JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
R-25 BBA (Data Analytics) Course Structure
Applicable from the Academic Year 2025-2026
* CC- Core Course; AEC - Ability Enhancement Course; MDE - Multidisciplinary Elective Course; VAC - Value Added Course; SEC - Skill Enhancement Course; DSE - Discipline Specific Elective

I Year I Semester

S. No.	Course Code	Category	Category Course Title	L	T	P	Internal Marks	External Marks	Credits
1	25BBA101	CC	Principles and Practices of Management	3	--	--	40	60	3
2	25BBA102	CC	Financial Accounting	3	--	--	40	60	3
3	25BBA103	CC	Business Communication	3	--	--	40	60	3
4	25BBA104	AEC	Introduction to Digital Technologies	3	--	--	40	60	3
5	25BBA105	MDE	Indian Knowledge Systems	2	--	--	40	60	2
6	25BBA106	VAC	Environment and Sustainability Management (CC)	3	--	--	40	60	3
7	25BBA107	AEC	Business Communication Lab	--	--	4	40	60	2
8	25BBA108	AEC	Accounting Information Systems Lab	--	--	4	40	60	2
			Total	**17**	**--**	**8**	**320**	**480**	**21**

I Year II Semester

S. No.	Course Code	Category	Category Course Title	L	T	P	Internal Marks	External Marks	Credits
1	25BBA201	CC	Business Statistics	3	--	--	40	60	3
2	25BBA202	CC	Business Economics	3	--	--	40	60	3
3	25BBA203	CC	Fundamentals of Marketing	3	--	--	40	60	3
4	25BBA204	CC	Fundamentals of Human Resources Management	3	--	--	40	60	3
5	25BBA205	VAC	Indian Constitution	2	--	--	40	60	2
6	25BBA206	MDE	Creativity and Innovation	2	--	--	40	60	2
7	25BBA207	SEC	Personality Development and Soft Skills Lab	--	--	4	40	60	2
8	25BBA208	AEC	Digital Skills Lab	--	--	4	40	60	2
			Total	**16**	**--**	**8**	**320**	**480**	**20**

* Summer Internship: Social Responsibility Project Report - 2 credits; Report to be presented in II Year I Semester - 2 credits

II Year I Semester

S. No.	Course Code	Category	Category Course Title	L	T	P	Internal Marks	External Marks	Credits
1	25BBA301	CC	Business Environment	3	--	--	40	60	3
2	25BBA302	CC	Entrepreneurship & Startup Ecosystem	3	--	--	40	60	3
3	25BBA303	CC	Financial Management	3	--	--	40	60	3
4	25BBA304	CC	Business Research Methodology	3	--	--	40	60	3
5	25BBA305	CC	Operations Management	3	--	--	40	60	3
6	25BBA306	MDE	Social Responsibility Project	--	--	2	40	60	2
7	25BBA307	SEC	Business Development Plan Lab	--	--	2	40	60	2
8	25BBA308	VAC	Health and Wellness Project	--	--	2	100	--	1
			Total	**15**	**--**	**6**	**380**	**420**	**20**

II Year II Semester

S. No.	Course Code	Category	Category Course Title	L	T	P	Internal Marks	External Marks	Credits
1	25BBA401	CC	Organizational Behavior	3	--	--	40	60	3
2	25BBA402	CC	Legal and Ethical Practices in Business	3	--	--	40	60	3
3	25BBA403	CC	Cost and Management Accounting	3	--	--	40	60	3
4	25BBA404	CC	Business Taxation	3	--	--	40	60	3
5	25BBA405	CC	Supply Chain Management	3	--	--	40	60	3
6	25BBA406	MDE	Database Management Systems	3	--	--	40	60	3
7	25BBA407	VAC	Social Media Analysis & Campaigning Management	--	--	2	40	60	1
8	25BBA408	SEC	Multimedia Lab	--	--	2	40	60	1
			Total	**18**	**--**	**4**	**320**	**480**	**20**

Summer Internship – II: Field based study in a Company (or) Public Sector (or) NGO. – 2 credits

III Year I Semester

S. No.	Course Code	Category	Category Course Title	L	T	P	Internal Marks	External Marks	Credits
1	25BBA501	CC	International Business	3	--	--	40	60	3
2	25BBA502	CC	Design Thinking	3	--	--	40	60	3
3	25BBA503	CC	Business Analytics	3	--	--	40	60	3
4	25BBA504	CC	Information Security	3	--	--	40	60	3
5	25BBA505	DSE	Data Science	3	--	--	40	60	3
6	25BBA506	DSE	Python Programming	3	--	--	40	60	3
7	25BBA507	DSE	Python Programming Lab	--	--	4	40	60	2
8	25BBA508	SEC	Field based Project – Analytics	--	--	2	100	--	2
			Total	**18**	**--**	**6**	**380**	**420**	**22**

III Year II Semester

S. No.	Course Code	Category	Category Course Title	L	T	P	Internal Marks	External Marks	Credits
1	25BBA601	CC	Fundamentals of Strategic Management	3	--	--	40	60	3
2	25BBA602	CC	Introduction to AI and Automation	3	--	--	40	60	3
3	25BBA603	DSE	R Programming	2	--	--	40	60	2
4	25BBA604	DSE	Data Visualization & Analysis	2	--	--	40	60	2
5	25BBA605	DSE	R Programming Lab	--	--	4	40	60	2
6	25BBA606	DSE	Data Visualization & Analysis Lab	--	--	4	40	60	2
7	25BBA607		Pre-submission Seminar (Project)	--	2	--	100	--	2
8	25BBA608	SEC	Project Work	--	--	4	--	100	4
			Total	**10**	**2**	**12**	**340**	**460**	**20**

25BBA101: PRINCIPLES AND PRACTICES OF MANAGEMENT

SDG 8 (Decent Work & Economic Growth)   **SDG 16** (Peace, Justice & Strong Institutions)

Course Objectives:
1. Understand the concepts, evolution thoughts, functions and process of Management.
2. Analyze the importance of planning process, tools and techniques and decision making in an organization.
3. Learn about various organizational structures, authority and responsibility, line & staff relationships in an organization.
4. Understand about HR planning, recruitment, and selection process in an organization.
5. To orient on the aspects of directing & controlling in an organization.

Course Outcomes: Students will be able to
1. Gain a clear understanding of the Management concepts, process and functions.
2. Assess knowledge on planning process tools and techniques and decision making in an organization technique in decision-making.
3. Illustrate different types of organizational structures, processes or organizational effectiveness.
4. Apply HR planning, its importance and also know the importance of recruitment and selection process in an organization.
5. Identify the need and principles of directing and explain effective control system.

Unit -I: Introduction to Management
Concept, nature and scope, importance of management, the management process, hierarchy of management, management functions, managerial skills and competencies. Evolution of management thought: Scientific Management approach, Classical Management Approach, Administrative approach, Behavioral approach, System, Contingency approach, learning organization.

Unit -II: Planning
Concept and importance, planning process, Benefits, Essentials of a Good plan, Types of plans, planning tools and techniques, Management by Objectives, environmental analysis and diagnosis. decision making - Concept and process, types of Decision-making, Decision-Making Model.

Unit -III: Organizing
Concept, nature & scope, span of Management, organizational structure, types of organizational structures and their merits and demerits, process and significance. Authority and responsibility - delegation, centralization and decentralization of authority, line and staff relationship, accountability.

Unit -IV: Managerial Staffing
Nature of staffing function, Human Resource Planning, sources of recruitment, recruitment process and types. Selection - process, types of selection, job offer, placement and induction.

Unit -V: Directing and Controlling
Need for directing, principles and characteristics of directing, Leader Vs Manager. Controlling-importance of controlling, characteristics of control, steps, resistance to control, design of effective control system and types.

Suggested Readings:
- Harold Koontz & Heini Weihrich Essentials of Management-An International, Innovation and Leadership perspective, 11th Edition, Tata Mc Graw-Hill Education, 2020
- T. Ramasamy, Principles of Management, Himalaya Publishing House, Mumbai, 2018.
- Anil Bhat, Arya Kumar, Principles of Management, Oxford University Press, 2018.
- Chandrani Singh, Aditi Khatri, Principles and Practices of Management and Organizational Behaviour, Sage Publications, 2016.
- John R. Schermerhorn., Daniel G. Bachrach, Introduction to Management, Wiley, 13e, 2016.
- Robbins, S. P., & DeCenzo, A. D. Fundamentals of Management. New Delhi: Pearson Education.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – I
25BBA102: FINANCIAL ACCOUNTING
SDG 8 (Decent Work & Economic Growth) **SDG 16** (Peace, Justice & Strong Institutions)

Course Objectives:
1. Understand the foundation of Financial Accounting and its applications in business.
2. Familiarize the concept of Double Entry Book System and Accounting Process.
3. Develop the skills needed to analyze financial statements and its interpretation for better decision making.
4. Understand the significance of Inventory and its role in financial accounting.
5. Analyze financial statements through Ratios of a firm.

Course Outcomes: After completion of the course, students will be able to
1. Know the basic terminologies in financial accounting and learn accounting standards issued by ICAI.
2. Gain knowledge about the Accounting Cycle to prepare and interpret financial statements from financial transactions.
3. Analyze the reasons for keeping inventories to aid in financial decision making.
4. Able to learn the inventory valuation methods in business.
5. Interpret financial statements through ratios analysis.

Unit –I: Introduction to Accounting
Importance, Objectives and Principles, Accounting Concepts and conventions, and The Generally Accepted Accounting Principles (GAAP), Accounting Standards Issued by ICAI- International Financial Reporting Standards (IFRS), Basic terminology in accounting.

Unit –II: The Accounting System
Double entry system–recording business transactions–Classification of accounts–Accounting cycle, Books of Original Record; Journal, ledger, Trial Balance, Rectification of Errors (Problem Solving).

Unit –III: The Accounting Process
Capital and Revenue expenses, Final Accounts; Trading-Purpose, structure and Format, Profit and Loss account-Purpose, structure and Format and Balance sheet -Purpose, structure and Format without adjustments and with adjustments (Problem Solving).

Unit –IV: Inventory Valuation and Depreciation
Introduction, Reasons for Keeping Inventories, objectives of inventory accounting, Methods of inventory valuation- Sales Price Method, Market Price Method and cost Price Methods Depreciation, Methods of depreciation and valuation -Straight Line Method, Diminishing Balance Method, Sum of years' Digits Methods, Production Units Methods (Problem Solving).

Unit –V: Financial Analysis
Introduction to financial statements Analysis, Horizontal Analysis and Vertical Analysis of Company, Financial Statements, Liquidity, leverage, solvency and profitability ratios – Du Pont Chart.

Suggested Readings:
- Narayanaswamy, R., Financial Accounting A Managerial Perspective, PHI Learning Pvt. Ltd.,2022
- R. K. Arora, Financial Accounting-Fundamentals, Analysis and Reporting, Wiley, 2e, 2018.
- Jai Kumar Batra, Accounting and Finance for Non- Finance Managers, Sage texts, 1e, 2019.
- S. N. Maheswari, S. K. Maheshwari, Sharad K. Maheshwari Accounting for Management, 4e, Vikas Publishing House, 2018.
- Dhanesh K. Khatri, Financial Accounting & Analysis, Tata McGraw-Hill Publishing Limited, New Delhi, 2015.
- Paresh Shah, Basic Financial Accounting for Management, Oxford University Press, New Delhi, 2014.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – I
25BBA103: BUSINESS COMMUNICATION

SDG 4 (Quality Education)   **SDG 17** (Partnerships for the Goals)

Course Objectives:
1. To familiarize the importance of communication, its components and process.
2. To know the importance of formal, informal communication, its applications in Business.
3. To study different types of communication skills, listening skills for overall personality development.
4. To focus on written communication for overall development.
5. To learn different inter-cultural, cross cultural, need for business etiquette in an organization.

Course Outcomes: Students will be able to
1. Understand the importance of communication in Business.
2. Demonstrate knowledge on different modes of communication for self-development.
3. Develop presentation, oral communication and non-verbal communication for enhancing effective presentation.
4. Improve written communication through drafting letters and reports
5. Analyze different inter -cultures and role of social media for effective communication in organizations.

Unit -I: Introduction to Business Communication
Introduction to communication, sender-receiver model of day-to-day communication. Foundations of Business Communication: Components of Communication, business communication process. Barriers to communication. Real world communication failures and their business consequences.

Unit -II: Day-to-day Business Communication
Formal vs. informal communication in organizations. Direction of information: upward, downward, horizontal/lateral, diagonal, Cross communication and grapevine. Importance and need for developing listening skills. Modes of communication: Verbal (oral), written, non-verbal communication and others. Need and scope of Virtual Communication.

Unit -III: Developing verbal and non-verbal communication skills
Presentation vs. oral communication, developing presentation skills. Role of non-verbal communication; using non-verbal skills, body-language, gestures and voice modulation for enhancing the effectiveness of verbal communication and presentation.

Unit -IV: Developing Written Communication skills
Planning and organizing written content, guidelines for writing formal letters and e-mails; kinds of formal letters and e-mails, learning to customize written communication for different situations. Basic guidelines for report writing. Biodata/Resume/CV, Agenda, Memo and Minutes.

Unit -V: Contemporary aspects of Business Communication
Inter-cultural, team communication and organizational communication; interpersonal communication, Role of social media in communication, business etiquette. Digital Skills. Cross cultural communication challenges.

Suggested Readings:

- Ober Newman, Communicating in Business, Cengage Learning, 8e, 2015
- Kelly M. Quintanilla and Shawn T. Wahl, Business and Professional Communication, Sage,   4e, 2020
- Hory Sankar Mukerjee, Business Communication, Oxford, 2e, 2016
- M K Sheal & Vandana Khetrapal, Business Communication, Excel books.
- Celeste Lawson, Robert Gill, Angela Feekery, Mieke Witsel, Communication Skills for Business Professionals, Cambridge University Press 2019.
- Sanjay Gupta, Business Communication (E Book), SBPD Publications, 2021.

SDG 4 (Quality Education)   **SDG 9 (Industry, Innovation & Infrastructure)**

Course Objectives:
1. To enable students to understand the basic concepts of IT in business.
2. To understand about Information system
3. To analyze the emerging trends in information Technology.
4. To get exposed to AI tools for business growth and automation
5. To study morality and ethics in AI

Course Outcomes: After completion of the course, students will be able to
1. Know about the evolution of computer systems, operating system, and programming languages.
2. Know about the information system
3. Gain knowledge about various trends in IT like EDI, RIFD and infrared communication.
4. Gain knowledge about various tools in AI
5. Exposed to morality and ethical issues concerning AI development.

Unit -I: Computer system: An Overview
Introduction to the computer, block diagram of a computer, input and output devices of computer, GUI, evolution of computer, application of computer, memory devices, Software, classification of software, Operating systems, types of operating system, Programming languages, classification of programming languages

Unit -II: Information System
LAN, application of LAN, WAN, Intranet, Internet and future internet technology. Introduction to data, information and knowledge, types of information-Transaction Processing System, Management Information Systems, Decision Support System, Executive Support system. Data Base definition, database management system architecture, types of databases.

Unit -III: Emerging Trends in IT
E-Commerce, EDI, mobile communication, blue-tooth, global positioning system, infrared communication, smart card, RIFD. Developments in Information Technology.

Unit IV: AI Tools for Business Growth and Automation
Predictive Analytics tools, Sentiment Analysis tools, Recommendation tools, Voice assistance tools, Chatbox tools, AI Virtual Assistants tool, Edit video tools.

Unit V: AI and Ethics
Definition of morality and ethics in AI, Impact on human, psychology, trust and legal system, Model process for addressing ethical concerns during system design, data privacy process, societal issues concerning application of AI.

Suggested Readings:

- Dr.Kuldeep Singh Kanswan, Dr. Om Prakash Sangwan, Essential of Information Technology, Educreation Publishing, 2018.
- P. Kumar, A Tomar, R. Sharmila, Emerging Technologies in Computing, Theory, Practice and Advances.
- V.Rajaraman, Introduction to Information Technology, PHI Learning Private Limited, 3e, 2018.
- Aleksandrs Posts, AI for Business Growth, A practical guide to innovation and automation.
- Animesh Mukherjee, AI and Ethics 2023

25BBA105: INDIAN KNOWLEDGE SYSTEM

SDG 4 (Quality Education) **SDG 11** (Sustainable Cities and Communities)

Course Objectives

1. To introduce students to the foundational concepts, structure, and relevance of Kauṭilya's Arthaśāstra in governance and management.
2. To examine the internal governance mechanisms and knowledge traditions of ancient Indian statecraft.
3. To understand the Saptāṅga theory and its significance in defining the strength and sustainability of a kingdom.
4. To explore the strategic and diplomatic doctrines in *Arthaśāstra* and their relevance to modern geopolitical and business contexts.

Course Outcomes: After completion of the course, students will be able to

1. Describe the key ideas and analyze the modern applications of Arthaśāstra in contemporary administration and leadership.
2. Evaluate the administrative structure, intelligence systems, and knowledge branches and compare them with modern frameworks.
3. Identify and interpret the seven constituents of the Rājya and apply the model in organizational or national analysis.
4. Explain the Ṣāḍguṇya strategies and critically assess their applicability in present-day international relations or corporate diplomacy.

Unit 1: Introduction to Kauṭilya's Arthaśāstra: Introduction to Kauṭilya and the Arthaśāstra, Basic Concepts of *Rājā* (King) and *Rājya* (Kingdom), Historical Context and Significance, Structure and Key Themes of the Arthaśāstra, Relevance of Arthaśāstra in Modern Governance and Management

Unit 2: Internal Affairs and State Administration: Focus on Tantrādhikāra – internal management of the Rājya; Education and training under Vinayādhikaraṇa; Four branches of knowledge – Ānvīkṣikī, Trayī, Vārttā, Daṇḍanīti; Council of Ministers and their advisory role; Espionage system and types of spies; Types of envoys and sensitive decision-making (Mantrādhikāra); Conduct and qualities of a ruler; Bureaucratic structure and role of departmental superintendents; Key departments – trade, agriculture, standardization, liquor, courtesans; Role of women and spies; Overview of legal systems under Dharmasthīyam and Kaṇṭakaśodhanam; Civil and criminal matters; Secret conduct and ethics in governance.

Unit 3: Constituent Elements of the Rājya: Understanding Prakṛti Sampat through the Saptāṅga theory – the seven pillars of a state: Svāmī (King), Amātya (Minister), Janapada (Territory), Durga (Fort), Kośa (Treasury), Daṇḍa (Law and Order), and Mitra (Ally); Concept of Maṇḍalayoni – the circle of kings; Integration of Yoga and Kṣema – administration and welfare; Managerial and strategic insights from the Saptāṅga framework.

Unit 4: Foreign Policy and Strategic Thought: Understanding Avāpādhikāra – external affairs in the Arthaśāstra; Types of warfare – Mantrayuddha (strategic), Prakāśayuddha (open), Kūṭayuddha (deceptive), and Gūḍayuddha (secret); Use of medicine/herbs in war (Aupaniṣadikaṃ); The Ṣāḍguṇya doctrine – six strategic policies: peace, war, neutrality, alliance, dual policy, and subjugation; Conditions and outcomes for applying each policy; Relevance of Kauṭilya's diplomatic framework in modern international relations and business strategy.

Suggested Readings : AICTE Prescribed / Recommended Sources

- AICTE Model Curriculum for Indian Knowledge System (IKS) (can be downloaded from AICTE official website)
- Mahadevan B.Introduction to Indian Knowledge Systems (AICTE Recommended Textbook),PHI Learning,
- **Other Academic & Scholarly Sources**
- R. Shamasastry ,Kautilya's Arthashastra, Translated by (freely available on archive.org)
- K.P. Jayaswal ,The Concept of State in Ancient India
- Balbir Sihag ,Kautilya: The True Founder of Economics,
- L.N. Rangarajan, Arthashastra: A Treatise on Statecraft, Penguin Edition
- Himanshu Roy, Indian Political Thought: Themes and Thinkers,Pearson

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – I
25BBA106: ENVIRONMENT AND SUSTAINABILITY MANAGEMENT
SDG 12 (Responsible Consumption & Production)
SDG 13 (Climate Action)   **SDG 15** (Life on Land)

Course Objectives:
1. To understand the interaction of environment drives the eco system, biodiversity and green environment.
2. To assess the Future Business models with respect to renewable and non-renewable resources
3. & sustainability.
4. To facilitate the students in understanding how to assess changing aspects of Business needs.
5. To develop an effective Business model to face the challenges of ecosystem.

Course Outcomes: After completion of the course, students will be able to
1. Develop critical thinking for environmental protection on conservation of biochemistry, social equity.
2. Acquiring values and attitudes towards understanding complex environmental economic social challenges & environmental problems.
3. Able to understand the ecosystem and its impact on Business Practices
4. Able to develop new Business Models to face changing aspects of Environment
5. Effective Resource Management

Unit I: Introduction to Environmental studies: Definition, scope and importance-Sustainable development, Realm of Ecology, Environmental Management System (EMS), Biodiversity, Business and Environmental Ethics. Natural Resources: Renewable and Non-Renewable, Forest Resources, Water Resources, Mineral Resources, Food Resources, Energy Resources, Land resources

Unit-II Ecosystems: Concept of an ecosystem – Structure and function of an ecosystem; Producers, consumers and decomposers. Food chains, food webs and function of ecosystem: Energy flow in an ecosystem, nutrient cycle and ecological succession. Ecological Interactions. Green Environmental Issues Introduction – Clean development mechanism, carbon footprint, carbon credits, carbon sequestration and Polluter pay principle. Green building practices. Approaches to green computing and nanotechnology IS014000. Role of information technology in environment and human health.

Unit-III Introduction to Sustainable and Business Ethics
Introduction, Definition of sustainability, Evolution, Business sustainability, Social and economic sustainability, Environmental sustainability, eco-efficiency, linking sustainability and ethics, different types of ethics, Corporate social responsibility, forms of CSR to corporate citizenship-Human rights, labour issues, fair trade, business and poverty, animal welfare, CITES and corporate governance.

Unit-IV Sustainable Business
Introduction, Socially Responsible Investing, Responsible Business model, Value logic and practices, Triple bottom line accounting(3BL), responsible organizational change, developing sustainable and responsible organization culture, Green Management. Sustainability in External Environment**:** Governance: sustainability and governance, Government initiatives, alternative governance, climate governance, the sustainable consumption and production trichotomy, sustainable production, sustainable consumption, consuming differently, consuming less.

Unit-V Responsible Management and Globalization
Introduction, need for responsible management, principles of responsible management education, responsible individual learning, organizational culture, change and learning, types, socially responsible organizational learning, social movement learning, leadership for responsible organizational management, The relationship between globalization and sustainability, theories of development and innovation, ecological Kuznets curves, ecological modernization theory, post material value theory.

Suggested Readings:

- Abhik Gupta, Susmita Gupta, Environmental Studies Principles and Practices, Sage Publications,2021
- Richard T. Wright and Bernard J. Nebel, Environmental Science towards a sustainable Future, PHI.
- Benny Joseph , Environmental Studies, New Delhi, Tata McGraw Hill Publishing co. Ltd.2025
- Helen Kopnina , Rory Padfield and Josephine Mylan , Sustainable Business key issues, 3rd edition, Routledge Taylor and Francis Group.
- Martin J.Ossewaarde, Introduction to Sustainable Development, Sage Texts,2022
- Michael Blowfield, Business and Sustainability, Oxford,2021

25BBA107: BUSINESS COMMUNICATION LAB

SDG 4 (Quality Education)   **SDG 17** (Partnerships for the Goals)

Course Objectives:
1. To familiarize the importance of communication, its components and process.
2. To know the importance of formal, informal communication, its applications in Business.
3. To study different types of communication skills, listening skills for overall personality development.
4. To focus on written communication for overall development.
5. To learn different inter-cultural, cross cultural, need for business etiquettes in an organization.

Course Outcomes: After completion of the course, students will be able to
1. Understand the importance of communication in Business.
2. Demonstrate knowledge on different modes of communication for self-development.
3. Develop presentation, oral communication and non-verbal communication for enhancing effective presentation.
4. Improve written communication through drafting letters and reports
5. Analyze different inter-cultures and role of social media for effective communication in organizations.

Unit – I: Introduction to Business Communication
Game to demonstrate complexity in communication. Role plays to debrief the process of communication in different contexts. Barriers to communication: Exercises on Listening, Speaking, Reading and Writing (LSRW). Communication style assessment.

Unit – II: Day-to-day Business Communication
Use of formal communication, informal communication for effectiveness, hearing vs. listening, identifying barriers to listening and addressing them. Excessive talking, prejudice, distraction, misunderstanding, interrupting, noise etc. Mock meetings and Contemporary Group Discussions.

Unit – III: Developing Verbal and Non-Verbal communication skills:
Design elements of a presentation, two-three iterations of presentations, video reflections and feedback, improvisations (presentations skills such as pace, tone, voice modulation, inflection etc.). Body language in presentations: posture, body movements, gestures / hand movements, facial expressions, eye contact etc.

Unit – IV: Developing Written Communication skills
Review of various letter writing templates, Choosing right format for different types of letters and mails, Practice of letter writing and e-mail writing, Biodata, CV, Resume. Creating profiles in Professional network (LinkedIn).

Unit – V: Contemporary aspects of Business Communication
Presentations on application of social media platforms: blogs, vlogs, Podcast, micro blogs, multimedia, wikis and social networking.

Suggested Readings:
- Ober Newman, Communicating in Business, Cengage Learning, 8e, 2015
- Kelly M. Quintanilla and Shawn T. Wahl, Business and Professional Communication, Sage, 4e, 2020
- Hory Sankar Mukerjee, Business Communication, Oxford, 2e, 2016
- M K Sehgal & Vandana Khetrapal, Business Communication, Excel books.
- Celeste Lawson, Robert Gill, Angela Feekery, Mieke Witsel, Communication Skills for Business Professionals, Cambridge University Press 2019.
- Sanjay Gupta, Business Communication (E Book), SBPD Publications, 2021.

25BBA108: ACCOUNTING INFORMATION SYSTEMS LAB

SDG 8 (Decent Work & Economic Growth)
SDG 9 (Innovation & Infrastructure)

Course Objectives:
1. To familiarize with the accounting groups using tally.
2. To learn the concept and overview of Stock Group, Vouchers in Tally.
3. To know about the different types of taxes and filing returns.
4. To study the payroll accounting system in Tally.
5. To understand the financial statements and generate reports using Tally

Course Outcomes: After completion of the course, students will be able to
1. Create accounting groups using Tally
2. Create inventory data, raise Invoice   using software
3. Evaluate Goods and Services Tax, tax deducted at source, professional tax in accounting
4. Develop the payroll system using Accounting Software.
5. Generate the financial report and stock report of a company.

Unit –I: Accounting Groups in Tally
Charts of groups, groups, multiple groups, ledgers, multiple ledgers.

Unit -II: Inventory and Vouchers in Tally
Stock Group, Multiple stock group, stock categories, multiple stock categories, unit of measures, stock items. Introduction to vouchers, types, chart, accounting, inventory, invoicing.

Unit –III: Tax in Tally
TDS, TDS Reports, GST, GST Returns, Professional Tax.

Unit –IV: Payroll Accounting in Tally
Employee creation, salary define, employee attendance, register, pay head creation, salary report.

Unit –V: Generating Reports in Tally
Financial statements, trading, profit and loss a/c, balance sheet, inventory report, payroll report, stock summary.

Suggested Readings:
- Joy Dhingra, Good and Service Tax, Kalyan Publishers, 2022.
- Neeraj Goyal, Tally, Kalyani Publishers,2018.
- Jeff Lewis, The Book You Need Before You Buy That Accounting Software,Evolve Instant ,2014
- Neeraj Goyal, Accounting Software, Kalyani Publishers,2018.
- Neeraj Goyal and Rohit Sacheva, Tally with GST Applications, Kalyani Publishers,2018.
- Shraddha Singh, Tally ERP 9 (Power of Simplicity), V&S Publishers,2015.

SDG 4 (Quality Education)
SDG 9 (Industry, Innovation & Infrastructure)

Course Objectives:
1. To know the need for and importance of Statistics in business and in organizations.
2. To learn different scaling techniques, sources of data collection, drafting questionnaires for conducting surveys.
3. To enable students to learn descriptive statistics and understand its significance.
4. To understand the importance of variance and standard deviation.
5. To present statistical data in a user-friendly way for organizational effectiveness.

Course Outcomes: After completion of the course, students will be able to
1. Understand the basics of statistics, its importance and applications in various areas of study.
2. Apply various data collection methods, art of drafting questionnaires to solve practical business problems.
3. Calculate and analyze numerical descriptive measures for a given data set.
4. Calculate and evaluate the dispersion among data to solve practical problems.
5. Interpret the relevance of statistical findings for business problem solving and decision-making using diagrams and Graphs.

Unit -I: Introduction to Business Statistics
Origin and development of statistics – definition of Statistics, its importance and scope and objectives of statistics, application areas of Statistics: Business, Economics, Research, Government and other areas. Limitations of Statistics.

Unit -II: Qualitative Methods of Data Collection
Types of data collection – primary and secondary data, classification of secondary data, internal source data, external source data, precautions in the use of secondary data, methods of collecting primary data, drafting the questionnaire, pretesting the questionnaire (Pilot survey).

Unit -III: Descriptive Statistical Analysis
Introduction to descriptive statistical analysis, types of data, frequency distribution, measures of central tendency- Mean, Mode, Median, calculation of arithmetic mean, mode and median for Individual observation, discrete series, continues series. Types of mean- merits and demerits.

Unit -IV: Measures of Dispersion
Introduction –significance of measuring variance, properties of a good measure of variance, methods of studying variance, Quartile deviation - calculation of mean deviation, standard deviation- mean deviation for continues series.

Unit -V: Data Analysis and Interpretation
Sources of Information, tabulation, cross tabulation, diagrammatic and graphical representation of data. one dimensional, two dimensional and three-dimensional diagrams and graphs.

Suggested Readings:
- William G Zikmund, Barry J Babin, Jon C. Carr, Atanu Adhikari, Mitch Griffin, Barry J. Babin, Business Research Methods, Cengage Learning, 2012.
- Prahalad Mishra, Business Research Methods, Oxford University Press, 2015.
- S.P. Gupta, Statistical Methods, Sultan Chand & Sons, 2018.
- Gupta SC, Fundamental of Statistics, Himalaya Publishers House, 7th Ed, 2019.
- Sharma JK, Business Statistics, Pearson Education, 2nd Edition, 2007.
- Arora, PN, Arora, Sumeet and Arora, Amit, Managerial Statistics, S. Chand, 1st Edition, 2009.

SDG 8 (Decent Work & Economic Growth)   **SDG 10 (Reduced Inequalities)**

Course Objectives:
1. To familiarize with the basic concepts of economics and its applications in business.
2. To know the importance of the demand and supply analysis in business forecasting.
3. To study the concepts of production function and economies and diseconomies of scale.
4. To orient the cost structure and various cost aspects in a firm and its applications.
5. To understand the price and output decisions under various market structures.

Course Outcomes: After completion of the course, students will be able to
1. Understand foundation of economics and its application in business.
2. Analyze the market focus, demand and supply in business.
3. Evaluate the production function, economics of scale to practical business aspects.
4. Analyze the types of cost its components, break even analysis in decision making.
5. Examine market structures and pricing strategies for firms

Unit -I: Introduction to Business Economics
Economics-Definition, concepts, micro vs macroeconomics, business economics, economics vs business economics, relation of business economics with other disciplines; business decisions in short and long run; Basic economic principles: opportunity cost, Marginalism, Equimarginalism, incremental cost, time perspective, discounting principle, risk & uncertainty.

Unit -II: Theory of Demand & Supply
Demand-Law of demand, demand function, demand schedule, demand curve, types of demand, elasticity of demand, measurement of elasticity of demand, demand forecasting, demand forecasting methods. Exceptions to the law of demand. Supply- Law of supply, supply function, elasticity of supply. Market equilibrium.

Unit -III: Production Analysis
Production function with one variable and two variables, Cobb Douglas production function, iso- quants and iso-costs, returns to scale, economies and diseconomies of scale.

Unit –IV: Cost Concepts
Cost concepts, determinant of cost, cost output relationship in the short run and long run, short run vs long run costs, average cost curves, Break even analysis.

Unit – V: Market Structures &Pricing Strategies
Classification of Market Structures: Perfect and imperfect markets, features of Perfect, Monopolistic, Oligopolistic and Monopoly markets, Price output determination under perfect competition and Monopoly. Pricing Policy, price discrimination, cost plus pricing, pricing of multiple products, transfer pricing.

Suggested Readings:
- Geetika Piyali Ghosh, Managerial Economics, 3e, Tata McGraw-Hill Education, 2017.
- H L Ahuja, Business Economics, S. Chand & Co, 13e, 2019.
- Dominick Salvatore & Siddhartha K. Rastogi, Managerial Economics, Oxford Publications, 9e, 2020
- Satya P. Das & J.K. Goyal, Managerial Economics, Sage,2022
- Suma Damodaran, Managerial Economics, 2e, 2010
- N. Gregory Mankiw, Principles of Economics, Cengage, 7e, 2012

SDG 9 (Innovation & Infrastructure) **SDG 12** (Responsible Consumption & Production)

Course Objectives:
1. To familiarize with the various functions, evolution and challenges in marketing.
2. To learn about marketing research process and its application.
3. To know marketing segmentation, targeting and positioning.
4. To study the new product development process and product life cycle of an organization.
5. To orient on the marketing mix and its impact on business.

Course Outcomes: After completion of the course, students will be able to
1. Understand marketing principles, concepts and challenges.
2. Analyze PESTEL in Indian market.
3. outline Market Segmentation, Targeting and Positioning strategies of the organization.
4. Examine factors of new product development, understand PLC and about various marketing strategies.
5. Understand marketing mix and its impact on business.

Unit –I: Introduction to Marketing

Meaning of Marketing. Evolution of Marketing, Nature & Scope marketing -Basic Principles of the production, product, selling, marketing and holistic marketing concepts. Marketing Challenges of the 21ˢᵗ century, e-Marketing.

Unit -II: Marketing Research & Marketing Environment
Nature & Scope, Marketing Research Process, types of research. demographic, Political, Economic, Socio cultural, Technological, Environmental, Legal environment (PESTEL)(Indian context).

Unit -III: Market Segmentation, Targeting & Positioning (STP)
Market Segmentation, meaning, its benefits, Bases for segmenting Consumer market and Industrial market, Market Targeting, Product positioning concept and Tools.

Unit -IV: New Product Development
New Product Development: Concept, Levels of Products – core benefit, Product Life Cycle - concept, stages and its influence on marketing mix decisions.

Unit –V: Marketing Mix
Price: Meaning, pricing objectives, Pricing Strategies - skimming pricing, Penetration pricing and psychological pricing.
Place: Channel functions, channel Levels, types of wholesalers.
Promotion Mix: Factors determining promotion mix, promotional tools –basics of advertisement, sales promotion, public relations and publicity and personal selling.

Suggested Readings:

- Philip Kotler, Gray Armstrong, Prafulla Agnihotri, Principles of Marketing, 19e.Pearson, 2023. Education,2018.
- Rosalind Masterson, Nichola Phillips, David Pickton, Marketing An Introduction, 5 e, SAGE South Asia edition, 2021
- Lamb, Hair, Sharma, Mc Daniel, Principles of Marketing, A South Asian Perspective Cengage Learning, 2016.
- Ramaswamy Namakumari, Marketing Management-Indian Context, Global Perspective,6e. Sage Texts, 2018.
- K.S. Chandrashekar, Market Management-Text & Cases, Tata Mc Graw Hill, 2010.
    Paul Baines, Chris Fill, Sara Rosengren, and Paolo Antonetti, Marketing Oxford University

SDG 5 (Gender Equality)   **SDG 8 (Decent Work & Economic Growth)**

Course Objectives:
1. To familiarize with the importance of HRM, evolution, functions, challenges and e-HRM at various levels in the organization.
2. To study the human resource planning its importance, types, process and HRIS
3. To orient the concepts, process and sources of Job Analysis.
4. To learn the Recruitment and selection concepts, types, sources and Process.
5. To know the need for training and development.

Course Outcomes: After completion of the course, students will be able to
1. Outline the importance of HRM, evolution, functions, challenges and e-HRM at various levels in the organization.
2. Determine the significance of human resource planning, demand and supply of manpower in the organization.
3. Examine the number of vacant positions in an organization with job analysis.
4. Identify the right profile for recruitment and selection and understand its process.
5. Provide an understanding of the required training and development programs in the organization.

Unit - I: Introduction to HRM
Definition, Nature & scope of human Resource Management - evolution of human resource management, objectives, functions, Importance of human resource Management Challenges of Human Resource Management, Contemporary role of Human Resource Manager, e-HRM.

Unit - II: Human Resource Planning
Introduction to Human Resource Planning, importance, objectives of HR Planning, steps, types of Human Resource Planning - corporate planning and the human resource planning process -human resource information system.

Unit - III: Job analysis
Concept of Job Analysis - process of job analysis, purposes and uses of job analysis, sources of information for job analysis, job description and specifications, satisfaction, job design, job rotation, Job enlargement, job enrichment, human resource inventory.

Unit - IV: Recruitment & Selection Process
Introduction to Recruitment and selection concepts of recruitment - types of recruitment, sources of recruitment - merits and demerits of recruitment methods, recruitment process
Selection-types of selection methods, selection Process – e-recruitment and selection, On boarding and Induction.

Unit - V: Training & Development
Nature and scope of training and development - objectives, methods, process- analysis training needs & designing the training program, implementation, feedback.
Development-training Vs Development, Management development, process, evaluation of development programs, continues learning.

Suggested Readings:
- Gary Dessler, Biju Varkkey, Human Resource Management, 16e, Pearson 2020.
- Shashi K Gupta, Rosy Joshi, Human Resource Management, Kalyani Publishers, 2021.
- Seem Sanghi, Human Resource Management, Vikas Publication, 2e, 2019.
- Robert L. Mathis, John H. Jackson, Manas Ranjan Tripathy, Human Resource Management, Cengage Learning 2016.
- Uday Kumar Haldar, Juthika Sarkar, Human Resource Management, Oxford University Press 2013.
- K. Aswathappa, Human Resource Management, Text and Cases, TMH, 2011.

25BBA205: INDIAN CONSTITUTION

SDG 4 (Quality Education)   **SDG 16** (Peace, Justice & Strong Institutions)

Course Objectives:
1. To explore the evolution of the Indian Constitution through the lens of economic justice and regulatory design from independence to the present.
2. To understand the interface between fundamental rights and economic freedoms, especially the right to carry on trade or business under Article 19(1)(g).
3. To examine the constitutional framework governing trade, commerce, and fiscal relations between the Union and States.
4. To study landmark constitutional judgments that significantly influenced India's economic and business landscape.

Course Outcomes: After completion of the course, students will be able to
1. Analyze the constitutional underpinnings of major economic policies and evaluate their impact on economic justice and governance.
2. Interpret the implications of Article 19(1)(g) and critically assess the balance between individual business rights and state-imposed restrictions.
3. Explain the constitutional provisions related to fiscal federalism and evaluate the challenges of vertical fiscal imbalance in India.
4. Analyze key judicial decisions and discuss their long-term implications on economic governance, regulation, and market freedom.

Unit-I : An Economic History of the Constitution of India
Historical understanding of the constitution as an economic document. Understanding the Preamble, Starting from the land reform cases in the 1950s to the validity of the bitcoin ban imposed by the RBI, this module signpost all of the important economic moments in the constitutional history of post-colonial India; Constitutional design, Legal Regulation and economic justice

Unit -II: Fundamental Rights and Business in India
Article 19(1) (g), grants every citizen the right, to practice any profession, or to carry on any profession, occupation, trade, or business. Like other fundamental rights, this right is subject to reasonable restrictions impose by the state. This particular provision of the Constitution has been one of the most severely litigated freedoms. Fundamental Duties.

Unit -III: Fiscal Federalism
Article articles 301 to 307 of the Constitution pertains to Trade, Commerce and Intercourse within the Territory of India; Challenges associated with fiscal federalism in India including the vertical fiscal imbalance; Article 280 of the Constitution.

Unit -IV: Constitutional battles that shaped the economy
This module will be taught through key case studies that demonstrate the complex and fascinating overlap between the constitution and business and shall use Saurabh Kirpal's book Fifteen Judgments: Cases that Shaped India's Financial Landscape as our guide through this landscape. The case studies include the banning of diesel engine cars, Telecom regulation and ownership of broadcast media, Demonetization, Aadhaar, the lifting of restrictions on dealing in crypto currencies.

Suggested Readings:
● The Oxford Handbook of the Indian Constitution, Oxford university press.
Cases
● Rustom Cavasjee Cooper v. Union of India, (1970) 1 SCC 248
● State of Rajasthan v. Mohan Lal Vyas, AIR 1971 SC 2068 (confirmation of a private monopoly, not a violation of fundamental right)
● Mithilesh Garg v. Union of India, (1992) 1 SCC 168 : AIR 1992 SC 221 (Right to carry on business, not breached when it is liberalized)
● Chintamanrao V. The State of Madhya Pradesh, AIR 1951 SC 118 (scope of reasonable restrictions in relation to trade and occupation)

● Cooverjee B. Bharucha v. Excise Commissioner, Ajmer, AIR 1954 SC 220 (the reasonableness of the restriction imposed may depend upon the nature of the business and prevailing conditions including public health and morality)
● T. B. Ibrahim v. Regional Transport Authority. Tanjore, AIR 1953 SC 79
● Harman Singh v. RTA, Calcutta, AIR 1954 SC 190
● Dwarka Prasad Laxmi Narain v. State of U.P., AIR 1954 SC 224
● State of Bombay v. R.M.D. Chamarbaugwala, AIR 1957 SC 699
● Parbhani Transport Coop. Society Ltd. v. Regional Transport Authority, Aurangabad, AIR 1960 SC 801
● State of Bombay v. R. M. D. Chamarbaugwala, (1957) S.C.R. 874,
● G.K.Krishnan vs State of Tamil Nadu, 1975 SCC (1) 375
● Automobile Transport (Rajasthan) Ltd. Vs State of Rajasthan, AIR 1962 SC 1406

25BBA206: CREATIVITY AND INNOVATION

SDG 8 (Decent Work & Economic Growth)
SDG 9 (Industry, Innovation & Infrastructure)

Course Objectives:
1. To introduce the fundamental concepts of innovation and creativity, their characteristics, sources, and the principles and functions of innovation management.
2. To explore the cognitive processes and techniques associated with creative thinking, both at the individual and group level.
3. To examine strategies for managing product and process innovations and analyze frameworks and tools for effective innovation execution and improvement.
4. To understand the process of innovation diffusion and the importance of legal mechanisms in safeguarding innovations.

Course Outcomes: After completion of the course, students will be able to
1. Students will be able to explain the key components of innovation, distinguish different types of innovation, and describe the role and functions of innovation management in organizational settings.
2. apply various individual and group creativity techniques to solve problems, stimulate innovative thinking, and enhance creative decision-making.
3. differentiate between product and process innovations and apply relevant strategies such as Kaizen, BPR, and Six Sigma for innovation-driven improvements.
4. analyze the factors affecting innovation adoption, explain the consumer adoption process, and recognize the importance of intellectual property rights (IPR) in protecting innovations.

UNIT – I: Introduction: Concept of innovation, characteristics, components, Sources, Types, Concept of creativity, Creativity process, Impact of innovation, Innovation Management, scope, characteristics, systems approach, significance, effective innovation management, Functions of Innovation Management - Top down function, Planning, organizing, staffing, controlling.

UNIT – II: Creativity Processes and Techniques: a) Creative Thinking, Traditional vs Creative thinking, Left and right brain thinking, Linear thinking processes, Nonlinear thinking processes, Creative thinking process, Intuition, Directed Creativity, Decision makers require creativity, Principles behind directed creativity, Heuristics
b) Individual Creativity Techniques, Training mind processes, Changing mindsets, Inner creativity techniques Directed creativity methods and techniques, Group Creativity Techniques, Group techniques, Writing techniques, Techniques based on pictures, maps, and networks

UNIT – III: Managing Innovations: a) Product Innovations- Concept, Significance**,** Types of new products**,** Target market for disruptive innovation**,** Product development strategies**,** dynamically continuous innovation strategies**,** Technology strategies for innovation**,** Packaging innovations**,** New Product Development Process**,** Beyond product innovation**,** Positioning innovations**,** New product failures.
b) Process Innovations – concept, Types of Process Innovations, Process Improvement, 5W2H, Work Simplification, Kaizen, Stretch Goal, Six Sigma, Business Process Reengineering (BPR), Total Quality Management (TQM), Benchmarking

UNIT IV: Innovation Diffusion – concept**,** Diffusion orientation in innovation**,** Innovation diffusion theory**,** factors influencing diffusion,**,** attributes of innovation**,** characteristics of adopter, Consumer adoption process**,** Role of opinion leaders**,** Marketing strategies**,** Innovation adoption by organizations.
b) Legal Aspects of Innovation -safeguarding innovation, concept of IPR, what can be protected?, benefiting from patents, Indian Patents and Designs Act, 1991, IPR in International setting, patenting trends and challenges.

Suggested Readings:
- Krishnamacharyulu C.S.G, Lalitha R. Innovation Management, Himalaya Publishing House
- CQ-Boost your Creative Intelligence, Harry Alder,
- Margeret White, Garry D.bruton, The Management of Technology and Innovation, Cengage

- Renu Arora & S.K.Sood, Creativity and Innovation Management, Himalaya Publishing House
- Dr. Neeraj Pandey & Khushdeep Dharni, Intellectual Property Rights: Text and Cases, PHI Learning

- Renu Arora & S.K.Sood, Creativity and Innovation Management, Himalaya Publishing House
- Dr. Neeraj Pandey & Khushdeep Dharni, Intellectual Property Rights: Text and Cases, PHI Learning

SDG 4 (Quality Education)   **SDG 17** (Partnerships for the Goals)

Course Objectives:
1. To study the concept of personality, attitude, Motivation and factors affecting personality development and its importance in life.
2. To know self-awareness, soft, hard and life skills for skill improvement.
3. To introduce students to essential soft skills required for personal growth, effective communication, and basic time and stress management.
4. To understand the soft skills at team level and its importance in organization.
5. To develop soft skills for effective performance in organization.
6.

Course Outcomes: After completion of the course, students will be able to
1. Understand the importance of personality aspects, attitude for positive development.
2. Know about self through psychometric analysis and skills needed to be effective.
3. Develop soft skills at different levels, communication skills for successful career.
4. Improve interpersonal skills, Leadership skills, and negotiation skills for career development
5. Bring change in the business through self-development.

Unit – I: Introduction to Personality
Concept of personality, profile of a pleasing personality. Factors affecting personality. Test on the dimensions of personality: Openness, Conscientiousness, Agreeableness, Extraversion, and Neuroticism; concept of attitude: positive vs negative, ways to develop a positive attitude; caselets: comparison of positive vs negative attitude personalities. Concept of Motivation: Test on Maslow's need hierarchy to learn what motivates us.

Unit – II: Self Discovery (knowing yourself)
Creating self-awareness by undergoing various personality & psychometric tests such as SWOC Analysis, Johari Window, Transactional Analysis, Conflict modes; quotients such as Intelligence Quotient (IQ), Emotional Quotient, adversity quotient and spirituality quotient. Introspection and working on feedback from others for continual development. Skills need to be effective: (i) Soft Skills, (ii) Hard Skills, (iii)Life Skills.

Unit – III: Soft Skills at Individual Level – Communication and Self-Management: Meaning and Importance of Soft Skills, Communication Skills: Verbal and Non-verbal communication, Importance of body language and eye contact, Basic Written Communication: Email writing, WhatsApp etiquette, Time Management: Simple planning tools (To-Do list, prioritizing), Basics of Self-Confidence and Positive Thinking, Introduction to Stress and simple stress-relief techniques, Importance of Listening and Empathy in communication.

Unit – IV: Soft Skills at Team Level – Working Well with Others: Importance of Teamwork and Group Work, Qualities of a Good Team Member, Interpersonal Skills, Respecting others' opinions, Basic conflict handling, Cooperative Problem Solving, Simple leadership behaviours in a group setting, Giving and receiving feedback politely.

Unit –V: Soft Skills at Organization Level – Behaviour & Etiquette: Basics of Workplace Behaviour, Professional Etiquette, Responsibility and Accountability, Importance of Honesty and Ethics, Self-Conduct in a Professional Setting, Respecting cultural and social differences. Aspects of Leadership in Organizations, Networking and Relation Building Skills, Empowering Others, Partnering Skills. Administration of skill based, Personality and Psychometric Test for select Soft Skills at all levels.

Suggested Readings:
- Barun K. Mitra, Personality development & Soft skills, Oxford, 2016.
- Virender Kumar, Personality Development, Kalyani Publishers, 2021
- Dr. Alex, Soft skills Know Yourself And Know The World, S.Chand, 2014

- Jeff Butterfield, Soft skills for everyone, Cengage Learning, 2010
- Alka Wadkar, Life Skills for Success, Sage, 2016
- Anjana Senet. Al. Soft skills for workplace success, Sage, 2021

25BBA208: DIGITAL SKILLS LAB
SDG 4 **(Quality Education)**　　　　　SDG 9 **(Innovation & Infrastructure)**

Course Objectives:
1. To build foundational knowledge of digital technologies, operating systems, file management, and internet safety practices.
2. To enable students to use word processors and spreadsheets effectively for business documentation and basic data management.
3. To introduce students to effective digital presentation design and delivery for academic or business communication.
4. To familiarize students with modern digital collaboration platforms for team-based work and virtual communication.

Course Outcomes: After completion of the course, students will be able to
1. Identify and use basic digital tools, navigate operating systems, manage files, and browse the internet securely and responsibly.
2. Create, format, and manage documents and spreadsheets for academic and business purposes.
3. Design and deliver visually effective presentations using PowerPoint or Google Slides.
4. Use digital platforms to collaborate, share files, and communicate effectively in teams.

Unit I: Digital Literacy and Computer Basics: Introduction to Operating Systems: Windows/macOS/Linux basics, File & Folder Management: Creating, renaming, storing (local & cloud), Internet Use: Search strategies, netiquette, and digital footprint, Email Usage: Email setup, folders, filters, attachments, Digital Security: 2FA, password protection, phishing basics.

Unit II: Office Productivity Tools – Word Processing & Spreadsheets: MS Word / Google Docs: Formatting, tables, templates, page layout, referencing, MS Excel / Google Sheets: Data entry and formatting, Formulas and functions (SUM, AVERAGE, IF), Creating Charts and Tables, Basic Pivot Tables.

Unit III: Presentation Tools for Business Communication: Basics of Slide Design: Templates, layout, transitions, Text & Visual Balance: Using images, graphs, infographics, Storyboarding and Message Framing, Notes, Timers, and Slide Annotations, Do's and Don'ts of Business Presentations.

Unit IV: Digital Collaboration and Communication Tools: Google Workspace / Microsoft 365 Overview, Google Drive / OneDrive: Sharing and permissions, Real-time collaboration in Docs/Sheets/Slides, Using Zoom / Google Meet / MS Teams: Etiquette, features (chat, breakout rooms, polls), Scheduling meetings using Calendar.

Suggested Readings:

- Rajaramam, **F**undamentals of Computers**,** PHI Learning
- M.Sasikumar, Digital tools for Beginners, Himalaya Publishing House
- Anuradha Mathur, Digital Literacy: Concepts and Applications *(For Google Workspace & Online Tools,* Cengage Learning.
- Anita Goel, Computer Fundamentals and Office Automation**,** Pearson Education
- Randy Nordell, et al., **M**icrosoft Office 365 in Practice**,** McGraw-Hill

25BBA301: BUSINESS ENVIRONMENT

SDG 8 (Decent Work & Economic Growth)   **SDG 9** (Innovation& Infrastructure)
SDG 16 (Peace, Justice & Institutions)

Course Objectives:
1. To familiarize the significance, nature and concepts of Business Environment.
2. To learn about industrial policy, LPG policies and regulations.
3. To know the Fiscal and Monetary policy of India.
4. To study the trade policy, Balance of payment, and EXIM policy.
5. To understand business in the International Environment and examine and evaluate business in the International Environment.

Course Outcomes: After completion of the course, students will be able to
1. Understand micro and macro-economic environment and its impact on business.
2. Examine the industrial policy and LPG.
3. Analysis of fiscal and monetary policies and its impact on business.
4. Outline the EXIM policy, BOPs, New economic policy.
5. Assess global trade and its impact on business.

Unit – I: Introduction to Business Environment
Significance, nature and scope of Business Environment – Theoretical Framework of Business Environment: - 1. Micro- Environment 2. Macro – Environment 3. Social, Economic, Cultural, Ecological and Political Factors influencing Business.

Unit-II: Industry Policy and Regulation
Introduction - Objectives of Industrial Policy - Industrial Policies: - 1. Industrial Policy 1948, 2. Industrial Policy 1956, 3. Industrial Policy 1977, 4. Industrial Policy 1991, 5. LPG Policy: a. Liberalizations b. Privatizations c. Globalizations.

Unit –III: Fiscal & Monetary Policies
Public revenues, public expenditure, public debt, development activities financed by public expenditure, an evaluation of recent fiscal policy of Government of India – Highlights of Budget - Functions of the Reserve Bank of India- RBI and Monetary Policy: - Factors affecting Money Supply in India-Monetary policy instruments: - 1. Cash Reserve ratio (CRR) 2. Statutory liquidity ratio (SLR), 3. Bank rate.

Unit – IV: India's Trade Policy & Balance of Payments
India's Trade Policy – Magnitude and direction of Indian International trade, bilateral and multilateral trade agreements, EXIM Policy, Role of EXIM Bank. Balance of Payments: Structure, Major components, causes for dis-equilibrium in Balance of Payments, Impact of New Economic Policy on Balance of Payments.

Unit – V: World Trade Organization (WTO)
Nature and scope - organization and structure – Role and functions of WTO in promoting world trade – Principles followed- Agreements reached in the Uruguay round including TRIPS, TRIMS and GATS, Disputes settlement mechanism- Dumping and Anti-dumping measures – Critical review of WTO functioning.

Suggested Readings: -
- Dr. V. C. Sinha, Ritika Sinha (eBook), Business Environment, SBPD Publications**,**2020
- Bhall, V.K. and S. Shivaramu: International Business Environment and Business, Anmol, New Delhi, 2003.
- Vivek Mittal: Business Environment, Excel, 2009.
- Francis Cherunilam: International Business Environment, Himalaya, 2008.
- David Miles and Andrew Scott, Macro Economics and The Global Business Environment, Wiley, 2007.
- Saleem, Shaikh, Business Environment, Pearson Education India, 2011

SDG 1 (No Poverty)   **SDG 8** (Decent Work & Economic Growth)
SDG 9 (Industry, Innovation & Infrastructure)

Course Objectives:
1. To understand the concept of entrepreneurship, entrepreneurial traits, characteristics, and skills, as well as the theories of entrepreneurship.
2. To understand the macroeconomic environment and emerging dimensions of business ecosystems.
3. To understand and apply growth strategies, performance appraisal, and networking techniques to drive business expansion and future growth.
4. To get the knowledge about legal and regulatory resources required for startup companies.
5. To understand and analyze various types of new-age businesses, including fintech, edtech, healthcare, and more, and their impact on the economy and society.

Course Outcomes: After completion of the course, students will be able to
1. To identify key entrepreneurial traits and characteristics and understand the relevant theories of entrepreneurship.
2. To Analyze the macroeconomic environment and its impact on entrepreneurial ecosystems.
3. To analyze and implement effective growth strategies, performance appraisal, and networking techniques to enhance business performance and achieve future growth
4. To analyse the legal and regulatory framework for startups.
5. To Analyze the opportunities and challenges associated with each type of new-age business.

Unit-I: ENTREPRENEURSHIP: Introduction to the Entrepreneur -Definition and concept-Entrepreneurial Traits-Characteristics and Skills-Classification of Entrepreneurs-The Entrepreneurial Culture-The Concept of Entrepreneurship-Theories of Entrepreneurship.

Unit-II: THE ENTREPRENEURIAL ECO SYSTEM: Macroeconomics Enironment and Emerging Dimensions of Business Ecosystems-Formation and Incorporation of a Legal Entity-Legal and Intellectual Property Rights- Working Capital Management-Market Dynamics-Government Policies -Subsidies-incentives, Tax Laws-Trends in Entrepreneurship.

Unit-III: GROWTH STRATEGIES AND NETWORKING: Introduction-Performance Appraisal & its Role in Business Growth-Profitability and Control Measures-Market Demands and Human Resource Challenges-Techniques of expansion & diversification-Vision Strategies for future Growth.

Unit-IV: IDEA TO ACTION: Monetizing Ideas-Bootstrapping-Preparation of a Project report-Funding options for Start-up, including Crowd Funding-Strategic Alliances-Technology-regulatory assessments.

Unit-V: TYPES OF NEW AGE BUSINESS: Fintech-Edtech-Health care-Agri Tech-Defence-IT-Space-Robotics-Digital Transformation &VBA -Women Entrepreneurship-Family Run Business-MSME-Social Entrepreneurship-Emerging Markets

Suggested Readings:
▪ Baisya, R. K. (2021). Managing Start-ups for Success Entrepreneurship in Difficult Times. Taylor & Francis.
▪ Barringer, B. R., & Ireland, R. D. (2019). Entrepreneurship Successfully Launching New Ventures. Pearson.

- Eric Ries -The Lean Start-up: How Today's Entrepreneurs Use Continuous Innovation to Create (2011).
- Rajat Kanti Baisya, Managing Start-ups for Success Entrepreneurship in Difficult Times, Taylor & Francis, 2021
- Vasant Desai -The Dynamics of Entrepreneurial Development and Management. Himalaya Publishing House,6th Edition-2025.
- Vasant Desai -Small -Scale Industries and Entrepreneurship in the twenty -First Century Himalaya Publishing House,9th Edition 2023.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – III
25BBA303: FINANACIAL MANAGEMENT

SDG 8 (Decent Work & Economic Growth)
SDG 16 (Peace, Justice & Strong Institutions)
Course Objectives
1. To familiarize the concept, types, objectives and goals of financial management.
2. To know the time value of money, estimation of cash flows.
3. To study the Strategic Decision making, financial planning, forecasting and capital budgeting.
4. To learn the sources of financing and role of financial markets.
5. To orient about concept, planning and principles of working capital management.

Course outcomes: After completion of the course, students will be able to
1. Understand the concepts and importance of profit & wealth maximization, time value of money Examine time value of money and estimation of cash flows.
2. Outline the financial planning, forecasting and capital budgeting tools in the business.
3. Evaluate the various sources of finance available in the market.
4. Assess the performance of current assets and current liabilities in business.
5. Apply the principles of working capital management

Unit-I Introduction to Financial Management
Introduction, Meaning, Definition and types of finance, Scope and objectives of Financial Management, Profit Maximization and wealth Maximization, area of finance, finance within an organization, finance vs economics vs accounting.

Unit -II Time value of money
Introduction, need of time value of money, future value-of a single cash flow, annuity, sinking fund, Present value-single cash flow and annuity, perpetuity, uneven cash flows, growing annuity, growing perpetuity, value of an annuity due.

Unit -III Financial Planning and Strategy
Introduction, Strategic Decision making and planning, Interface between Financial planning and strategic management, financial forecasting, basics of capital budgeting, capital budgeting decisions- Payback period, Accounting Rate of Return and Net Present Value.

Unit -IV Sources of Financing
Introduction, Role of Financial Markets, Financial Markets: Segments, Product and Services, Long Term Source of finance-Equity, Domestic Capital Markets, Global Depository Receipts, Exist Options, Long Term Source of Finance, internal finance and loan financing.

Unit-V Working Capital Management
Introduction, Meaning of Working Capital, concept of working capital, nature of working capital, planning of working capital, principles of working capital management, factors affecting working capital management, working capital and operating cycle, net working capital and gross working capital.

Suggested Readings:
- I M Pandey, Financial Management, 12 e, Pearson Publications, 2021.
- M.Y Khan, P K Jain, Financial Management-Text and Problems, 8e, Mc Graw Hill,2019.
- Prasanna Chandra, Financial Management, 10e, Mc Graw Hill, 2019.
- Eugene F. Brigham Michael C. Ehrhardt, Financial Management, Cengage Learning, 12e, 2012.
- Arindam Banerjee, Financial Management, Oxford Publications, 2016.
- C. Paramasivan, T. Subramanian, Financial Management, New age international (p) Ltd., 2009.

25BBA304: BUSINESS RESEARCH METHODOLOGY

SDG 4 (Quality Education)   **SDG 9** (Innovation & Infrastructure)

Course Objectives
1. To familiarize with concept, nature, objective and application of business research.
2. To know the research framework, defining research problem, research hypotheses, analysis and Interpretation of business problem.
3. To learn about implications, characteristics of sample designs and different sampling techniques.
4. To study the procedure of hypotheses testing and the types of errors occur during the test.
5. To orient the importance of report writing and interpretation for decision making.

Course Outcomes: After completion of the course, students will be able to
1. Analyze different perspectives of research in business areas.
2. Identify the research gap, define research problems, formulate hypothesis of the business.
3. Define sampling design, characteristics and sampling errors for better data collection.
4. Formulate proper hypotheses and statistical test for problem solving.
5. Simplify the technical and business reports on the basis of data analysis and interpretation.

Unit-I: Introduction to Business Research
Business Research- Meaning and definition – Different perspectives of Research –Nature and scope & Objectives of Research, - Motivation of Research, -Types of Research, - Significance of Research, - Application of research in Business Areas: -Personal & HRM, Marketing functions, financial functions, Production and operation management, Cross – functional Research-Limitations of Research.

Unit-II: Fundamental of Research Framework
The Research Process-Management of Dilemma-Understanding conceptual background of Research-Literature survey. Identifying the research GAPS – Research Problem- Select the research Problem – Necessity of defining the Research Problem – Scope and Limitations-Identification of Research Variables –Formulating the research Hypotheses-Developing Research Proposal-Data analysis and interpretation of Results.

Unit-III: Sampling Techniques
Sampling Design -Census and Sample Survey – Implications of a Sample Design -Steps in Sampling Design – Criteria of Selecting a Sample –Sampling Procedure – Characteristics of a Good Sample Design –Universe, Population, Sample units, Sample, Sample size, Sampling Error – Different Types of Sampling Techniques – Probability Sampling-Non-Probability sampling.

Unit-IV: Hypothesis Testing
Hypotheses -Testing of Hypotheses- Null Hypothesis and Alternative Hypothesis – (Type –I and Type- II Error) of Testing of Hypotheses – Procedure for Hypothesis Testing: – Setting up of a hypothesis, setting up suitable significance level, Determination of test of Statistical tools, Determination of critical region, computing the value of test-statistics, Criteria for accepting and Rejecting Null Hypothesis.

Unit-V: Report Writing
Significance of Report Writing- Different Steps in writing Report -Layout of the Research Report – Types of Research Reports: - Brief reports, Detailed Report, Technical Report, Business Reports – Report preparation and presentation-Report structure: - Preliminary section, Main Report, Interpretation of Results and suggested recommendations-Limitation of the study-End note and Precautions for Writing good Research Reports.

Suggested Readings:
- Donald R Cooper, Pamela S Schindler, J K Sharma, Business Research Methods, 11e,Tata Mc Graw Hill Education , 2019.
- William G. Zikmund, Barry J. Babin, Jon C. Carr, Atanu Adhikari, Mitch Griffin, Business Research Methods, Cengage Learning India Pvt Ltd, 2016.
- Deepak Chawla, Research methodology concept and cases, second edition Vikas

publications -2016.
- Uwe Flick, An Introduction to Qualitative Research 5e Sage/text -2014
- Naval Bajpai, Business Research Methods, Pearson Publications, 2e 2017.
- S.P. Gupta, Statistical Methods, Sultan Chand &Sons, 2018.

25BBA305: OPERATIONS MANAGEMENT

SDG 9 (Innovation & Infrastructure)   **SDG 12** (Responsible Consumption & Production)

Course Objectives:
1. To introduce the fundamental concepts, scope, systems, and strategies of production and operations management.
2. To enable students to understand and apply various plant location strategies and facility layout designs.
3. To provide knowledge on integrated materials management, purchasing processes, and inventory control techniques.
4. To develop an understanding of quality control systems and total quality management frameworks used in operations.
5. To explore maintenance management types and expose students to emerging trends in operations and production technologies.

Course Outcomes: After completion of the course, students will be able to
1. Explain the core concepts and analyze the strategic role of operations management in organizational competitiveness.
2. Evaluate different location and layout options and apply appropriate techniques like factor rating or break-even analysis in decision-making.
3. Classify different inventory types and apply inventory control tools such as EOQ, ABC, VED, and JIT in materials planning.
4. Analyze key quality concepts and evaluate quality improvement tools like Six Sigma, benchmarking, and ISO certifications.
5. Identify various maintenance strategies and examine the impact of technologies like ERP, Industry 4.0, and green manufacturing on operational efficiency.

Unit I: Introduction to Production and Operations Management: Definitions, objectives, scope and functions of POM. Types of production systems, transformation process model, systems perspective. Functional subsystems of an organization. Its Interaction with marketing, finance, HR and support functions. Production design, planning & control: objectives, levels and procedures and its influencing factors and approaches, Capacity Planning. Strategic Operations Management, Corporate Strategy, Generic Competitive Strategies, Functional Strategies. Productivity.

Unit II: Plant Location & Facility Layout: Plant / Facility Location: Introduction, Factors influencing plant location, site selection methods: Break even Analysis, factor rating, center of gravity, Delphi method. Single and multi-facility location Problems. Plant / Facility layouts: Introduction, Types of facility layouts (process, product, fixed-position), Group and Cellular Layout Techniques, Advantages and Disadvantages of each type of Layouts, layout planning, tools and techniques

Unit III: Materials Management, Purchasing & Inventory Techniques: Introduction and Concepts, Integrated Material Management and its Components, Material Planning and control, Obsolete, Surplus and Scrap Management, ABC, XYZ, VED, FSN, SDE Analysis. Purchasing Management and its process, role of purchase manager, organization of materials management, Stores Management. Introduction to inventory Management: Concept, Inventory Control, Inventory control techniques: EOQ, ABC, VED, FSN, JIT.

Unit IV: Quality Management & Total Quality Systems: Introduction to Quality Management, Quality control vs quality assurance, cost of quality, quality at source, zero defects, Operations Planning and Control Tools. Introduction to TQM, TQM tools: benchmarking, Six Sigma, Poka-Yoke, ISO 9000 / 14000 audit & certification.

Unit V: Maintenance Management & Emerging Technologies: Introduction, Concepts, Types of maintenance: breakdown, preventive, predictive, routine and planned maintenance. Emerging trends: ERP, CAD/CAM, supply chain integration, Lean Production, green manufacturing, sustainable production and technology innovation, Industry 4.0.

Suggested Readings:

- Lee J. Krajewski et al., Operations Management: Process and Supply Chains
- Heizer & Render — Principles of Operations Management
- Stevenson — Operations Management
- S.N. Chary — Production and Operations Management
- Panneerselvam, POM, TMH.
- K. Ashwathappa, Sridhar Bhatt, POM, HPH

SDG 10 (Reduced Inequalities)   **SDG 11** (Sustainable Cities & Communities)
SDG 17 (Partnerships for the Goals)

Course Objectives:
To familiarize with social problems of a selected Institution/ Organization /Government sectors by collecting data, analyzing, report preparation and presentation.

Course Outcomes:
Students will be able to make an attempt to identify the problems in the project and provide alternative choices to the selected Institution/ Organization/ Government sector.

Every student of this BBA-Analytics Programme needs to identify a social problem in the selected area. The student needs to gather data, both primary and secondary, identify the problems faced by an institution/ Organization/ Government sector/ School/ Panchayath etc. Analyze the problem and prepare a report based on the data collected and its impact on society.

Guidelines:
The report should consist of:
Chapter 1: Introduction
Chapter 2: Company/ Industry Profile
Chapter 3: Methodology-Need, Scope, objectives, Statistical Tools and Data source.
Chapter 4: Data analysis
Chapter 5: Limitations, Findings, Suggestions, Bibliography

SDG 8 (Decent Work & Economic Growth)   **SDG 9** (Innovation & Infrastructure)

Course Objectives:
1. To learn about a business plan, its elements and fit.
2. To know the recourse issues and economic system while preparing a business plan
3. To study the importance of financial analysis while preparing a business plan
4. To outline the strategic implementation while preparing a business plan
5. To learn the importance of organizational structure, Budget plan and legal aspects while preparing the business plan.

 Course outcomes: After completion of the course, students will be able to
1. Outline business plan by evaluating the business and market forces in which the business is set to operate.
2. Evaluate economic and market analysis, Resource issues and market forces in business plan.
3. Analyze the basic financial aspects of a business and incorporate it into a business plan.
4. Assess the strategic implementation aspects of a business.
5. Design the required organizational structure and plan for the legal requirements.

Unit – I: Introduction
Business Plan, write a business plan Issues beyond the plan; Self-Evaluation; Describe business; Need-Gap Analysis, Taste, Trend and Technology: Future prospects of business.

Unit – II: Marketing plan
Resource issues and economic systems; Customer Analysis; Market Analysis; Market Demand; Market supply and price; Market type and market forces (Competition).

Unit – III: **Financial Analysis**
Required investment for your business; Important Assumptions; Break-Even Analysis; Projected Profit and Loss; Projected average cost of sales; Projected Balance Sheet; Projected Cash Flow; Long Term Plan.

Unit – IV: Strategic Implementation
Strategy Pyramids; Value Proposition; Competitive Edge; Marketing Strategy; Sales Strategy.

Unit – V: Organization Plan and Personnel Plan
Organizational Structure; Organizational Budget; Personnel Plan; Plan for Legal Details

Suggested Readings:
- Mike McKeever: How to Write a Business Plan – 10th Edition, Nolo
- Lynn M. Pearce: Business Plan Handbook, GALE CENGAGE Learning
- Hurdle – The Book on Business Planning, Tim Berry
- Barringer, B.R.: Preparing Effective Business Plans, An Entrepreneurial Approach, 2nd Edition Barringer Solutions Manual
- Sam A. Brown: Writing a Business Plan That Works, 2015

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – III
25BBA308: HEALTH AND WELLNESS PROJECT

SDG 3 (Good Health & Well-being)   **SDG 4** (Quality Education)
SDG 11 (Sustainable Cities & Communities)

Course Objectives
1. To foster awareness about the importance of physical, mental, and emotional well-being.
2. To encourage students to monitor, improve, and reflect on their personal health.
3. To develop a research-based approach to understanding wellness issues in individuals or communities.
4. To integrate wellness strategies into professional and academic life.

Course Structure:

This course is **activity-based** and culminates in a **project report** involving reflection, tracking, analysis, or awareness-building related to health and wellness.

Part A: Conceptual Foundation
- Dimensions of wellness: physical, emotional, mental, spiritual, social
- Importance of mental health and emotional intelligence
- Lifestyle diseases and their prevention
- Yoga, meditation, and mindfulness
- Role of diet, sleep, and exercise in productivity

Part B: Wellness Practices & Tracking
- Personal wellness tracking (fitness, sleep, stress, screen time, etc.)
- Group wellness challenge (e.g., 21-day habit building)
- Reflection journal (weekly entries)
- Guided physical and/or mindfulness sessions (optional collaboration with physical education or yoga instructors)

Part C: Project Work: Students choose **one of the following** for their project:

1. **Personal Health & Wellness Journey Report**
    - Track personal wellness goals for 4–6 weeks
    - Include metrics, journaling, and reflection
    - Analyze impact and future plan
2. **Community Wellness Survey & Awareness Drive**
    - Conduct a survey in campus/community on a wellness topic (e.g., stress, screen addiction, fitness)
    - Compile findings into a brief report
    - Propose a feasible wellness program or campaign
3. **Thematic Study / Case Report**
    - Choose a topic such as corporate wellness programs, yoga in education, burnout, nutrition myths, etc.
    - Secondary data collection + analysis
    - Reflective learning and practical implications

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – IV
25BBA401: ORGANIZATIONAL BEHAVIOR

SDG 5 (Gender Equality)   **SDG 8** (Decent Work & Economic Growth)

Course Objectives:
1. Familiarize the fundamental concepts, scope, and environmental influences shaping Organizational Behaviour.
2. Understand cognitive processes such as perception, attribution, personality, attitudes, and motivation, and their impact on workplace behaviour.
3. Evaluate communication processes, decision making, stress, and conflict dynamics within organizational settings.
4. Differentiate types of power, group dynamics, team functioning, and political behavior in organizations.
5. Apply behavioural performance management, goal setting, job design, and leadership theories to foster high performance and quality of work life.

Course Outcomes: After completion of the course, students will be able to
1. Understand the nature, scope, and environmental context of Organizational Behaviour including globalization, diversity, and ethics.
2. Analyze and interpret cognitive processes such as perception, attribution errors, personality traits, attitudes, and their effects on individual and group behaviour.
3. Evaluate and Apply strategies for effective communication, participative decision making, stress management, and conflict resolution in organizations.
4. Differentiate various types of power, informal group dynamics, and team functioning for effective organizational performance.
5. Design and implement high-performance work practices, behavioural modification strategies, and leadership approaches to enhance individual and organizational effectiveness.

UNIT- I: Introduction: Introduction to OB - Definition, Nature and Scope – Environmental and organizational context – Impact of IT, globalization, Diversity, Ethics, culture, reward systems and organizational design on Organizational Behaviour. Cognitive Processes-I: Perception and Attribution: Nature and importance of Perception – Perceptual selectivity and organization – Social perception – Attribution Theories – Locus of control –Attribution Errors –Impression Management.

UNIT-II: Cognitive Processes-I: Personality and Attitudes – Personality as a continuum – Meaning of personality - Johari Window and Transactional Analysis - Nature and Dimension of Attitudes – Job satisfaction and organizational commitment-Motivational needs and processes- Work-Motivation Approaches Theories of Motivation- Motivation across cultures - Positive organizational behaviour: Optimism – Emotional intelligence – Self-Efficacy.

UNIT- III: Dynamics of OB-I: Communication – types – interactive communication in organizations – barriers to communication and strategies to improve the follow of communication - Decision Making: Participative decision-making techniques – creativity and group decision making. **Dynamics of OB –II** Stress and Conflict: Meaning and types of stress –Meaning and types of conflict - Effect of stress and intra individual conflict - strategies to cope with stress and conflict.

UNIT- IV: Dynamics of OB –II: Power and Politics: Meaning and types of power – empowerment - Groups Vs. Teams – Nature of groups – dynamics of informal groups – dysfunctions of groups and teams – teams in modern workplace.

UNIT- V: Leading High performance: Job design and Goal setting for High performance- Quality of Work Life- Socio technical Design and High-performance work practices - Behavioural performance management: reinforcement and punishment as principles of Learning –Process of Behavioural modification - Leadership theories - Styles, Activities and skills of Great leaders.

Suggested Readings:
- Luthans, Fred: Organizational Behaviour 10/e, McGraw-Hill, 2009.

- Robbins, P. Stephen, Timothy A. Judge: Organisational Behaviour, 12/e, PHI/Pearson, New Delhi, 2009.
- McShane: Organizational Behaviour, 3e, TMH, 2008.
- Nelson: Organizational Behaviour, 3/e, Thomson, 2008.
- Newstrom W. John & Davis Keith, Organisational Behaviour-- Human Behaviour at Work, 12/e, TMH, New Delhi, 2009.

SDG 8 (Decent Work & Economic Growth)   **SDG 16** (Peace, Justice & Strong Institutions)

Course Objectives:
1. To understand the rules of agreements and contracts.
2. To compare and contrast types of contracts and modes of discharge of contracts.
3. To identify the significance of Special Contracts.
4. To analyze various provisions related to The Negotiable Instrument Act, 1881.
5. To interpret the importance of ethical business practices.

Course Outcomes: After completion of the course, students will be able to
1. To synthesize basic principles of law of contracts.
2. To analyze the rules related to free consent and different modes of discharge of contracts.
3. Apply the rules regarding the special contracts.
4. Evaluate various provisions related to The Negotiable Instrument Act, 1881 with Amendments.
5. Perceive the significance of adoption of ethical business practices.

Unit-I Contract: Introduction to the law of contracts and the sources of law. The Indian contract Act,1872, essential elements of a valid contract, kinds of contracts, offer and acceptance - meaning, communication of offer, acceptance and revocation. Consideration - need & legal rules of consideration. Free consent in contract.

Unit-II Discharge, Breach, Void and Quasi Contract: Discharge of contract, discharge by performance, discharge by agreement, discharge by lapse of time, discharge by operation of law, discharge by impossibility of performance, breach of contract, remedies for breach of contract, void agreement, quasi contracts and contingent contracts.

Unit -III Special Contracts: Contract of sale of goods, essentials of a contract of sale. Difference between sale and agreement to sell, conditions & warranties. Features of contract of agency, contract of bailment and pledge, contract of indemnity & guarantee.

Unit-IV Negotiable Instruments Act: Definition and Characteristics of negotiable Instruments, types of negotiable instruments. definition, essentials and distinctions between promissory note, bills of exchange, cheques. Types of crossing. Endorsement and its different types.

Unit-V Business Ethics: Meaning, objectives, importance & principles of business ethics. corporate social responsibility(CSR) - Meaning, evolution and development. Forms & dimensions of CSR. Relation of Sustainability to Ethical Decision Making & Social Responsibility.

Suggested Readings:
- Indrejeet Dagar and Anurag Agnihotri, Business laws: Test and Problems, Sage Texts, 2020.
- SS Gulshan and Ravi Akula, Business Law Regulations, excel books,2e, 2009.
- Satish B Mathur, Business Law, Tata McGraw Hill.
- K.R. Bulchandani, Business Law for Management, Himalya Publications, 4e.
- S.N. Maheshwari and S.K. Maheshwari, A Manual of Business Law, Himalaya Publishing House, 6e, 2015.
- Dr. B. K. Singh, Dr. Angad Tiwary , Business Law, SBPD Publications, 2021.
- Dr. S.S. Khanka Business Ethics & Corporate Governance (Principles & Practices), 2024.
- O.C. Ferrell, John Fraedrich and Linda Ferrell, Business Ethics (Ethical Decision Making & Cases), 13e, Cengage.

SDG 8 (Decent Work & Economic Growth)
SDG 12 (Responsible Consumption & Production)

Course Objectives:
1. To know the functions, role, objectives and principles of cost accounting.
2. To learn the Business and cost concepts -cost object, cost unit, types and characteristics of cost accounting.
3. To study the capital project planning cycle, work breakdown and scheduling techniques.
4. To learn the cost control techniques and Pareto's law.
5. To get knowledge about material costing, labour costing and overhead costing for better cost management.

Course Outcomes: After completion of the course, students will be able to
1. Apply the cost accounting principles and methods in business.
2. Outline the cost concepts and classify the cost centers for decision making.
3. Examine the capital project planning cycle, work breakdown and scheduling techniques.
4. Assess the cost control techniques and Pareto's law.
5. Propose about material costing, labor costing and overhead costing for better cost management.

Unit-I: Overview of Cost Management
Introduction, Cost Accounting, Cost Accounting and Cost Accountancy, Functions, Role, Objectives, Advantages, Principles, Importance of cost accounting, Classification of cost accounting.

Unit-II: Cost Concepts
Business and Cost Concepts, Cost of Product, cost, expenses and loss, Features of cost, cost object, cost unit and cost centre, types of cot centres, classification of costs, costing principles, components of Total Costs, Types of Costing System, Methods of Costing, Characteristics of Cost Information.

Unit-III: Cost Plan
Capital project overview-the planning cycle, types of projects, project organization, the work breakdown structure, scheduling-project duration, the bar chart, process scheduling, network planning, precedence diagramming, resource planning, Capital Cost Estimating-estimating qualities, range estimating, estimating techniques.

Unit-IV: Cost Control
Cost collection-basic accounting, cost vs cash, quantitative cost collection, Cost Control System-Definition and Concepts, the control cycle, objectives and requirements, cost information flow, Time control-scheduling Control system, Resource Levelling, Conventional Cost control, Pareto's Law, Budgeting and Trending, Cost/Schedule Integration, the earned value concept, fast tracking.

Unit-V: Elements of cost
Cost of Materials-Introduction, Scope of material costing, essential of material control procedure. Costing for Labour- Introduction, labour cost, classification of labour costs, labour cost records, methods of remuneration. Overheads-Direct expenses and Indirect expenses, Limitations of Direct expenses, Overheads, classification of Overheads.

Suggested Readings:
- Paresh Shah, Management Accounting, Oxford,2e,2022.
- MN Arora, Cost and Management Accounting, Vikas Publishing House Pvt Ltd,11e,2021.
- S.P. Jain &K.L. Narang, Cost and Management Accounting, Kalyani Punlihers,2018
- Mohammed Hanif, Cost and Management Accounting-I, Tata Mc Graw Hill,2018
- Kurt Heinze, Cost Management of Capital Projects, CRC Press, 2017.
- Dr. B. K. Mehta, Cost And Management Accounting , SBPD Publications, 2021.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – IV
25BBA404: BUSINESS TAXATION

SDG 8 (Decent Work & Economic Growth) **SDG 16** (Peace, Justice & Strong Institutions)

Course Objectives:
1. To familiarize with the importance, types, principles and sources of business taxes.
2. To know the residential status, Income from Business and provisions for income tax.
3. To study the income from salary and other source of an individual.
4. To learn the Goods and Sales Tax applicable to business and amendments.
5. To orient the Services and Central Excise imposed into a global trading.

Course Outcomes: After completion of the course, students will be able to
1. Apply principle of taxation to business.
2. Determine the residential status of an individual and scope of total income.
3. Analyze income from salaries, house property, business/profession, capital gains and income from other sources.
4. Interpret the Goods and Sales Tax to the selected business.
5. Outline the Service and Central Excise Tax on export and import business.

Unit–I: A Framework for understanding Taxes
Introduction, Constitution and Taxation, taxes importance in decision Making, types of taxes, Basic principles of Taxation, Sources of Tax laws, important principles and concepts in tax law, SAVANT Framework.

Unit -II: Income Tax
Introduction to Income tax, Persons to whom the act applies, Residential status, Previous year and assessment year, heads of Income, exemptions. Income from House Property-Annual value, annual value of residential Property, Deduction from annual value. Income From Business: Revenue expenditure, time and cost acquisition, Special Provisions.

Unit-III: Income from Salary and Other Sources
Salary and dearness allowances, House rent allowances, Retirement benefits, Salary and Income Tax, Exemptions from the act, Dividend and Interest, Hiring of Plant and Machinery, gift and inheritance.

Unit-IV: Goods and Sales Tax
Introduction to indirect taxation, sales, work, service contract, sales and hire purchase, sales by clubs and Societies, scope of 'Goods'. Dealers, Charges of sales tax, Liability to pay tax, Central tax.

Unit-V: Service and Central Excise tax
Scope of 'Service Tax', Charge of Service Tax, Taxable value, Service provider as agent, services and sale of goods, charges of service tax, Manufacturer or produced Goods, Scope of 'Goods', Inclusion in the tariff act, manufacturer, charge of customs duty, cargo import, Import of Baggage, Import through Courier and Import by Post.

Suggested Readings:
- John E. Karayan &Charles W. Swenson, Strategic Business Tax Planning, Wiley, 2e, 2007.
- Akhileshwar Pathak & Savan Godiawala, Business Taxation, Tata McGraw Hill,3e,2014
- V.P. Gaur & D.B Narang, Income Tax Law and Practice, Kalyani Publishers.
- Dr. Preeti Rani Mittal, Dr.nshika Bansal, Income Tax Law and Practice, Sultan Chand & Sons, 2021
- Dr. H.C. Mehrotra, Dr. S.P. Goyal, Problems and Solutions in Income Tax, Sahitya Bhawan Publications, 2020.
- Dr. Vinod K. Singhania & Dr. Kapil Singhania, Direct Taxes Law & Practice, Taxman, 2009.
- B.B. Lal, Income Tax, Pearson Education, 2010.

SDG 9 (Innovation & Infrastructure)
SDG 12 (Responsible Consumption & Production)   **SDG 13** (Climate Action)

Course Objectives:
1. To familiarize the basic concepts and role of Logistics and supply chain management in business.
2. To know the supply chain drivers and its role in redefining value chain of Firms.
3. To learn skills for planning, designing and operations of supply chain Management.
4. To study about the various parties in logistics, strategies and out sourcing aspect.
5. To orient the Supply chain management systems and its integration with enterprise resource planning and Customer Relationship Management.

Course Outcomes: After completion of the course, students will be able to
1. Understand the elements and functions of supply chain.
2. Examine the stages and process of supply chain, its drivers and best practices.
3. Apply performance management tools, issues and challenges of global supply chain management.
4. Analyze the warehouse facilities, parties in logistics.
5. Outline the linkage between Supply chain management and CRM, green Supply chain management practices.

Unit I: Logistics
Evolution, Objectives, Components and Functions of Logistics Management, Distribution related Issues and Challenges; Gaining competitive advantage through Logistics Management, Transportation-Functions, Costs, and Mode; Network and Decision, Containerization, Cross docking.

Unit II: Supply Chain: Concepts, Objectives of a Supply Chain, Stages of Supply chain, Value Chain Process, Cycle view of Supply Chain Process, Key issues in SCM, logistics & SCM, Supply Chain Drivers and obstacles, Supply chain strategies, strategic fit, best practices in SCM, Obstacles of streamlined SCM.

Unit III: Supply Chain Performance
Bullwhip effect and reduction, Performance measurement: Dimension, Tools of performance measurement, SCOR Model. Demand chain management, Global Supply chain- Challenges in establishing Global Supply Chain, Factors that influences designing Global Supply Chain Network.

Unit IV: Warehousing
Concept and types, Warehousing strategy, Warehouse facility location & network design, Reverse logistics, Outsourcing: Nature and concept, Strategic decision to Outsourcing, Third party logistics (3PL), Fourth party logistics(4PL), Fifth Party logistics (5PL), Sixth Party Logistics (6PL).

Unit V: Supply Chain and CRM
Concepts, Linkage, IT infrastructure used for Supply Chain and CRM, Functional components for CRM, Green supply chain management, Supply Chain sustainability.

Suggested Readings:
- Chopra, Sunil, Meindl, Peter and Kalra, D. V.; Supply Chain Management: Strategy, Planning and Operation; Pearson Education.
- Altekar, Rahul V.; Supply Chain Management: Concepts and Cases; PHI Learning Reference.
- Ballou, Ronald H.; Supply Chain Management; Pearson Education.
- Sahay, B.S.; Supply Chain Management; Macmillan.
- Ballou, R.H. Business Logistics Management. Prentice-Hall Inc.
- Bowersox D.J. Closs D. J, Logistical Management, McGraw-Hill, 1996

SDG 9 (Innovation & Infrastructure)   **SDG 4** (Quality Education)

Course Objectives:

1. Introduce the fundamental principles and architecture of database management systems. Explain the differences between file systems and DBMS, and the need for data independence.
2. Develop an understanding of database models including relational, hierarchical, network, and object-oriented models.
3. Provide practical knowledge of SQL and PL/SQL for querying and managing databases.
4. Explore advanced topics such as data warehousing, data mining, and emerging database technologies.
5. Address database security, including common threats, recovery techniques, and distributed database systems.

Course Outcomes:

- Describe the basic concepts of DBMS, its architecture, components, and advantages over file systems.
- Compare and contrast different data models and understand the three-level data abstraction architecture.
- Construct and execute SQL queries for creating, manipulating, and retrieving data from relational databases.
- Explain the concepts and applications of data warehousing, data mining, and emerging database technologies.
- Identify common database security threats and apply basic techniques for securing data and managing distributed databases.

UNIT – I: Introduction to DBMS: DBMS and its evolution, data processing, need of information, database and file system, objectives, characteristics, advantages, users, components, approaches to data management, applications and trends.

UNIT – II: Database Architecture: Introduction, schema, sub-schema, data architecture - 1-tier, 2- tier, 3-tier; data independence, Types of data models – Hierarchal model, network model, relational model, object-oriented model, Entity-Relationship model (E-R).

UNIT – III: SQL (Structured Query Language): SQL basics and data types, joints, set operators, DDL, DML, DCL, TCL, PL/SQL.

UNIT – IV: Data Warehousing and Data Mining: Introduction, purpose and characteristics of data warehousing & data mining, relationship between data warehousing & data mining, Emerging database technologies, internet database, digital libraries, multimedia database, social media database, mobile database, special database.

UNIT – V: Database Security: Introduction, threats and security issues, firewalls and database recovery, techniques of database security, distributed database.

Suggested Readings:
- Navathe, *Database System Concepts*, 3rd edition, McGraw Hill
- Date, C.J., *An Introduction to Database Systems*, 7th edition, Addison Wesley
- Singh, C.S., *Database System*, New Age Publications, New Delhi
- Kumar, P., *Database management system* (New ed.). Kalyani Publishers.

SDG 9 **(Innovation)**   SDG 12 **(Responsible Consumption)**
SDG 17 **(Partnerships for the Goals)**

Social Media Analysis: Social media not only provides marketers with a means of communicating with their customers, but also a way to better understand their customers. Viewing consumers' social media activity as the "voice of the consumer," this session exposes learners to the analytic methods that can be used to convert social media data to marketing insights. In Introduction to Social Media Analytics, learners will be exposed to both the benefits and limitations of relying on social media data compared to traditional methods of marketing research. Partnering with a leading social media listening platform, this course provides learners with the foundational skills of social media listening including the creation of monitors and common social media metrics. Moving beyond social media listening, this course shows learners how social media data can be used to provide insights into market structure and consumers' perceptions of the brand. Learners will have the opportunity to assess data and discern how to "listen" to the data by watching video lectures and completing activities, practice quizzes, discussion boards, and peer assessments. The student has to select a topic and use the social media platform to collect the data and analyze the data using some statistical tools and prepare a report on that topic.

Campaign Management: Campaign Management involves planning, executing, tracking, and analyzing marketing campaigns across various channels to achieve strategic objectives. This session introduces students to the key stages of campaign lifecycle management, including audience targeting, budgeting, content scheduling, and performance evaluation. Learners will gain hands-on experience in designing and managing a digital marketing campaign using tools such as Google Ads or Meta Ads Manager. The student is expected to conceptualize a campaign, implement it through digital channels, monitor its progress using relevant metrics, and submit a final report analyzing its effectiveness.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – IV
25BBA408: MULTIMEDIA LAB

SDG 4 (Quality Education)   **SDG 9** (Innovation & Infrastructure)

Course Objectives:
1. To familiarize about the basics of multimedia used and its issues.
2. To study the graphical presentation of data and different file formats.
3. To know the digital audio representation and image compression.
4. To learn the video recording, frame sequencing and display speed.
5. To orient the concept of animation, background design, effect of animation, photo shop and adobe flash.

Course Outcomes: After completion of the course, students will be able to
1. Understand the architecture, multimedia applications, the users of multimedia for solving issues for distributed multimedia system.
2. Analyze the data using graphs and save it in different file formats for better image presentation.
3. Adopt the audio and time-based media representation for the analysis of data.
4. Design the video creation for the presentation of data with a specific speed and save the file in different formats.
5. Outline the animations, background design, storyboard and 2D digital animation sound in presenting the data.

Unit-I: Multimedia Overview
Users of Multimedia Information, the Convergence of Computers, Communications and Entertainment Products, Architecture and Issues for Distributed Multimedia Systems.

Unit-II: Graphics and Data Representations
Graphics: - 1 Bit image, 8 Bit Gray level Image, 24-bit Colour Image, Bit Colour Image. Popular File formats: GIF, JPEG, PNG, TIFF, Window BMP, WMF, EXIF, PTM.

Unit-III: Media and Time
Digital Audio Representation and Processing, Video Technology, Digital Video and Image Compression, Time – based Media representation and Delivery.

Unit-IV: Video Creation
Video presents moving pictures and typically combines images and sound for a multimedia experience. Technology records, synthesizes, and displays images as frames in such sequences at a fixed speed that makes the creation appear as moving; this is how we see a completely developed video. To create a video without any interruption, video device must display 25 to 30 frames/second. • Common file types for Video include AVI, WMV, FLV, MOV, MP4.

Unit-V: Animation
History of Animation, Composition, Perspective, Background Design, Effects Animation1 Introduction Storyboard, Storyboard Layout. Assisting Animation, Color Theory, Effects Animation2, Storyboarding Final Film Concept Art Direction, Animation Final Film Project, Layout Recap, Premiere, Sound Breakdown. Digital Ink and Paint, 2D Digital Animation Sound, Photoshop, Adobe flash, Toon Boom.

Suggested Readings
- Practical Photoshop CS6, Level 1 by Barbara Zukin Heiman, Donald Laird, Corrine Haverinen, Windsor Green, & Marilyn P. Kelly Practical Photoshop.
- Project Flash MX by Nat Gertler, Thomson Delmar Learning Publication.
- Comdex Multimedia and Web Design Course Kit, DreamTech, Vikas Gupta, ISBN 13: 788177229196
- The Animator Survival Kit by Richards Williams
- Basic Drawing Techniques by Richards Box
    - Drawing and Anatomy by Victor Petard

25BBA501: INTERNATIONAL BUSINESS

SDG 17 (Partnerships for the Goals)　　　　　　　　**SDG 10** (Reduced Inequalities)
SDG 8 (Decent Work & Economic Growth)

Course Objectives:
1. To study the scope, Drivers, modes, opportunities and challenges of international business.
2. To get knowledge about different international trade theories and Foreign Direct Investment in India.
3. To Learn the International Trade Policies and economic integration.
4. To orient about economic groups and multilateral trade agreements of the business.
5. To understand the International Business strategies in production, marketing and finance and forex Market.

Course Outcomes: After completion of the course, students will be able to
1. Demonstrate the scope, Drivers, modes, opportunities and challenges of international business.
2. Examine about different international trade theories and Foreign Direct Investment in India.
3. Discuss International Trade Policies and economic integration.
4. Analyze economic groups and multi-lateral trade agreements of the business.
5. Formulate International Business strategies in production, marketing and finance and forex Market.

Unit - I: Introduction to International Business: Definition, Need & scope of International Business, Distinction between Domestic and International Business, Drivers of Globalization, Environmental Analysis, Approaches to International Business, Modes of entering International Business, Impediments in international Business, Opportunities and Challenges of International Business.

Unit - II: International Trade Theories: Classical theories: Mercantilism, Absolute Advantage Theory, Comparative Advantage Theory and Factor Endowment Theory; Modern theories: Country Similarity Theory, Product Lifecycle Theory, New Trade Cycle Theory and National Competitive advantage theory. India's Foreign Trade, Foreign Direct Investment in India and Balance of Payments.

Unit - III: International Business and Economic Integration: Economic Integration & its levels: Free Trade Agreement (FTA), Customs Union, Common market, Economic Union and Political Union. International Trade Policy of India.

Unit - IV: Economic Groups & Trade Agreements: Regional Economic Groups: European Union, NAFTA, ASEAN, SAARC. Multilateral Trade agreements: GAAT, WTO, TRIPS, TRIMS and UNCTAD. Rise of BRICS. Contemporary Economic Developments and Trade Agreements.

Unit - V: International Business Strategy & Operations: International Business Strategy, types of strategies, strategy implementation process. International Production: Sourcing and vertical Integration; International Marketing: Brand Decisions; International Financial Management: Forex market, International Monetary System, International financial markets and Export Financing; International HR Activities: HR Planning, Recruitment and selection of expatriates.

Suggested Readings:
- Michael R. Czinkota, Ilkka A. Ronkainen, Michael H. Moffett, International Business, 8e, Wiley, 2021.
- K Ashwatappa, International Business, 6e, Mc Graw Hill, 2015.
- S.N.Chary, elements of International Business, 2e, Wiley, 2016.
- Ehud Menipaz, Amit Menipaz & ShV S Tripathi, International Business, Sage, 2017.
- P. Subba Rao, International Business, 5e, Himalaya Publications, 2021
- Charles W. L Hill, G. Thomas M Hult, Rohit Mehtani, International Business,11e, Mc Graw Hill, 2019.

25BBA502: DESIGN THINKING

SDG 9 (Innovation & Infrastructure)   SDG 11 (Sustainable Cities & Communities)

Course Objectives:
1. To introduce the fundamental concepts, origins, principles, and interdisciplinary relevance of design thinking and differentiate it from traditional problem-solving approaches.
2. To explore and compare prominent design thinking models and examine real-world applications through global and Indian case studies.
3. To equip students with the skills and techniques for empathizing with users and accurately defining user-centric problems.
4. To foster creative thinking and hands-on prototyping skills through ideation techniques and prototype development strategies.
5. To provide an understanding of user testing, iterative improvement, and implementation strategies for design thinking solutions.

Course Outcomes: After completion of the course, students will be able to
1. Understand and articulate the key features, benefits, and limitations of design thinking and its applicability in diverse fields like business, education, and technology.
2. Students will be able to analyze and apply appropriate design thinking models to real-life problem scenarios based on contextual needs.
3. Conduct user research, synthesize insights, and develop meaningful problem definitions using tools like empathy maps, fishbone diagrams, and "How Might We" framing..
4. Generate innovative ideas using structured ideation techniques and build appropriate prototypes for testing user-centric solutions.
5. Conduct testing, integrate user feedback, and implement scalable solutions while assessing the impact of design thinking interventions.

Unit-I: Foundations of Design Thinking: Introduction to Design and Design Thinking, Design Skills, Thinking Skills, and Mindsets, History and Evolution of Design Thinking, Design Thinking vs Traditional Problem Solving, Need and Benefits of Design Thinking, Principles and Features of Design Thinking, Applications and Limitations of Design Thinking, Relevance of Design Thinking in Education, Business, Technology, Healthcare and Society. Creating Ideal Conditions for Design Thinking. Mistakes that can be and cannot be tolerated in Design Thinking.

Unit-II: Models and Cases of Design Thinking: (a) Design Thinking Models: IDEO's Model, Harvard B School Model, IBM Design Thinking Framework, Design Council's Double Diamond Model, Stanford d.school Process (EDIPT), Edward de Bono's Six Thinking Hats and Liedtka's Framework. **(b) Cases in Design Thinking:** Airbnb, Delta Airlines, Heinz, Kaiser Permanente, Ford, IDEO; Indian Cases: Indian Railways, Naandi Foundation and Zomato.

Unit-III: Empathizing and Defining: (a) The Empathize Stage: Importance of Empathizing, User Research, Interviewing, Observation (observing people in action), Empathy Mapping, Cultural Probes, Gaining User Insights. Searching for causes of the problem using Fish-bone Diagram. **(b) The Define Stage:** Analyzing and Synthesizing User Data, Developing Point of View (POV), Framing "How Might We" Questions, Transition from Empathy to Problem Framing, Identifying and Closing Knowledge Gaps.

Unit-IV: Ideating and Prototyping: (a) Ideation Techniques: Brainstorming, Brainwriting, SCAMPER, Mind Mapping, Crazy 8s, Divergent and Convergent Thinking, Need of Creativity and Lateral Thinking in the Ideation Phase. Evaluating Ideas, Lean Startup Method for Prototypes. **(b) Prototyping Techniques:** Role of Prototypes in DT, Low-fidelity vs Medium-fidelity vs High-fidelity Prototypes, Startup and Collaborative Prototyping Models, Developing Prototype Skills and Tools, Product Innovation and New Product Development.

Unit-V: Testing and Implementing: Testing Methods and Stakeholder Involvement, Implementation: Piloting, Feedback, Launching, Tools: Kano Model, Usability & Ergonomic Testing, Continuous Improvement and Scaling, Measuring Design Thinking Impact (User, Organization, Society), Integrating Feedback for Iterative Improvement.

Suggested Readings:

- Chandramouli Subramanian, Tiyagarajan Paramasivan & Sankaran Venkataramani, Design Thinking-A Hands-on Approach, 1e, Universities Press, 2025.
- K.V.Sambasiva Rao, Design Thinking and Innovation, 1e, Pen Press, 2025.
- Shalini Rahul Tiwari, Rohit Rajendra Swarup, Design Thinking-A Comprehensive Textbook, 1e, 2024.
- Christian Muller- Roterberg, Design Thinking for Dummies, John Wiley & sons, 2020.
- C. Karthikeyan, Design Thinking Applications in Management, 1e, Walnut Publication, 2024. (e-book)
- Idris Mootee, Design Thinking for Strategic Innovation – What They Can't Teach You at Business or Design School, Wiley, 2013.

SDG 9 **(Innovation)**   SDG 12 **(Responsible Consumption)**
SDG 17 **(Partnerships of the Goals)**

Course Objectives:
1. To know the concept, importance of data analytics and Business analytics in practice.
2. To learn the basic arithmetic operations using functions, data sorting, filtering and formatting in MS Excel.
3. To study the overview of Data visualization, tools, tools, Statistical methods for summarizing data and Exploring data using pivot table
4. To learn mean, variance, Standard deviation and coefficient of variation using MS Excel.
5. To understand the predictive analytics using MS Excel.

Course Outcomes: After completion of the course, students will be able to
1. Understand the concept, importance of data analytics and Business analytics in practice.
2. Outline the basic arithmetic operations using functions, data sorting, filtering and formatting in MS Excel.
3. Examine the Over view of Data visualization, tools, tools, Statistical methods for summarizing data and Exploring data using pivot table
4. Apply the mean, variance, Standard deviation and coefficient of variation using MS Excel.
5. Analyze the predictive analytics using MS Excel.

Unit - I: Introduction to Data Analytics
Introduction to Data analytics - Importance of Analytics- Difference between Data analytics and Business Analytics – Business Analytics in Practice: - 1. Financial analytics, 2. HR analytics, 3. Marketing analytics, 4. Health care analytics, 5. Supply chain analytics 6. Web analytics etc.

Unit - II: Basic Arithmetic operation of MS Excel
Basic arithmetic operation in Excel such as Addition, Subtraction, Multiplication and Division- Calculations using – Auto sum Function- SUMIF functions – MAX and MIN functions – COUNT and COUNTIF Functions-Modifying data in excel- Sorting and filtering Data in Excel- Conditional Formatting of Data in Excel- Frequency Distribution for Categorical data and Qualitative data in MS Excel.

Unit - III: Data Visualization
Over view of Data visualization – Data Visualization tools, Statistical methods for summarizing data – How to create pivotal tables using excel - Exploring data using pivot table –Cross Tabulation _ Creating Charts: - 1. Scatter charts, 2. Line charts, 3. Bar charts and column, 4. Pie Charts and 3-D charts, 4. Bubble charts, - Effective use of Dashboards, Power BI and Tableau.

Unit -IV: Descriptive Analytics
Mean, Geometric and Harmonic mean using MS Excel-Measures of Variability-Range, Variance, Standard Deviation, Coefficient of Variation using MS Excel

Unit - V: Predictive Analytics
Karl Pearson Correlation Techniques - Spearman's Rank correlation -Simple and Multiple regression - Regression by the method of least squares – Building good regression models – Regression with categorical independent variables.

Suggested Readings:
- Mohiuddin Ahmed, Al-Sakib Khan Pathan, Data Analytics: Concepts, Techniques, and Applications, Taylor & Francis Group, 2020
- James Evans, Business Analytics, 2e, Pearson, 2017.
- Camm, Cochran, Fry, Ohlmann, Anderson, Sweeney, Williams Essential of Business Analytics, Cengage Learning, 2020.
- Thomas Eri, Wajid Khattack & Paul Buhler: Big Data Fundamentals, Concepts, drVers and

Techniques by Prentice Hall of India, New Delhi, 2015.

- Akil Maheswari, Big Data, Upskill ahead by Tata McGraw Hill, New Delhi, 2016.
- Foster Provost and Tom Fawcett, Data Science for Business, Shroff Publisher, 2018.

SDG 9 (Innovation & Infrastructure)   **SDG 16** (Peace, Justice & Strong Institutions)

Course Objectives:
1. Introduce the fundamental concepts and importance of information security in business and everyday digital life.
2. Explain common types of security threats, including malware, phishing, insider attacks, and system vulnerabilities.
3. Develop awareness of preventive measures and best practices for personal and organizational security.
4. Familiarize students with security policies, compliance standards (ISO 27001, GDPR, IT Act), and access controls.
5. Explore ethical, legal, and societal implications of cybercrime, data protection, and intellectual property rights.

Course Outcomes:
- Explain key concepts of information security such as confidentiality, integrity, availability (CIA triad), and risk management.
- Identify and describe various cyber security threats, attacks, and vulnerabilities.
- Apply basic security measures such as password hygiene, antivirus use, and safe browsing techniques.
- Understand the structure of organizational security policies and roles in compliance with legal standards.
- Recognize ethical concerns and legal regulations regarding cybercrime and digital conduct in India and globally.

Unit-I: Introduction to Information Security: Importance of information security in business, Types of information-public, private, confidential, proprietary, Key concepts: CIA Triad (Confidentiality, Integrity, Availability), Threats vs. vulnerabilities vs. risks

Unit-II: Types of Security Threats: Malware: viruses, worms, trojans, ransomware, Phishing and social engineering, Insider threats and data leakage, Denial of Service (DoS), SQL injection (overview)

Unit-III: Security Measures and Best Practices: Password management and authentication, Firewalls, antivirus, and encryption (conceptual understanding), Secure browsing and safe use of social media, Mobile device and cloud security awareness

Unit-IV: Organizational Security Policies and Compliance: Security policy framework and access control, Roles and responsibilities in maintaining security, Data classification and handling policies, Introduction to compliance: ISO 27001, GDPR, IT Act (India)

Unit-V: Cyber Ethics and Legal Issues: Ethical issues in information handling, Intellectual property rights and software piracy, Cybercrime: identity theft, hacking, cyber bullying, Laws relating to IT security and privacy in India.

Suggested Readings:

- Mark Stamp, Information Security: Principles and Practice, Wiley, 2nd Edition.
- Sunit Belapure & Nina Godbole, Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Perspectives, Wiley India
- Surya Prakash Tripathi, Ritendra Goyal, and Praveen Kumar Shukla,Introduction to Information Security and Cyber Laws, Dreamtech Press.
- William Stallings & Lawrie Brown ,Computer Security: Principles and Practice
- Pavan Duggal, Cybersecurity and Cyberlaw
- Nina Godbole, Information Systems Security, Wiley India.

SDG 9 (Innovation & Infrastructure)   **SDG 4 (Quality Education)**

Course Objectives:
1. To expose the students to the Data Science Environment
2. To understand the data science process
3. To introduce the concepts of data mining
4. To introduce to the concepts of machine learning
5. To introduce the concepts of artificial intelligence

Course outcomes: After completion of the course, students will be able to
1. Understand the scope of data science and its applications in business.
2. Get acquainted with data science processes and apply in business.
3. Familiarize with concepts of data mining and its applicants.
4. Familiarize with concepts of machine learning and its applicants.
5. Familiarize with concepts of artificial intelligence and its applicants.

Unit – I: Introduction to Data Science:
Defining Data Science and Big Data, Benefits and Uses of Data Science and Big Data, Facets of Data, Structured Data, Unstructured Data, Natural Language, Machine-generated Data, Graph-based or Network Data, Audio, Image, Video, Streaming data, Data Science Process, Big data ecosystem and data science.

Unit – II: Data Science Processes:
Six steps of data science processes, define research goals, data retrieval, cleansing data, correct errors as early as possible, integrating – combining data from different sources, transforming data, exploratory data analysis, Data modelling, model and variable selection, model execution, model diagnostic and model comparison, presentation and automation.

Unit – III: Data Mining:
Scope of Data Mining, Data Exploration and Reduction, Unsupervised learning – cluster analysis, Association rules, Supervised learning- Partition Data, Classification Accuracy, prediction Accuracy, k-nearest neighbors, Classification and regression trees, Logistics Regression.

Unit – IV: Introduction to Machine Learning concepts:
Machine Learning, Learning from Data, History of Machine Learning, Big Data for Machine Learning, Leveraging Machine Learning, Descriptive vs Predictive Analytics, Machine Learning and Statistics, Types of Machine Learning, Reinforcement Learning.

Unit – V: Introduction to AI concepts:
AI, Turing test, cognitive modeling approach, the law of thoughts, the relational agent approach, the underlying assumptions about intelligence, techniques required to solve AI problems, level of details required to model human intelligence, successfully building an intelligent problem, history of AI.

Suggested Readings:
- James Evans, Business Analytics, 2e, Pearson, 2017.
- David R.H. and Galit Shmueli, Getting Started with Business Analytics, CRC Press, 2013
- Foster Provost and Tom Fawcett, Data Science for Business, Shroff Publisher, 2018.
- Seema Acharya & Subhashini Chellappan: Big Data and Analytics, Wiley Publications, New Delhi, 2015.
- Machine Learning for Absolute Beginners, O Theobald, 2e, 2015
- Artificial Intelligence Basics: A Non-Technical Introduction, Tom Taulli, Apress, 2019

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – V
25BBA506: PYTHON PROGRAMMING

SDG 4 (Quality Education)   **SDG 9 (Innovation & Infrastructure)**

Course Objectives:
1. Get introduced to Python language for data science, data types and structures
2. Learn the concepts of compound data types
3. Learn the concepts of functions and expressions in Python language
4. Get introduced to libraries such as NumPy and Panda
5. Use matplotlib library for data visualization

Course outcomes: After completion of the course, students will be able to
1. Understand the concept of Python language, data types and structures
2. Outline the compound data types in python
3. Examine the concepts of functions and expressions in Python language
4. Assess the fundamental Python libraries for data science- NumPy and Panda
5. Analyze Key Python Libraries for Data Visualization

Unit I: Introduction & Data Types and Structures
Introduction, setting a working directory, creating and saving a script file, commenting script files, variable creation, arithmetic and logical operators, input-output statements, control structures: conditional statement, looping statements, control statements.

Unit II: Compound Data Types
Strings, Lists, Arrays, Tuples, Dictionary, Sets, Range, Module-importing module, packages, composition, exception handing.

Unit III: Functions and Expressions
Conditions and Branching: Boolean Variables, Loops, Functions: defining and calling a function, types of functions, Regular Expressions: Match function, Search function, Matching Vs Searching, Object- orient programming and external libraries.

Unit IV: Libraries
NumPy: creating arrays, indexing arrays, array processing, array input and output. Pandas: series, data frames, index objects, data alignment, rank and sort, summary statistics.

Unit V: Python for Visualization
Matplotlib, installing/importing matplotlib, matplotlib architecture, Pyplot, creating simple charts, adding elements to charts, line chart, histogram, bar chart, pie chart, multi panel plot.

Suggested Readings:

- Anita Goel, Python Programming – An Object-Oriented Approach, 1e, Universities Press, 2025
- Wes McKinney, Python for Data Analysis, O'Reilly - Shroff Publishers & Distributors Pvt. Ltd, 2013.
- Fabio Nelli Python Data Analytics, Apress Kenneth A Lambert, Fundamentals of Python, Cengage Learning, 2015
- Davy Cielen, Arno D.B. Meysman, Mohamed Ali, Introducing Data Science: Big Data, Machine Learning and More, Using Python Tools, Manning, 2016.
- Wiley India Bharti Motwani Data Analytics using Python, Wiley India, 2020
- Miller Curtis, Hands-On Data Analysis with NumPy and pandas, Packt Publishing,2018.
- Mohiuddin Ahmed, Al-Sakib Khan Pathan, Data Analytics Concepts, Techniques, and Applications, Taylor & Francis Group, 2020

SDG 4 (Quality Education)   **SDG 9 (Innovation & Infrastructure)**

Course Objectives: To introduce the students to the basics of Python as a language/tool for Data Science
1. To know the concept of Python language, data types and structures
2. To Learn compound data types in python
3. To Study the concepts of functions and expressions in Python language
4. To Familiarize with fundamental Python libraries for data science- NumPy and Panda
5. To Understand Key Python Libraries for Data Visualization

Course outcomes: After completion of the course, students will be able to
1. Understand the concept of Python language, data types and structures
2. Outline the compound data types in python
3. Examine the concepts of functions and expressions in Python language
4. Assess the fundamental Python libraries for data science- NumPy and Panda
5. Analyze Key Python Libraries for Data Visualization

Unit -I: Fundamentals of Python
Installation of Python interpreter, simple data types: integer, float, string, accepting input from console, assignment statement, expressions, variable creation, arithmetic and logical operators, input-output statements.

Unit -II: Conditional and Looping Statements and Compound Data Types
Conditional statement – if, if-else, if-elseif-else, built-in mathematical functions; Looping statements – for, while, flowcharts of for and while, errors and exceptions; Strings – concatenation, repetition, membership, function method, string slicing; Lists – creation of a list, traversal of a list, operation on a list, functions/methods, list slicing, nested listing.

Unit -III: Array, Tuples, Dictionary, Functions
Arrays – creating an array, accessing elements of an array, Tuples; Dictionary – creating, accessing an element, add an item, modify an item in a dictionary, traversal, function methods; Functions – scope, parameter passing, recursion, return values.

Unit -IV: File Handling
Open and close file, read, write and append to a file (Text files); CSV file import csv module; Functions – Open/Close csv file; Read from a csv file and write into a csv file using csv.reader() and csv.writerow().

Unit -V: NumPy and Pandas Module
NumPy: creating arrays, array processing, accessing elements, slicing part of array; Pandas: series, data frames, data alignment, accessing tabular data.

Suggested Readings:
- Wes McKinney, Python for Data Analysis, O'Reilly - Shroff Publishers & Distributors Pvt. Ltd., 2013
- Fabio Nelli, Python Data Analytics, Apress, 2015
- Kenneth A Lambert, Fundamentals of Python, Cengage Learning, 2015
- Davy Cielen, Arno D.B. Meysman, Mohamed Ali, Introducing Data Science: Big Data, Machine Learning and More, Using Python Tools, Wiley India,2016
- Miller Curtis, Hands-On Data Analysis with NumPy and pandas, Packt Publishing, 2018
- Mohiuddin Ahmed, Al-Sakib Khan Pathan, Data Analytics Concepts, Techniques, and Applications, Taylor & Francis Group, 2020

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA SEMESTER – V
25BBA508: FIELD BASED PROJECT
(IN A COMPANY OR NGO DURING SUMMERVACATION)

SDG 4 (Quality Education)   **SDG 8** (Decent Work & Economic Growth)
SDG 17 (Partnerships of the Goals)

Course Objective: To acquire practical knowledge by working in any organization. Students should learn application of conceptual knowledge to practical business problem and also develop interpersonal relations, working in teams and understanding dynamics in an organization.

Course Outcome: Students will be able to understand a) Management functions and Organizational structure b) organizational dynamics in terms of organizational behavior, culture, climate c) Functional domain knowledge d) Processes and systems d) External and Internal
Approach to Field Based Project:

Students should take covering letter/s from the college, addressed to the organization/professional institutions during the beginning of the second semester coursework. The students in consultation with Supervisor / Mentor and Head of the department should choose any area / topic of Business Management as per the Syllabus prescribed by the University.

The students can approach any Business organizations / Corporate / Public and Private sectors, Government Departments, Research organizations, J-Hub, T-Hub etc. for the Field based Projects. The students should do the internship Project the summer break.
Summer internship report needs to be submitted to the department after approval by the concerned Supervisor/Mentor and the Head of the department for the Power point (PPT) presentation for evaluation.

Field based project report is evaluated for 20 marks internal Exam and 30 marks External Exam.
The report has to be evaluated by the Head, Supervisor/ mentor and the senior faculty of the department.

SDG 9 (Industry, Innovation & Infrastructure)
SDG 8 (Decent Work & Economic Growth)   **SDG 17 (Partnerships for the Goals)**

Course Objectives:
1. To introduce the fundamental principles, processes and types of strategies involved in strategic management.
2. To develop students' ability to use strategic tools for internal and external analysis in business environments.
3. To understand how organizations pursue competitive advantage through various business and corporate strategies, including diversification and M&A.
4. To examine the challenges and approaches in the successful implementation and adaptation of strategies.
5. To enable students to assess and monitor strategic performance, with insights into ethical and global strategic issues.

Course Outcomes: After completion of the course, students will be able to
1. Describe different types of strategies and explain the influence of organizational values in strategic formulation.
2. Apply analytical tools to evaluate the strategic position of an organization.
3. Identify appropriate strategic alternatives and explain mergers and diversification strategies in real-world contexts.
4. Evaluate strategic change efforts and discuss how leadership and structure support strategic implementation.
5. Analyze strategic performance using control mechanisms and discuss global and ethical issues in strategic management.

Unit- I: Foundations of Strategic Management and Strategy Formulation: Introduction, Definition, Nature and Importance of Strategic Management; Strategies vs Tactics; Levels of Strategy; Strategic Intent – Vision, Mission, Objectives; Strategy Formulation Process; Generic Strategies (Cost Leadership, Differentiation, Focus); Types of Strategies – Offensive, Defensive, Turnaround, Stability, Expansion, Entry and Exit Barriers; Impact of Organizational Values and Culture on Strategy.

Unit – II: Strategic Analysis – Tools and Techniques: External Environment Analysis – PESTEL, Industry and Competitive Analysis (Porter's Five Forces), Strategic Groups; Internal Analysis – Resources, Capabilities, VRIO Framework; SWOT Analysis; Experience Curve; Impact Matrix; Value Chain Analysis; Core Competencies and Sustainable Competitive Advantage.

Unit – III: Business-Level and Corporate-Level Strategy: Business-Level Strategies – Cost Leadership, Differentiation, Focus; Corporate-Level Strategies – Growth, Stability, Retrenchment; Diversification Strategies – Related, Unrelated, Conglomerate Diversification; Portfolio Analysis – BCG Matrix, GE-McKinsey Matrix; Strategic Alliances, Joint Ventures; Mergers and Acquisitions – Strategic Rationale, Types and Integration Challenges.

Unit- IV: Strategy Implementation and Strategic Change: Strategy-Structure Relationship; Organizational Design and Strategic Fit; Strategic Leadership and Role of the Strategist; Operationalizing and Institutionalizing Strategy; Strategic Change Management; Resistance to Change; Strategic Renewal, Mergers and Acquisitions (implementation phase); Building Strategic Flexibility and Innovation.

Unit– V: Strategic Evaluation, Control and Contemporary Issues: Strategic Control Process; Performance Measurement – Qualitative and Quantitative Metrics; Balanced Scorecard; Challenges in Measuring Strategic Performance; Evaluation and Control in Diversified and Global Corporations (MNCs); Corporate Governance; Ethics and CSR in Strategy; Blue Ocean Strategy; Disruptive Innovation and Strategic Agility.

Suggested Readings:

- Hitt, Ireland & Hoskisson, Strategic Management: Competitiveness and Globalization, 13e, Cengage Learning, 2020.
- Gregory G. Dess, Gerry McNamara, Alan Eisner & Seung-Hyun Lee, Strategic Management: Texts and Cases, 10e, McGraw Hill, 2021.
- Thomas L. Wheelen, J. David Hunger, Alan N. Hoffman, Charles E. Bamford, Strategic Management and Business Policy, 14e, Pearson, 2015.
- Fred David & Forest David, Pearson, Strategic Management: A Competitive Advantage Approach Concepts and Cases, Pearson Education, Limited,2016, Edition 16th.
- R. Maheshwari, Saurabh Agarwal, Strategic Management: SBPD Publishing House,2020
- William H. A. Johnson, Managing Global Strategy: Developing an Effective Strategy in International Business, Taylor & Francis,2020,
- Anthony E. Henry, Understanding Strategic Management, Oxford University Press, 2018.
- Jaimin H Trivedi, Fundamentals of Strategic Planning and Development, RED'SHINE Publication. Pvt. Ltd, 2019.

SDG 4 (Quality Education) **SDG 8** (Decent Work & Economic Growth)
SDG 9 (Industry, Innovation & Infrastructure)

Course Objectives:
1. To familiarize students with the origins, evolution, and scope of AI and automation in modern business.
2. To demonstrate the impact of AI on various business decision-making areas.
3. To help students understand how automation technologies optimize operational workflows.
4. To introduce students to commonly used AI tools for business insights and decision-making.
5. To raise student awareness on the ethical, legal, and social implications of AI technologies.

Course Outcomes: After completion of the course, students will be able to
1. Explain the fundamental concepts of AI and distinguish AI, ML, and automation with examples.
2. Identify and describe how AI supports business decisions across multiple domains.
3. Analyze automation applications and evaluate their impact on business processes.
4. Demonstrate familiarity with business-friendly AI tools and articulate their usage.
5. Evaluate ethical risks and legal issues associated with AI systems and advocate responsible AI practices.

Unit- I: Foundations of Artificial Intelligence and Automation: Introduction to Artificial Intelligence: Definition, scope, and evolution, Key domains of AI: Machine Learning, Natural Language Processing (NLP), Computer Vision, Robotics, Differences between Artificial Intelligence, Machine Learning, and Automation, Role of automation in business environments, Introduction to Industry 4.0 and smart enterprises.

Unit -II: Business Applications of AI: AI applications in core business functions: Marketing, Finance, HR, and Operations, AI in customer service: Chatbots, voice assistants, recommendation systems, Predictive analytics for demand forecasting and customer behaviour, AI use cases in fraud detection and risk management, AI applications in supply chain optimization and CRM systems.

Unit -III: Automation and Business Process Improvement: Introduction to Robotic Process Automation (RPA), Automation in functional areas: HR onboarding, accounting, procurement, inventory, Benefits and limitations of automation: efficiency, scalability, job redesign, Challenges in implementation: cost, training, change management, Case studies on process automation in services and manufacturing industries.

Unit -IV: AI Tools and Technologies for Business Users: Overview of AI tools: Python (concept only), Power BI, Tableau, ChatGPT, Google AI tools, Introduction to enterprise AI platforms: IBM Watson, Microsoft Azure AI, Google Cloud AI, Introduction to no-code and low-code AI tools (e.g., Microsoft Power Platform), Walkthrough of a chatbot or recommendation system (non-programming approach), Practical overview of AI dashboards and visualization tools.

Unit -V: AI Ethics, Legal Framework, and Responsible Innovation: Ethical considerations in AI: algorithmic bias, surveillance, discrimination, AI and job displacement: future of work and skill transition, Overview of Indian and global data privacy regulations (e.g., GDPR, Digital Personal Data Protection Act), Principles of Explainable and Transparent AI, Guidelines and frameworks for responsible and ethical AI deployment.

Suggested Readings:
- Shajahan.S. Artificial Intelligence in Business: Concepts and Applications,McGraw Hill India
- Doug Rose, Artificial Intelligence for Business: A Roadmap for Getting Started, Pearson,
- Ravindra Savaram, AI for Everyone: Master the Basics, Amazon
- Saurabh Sharma, Cyber Laws and Ethics, Vikas Publishing.
- Saroj Kaushik , General Introduction to AI & Applications, Artificial Intelligence, Cengage Learning

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – VI
25BBA603: R PROGRAMMING

SDG 4 (Quality Education)   **SDG 9 (Industry, Innovation & Infrastructure)**

Course Objectives: Learn R programming language, basic functions and techniques.
1. To introduce to R Programming
2. To understand the usage of expressions and loop in R
3. To understand list, functions, strings and factors in R
4. To understand the usage of objects and strings in R
5. To visualize and analyze the data using R programming

Course outcomes: After completion of the course, students will be able to
1. Get familiarize with R environment
2. Work with expressions and loops in R
3. To apply with list, functions, strings and factors in R
4. To apply Statistics with R
5. Visualize and analyze data using R

Unit–I: Getting Started with R
Concept of R, installing R, IDE of R, getting help from R, Mathematical Operators and Vectors, Assigning Variables, Special Numbers, classes, different types of numbers, changing classes, examining variables, the workplace, library of package, getting to know a package.

Unit–II: Basic Expressions
Vectors – sequences, lengths, names, indexing vectors, vector recycling and repetition, Matrices and Arrays – creating arrays and matrices, rows, columns, dimensions, indexing arrays, Arithmetic, Conditional – if and else, vectorized if, multiple selection, Loops – repeat loops, while loops, for loops, Advanced looping – replication, looping over lists, looping over arrays, Multiple – input apply, instant vectorization.

Unit–III: Lists, Functions, Strings and Factors
Lists – creating lists, automatic and recursive variables, list dimensions and arithmetic, indexing lists, conversion between vectors and lists, Combining lists, NULL, Pair-lists, Data Frames – Creating Data Frames, Indexing Data Frames, Basic Data Frame Manipulation, Functions – Creating and Calling Functions, Passing functions, variable scope, Strings – Constructing and printing strings, Formatting numbers, Special characters, Changing case, Extracting Substrings, Splitting Strings, File paths, Factors – Creating, factor levels, ordered factors, conversion of variables .

Unit–IV: Statistics with R
Summarizing data, calculating relative frequencies, tabulating factors and creating contingency tables, testing categorical variables for independence, calculating quantiles of a dataset, converting data into z-scores, t-test, testing sample proportions, testing normality, comparing means of two samples, testing correlation for significance, linear regression in R, logistic regression in R, clustering with R.

UNIT V: Packages and Visualization
Loading packages, search path, libraries and installed packages, installing packages, maintaining packages, reading and writing data, importing data using built-in functions, Visualization – The three plotting systems, Scatterplots – based graphics, lattice graphics, histograms, box plots, bar charts, fitting linear model and regression tree.

Suggested Readings:
▪ Sandhya Arora & Latesh Malik, R Programming for Beginners, 1e, Universities Press, 2020.
▪ Gardener, M, Beginning R, New Delhi: Wiley India,2013.
▪ Teetor, P., R Cookbook, Mumbai: O‟ Reilly India / Shroff Publishers,2014.
▪ Cotton, R. Learning R, Mumbai: O‟ Reilly India / Shroff Publishers,2014.
▪ Nathan Metzler, R Programming for Beginners,2019
▪ Sandip Rakshit , R Programming for Beginners,2017.
▪ Alex Nordeen, Learn R Programming in 24 Hours Complete Guide for Beginners, Guru99, 2020

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – VI
25BBA604: DATA VISUALIZATION AND ANALYSIS

SDG 9 (Industry, Innovation & Infrastructure)   **SDG 12** (Responsible Consumption)

Course Objectives:
1. To understand the purpose of data visualization.
2. To introduce the methods of data handling and data models.
3. To introduce the methods of data manipulation for decision making.
4. To present the data in a compelling manner using Tableau.
5. To understand the methods used to analyze data for strategic decision making.

Course outcome: After completion of the course, students will be able to
1. To design compelling data visualizations for insights for solving business problems.
2. To get familiarized with data handling methods and models.
3. To apply data manipulation techniques for decision making.
4. To be able to present the data in a compelling manner using Tableau.
5. To be able to conduct analysis on the data for strategic decision making.

Unit I: Effective Communication of Quantitative Information
Purpose, Scope, Communication Style, Quantitative relationships, differing roles of tables and graphs Mechanics of Sight, applying visual attributes to design, Gestalts principle, Fundamental variations of tables, Fundamental variations of graphs General Design principles for Communication Organizing, Highlighting, Integration, Table design, General graph design, Component level graph design, multi-Variable display.

Unit – II: Introduction to Data Handling
Overview of Data Analysis, Introduction to Data visualization, Working with Logical and financial functions, Data Validation & data models, Power Map for visualizing data, Power BI-Business Intelligence, Dashboard designing.

Unit- III: Introduction to Data Manipulation
Heat Map, Tree Map, Smart Chart, Column Chart, Line Chart , Pi, Bar, Area, Scatter Chart, Data Series, Axes, Chart Sheet, Trendline, Error Bars, Sparklines, Combination Chart, Gauge, Thermometer Chart , Gantt Chart, Pareto Chart etc., Frequency Distribution, Pivot Chart, Slicers, Tables: Structured References, Table Styles, What-If Analysis: Data Tables, Goal Seek, Sensitivity Analysis, Histogram, Descriptive, Statistics, Anova, F-Test, t-Test, Moving, Average, Exponential Smoothing, Correlation model, Regression model.

Unit –IV: Getting Started with Tableau
Tableau-Tableau product suite, Working, Tableau Architecture, Tableau Repository, Connecting to Data & Introduction to data source concepts, Understanding the Tableau workspace, Dimensions and Measures, Data Types & Default Properties, Building basic views.

Unit – V: Data Strategy
Understanding Product & Category, Competitive Analysis, Market Share understanding- Market potential Index, Seasonality Sales Trending, Consumer behavior Analytics-MIND AND MARKET FACTORS, Budget planning & Execution- MIMI, Regression & Correlation Analysis for Sales trending, Forecasting method with predictive investment modelling, Cohort Analysis, Google Analytics (GA).

Suggested Readings:
- Camm Cochran, Fry, Ohlmann, Anderson, Sweeney, Williams; Essentials of Business Analytics; Cengae Learning, 2015
- Tristan Guillevin, Getting Started with Tableau 2019.2: Effective data visualization and business intelligence, Packt Publishing,2019, 2nd Edition.
- Claus O. Wilke, Fundamentals of Data Visualization, O'Reilly Media,2019.
- Cole Nussbaumer Knaflic, Storytelling with Data: A Data Visualization Guide for Business Professionals, Wiley, 2015, 1st Edition
- Stephanie D.H. Evergreen, Effective Data Visualization: The Right Chart for the Right Data,

SAGE Publications,2019.
- Kieran Healy, Data Visualization: A Practical Introduction, Princeton University Press,2019

25BBA605: R PROGRAMMING LAB

SDG 4 (Quality Education)   **SDG 9 (Industry, Innovation & Infrastructure)**

Course Objectives: Learn R programming language, basic functions and techniques.
1. To Introduce to students to the concepts of R programming.
2. To know the usage of basic expressions and loops in R.
3. To make the student familiarize to create list, functions, strings and factors in R.
4. To understand the usage of objects and strings in R.
5. To make the student learn visualization and to analyze the data using R programming

Course outcomes: After completion of the course, students will be able to
1. Demonstrate how to install and configure R Studio
2. Gain Knowledge on expressions, arrays and loops in R programming.
3. Create lists, functions, strings and factors in R.
4. Performing Statistics with R
5. Develop to visualize and to analyze the data using R programming

Unit–I: Getting Started with R
Concept of R, installing R, IDE of R, getting help from R, Mathematical Operators and Vectors, Assigning Variables, Special Numbers, classes, different types of numbers, changing classes, examining variables, the workplace, library of package, getting to know a package.

Unit–II: Basic Expressions
Vectors – sequences, lengths, names, indexing vectors, vector recycling and repetition, Matrices and Arrays – creating arrays and matrices, rows, columns, dimensions, indexing arrays, Arithmetic, Conditional – if and else, vectorized if, multiple selection, Loops – repeat loops, while loops, for loops, Advanced looping – replication, looping over lists, looping over arrays, Multiple – input apply, instant vectorization.

Unit–III: Lists, Functions, Strings and Factors
Lists – creating lists, automatic and recursive variables, list dimensions and arithmetic, indexing lists, conversion between vectors and lists, Combining lists, NULL, Pairlists, Data Frames – Creating Data Frames, Indexing Data Frames, Basic Data Frame Manipulation, Functions – Creating and Calling Functions, Passing functions, variable scope, Strings – Constructing and printing strings, Formatting numbers, Special characters, Changing case, Extracting Substrings, Splitting Strings, File paths, Factors – Creating, factor levels, ordered factors, conversion of variables .

Unit–IV: Statistics with R
 Summarizing data, calculating relative frequencies, tabulating factors and creating contingency tables, testing categorical variables for independence, calculating quantiles of a dataset, converting data into z-scores, t-test, testing sample proportions, testing normality, comparing means of two samples, testing correlation for significance, linear regression in R, logistic regression in R, clustering with R .

Unit -V: Packages and Visualization
 Loading packages, search path, libraries and installed packages, installing packages, maintaining packages, reading and writing data, importing data using built-in functions, Visualization – The three plotting systems, Scatterplots – base graphics, lattice graphics, histograms, box plots, bar charts, fitting linear model and regression tree.

Suggested Readings:
- Gardener, M, Beginning R, New Delhi: Wiley India, 2013.
- Teetor, P, R Cookbook, Mumbai: O" Reilly India / Shroff Publishers,2014.
- Cotton, R, Learning R, Mumbai: O" Reilly India / Shroff Publishers,2014.
- Nathan Metzler, R Programming for Beginners, 2019.
- Sandip Rakshit , R Programming for Beginners,2017.
- Alex Nordeen, Learn R Programming in 24 Hours Complete Guide for Beginners, Guru99, 2020

SDG 9 (Industry, Innovation & Infrastructure)   **SDG 12** (Responsible Consumption)

Course Objectives:
1. To develop the ability to present quantitative data effectively using Excel-based visualization tools.
2. To introduce students to the basics of data handling and the creation of interactive dashboards.
3. To train students in data transformation and statistical analysis for decision-making.
4. To familiarize students with Tableau for creating interactive and insightful visualizations.
5. To apply advanced analytics techniques to draw strategic insights from business data.

Course Outcomes: After completion of the course, students will be able to
1. Create clear and effective visualizations to communicate quantitative information.
2. Clean, handle, and visualize datasets and create basic interactive dashboards.
3. Manipulate datasets and apply statistical tools for solving business problems.
4. Use Tableau to build compelling and dynamic visualizations for business datasets.
5. Apply visualization and analytics tools to generate strategic business insights.

Unit I: Visual Communication Techniques using Excel: Creating tables and graphs for business reports, Formatting and styling charts, Use of visual design principles in dashboards, Designing multi-variable visualizations, Highlighting insights using colour and layout.

Unit II: Data Handling and Dashboard Creation: Using Excel functions (Logical, Financial, Statistical), Data validation and cleaning, Creating Power Map visualization, Power BI: importing and transforming data, Designing a business intelligence dashboard.

Unit III: Data Manipulation and Statistical Analysis: Generating and customizing charts (bar, pie, line, scatter, area, etc.), Creating pivot tables and pivot charts, Using slicers and timelines for filtering, Performing what-if analysis (Goal Seek, Data Table), Applying statistical tools: histogram, t-test, regression, ANOVA.

Tableau for Data Visualization: Installing and navigating Tableau, Connecting datasets and preparing data, Creating basic views: bar, line, pie, map visualizations, Using filters, groups, and hierarchies, Designing interactive dashboards in Tableau.

Unit V: Strategic Business Insights through Analytics, Conducting competitor and category analysis using visual tools, Using trend lines and forecasting in Tableau and Excel, Building cohort analysis and customer segment charts, Visualizing market potential and budget planning, Integrating Google Analytics data into business dashboards (intro level).

Suggested Readings:
- Camm Cochran, Fry, Ohlmann, Anderson, Sweeney, Williams; Essentials of Business Analytics; Cengae Learning, 2015
- Tristan Guillevin, Getting Started with Tableau 2019.2: Effective data visualization and business intelligence, Packt Publishing,2019, 2nd Edition.
- Claus O. Wilke, Fundamentals of Data Visualization, O'Reilly Media, 2019.
- Cole Nussbaumer Knaflic, Storytelling with Data: A Data Visualization Guide for Business Professionals, Wiley, 2015, 1st Edition
- Stephanie D.H. Evergreen, Effective Data Visualization: The Right Chart for the Right Data, SAGE Publications, 2019.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – VI
25BBA607: PRE-SUBMISSION SEMINAR

SDG 4 (Quality Education)   **SDG 17** (Partnerships for the Goals)

The student shall select a topic from any of the management subjects for the project work and need to approach the supervisor/ mentor and get approved the topic by Head of the Department. The student needs to present in the pre-submission seminar the synopsis which includes: introduction, methodology, objectives, scope, sampling, data source, statistical tools and programming to be applied.
 The synopsis needs to be presented to DRC (Department Research Committee) consisting of Supervisor or mentor, senior Faculty member and Head of the department.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
BBA (DA) SEMESTER – VI
25BBA608: PROJECT WORK

SDG 4 (Quality Education)
SDG 9/11/12/13/16/17
The topic selected by the student after approval in the pre-submission by DRC, the student shall work with the supervisor or mentor.

Guidelines:
The report should consist of:
Chapter 1:   Introduction
Chapter 2:   Company profile and
Chapter3:   Review of literature
Chapter 4:   Methodology-Need, objectives, scope, sampling design, Statistical Tools and Data sources.
Chapter 5:   Data analysis and interpretation
Chapter 6:   Findings, Conclusions and Suggestions.
          Annexures
          Bibliography