

SCHEME OF EXAMINATION

&

SYLLABI

for

**Bachelor of Computer Applications Programmes of Studies
under the aegis of University School of Information and
Communication Technology offered at Affiliated Institutions of
the University**

**(3rd Semester Common Scheme and Syllabus)
(Applicable to the students of the batch 2025-29)**

Third Semester

Third Semester						
Group	Code	Paper	L	P	Credits	Mode
¹ SEC	BCA 201T	Python Programming [#]	3	-	3	Theory
¹ PC	BCA 203T	Software Engineering	3	-	3	Theory
¹ PC	BCA 205T	Operating System	3	-	3	Theory
¹ PC	BCA 207T	Introduction to Data Analytics	3	-	3	Theory
¹ PC	BCA 209	Computer Organization and Architecture	3	-	3	Theory
MDC		Choose any one Multidisciplinary Course (MDC)**				
	BCA 211	Principles of Management and Organizational Behaviour	3	-	3	Theory
	BCA 213	Open Elective offered by other Department/School/Programme**	3	-	3	Theory
¹ SEC	BCA 201P	Python Programming Lab [#]	-	2	1	Practical
¹ PC	BCA 203P	Software Engineering Lab	-	2	1	Practical
¹ PC	BCA 205P	Operating System Lab	-	2	1	Practical
¹ PC	BCA 207P	Introduction to Data Analytics Lab	-	2	1	Practical
Total			18	8	22	

¹ Mandatory paper to be passed for the award of the degree.

[#] Generic Elective (GE) for other undergraduate programmes (Refer Table for Generic Electives)

Generic (Open) Electives offered by BCA programmes for other undergraduate programmes

S.No.	Semester	Subject Code	Subject Name
1	I	BCA 107T BCA 107P	Web Technologies Web Technologies Lab
2	II	BCA 108T BCA 108P	Database Management System Database Management System Lab
3	III	BCA 201T BCA 201P	Python Programming Python Programming Lab

Paper Code: BCA 201T	Paper: Python Programming					L	P	C				
						3	-	3				
Marking Scheme:												
1.Teachers Continuous Evaluation: 40 marks												
2.Term end Theory Examinations: 60 marks												
Instruction for paper setter:												
1. There should be 9 questions in the term end examinations question paper.												
2. The first (1 st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 12 marks.												
3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 12.												
4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook.												
5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.												
Course Outcomes (CO):												
CO1	Demonstrate knowledge of basic programming constructs in python.											
CO2	Illustrates string handling methods and user-defined functions in python.											
CO3	Applying data structures primitives like List, Dictionary and tuples.											
CO4	Identify the commonly used operations involved in file handling.											
CO5	To understand how python can be used for application development											
Course Outcomes (CO to Programme Outcomes (PO)) Mapping (scale 1: low, 2: Medium, 3: High)												
CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	4	-	4	2	-	-	-	-	-	-	-	2
CO2	2	-	4	4	-	-	-	-	-	-	-	2
CO3	2	-	4	4	-	-	-	2	-	-	-	2
CO4	2	-	4	4	-	-	-	4	-	-	-	2
CO5	2	-	4	4	-	3	-	3	2	-	4	4

UNIT-I

Basic Introduction: Origin, Need of Python Programming, Features, program structure, identifiers, reserved words, escape sequences, IDLE-Python Interpreter

Python Programming Introduction: Variables and assignment statements, data types, **Operators:** Assignment, Unary, Binary, Arithmetic, Relational, Logical, Bitwise Operator and membership operator

Control Structures: if-conditional statements, if –else condition, if-elif-else condition, nested if-elif-else condition, Iteration (for Loop and while loop), Nested Loops, break and continue statement.

Strings: Slicing, Membership, Built in functions (count, find, capitalize, title, lower, upper and swap case, replace, join, isspace (), isdigit(), split(), startswith(), endswith()).

UNIT-II

Mutable and Immutable objects: List: creating, initializing, accessing, slicing, and traversing List. List operations: length, concatenation, repetition, in, not in, max, min, sum, all, any. List methods: append, extend, count, remove, index, pop, insert, sort, reverse.

Tuples: creating tuples, Tuple operations: length, concatenation, repetition, membership, maximum, minimum, tuple methods: count, index.

Dictionary: creating, accessing values, adding, modifying and deleting items in dictionary, Dictionary methods: len, str, clear, copy, get, update, copy. Difference between list and dictionary

UNIT-III

Concept of Functions: Functions: Defining, Calling and Types of Functions, Arguments and Return Values, Formal vs. Actual Arguments, Scope and Lifetime, Keyword Arguments, Default Arguments, Recursion.

Modules: importing Modules, Math and Random Module, creating your own modules, and concept of Packages

UNIT-IV

NumPy Library: introduction to NumPy, Creation of One-Dimensional Arrays, Re-shaping of an Array, Element-wise Operations, Aggregate Operations, Array indexing, Array Slicing, insert Row/Columns, Append Row/Columns, Array Manipulation Operations.

Introduction to matplotlib: Bar Graphs , pie charts

File handling: Types of Files (Text file, Binary Files, CSV file), Creation, writing, appending, Insertion, deletion, updating, modification of Data in into the files.

TEXTBOOKS:

TB1. Eric Matthes, Python Crash Course, 3rd Edition, No Starch Press, 2023..

TB2. Sheetal Taneja and Naveen Kumar, Python Programming: A Modular Approach, Pearson Education India, Latest Impression.

TB3. Wes McKinney, Python for Data Analysis: Data Wrangling with pandas, NumPy, and Jupyter, 3rd Edition, O'Reilly Media, 2022

REFERENCE BOOKS:

RB1. Yashavant Kanetkar, Let Us Python, 3rd Edition, BPB Publications, 2024.

RB2. Mark Lutz, Programming Python, 4th Edition, O'Reilly Media, 2010.

RB3. Martin C. Brown, Python: The Complete Reference, McGraw-Hill Education, 2018.

Paper Code: BCA 203T				Paper: Software Engineering				L	P	C		
								3	-	3		
Marking Scheme:												
1.Teachers Continuous Evaluation: 40 marks												
2.Term end Theory Examinations: 60 marks												
Instruction for paper setter:												
1. There should be 9 questions in the term end examinations question paper.												
2. The first (1 st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 12 marks.												
3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 12.												
4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook.												
5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.												
Course Outcomes (CO):												
CO1	To evaluate languages to code front end and back end of a software											
CO2	Instantiating into the process of designing, coding and testing a software module.											
CO3	Organizing a software product along with its complete documentation.											
CO4	Implementing Software Development Cycle to develop a software module.											
CO5	To analyze the use of techniques, skills and modern engineering tools necessary for software development.											
CO6	Organizing a complete software module											
Course Outcomes (CO to Programme Outcomes (PO)) Mapping (scale 1: low, 2: Medium, 3: High)												
CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	-	-	4	2	4	-	-	-	-	-	-	-
CO2	-	-	4	4	2	-	-	4	-	-	2	-
CO3	-	2	2	4	-	-	-	2	4	-	2	-
CO4	-	-	4	4	2	-	-	3	-	-	4	2
CO5	-	-	2	4	4	3	-	3	2	-	4	4
CO6	-	-	4	4	2	2	-	4	3	-	4	4

UNIT – I

Introduction of software engineering: Software Crisis, Software life cycle models, Waterfall, Prototype, Spiral Models, Agile model.

Software Requirements analysis & specifications: Requirement engineering, requirement elicitation techniques like FAST, QFD, Requirement analysis using (DFD use-case, sequence and class diagram (with case studies), ER Diagrams, Requirements documentation: SRS, Characteristics & organization of SRS

UNIT – II

Software Project Planning: Software Metrics-Definition and Need, Types of Metrics-Product, Process and Project Metrics, Size Estimation like lines of Code & Function Count, Halstead Software Science measure, Cost Estimation: Need, Models COCOMO: Basic model, Intermediate model

Risk Management: Software Risks, Types of risk, risk management activities: risk assessment, risk control.

UNIT – III

Software Design: Cohesion & Coupling, Classification of Cohesiveness & Coupling,

Quality management: Quality concept, software quality assurance, Total Quality Management (TQM), software review, software inspection

Software Implementation: Structured coding techniques, coding style, Standards and guidelines, documentation guidelines. Reverse Engineering, Software Re-engineering, Configuration Management.

UNIT – IV

Software Testing: Testing Process, Levels of Testing: Unit testing, Integration testing and system testing. Types of Testing: Manual testing, Automation Testing. Methods of Testing- , Black box, White box and Grey Box Testing. Validation, Verification, Alpha-Beta testing, Acceptance testing, Functional Testing and its types, Structural Testing Difference between: Testing and Debugging

Software Maintenance: Management of Maintenance, The Maintenance Process and Types of maintenance: Preventive, Perceptive, Adaptive and Corrective Maintenance. Maintenance tools and techniques.

TEXT BOOKS:

TB1. K. K. Aggarwal and Yogesh Singh, “Software Engineering”, 3rd Edition, New Age International Publishers, 2008.

TB2. Ian Sommerville, “Software Engineering”, 10th Edition, Pearson Education, 2015.

REFERENCE BOOKS:

RB1. Jibitesh Mishra and Ashok Mohanty, “Software Engineering”, Pearson Education, 2011

RB2. Roger S. Pressman and Bruce R. Maxim, “Software Engineering: A Practitioner’s Approach”, 9th Edition, McGraw-Hill Education, 2019.

RB3. James F. Peters and Witold Pedrycz, “Software Engineering: An Engineering Approach”, Wiley India / John Wiley & Sons, 2000.

Paper Code: BCA 205T	Paper: Operating System					L	P	C				
						3	-	3				
Marking Scheme:												
1.Teachers Continuous Evaluation: 40 marks												
2.Term end Theory Examinations: 60 marks												
Instruction for paper setter:												
1. There should be 9 questions in the term end examinations question paper.												
2. The first (1 st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 12 marks.												
3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 12.												
4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook.												
5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.												
Course Outcomes (CO):												
CO1	Understand the basic concept of Operating System with the help of Unix and Linux Architecture.											
CO2	Understand the concept of Processes, Process Scheduling, Process Synchronization and applying process commands in Linux environment											
CO3	Understand the concept of memory management and deadlock.											
CO4	Understand the concept of file Systems, Types and Access Methods by using Linux commands											
Course Outcomes (CO to Programme Outcomes (PO)) Mapping (scale 1: low, 2: Medium, 3: High)												
CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	4	-	4	2	-	-	-	-	-	-	-	-
CO2	3	-	4	4	-	-	-	2	-	-	-	-
CO3	4	-	4	4	-	-	-	2	-	-	-	2
CO4	2	-	4	4	-	-	4	4	2	-	3	4

UNIT-I

Introduction: What is an Operating System, Functions of Operating System, Simple Batch Systems; Multi programmed Batch systems, Time-Sharing Systems, Personal-computer systems, Parallel systems, Distributed Systems, Real-Time Systems.

Introduction to Linux: Architecture of Linux OS, Basic directory structure of Linux, Basic commands of Linux:- man, info, help, what is, apropos, basic directory navigation commands like cat, mkdir, rmdir, cd, mv, cp, rm, ,file, pwd, date, cal, echo, bc, ls, who, whoami, hostname, uname, tty, alias

Vi Editor: vi basics, Three modes of vi Editor, how to write, save, execute a shell script in vi editor

UNIT-II

Processes: Process Concept, Process Scheduling, Operation on Processes, Threads

CPU Scheduling: Basic Concepts, Scheduling Criteria and Scheduling Algorithms: FCFS, SJF, SRTF, Priority and Round Robin Scheduling algorithms.

Process Synchronization: Background, The Critical-Section Problem, Semaphores solution to critical section Problem, Classical Problem: Consumer Producer

Process related commands in Linux: ps, top, pstree, nice, renice and system calls

UNIT-III

Memory Management: Background, Logical versus Physical Address space, swapping, Contiguous allocation, Segmentation, Paging

Virtual Memory: Demand Paging, Performance of Demand Paging, Page Replacement, Page-replacement Algorithms, Allocation of Frames, Thrashing

Deadlocks: System Model, Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock

UNIT-IV

Information Management: Introduction, File Concept, Access methods, Directory and Disk structure, File Protection

Linux File Security: Permission types, examining permissions, changing permissions (symbolic method and numeric method)

TEXT BOOKS:

TB1. Abraham Silberschatz, Peter B. Galvin and Greg Gagne, “Operating System Concepts”, 10th Edition, John Wiley & Sons, 2018

TB2. Sumitabha Das, “Unix Concepts and Applications”, 4th Edition, Tata McGraw-Hill Education

REFERENCE BOOKS:

RB1. Madnick E. and Donovan J., “Operating Systems”, Tata McGraw Hill, 2011

RB2. Andrew S. Tanenbaum and Herbert Bos, “Modern Operating Systems”, 5th Edition, Pearson Education, 2024

RB3. Sivaselvan and Gopalan, “A Beginner’s Guide to UNIX”, PHI Learning

Paper Code: BCA 207T	Paper: Introduction to Data Analytics					L	P	C				
						3	-	3				
Marking Scheme:												
1.Teachers Continuous Evaluation: 40 marks												
2.Term end Theory Examinations: 60 marks												
Instruction for paper setter:												
1. There should be 9 questions in the term end examinations question paper.												
2. The first (1 st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 12 marks.												
3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 12.												
4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook.												
5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.												
Course Outcomes (CO):												
CO1	Explain the concepts, lifecycle, and applications of data analytics.											
CO2	Apply data collection, preprocessing, visualization, and exploratory data analysis techniques.											
CO3	Apply basic statistical methods and machine learning algorithms for predictive and descriptive analytics.											
CO4	Perform data analysis using Python libraries for real-world datasets											
CO5	Describe big data concepts, Hadoop ecosystem, and applications of data analytics in various domains.											
Course Outcomes (CO to Programme Outcomes (PO)) Mapping (scale 1: low, 2: Medium, 3: High)												
CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	2	4	-	-	-	4	-	-	-	-	-	2
CO2	-	2	-	4	-	4	-	2	-	-	-	2
CO3	-	2	2	4	-	4	-	2	-	-	-	2
CO4	-	-	4	4	2	4	-	2	-	-	-	3
CO5	-	4	-	2	-	4	-	-	-	-	2	4

UNIT – I

Introduction to Data Analytics: Data, Information and Knowledge, Types of Data, Data Analytics Process, Data Analytics Lifecycle, Applications of Data Analytics, Data Collection, Sampling Techniques, Data Cleaning, Data Preprocessing, Data Transformation.

UNIT-II

Statistical Foundations and Exploratory Data Analysis: Measures of Central Tendency, Measures of Dispersion, Correlation, Probability Basics, Exploratory Data Analysis (EDA), Data Visualization, Histograms, Box Plots, Scatter Plots, Introduction to Hypothesis Testing.

UNIT-III

Predictive and Descriptive Analytics: Supervised and Unsupervised Learning, Classification, Regression, Naïve Bayes, K-Nearest Neighbour (KNN), Linear Regression, Clustering, K-Means Algorithm, Hierarchical Clustering, Association Rule Mining, Apriori Algorithm.

UNIT-IV

Python for Data Analytics and Big Data: Introduction to NumPy, Pandas, Matplotlib and Seaborn, Data Import and Export, Data Manipulation, Data Visualization, Big Data Fundamentals, Hadoop Ecosystem, MapReduce, Applications of Data Analytics.

TEXT BOOKS:

TB1. Foster Provost and Tom Fawcett, "Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking", 2nd Edition, O'Reilly Media, 2023.

TB2. Wes McKinney, "Python for Data Analysis: Data Wrangling with pandas, NumPy, and Jupyter", 3rd Edition, O'Reilly Media, 2022.

TB3. Jiawei Han, Micheline Kamber and Jian Pei, "Data Mining: Concepts and Techniques", 4th Edition, Morgan Kaufmann (Elsevier), 2023.

REFERENCE BOOKS:

RB1. Joel Grus, "Data Science from Scratch: First Principles with Python", 2nd Edition, O'Reilly Media, 2019.

RB2. Bart Baesens, "Analytics in a Big Data World: The Essential Guide to Data Science and its Applications", Wiley, 1st Edition, 2014.

RB3. Jake VanderPlas, "Python Data Science Handbook: Essential Tools for Working with Data", 1st Edition, O'Reilly Media, 2016.

RB4. Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani and Jonathan Taylor, "An Introduction to Statistical Learning with Applications in Python", 2nd Edition, Springer, 2023

Paper Code: BCA 209	Paper: Computer Organization and Architecture					L	P	C				
						3	-	3				
Marking Scheme:												
1.Teachers Continuous Evaluation: 40 marks												
2.Term end Theory Examinations: 60 marks												
Instruction for paper setter:												
1. There should be 9 questions in the term end examinations question paper.												
2. The first (1 st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 12 marks.												
3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 12.												
4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook.												
5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.												
Course Outcomes (CO):												
CO1	Able to understand the fundamentals of digital principles and able to design digital circuits by simplifying the Boolean functions											
CO2	Implement the combinational and sequential circuits for the given specifications											
CO3	Able to trace the execution sequence of an instruction through the processor											
CO4	Demonstrate computer architecture concepts related to design of modern processors, memories and I/Os											
CO5	Demonstrate the ability to classify the addressing modes, instructions set											
Course Outcomes (CO to Programme Outcomes (PO)) Mapping (scale 1: low, 2: Medium, 3: High)												
CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	4	-	2	4	-	-	-	-	-	-	-	2
CO2	4	-	4	4	-	-	-	2	-	-	-	2
CO3	4	-	4	2	-	-	-	-	-	-	-	2
CO4	4	-	2	4	-	-	-	-	-	-	-	2
CO5	4	-	4	4	-	-	-	-	-	-	-	2

UNIT – I

Boolean Algebra and Logic: Basics Laws of Boolean Algebra, Logic Gates, Simplifications of Boolean equations using K-maps SOP and POS, Don't Care condition.

Arithmetic Circuits: Adder, Subtractor, Parallel binary adder/Subtractor.

UNIT – II

Combinational Circuits: Multiplexers, De-Multiplexers, Decoders, Encoders.

Flip-flops: S-R, D, J-K, T, Clocked Flip-flop, Race around condition, Master slave Flip-Flop, Realisation of one flip-flop using other flip-flop, Applications of flip flop: Latch, Registers, Counters (elementary treatment to be given).

UNIT – III

Data Transfer Operations: Register Transfer, Bus and Memory Transfer, Registers and micro-operations.

Basic Computer Organizations and Design: Instruction Codes, Computer Registers, Instruction Cycle, General Register Organization, Stack Organization, Instruction Formats, Addressing Modes,

UNIT – IV

Input-Output Organization: Peripheral Devices, Input-Output Interfaces, Asynchronous Data Transfer, Modes of Transfer, Priority Interrupt, Direct Memory Access (DMA)

Memory Organization: Main Memory, Auxiliary Memory, Associative Memory, Cache Memory, Virtual Memory.

TEXT BOOKS:

TB1. Morris Mano, Computer System Architecture, 3rd Edition, Prentice-Hall of India Private Limited, 1999.

TB2. Moris Mano, “Digital Logic and Computer Design”, PHI Publications, 2002

REFERENCES:

RB1. R. P. Jain, “Modern Digital Electronics”, TMH, 3rd Edition, 2003.

RB2. William Stallings, Computer Organization and Architecture, 4th Edition, Prentice Hall of India Private Limited, 2001

RB3. Subrata Ghosal,” Computer Architecture and Organization”, Pearson 2011

RB4. Malvino, “Digital Computer Electronics: An Introduction to Microcomputers”, McGraw Hill

Paper Code: BCA 211				Paper: Principle of Management and Organizational Behavior				L	P	C		
								3	-	3		
Marking Scheme: 1.Teachers Continuous Evaluation: 40 marks 2.Term end Theory Examinations: 60 marks												
Instruction for paper setter: 1. There should be 9 questions in the term end examinations question paper. 2. The first (1 st) question should be compulsory and cover the entire syllabus. This question should be objective, single line answers or short answer type question of total 12 marks. 3. Apart from question 1 which is compulsory, rest of the paper shall consist of 4 units as per the syllabus. Every unit shall have two questions covering the corresponding unit of the syllabus. However, the student shall be asked to attempt only one of the two questions in the unit. Individual questions may contain upto 5 sub-parts / sub-questions. Each Unit shall have a marks weightage of 12. 4. The questions are to be framed keeping in view the learning outcomes of the course / paper. The standard / level of the questions to be asked should be at the level of the prescribed textbook. 5. The requirement of (scientific) calculators / log-tables / data – tables may be specified if required.												
Course Outcomes (CO):												
CO1	Explain the concepts, principles, functions, and evolution of management.											
CO2	Apply planning, organizing, staffing, and controlling techniques for effective management.											
CO3	Analyse individual and group behaviour, motivation, communication, and leadership in organizations.											
CO4	Evaluate organizational culture, conflict, power, organizational change, and decision-making processes.											
CO5	Apply management and organizational behaviour concepts to solve real-world organizational problems.											
Course Outcomes (CO to Programme Outcomes (PO)) Mapping (scale 1: low, 2: Medium, 3: High)												
CO/PO	PO01	PO02	PO03	PO04	PO05	PO06	PO07	PO08	PO09	PO10	PO11	PO12
CO1	-	4	-	-	-	-	-	-	3	-	2	-
CO2	-	4	-	2	-	-	-	-	4	-	4	-
CO3	-	4	-	-	-	-	-	-	4	4	4	2
CO4	-	4	-	2	-	-	-	-	4	4	4	2
CO5	-	4	-	4	-	-	-	-	4	4	4	4

UNIT – I

Introduction to Management: Nature, Scope and Functions of Management, Managerial Roles and Skills, Evolution of Management Thought, Classical, Neo-Classical and Modern Management Theories, Principles of Management.

UNIT-II

Planning and Organizing: Planning Process, Types and Levels of Planning, Management by Objectives (MBO), Strategic Management, Forecasting, Decision Making Process, Organizational Structure, Organizational Design, Delegation, Authority and Responsibility, Centralization and Decentralization, Coordination, Staffing, Human Resource Management, Selection Process.

UNIT-III

Organizational Behaviour: Foundations of Organizational Behaviour, Individual Behaviour, Personality, Learning, Values, Attitudes, Emotional Intelligence, Perception, Attribution Theory, Motivation Theories (Maslow, Herzberg, McGregor, McClelland, Alderfer, Vroom, Adams, Goal Setting Theory), Group Behaviour, Team Building, Communication and Barriers.

UNIT-IV

Leadership and Organizational Development: Leadership Theories, Conflict Management, Power and Politics, Organizational Culture, Organizational Change, Resistance to Change, Change Management Process, Controlling, Types of Control, Control Techniques, Contemporary Management Practices and Case Studies.

TEXT BOOKS

TB1. Stephen P. Robbins, Mary Coulter and Lori Long, Management, 16th Edition, Pearson, 2025.

TB2. Stephen P. Robbins and Timothy A. Judge, Organizational Behaviour, 19th Edition, Pearson, 2024.

TB3. Harold Koontz, Heinz Weihrich and Mark V. Cannice, Essentials of Management: An International, Innovation and Leadership Perspective, 11th Edition, McGraw-Hill, 2023.

REFERENCE BOOKS

RB1. Richard L. Daft, Management, 15th Edition, Cengage Learning, 2024.

RB2. Fred Luthans, Organizational Behavior: An Evidence-Based Approach, 14th Edition, Information Age Publishing, 2022.

RB3. Ricky W. Griffin, Management, 14th Edition, Cengage Learning, 2021.

RB4. John R. Schermerhorn Jr., Introduction to Management, 15th Edition, Wiley, 2023.

RB5. Peter G. Northouse, Leadership: Theory and Practice, 9th Edition, Sage Publications, 2021

Course Code: BCA 201P

L P C

Course Name: Python Programming Lab

- 2 1

INSTRUCTIONS

- 1.The course objectives and course outcomes are identical to that of BCA 201T as this is the practical component of the corresponding theory paper.
- 2.The practical list shall be notified by the teacher in the first week of the class commencement

Course Code: BCA 203P

L P C

Course Name: Software Engineering Lab

- 2 1

INSTRUCTIONS

- 1.The course objectives and course outcomes are identical to that of BCA 203T as this is the practical component of the corresponding theory paper.
- 2.The practical list shall be notified by the teacher in the first week of the class commencement

Course Code: BCA 205P

L P C

Course Name: Operating System Lab

- 2 1

INSTRUCTIONS

- 1.The course objectives and course outcomes are identical to that of BCA 205T as this is the practical component of the corresponding theory paper.
- 2.The practical list shall be notified by the teacher in the first week of the class commencement

Course Code: BCA 207P

L P C

Course Name: Introduction to Data Analytics Lab

- 2 1

INSTRUCTIONS

- 1.The course objectives and course outcomes are identical to that of BCA 207T as this is the practical component of the corresponding theory paper.
- 2.The practical list shall be notified by the teacher in the first week of the class commencement