaluate quantitative arguments that utilize mathematical, statistical, and quantitative information.

5. Students will be able to use appropriate technology in a given context.

Course Outcomes (CO): At the end of this course students will have:

CO1: Demonstrate procedural fluency with real number arithmetic operations and use those operations to represent real-world scenarios and to solve stated problems. Demonstrate number sense, including dimensional analysis and conversions between fractions, decimals, and percentages. Determine when approximations are appropriate and when exact calculations are necessary.

CO2: Solve linear equations, graph and interpret linear models, and read and apply formulas. Demonstrate a basic understanding of displays of univariate data such as bar graphs, histograms, dotplots, and circle graphs, including appropriate labeling.

CO3: Take charge of their own learning through good classroom habits, time management, and persistence. Participate in the classroom community through written and oral communication.

Syllabus: Theory

UNIT 1	Number System:
	a. Number system
	b. Power cycle
	c. Remainder cycle
	d. Factors, Multiples
	e. HCF and LCM
UNIT 2	Data Arrangements and Blood Relations:
	a. Linear Arrangement
	b. Circular Arrangement
	c. Multi-dimensional Arrangement

	d. Blood Relations
UNIT 3	Time and Work: a. Work with different efficiencies b. Pipes and cisterns c. Work equivalence d. Division of wages
UNIT 4	Coding & Decoding, Series, Analogy, Odd Man Out and Visual Reasoning: a. Coding and Decoding b. Series c. Analogy d. Odd Man Out e. Visual Reasoning
UNIT 5	Percentages, Simple Interest and Compound Interest: a. Percentages as Fractions and Decimals b. Percentage Increase / Decrease c. Simple Interest d. Compound Interest e. Relation Between Simple and Compound Interest
UNIT 6	Permutation, Combination and Probability: a. Fundamental Counting Principle b. Permutation and Combination c. Computation of Permutation d. Circular Permutations e. Computation of Combination f. Probability
UNIT 7	Data Interpretation and Data Sufficiency: a. Data Interpretation – Tables b. Data Interpretation - Pie Chart c. Data Interpretation - Bar Graph d. Data Sufficiency
UNIT 8	Profit and Loss, Partnerships and Averages: a. Basic terminologies in profit and loss b. Partnership

	c. Averages
	d. Weighted average
	e. Mixtures and allegations

Methodology for Evaluation

1. Internal Assessment

a) Class/ Home Assignments (Minimum One from each Unit) : 30 Marks

b) In Semester Tests (Minimum two) : 30 Marks

2. Term End : 40 Marks

*Note: Minimum one class assignment shall be given in each turn in the Lab which will be attempted by the students in the class itself and evaluated by the end of the day. Balance work shall be completed at home and submitted at the beginning of the next turn in Lab.

Suggested Reading:

1. Speed Mathematics, Secrets of Lightning Mental Calculations, by Bill Handley, Master Mind books;

2. The Trachtenberg Speed System of Basic Mathematics, Rupa& Co., Publishers;

3. How to Ace the Brainteaser Interview, by John Kador, Mc Graw Hill Publishers.

4. Quick Arithmetics, by Ashish Agarwal, S Chand Publ.;

5. Quicker Maths, by M tyra& K Kundan, BSC Publishing Co. Pvt. Ltd., Delhi;

6. Owl Purdue University online teaching resource

Value Education II
Subject Code: DIN004A
Credits: 1

Course Objectives
1. To give exposure to students about richness and beauty of Indian way of life. India is a country where history, culture, art, aesthetics, cuisine and nature exhibit more diversity than nearly anywhere else in the world.
2. Making students familiar with the rich tapestry of Indian life, culture, arts, science and heritage which has historically drawn people from all over the world.
Course Outcomes (CO):
At the end of this course students will have:
CO1: Ability to acknowledge and appreciate the ethical beauty of India
CO2: Ability to incorporate the values of human lives in real life applications
Yoga and Meditation
The objective of the course is to provide practical training in YOGA ASANAS with a sound theoretical base and theory classes on selected verses of Patanjali's Yoga Sutra and Ashtanga Yoga. The coverage also includes the effect of yoga on integrated personality development.
Rajasthan Mural Art and Painting
Mural painting is an offshoot of the devotional tradition in Rajasthan. A mural is any piece of artwork painted or applied directly on a wall, ceiling or other large permanent surface. In the contemporary scenario Mural painting is not restricted to the permanent structures and are being done even on canvas. Rajasthani mural paintings are the frescos depicting mythology and legends, which are drawn on the walls of temples, principally in Rajasthan. Ancient temples and tourists places in different States of Rajasthan, display an abounding tradition of mural paintings mostly dating back between the

9th to 12th centuries when this form of art enjoyed Royal patronage. Learning Mural painting through the theory and practice workshop is the objective of this course.

Course on Organic Farming and Sustainability

Organic farming is emerging as an important segment of human sustainability and healthy life. Haritamritam' is an attempt to empower the youth with basic skills in tradition of organic farming and to revive the culture of growing vegetables that one consumes, without using chemicals and pesticides. Growth of Agriculture through such positive initiatives will go a long way in nation development. It is a big step in restoring the lost harmony of nature.

Benefits of Indian Medicinal Systems

Indian medicinal systems are one of the most ancient in the world. Even today society continues to derive enormous benefits from the wealth of knowledge in Ayurveda of which is recognized as a viable and sustainable medicinal tradition. This course will expose students to the fundamental principles and philosophy of Ayurveda and other Indian medicinal traditions.

Traditional Fine Arts of India

India is home to one of the most diverse Art forms world over. The underlying philosophy of Indian life is 'Únity in Diversity" and it has led to the most diverse expressions of culture in India. Most art forms of India are an expression of devotion by the devotee towards the Lord and its influence in Indian life is very pervasive. This course will introduce students to the deeper philosophical basis of Indian Art forms and attempt to provide a practical demonstration of the continuing relevance of the Art.

Science of Worship in India

Indian mode of worship is unique among the world civilisations. Nowhere in the world has the philosophical idea of reverence and worshipfulness for everything in this universe found universal acceptance as it in India. Indian religious life even today is a practical demonstration of the potential for realisation of this profound truth. To see the all-pervading consciousness in everything, including animate and inanimate, and constituting society to realise this truth can be seen as the epitome of civilizational excellence. This course will discuss the principles and rationale behind different modes of worship prevalent in India

Insights into Indian Classical Music

The course introduces the students into the various terminologies used in Indian musicology and their explanations, like Nadam, Sruti, Svaram – svara nomenclature, Stayi, Graha, Nyasa, Amsa, Thala,-Saptatalas and their angas, Shadangas, Vadi, Samavadi, Anuvadi. The course takes the students through Carnatic as well as Hindustani classical styles.

Insights into Traditional Indian Painting

The course introduces traditional Indian paintings in the light of ancient Indian wisdom in the fields of aesthetics, the Shadanga (Six limbs of Indian paintings) and the contextual stories from ancient texts from where the paintings originated. The course introduces the painting styles such as Madhubani, Kerala Mural, Pahari, Cheriyal, Rajput, Tanjore etc.

Insights into Indian Classical Dance

The course takes the students through the ancient Indian text on aesthetics the Natyasastra and its commentary the Abhinava Bharati. The course introduces various styles of Indian classical dance such as Bharatanatyan, Mohiniyatton, Kuchipudi, Odissy, Katak etc. The course takes the students through both contextual theory as well as practice time.

Indian Martial Arts and Self Defense

The course introduces the students to the ancient Indian system of self-defense and the combat through various martial art forms and focuses more on traditional Kerala's traditional Kalari Payattu. The course introduces the various exercise technique to make the body supple and flexible before going into the steps and techniques of the martial art. The advanced level of this course introduces the technique of weaponry.

Social Awareness Campaign

The course introduces the students into the concept of public social awareness and how to transmit the messages of social awareness through various media, both traditional and modern. The course goes through the theoretical aspects of campaign planning and execution.

Organic Farming in Practice

Organic agriculture is the application of a set of cultural, biological, and mechanical practices that support the cycling of farm resources, promote ecological balance, and conserve biodiversity. These include maintaining and enhancing soil and water quality; conserving wetlands, woodlands, and wildlife; and avoiding use of synthetic fertilizers, sewage sludge, irradiation, and genetic engineering. This factsheet provides an overview of some common farming practices that ensure organic integrity and operation sustainability.

Ayurveda for Lifestyle Modification

Ayurveda aims to integrate and balance the body, mind, and spirit which will ultimately leads to human happiness and health. Ayurveda offers methods for finding out early stages of diseases that are still undetectable by modern medical investigation. Ayurveda understands that health is a reflection of when a person is living in harmony with nature and disease arises when a person is out of harmony with the cycles of nature. All things in the universe (both living and non-living) are joined together in Ayurveda. This leaflet endow with some practical knowledge to rediscover our pre- industrial herbal heritage.

Life Style and Therapy using Yoga

Yoga therapy is the adaptation of yogic principles, methods, and techniques to specific human ailments. In its ideal application, Yoga therapy is preventive in nature, as is Yoga itself, but it is also restorative in many instances, palliative in others, and curative in many others. The therapeutic effect comes to force when we practice daily and the body starts removing toxins and the rest is done by nature.

*Each student shall write a detailed Report/ Critique on one topic leading to publication of Newspaper/ Magazine article or a review paper in a Research Journal. In addition to s/he will be required to make a Power Point Presentation on the learning and face Viva-voce. Alternatively a Student may undertake a Project on any one of the topics and submit a detail Project Report leading to publication of Newspaper/ Magazine article or a review paper in a Research Journal. If the topic is related to Performing Arts including Yoga, Marshal Arts etc. the performance on stage may be given instead of PPT. In case of Fine Arts, an exhibition or a portfolio may be presented in place of PPT.

On the basis of the above points, a panel of experts from the department will award the credits.

<u>**Semester V**</u>

FIFTH SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA634A	International Business Management	4	-	-	4	C
BBA635A	Legal Environment for Business	3	-	-	3	ID
BBA636A	Corporate Strategy	3	-	-	4	C
BBA637A	Machine Learning and Artificial Intelligence	2	1	2	4	S
BBA638A	Big Data Analytics	2		4	4	S
BBA699A	Summer Training	-		10	05	G
	TOTAL	**14**	**1**	**16**	**24**	

International Business Management

Subject Code: BBA634A

Credits: 4

Course Objective:
The Objective is to provide the understanding of the international business environment and its competitive and investment climate and also would provide knowledge of international business and finance activities of the organization and the investigation of changes in firms strategies and accounting policies as per the change in business environment and also the understanding of various aspects of international trade, finance and currency derivatives.

Module 1: International business: An Overview
Understand the evolution of international trade theories, Introduction to Forex Markets: Absolute advantage, Relative advantage, and H-O theory, Leontief Paradox, Porter's Diamond paradox; Foreign Exchange (Forex) Market, Communication in Forex Markets, Currency Quotes- both in global and domestic market, calculation of forward rates using spot rates, calculation of discount/premium on spot rate using spot and forward rates, Spot Rates with and without transaction costs.

Module 2: Principles and monetary systems of international trade
Understand the theories of absolute cost advantage, comparative cost advantage theory, Interest rate Parity, PPP Principle, International Fisher Effect, The International Monetary System: Bretton Wood system, Exchange Rate Regimes, International Banking, Concept and Development of Universal banking, Global depository receipt, Indian depository receipt.

Module 3: Exposure of currency and its measurement
Understand the fundamental functions of currency Exposure and its Management: Types of Forex Exposures: Transaction, Translation, and Economic Exposure and their management; Country Risk- Analysis and Management. Multinational payments Management: Leading, Lagging, Pooling and Netting, foreign exchange risk management system.

Module 4: Financial derivatives
Understanding the factors influencing costs and benefits of FDI, Financial Derivatives with respect to currency: Forwards and Futures, Interest rate futures and currency futures; Determination of forward and futures prices; Options and related terminology, Calculating the pay-off from options and its representation.

Module 5: Pricing & Its strategies
Understanding on Pricing of Options- Binomial model and Black-Scholes model; trading strategies involving options; Introduction to Swaps, Interest rate swaps, currency swaps, cross currency swaps; Forward rate agreements (FRA). Interest rate caps, floors, collars, cost-oriented export pricing methods and market- oriented export pricing methods.

Course Outcomes:
CO1: This course introduces the students with the understanding about the international business theories and introduction to forex markets.
CO2: The students will learn the different approaches used in the international monetary systems.
CO3: The students will get a sound understanding of the various financial derivatives and foreign direct investments.
CO4: The student will get a deep analysis of the various financial pricing techniques held in use for international trade.
CO5: The student will understand the impact of methods and principles introduced in international finance.

Textbooks:

1. Francis cherunilam, *International business,*
2. Charles W.L. Hill and G. Thomas M. hult, *International business*
3. John H. dunning, *Governments, globalization and International business*

Reference Books:

1. Paul R. Krugman and Maurice Obstfeld, *International Finance: Theory & Practice.*

Legal Environment for Business

Subject Code: BBA635A

Credits: 3

Course Objective:

To understand various laws applicable in India i.e. Contracts Act, Special Contracts, Partnerships, LLP's, companies etc. On completion of this course, learners will be able to: appreciate the relevance of business   law to individuals and businesses and the role of law in an economic, political and social context.

Unit – 1 (Law of Contracts, Special Contract, Indemnity & Guarantee)

The Indian Contract Act, 1872 - Definition of contract -Law of contracts - Nature of contract - Classifications - Essential elements of a contract Offer and acceptance, consideration, capacity of parties- Minors-persons of unsound mind-persons disqualified by law- Free consent, legality of object and consideration, performance of contract, discharge of contract, breach of contract, remedies for breach of contract-Quasi contract- Performance. Special Contracts - Bailment and Pledge- Bailment Definition Essential elements Rights and duties of bailor and bailee Finder of lost goods. Pledge Essentials Rights and duties of Pawner and Pawnee.Indemnity and Guarantee-Indemnity - Definition, nature of liability of surety, rights of surety, discharge of surety. Meaning and definition of guarantee.

Unit 2 (Law of Agency & Sale of Goods Act)

Essentials, kinds of agents, rights and duties of agent and principal, creation of agency, termination of agency-Sub agents and substituted agents-Relationship. **Sale of Goods Act, 1930** Formation of contract of sale - Essentials of contract of sale goods and their classifications- Conditions on warranties Transfer of property in goods Performance of contract of sale Unpaid seller and his rights

Unit 3 (The Indian Partnership Act 1932, The Limited Liability Partnership)

Nature- rights and duties of partners- Registration and dissolution of firms- **The Limited Liability Partnership Act 2008-** Introduction- nature and scope- features- incorporation and differences with other forms of organization.

Unit 4 – (Companies Act and its Basics)
- Company - Definition – Characteristics – Classifications –History and framework of Company Law in India - Companies Act 2013 - one person company, small company, associate company, dormant company, producer company; association not for profit; illegal association. Promotion and formation of a company- Body Corporate - promoter- legal position-duties remuneration-Memorandum of Association – Articles of Association - Contents and alteration -Incorporation of Company - On-line registration of a company – CIN - Companies With Charitable Objects -

Doctrines of Indoor Management, Constructive Notice, Ultra-vires - Lifting up of Corporate veil - Conversion of Companies. Share Capital – Types - Public Offer - Private Placement - Prospectus - Contents of Prospectus – Types of prospectus – Deemed prospectus - Shelf Prospectus - Red Herring Prospectus - Abridged prospectus-Liability for Misstatements in Prospectus – Issue and Allotment of Securities – Types - Voting Rights –DVR- Application of Premiums - Sweat Equity Shares - Issue and Redemption of Preference Shares-Transfer and Transmission of Securities- Punishment for impersonation of Shareholder - Further Issue of Share Capital- Bonus Shares- Debenture Issue

Unit 5- (Membership in company and meetings)
Modes of acquiring membership-rights and liabilities of members- cessation of membership- Register of Members - Company meetings – Annual General Meeting - Extraordinary General Meeting- Notice Of Meeting - Quorum - Chairman - Proxies - Voting -Show of Hands – E-Voting - Poll- Postal Ballot- Motions - Resolutions - Types - Minutes - Books of accounts - Annual Return-Directors - Types - legal position – Appointment - Duties – Disqualifications- DIN - Vacation of Office - Resignation - Removal - Meetings of Board - Resolutions and Proceedings- Powers of Board - Key Managerial Personnel- CEO- CFO - Audit and Audit Committee – related party-transactions - Corporate Social Responsibility- Winding up - Contributory – Modes of winding up - Winding Up by Tribunal - Petition for Winding Up- Powers of Tribunal- Liquidators - Appointments- Submission of Report - Powers and Duties - Effect of Winding Up Order- Voluntary Winding Up - Circumstances - Declaration Of Solvency - Meeting of Creditors- Commencement of Voluntary Winding Up- Appointment of Company Liquidator- Final Meeting and Dissolution of Company Official Liquidators –Appointment -Powers - Functions - Winding up of unregistered companies.

Course Outcomes
CO1:   Ability to apply knowledge of Indian Contract Act, Sale of Goods Act, Partnership Act and LLP. Ability to identify, and solve legal issues in connection with business.
CO2:   Identify the fundamental legal principles behind contractual agreements.
CO3:   Know about the concept of company and shares.
CO4:   Know about the application of company law in India. Understand the use of the memorandum of association and article of association in a company, they also learn from this course.
CO5:   Use of various documents and forms in a company. Understand the relationship between company and its stakeholders.

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Corporate Strategy

Subject Code: BBA636A

Credits: 4

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Course Learning Outcomes: On successful completion of the module students will be able to:

1 . Analyse and evaluate critically real-life company situations and develop creative solutions, using a strategic management perspective.

2.To enable students to know and develop strategies for business to remain competitive

Unit 1: Introduction to Strategy

Concepts of strategy, Environmental issues(PESTLE) , SWOT analysis, The internal resources, capabilities and competences of an organization ,Strategic choices

Unit 2: Managing growth and scale

 Strategic management process, Environment and Organizational Appraisal, Strategic Business Unit and levels of strategy.

Unit 3: : Strategy Formulation

Industry life Cycle analysis, Corporate level strategies, Expansion and Stability, Integration and Diversification, Internationalization, Co-operative and Digitalization, Business Level Strategies, Cost leadership, Differentiation, Focus business strategy, Introduction to functional Level Strategies-Marketing, Financial, HRM, Product, Research and Development

Unit 4: Strategy Analysis and Implementation

 Process of Strategic Choice, Strategic Analysis, Mckinsey 7s , Porters five forces model BCG Matrix, Nature of Strategy implementation and barriers to strategy implementation

Suggested Reference Books:
1. .Strategic Management by Kazmi
2..Entrepreneur Development New Venture Creation Satish Taneja and S.L Gupta Galgotia Publication
3..Entrepreneurship Management;Dr.Aruna Kaulgad; Thomson Publication
4..Essentials of Entrepreneurship and small business Managemnt; Thomas Zimmerer and Norman S;Pearson Publication
5. Websites of corporates

Machine Learning and Artificial Intelligence

Subject Code: BBA637A

Credits: 4

Course Objective:
After this course students will gain critical knowledge and understanding about major Data Mining procedures like Decision Tree, Cluster Analysis, Neural Networks, Support Vector Machine, Bayesian Networks and Machine Learning fundamentals. Students will be able to apply and practice this gained knowledge in a variety of Business Scenarios.

Module 1: Classification and Regression Tree
Classification & Regression, working of a Decision Tree, Attribute Selection Measures, Information Gain, Gain Ratio, Gini Index, Building Decision Trees, CART, C5.0, and CHAID Trees, Prediction by Decision Tree, Advantages and Disadvantages of Decision Trees, Model Overfitting, Building Decision Trees in R.

Module 2: Clustering
Cluster Analysis versus Factor Analysis, Overview of Basic Clustering Methods, Agglomerative Hierarchical Clustering, Within-Group Linkage, Nearest Neighbor or Single Linkage, Furthest Neighbor or Complete Linkage, Centroid Clustering, Ward's Method, K- Means Algorithm, Dendrogram, Profiling of Cluster, Cluster Evaluation.

Module 3: Support Vector Machine
Decision Boundaries for Support Vector Machine, Maximum Margin Hyperplanes, Structural Risk Minimization, Linear SVM-Separable Case, Linear SVM-Non-Separable Case, Kernel Function, Kernel Trick, Kernel Hilbert Space, Model Evaluation.

Module 4: Market Basket Analysis
Market Basket Analysis and Association Analysis, Market Basket Data, Stores, Customers, Orders, Items, Order Characteristics, Product Popularity, Tracking Marketing Interventions, Association Rules, Support, Confidence, Lift, Chi-Square Value, Sequential Pattern Analysis.

Module 5: Introduction to Artificial Intelligence
Current Trends in AI, Intelligent Agents, Environments, Problem Solving Agents, Searching Techniques, Knowledge and Reasoning in AI, Forms of Learning, Structure of a Neural Network, Analogy with Biological Neural Network, Activation Functions, Gradient Descent, Model Accuracy.

Course Outcomes:
CO1: Understand and employ a wide variety of Statistical and Machine Learning Algorithms.
CO2: Identify the characteristics of Datasets, Problem Statement and develop Machine Learning programs with reference to known Computing Techniques.
CO3: Understand the Model Performance Evaluation and select the best one based on the solution.
CO4: Implement Machine Learning techniques and the Programming Framework to obtain acceptable decisions for the Real-World problems.
CO5: Employ the use of Artificial Neural Networks to solve real time high sized input analysis and predictions.
Textbooks:
1. Kevin Knight, Elaine Rich, B.Nair, 2017, *Artificial Intelligence*, McGraw.

References:
1. Han, Jiawei and Kamber, Micheline, 2012, *Data Mining: Concepts and Techniques*, Morgan Kaufman Publishers.
2. Anand Rajaraman, 2011, *Mining of Massive Datasets*, Cambridge University Press.
3. Mitchell, 2013, *Machine Learning*, McGraw Hill.
Stuart Russell, Peter Norvig, 2004, *Artificial Intelligence – A Modern Approach*, Pearson.

Big Data Analytics

Subject Code: BBA638A

Credits: 4

Course Objective:
This course will help students gain knowledge and understanding about Big Data Technology, Hadoop Ecosystem and various tools related to it. The students will learn about the HDFS File System, Map Reduce Framework, analysing data using Hbase and Hive along with the Integration of R with Hadoop.

Module 1: Introduction to Big Data
What Is Big Data? History of Data Management, Evolution of Big Data, Structuring of Big Data, Elements of Big Data, Application of Big Data in the Business Context, Careers in Big Data. Business Applications of Big Data: The Significance of Social Network Data, Financial Fraud and Big Data, Fraud Detection in Insurance, Use of Big Data in the Retail Industry.

Module 2: Technologies for Handling Big Data
Distributed and Parallel Computing for Big Data, Understanding Hadoop, Cloud Computing, Grid Computing and In-Memory Technology for Big Data. VMWare Installation of Hadoop, Linux and its Shell Commands, Different Hadoop Distributions and their advantages, Hortonworks, Cloudera, MapR.

Module 3: Understanding the Hadoop Ecosystem
The Hadoop Ecosystem, Storing Data with HDFS, Design of HDFS, HDFS Concepts, Command Line Interface to HDFS, Hadoop File Systems, Java Interface to Hadoop, Anatomy of a file read, Anatomy of a file write, Replica placement and Coherency Model. Parallel Copying with distcp, keeping an HDFS Cluster Balanced.

Module 4: Map Reduce Fundamentals
Origins of Map Reduce, How Map Reduce Works, Optimization Techniques for Map Reduce Jobs, Applications of Map Reduce, Java Map Reduce classes (new API), Data flow, combiner functions, running a distributed Map Reduce Job. Configuration API, setting up the development environment, Managing Configuration.

Module 5: Integrating R with Hadoop, Understanding Hive & Hbase
Understanding R-Hadoop, Integration Procedure, Packages needed for R under Hadoop Ecosystem, Text Mining for Deriving Useful Information using R within Hadoop, Introduction to Hive & Hbase, Hive and Hbase Architecture, Understanding Queries, Mining Big Data with Hive & Hbase.

Course Outcomes:
CO1: Understand the fundamentals of Big Data and its Applications in various Domains.
CO2: Conceptualize and Incorporate the Technologies behind Big Data.
CO3: Understand HDFS File Structure, Map Reduce Framework, the architectures related to them and to use them to solve complex problems.
CO4: Integrate R with Hadoop and solve analytical problems.
CO5: Understand and Use Hive/Hbase shell pertaining to relational data handling under Hadoop.
Textbooks:
1. Arshdeep Bahga, 2016, *Big Data Science & Analytics: A Hands-On Approach*, VPT.
References:
1. Tom White, 2012, *Hadoop: The Definitive Guide*, O'Reilly.
2. Adam Shook and Donald Miner, 2012, *Map Reduce Design Patterns: Building Effective Algorithms and Analytics for Hadoop and Other Systems*, O'Reilly.
3. Dean Wampler, Edward Capriolo & Jason Rutherglen, 2012, *Programming Hive*, O'Reilly.
4. Lars George, 2011, *HBase - The Definitive Guide: Random Access to Your Planet-Size Data*, O'Reilly.

Summer Training

Subject Code: BBA699A

Credits: 5

Semester VI

SIXTH SEMESTER						
Sub Code	**Sub Name**	**L**	**T**	**P**	**C**	**Type**
BBA639A	Customer relationship management	4	-	-	4	C
BBA640A	Project Management	4	-	-	4	C
BBA641A	Leadership Skills	3	-	-	3	S
BBA642A	Natural Language Processing	2	-	4	4	S
BBA643A	Social Media Analytics	2	-	4	4	S
BBA644A	Project Work	-	-	6	5	G
	TOTAL	**15**	**-**	**14**	**24**	

Customer relationship management

Subject Code:BBA639A
Credits:4

Course Outcomes:

On successful completion of this course, the students will be able:

CO1: To be aware of the nuances of customer relationship

CO2: To analyze the CRM link with the other aspects of marketing

CO3: To impart the basic knowledge of the Role of CRM in increasing the sales of the company

CO4: To make the students aware of the different CRM models in service industry

CO5: To make the students aware and analyze the different issues in CRM

Unit I: Evolution of Customer Relationship

CRM- Definition, Emergence of CRM Practice, Factors responsible for CRM growth, CRM process, framework of CRM, Benefits of CRM, Types of CRM, Scope of CRM, Customer Profitability, Features Trends in CRM , CRM and Cost-Benefit Analysis, CRM and Relationship Marketing.

Unit II: CRM Concepts

Customer Value, Customer Expectation, Customer Satisfaction, Customer Centricity, Customer Acquisition, Customer Retention, Customer Loyalty, Customer Lifetime Value. Customer Experience Management, Customer Profitability, Enterprise Marketing Management, Customer Satisfaction Measurements, Web based Customer Support.

Unit III: Planning for CRM

Steps in Planning-Building Customer Centricity, Setting CRM Objectives, Defining Data Requirements, Planning Desired Outputs, Relevant issues while planning the Outputs, Elements of CRM plan, CRM Strategy: The Strategy Development Process, Customer Strategy Grid.

Unit IV: CRM and Marketing Strategy

 CRM Marketing Initiatives, Sales Force Automation, Campaign Management, Call Centres. Practice of CRM: CRM in Consumer Markets, CRM in Services Sector, CRM in Mass Markets, CRM in Manufacturing Sector.

Unit V: Challenges of CRM Implementation

CRM Planning and Implementation Issues and Problems in implementing CRM, Information Technology tools in CRM, Challenges of CRM Implementation. CRM Implementation Roadmap, Road Map (RM) Performance: Measuring CRM performance, CRM Metrics.

Text Books:

1. Francis Buttle, Stan Maklan, Customer Relationship Management: Concepts and Technologies, 3rd edition, Routledge Publishers, 2015

2. Kumar, V., Reinartz, Werner Customer Relationship Management Concept, Strategy and Tools, 1st edition, Springer Texts, 2014

Reference Books:

1. Jagdish N.Sheth, Atul Parvatiyar & G.Shainesh, "Customer Relationship Management", Emerging Concepts, Tools and Application", 2010, TMH.

2. Dilip Soman & Sara N-Marandi," Managing Customer Value" 1st edition, 2014, Cambridge.

3. Alok Kumar Rai, "Customer Relationship Management: Concepts and Cases", 2008, PHI. 4. Ken Burnett, the Handbook of Key "Customer Relationship Management", 2010, PearsonEducation.

5. Mukesh Chaturvedi, Abinav Chaturvedi, "Customer Relationship Management- An Indian Perspective", 2010 Excel Books, 2nd edition

Project Management

Subject Code:BBA640A
Credits:4

Unit 1: The nature of project

Determine the distinguishing features of projects and the constraints they operate in. Discuss the implications of the triple constraints of scope, cost and time. Discuss the relationship between organisational strategy and project management. Identify and plan to manage risks. Advise on the structures and information that have to be in place to successfully initiate the project. Explain the relevance of projects to process re-design, e- business systems development and quality initiatives.

Unit 2: The project life cycle and building the business case

Techniques of project appraisal – payback perios, Accounting rate or return, NPV, IRR. Describe the structure and contents of a business case document. Analyse, describe, assess and classify benefits of project investment. Analyse, describe, assess and classify costs of project investment. Evaluate the costs and benefits of a business case using standard techniques. Establish responsibility for the delivery of benefits.

Unit 3: Managing and Leading projects

Discuss the organisation and implications of project-based team structures. Establish the role and responsibilities of the project manager and the project sponsor. Identify and describe the typical problems encountered by project manager when leading the project. Advise how these typical problems can be addressed and overcome.

Unit 4: Planning, monitoring and controlling projects

Discuss the principles of a product breakdown structure. Assess the importance of developing a project plan. Monitor the status of the project and identify project risks, issues, slippage and changes. Formulate response for dealing with project risk, issues, slippage and changes. Discuss the role of benefits management and project gateways in project monitoring.

Unit 5: Concluding a project

Establish mechanism for successfully concluding the project. Discuss the relative meaning and benefits of a post implementation and a post project review. Discuss the meaning and value of benefits realisation.

Leadership Skills

Subject Code:BBA641A
Credits:3

Course Outcomes:

On successful completion of this course, the students will be able:

CO1: To know the role, functions and different styles of leadership

CO2: To know and apply the theories of leadership

CO3: To know the meaning of power and politics in context of leadership

CO4: To make the students aware about developing leadership skills in themselves

CO5: To make the students aware about different and innovative leadership

Unit I: Introduction to Leadership:

Leadership, role and functions of a Leader, Leadership motives Characteristics of an Effective Leader, Leadership as a process – the complexities of leadership – Effective leadership behaviors and attitudes – Leadership and power, coercion, Management, Trait approach, Leadership Behaviour and styles – Lewins Leadership styles, Ohio state Leadership study, The University of Michigan Study, Blake and Moutons Managerial Grid.

Unit II: Leadership Theories:

Traditional Theories (A Brief Overview) • Trait Theory • Behavioral Theories • Fiedler's Contingency Model • Path – Goal Leadership Theory • Situational Leadership Theory • The Managerial Grid Modern Theories • Charismatic Leadership• Transactional and Transformational Leadership• Substitutes for Leadership• Authentic Leadership

Unit III: Power and Politics:

Meaning Power,Distinction between Power & Authority, Bases or Sources of Power, Acquisition of Power, Symbols of Power and Powerlessness, Organizational Politics,Reasons for Organizational Politics ,Managing Organizational Politics

Unit IV: Developing Leadership Skills:

What Skills do Leaders Need? ;Leadership Training Programs,Designing Effective Training ,Special Techniques of Leadership Training: Behavior Role Model, Case,Discussion and Business Games & Simulation, Challenges in designing training programmes

Unit V: Innovative Leadership and Design Thinking

Innovative Leadership , Concept of emotional and social intelligence , Synthesis of human and artificial intelligence , Why does culture matter for today's global leaders , Design Thinking ,What is design thinking, Key elements of design thinking: - Discovery - Interpretation - Ideation -

Experimentation - Evolution. ,How to transform challenges into opportunities? How to develop human-centric solutions for creating social good

Reference books:

1. Leadership in Organizations: Gray Yukl, Pearson Education (Sixth Edition)

2. Sham Lal. Indian Realities in Bits and Pieces, Rupa and Co. New Delhi

3. Surendra Kumar & Pradeep Kapur. India of My Dreams, Academic Foundation, New Delhi

4. Nissam, Urlah. India: Economic, Political and Social Issues

5. Drucker, Peter and Maciariello, Joseph: 366 Days of Insight and Motivation for Getting the Right Things Done: Rutledge

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Natural Language Processing

Subject Code:BBA642A
Credits:4

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Course Objective:
The course introduces the concepts of Text Analytics, Unstructured Information Analysis for better decision making by deriving valuable insights. The course will help the students understand the roots behind Text Mining which evolved from Machine Learning, Natural Language Processing and Statistics. Upon completion, students are expected to be able to describe basic concepts and methods of Text Mining, Information Extraction, Text Classification and Clustering, Topic Modelling.

Module 1: Introduction to Text Mining
Basics of Text Mining, Natural Language Content Analysis, Core Text Mining Operations, Associations, Using Background Knowledge for Text Mining, Domain Ontologies, Domain Lexicons. Text Mining Preprocessing Techniques, Task Oriented Approaches, NLP Tasks, Tokenization, Part-of-Speech Tagging, Syntactical Parsing and Shallow Parsing.

Module 2: Extracting Features, Relations from Text
Finding Implicit Features, Finding Opinion Phrases and their Polarity, Context-Specific Word Semantic Orientation, Analysis of Word and Document Frequency, tf-idf, Zipf's Law, bind tf_idf Function, Subsequence Kernels for Relation Extraction, Capturing Relation Patterns with a String Kernel.

Module 3: Text Categorization and Clustering
Applications of Text Categorization, Document Representation, Knowledge Engineering Approach to Text Categorization, Machine Learning Approach to Text Categorization, Evaluation of Text Classifiers. Clustering Tasks in Text Analysis, Clustering Algorithms and Clustering of Textual Data.

Module 4: Relationships between Words
Tokenizing by N-gram, Counting and Filtering N-gram, Analyzing Bigrams to provide Context in Sentiment Analysis, visualizing a Network of Bigrams using graph, Counting and Correlating Pairs of Words with the widyr Package, Counting and Correlating among Sections, Examining Pairwise Correlation.

Module 5: Topic Modelling and Probabilistic Models for Information Extraction
Latent Dirichlet Allocation, Word Topic Probabilities, Per-Document Classification, By- words Assignments, Alternative LDA Implementations. Hidden Markov models, Stochastic Context Free Grammar, Conditional Random fields, Parallel Learning Algorithms.

Course Outcomes:
CO1: Understand approaches to Syntax and Semantics in NLP.
CO2: Understand various methods for Statistical approaches to Machine Translation.
CO3: Build Models which extract information from Textual Unstructured Data.
CO4: Understand and implement Topic Modelling and Probabilistic Models for Information Extraction.
CO5: Implement and deploy programs based on Relationship Extraction, POS Tagging and Clustering Algorithms based on NLP.

Textbooks:
1. Julia Silge, David Robinson, 2018, Text Mining with R-A Tidy Approach, O'Reilly

References:
1. Matthew L. Jockers, 2014, Text Analysis with R for Students of Literature,
2. Springer.
3. James Pustejovsky, Amber Stubbs, 2012, Natural Language Annotation for Machine Learning, O'Reilly.
4. Steve R. Poteet, 2007, Natural Language Processing with Text Mining, Springer. James Sanger, Ronen Feldman, 2002, The Text Mining Handbook: Advanced Approaches in Analysing Unstructured Data, Cambridge.

Social Media Analytics

Subject Code:BBA643A
Credits:4

Course Objective:
This course aims at giving exposure on the advanced aspects with regards to Analytics. The course comprises Social-Media, Mobile, Text Analytics along with Web Scraping and the future advancements in the field of Analytics.

Module 1: Overview
Social Media, On-Line Social Network, Off-Line Social Network, Metrics and Measurement, Dashboard, Target Audience, Desired Action, Content, Market Research Online Communities, Cluster Analysis, Conjoint Analysis, Multidimensional Scaling, Social Media Listening, Social Media Scoring, Social Media Modelling.

Module 2: Mobile Analytics
Understanding Mobile Analytics Concepts, difference between Mobile Analytics and Site Analytics, Natural language Processing with Mobile Analytics, Text Mining for Mobile Analytics, Mobile Analytics Tools, Churn Analytics.

Module 3: Text Analytics
Text Data, Sources of Text Data, Information Clusters, Patterns, Trends, Tagging, Natural Learning Process, Lexical Analysis, Social Network Nodes, Linkage Structure, Node Labelling, Content-Based Classification, Word Stemming, Stemming Algorithms, Polarity of the Attitude, Psychological Profiling, Sentiment Analysis.

Module 4: Web Scraping
Web Scraping of unstructured data, Gathering data from HTTP and HTTPS format, Web Scraping from XML and JSON file, Regular expressions, Extraction Strategies, Term Document Matrix, Data Cleansing, Data Manipulation and Data Transformation after Scrapping.

Module 5: Future of Analytics

Introduction to Big Data, Predictive Analysis for Business, Social Information Processing and Distributed Computing, Advances in Machine Learning, Traditional Data Models Evolve, Analytics to Solve Social Problems, Location Based Data Explosion, Data Privacy Backlash, Internet of Things, Artificial Intelligence.

Course Outcomes:

CO1: Apply and use Social Media Analytics for the betterment of the business.

CO2: Use Mobile Analytics for solving complex business problems and to stop churn.

CO3: Evaluate the business problem and apply analytics techniques for better output.

CO4: Analyze and understand patterns and techniques in Social Media & Mobile Analytics to solve complex problems.

CO5: Identify the areas of research with regards to future implementation of social media analytics based on managerial disciplines.

Textbooks:

1. Galit Shamuelli, 2017, *Data Mining for Business Analytics: Concepts, Techniques and Applications with R*, Wiley.

References:

1. Luis Torgo, 2017, *Data Mining with R: Learning Case Studies*, Chapman.
2. Zaki & Meira, 2014, *Data Mining and Analysis Fundamental Concepts and Algorithms*, Cambridge.
3. Han, Kamber & Pei, 2013, *Data Mining: Concepts and Techniques*, Morgan Kaufmann.
4. Han, Jiawei and Kamber, Micheline, 2012, *Data Mining: Concepts and Techniques*, Morgan Kaufman.

Project Work

Subject Code:BBA644A
Credits:5