Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Odd Semester)
Session – (2025-26)

Name of the Teacher/s Dr. Mandeep K. Chawla, Ms. Komal Rathi
Department: Department of Computer Science & Applications
Class: BCA-II (3rd Semester) **Section(s): A & B**
Subject: Computer Architecture (BCA-DSC-3(Maj)-301)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	14.7.25	31.7.25	Definition of computer organization, design and computer architecture ; Digital Systems : basic block diagram of computer ; ALU design : Register Transfer Language, bus and memory transfer; Microoperations and their hardware implementation: Arithmetic microoperations - binary adder subtractor, binary incrementer, arithmetic circuit; Logic microoperations – logic circuit; Shift microoperations – 4 bit combinational shifter; Arithmetic Logic Shift Unit.	PPT, Assignments, discussions, written practice of technical diagrams
2	1.8.25	31.8.25	Basic Computer Organization : stored program organization, Von Neumann architecture ; microoperations and macrooperations ; instruction code format, direct and indirect addressing ; basic computer registers ; Types of instructions - memory reference, register reference , input output instructions ; Common bus system; instruction cycle ; interrupt cycle ; types of interrupts ; Introduction to assembly language , assembly language vs machine language.	PPT, Assignments, Discussions
3	1.9.25	30.9.25	Memory organization : memory hierarchy ; RAM and ROM chips, memory connection of four 128x8 RAM and one 512x8 ROM chip to CPU ; Associative memory; Cache memory -associative, set associative and direct mapping; Virtual memory - paging and segmentation; Microprocessor architecture: 8086/8088 - features, block diagram, memory and register organization, flag register, addressing modes.	PPT, Assignments, Discussions, Brain Storming, Discussions, class test, written practice of technical diagrams
4	1.10.25	31.10.25	Input Output organization : input output interface ; IOP design, isolated I/O , memory mapped I/O ; Asynchronous data transfer: source initiated - destination initiated strobe control and handshaking modes of transfer ;	PPT, Peer Learning, written practice of technical diagrams, class test
5	1.11.25	13.11.25	programmed I/O data transfer, interrupt initiated data transfer ; Direct Memory Access : DMA controller, cycle stealing and burst mode DMA transfer.	Peer Learning,Revision

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (BCA III: Odd Semester)
(2025-26)

Name of the Teacher/s: Dr. Deepti Sharda/Ms Punam
Department: Computer Science & Applications **Class: BCA-III Sem**
Subject: Data Structures (BCA-DSC-3(Min)-302) **Section (s):A& B**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	14.7.25	31.7.25	**Basic Concepts:** Introduction to Complexity, Data Structure and Data Structure operations. Applications of Data Structure, Basic data Structures.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
2	1.8.25	31.8.25	**Arrays:** Introduction, Types of Arrays, Memory representation, Applications and operations. **Stacks:** Introduction, memory representation, Applications and operations, Recursion. **Linked List:** Definition, Types of Linked List: Singly, Doubly, Header, Circular linked List	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
3	1.9.25	30.9.25	**Operations -**traversing, searching, inserting, deleting, operations on singly linked list and doubly linked list, memory representation, Applications, polynomial manipulation.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Class Test, Assignment Submission
4	1.10.25	31.10.25	**Queue:** Introduction, Types, Memory Representation and Applications. **Trees** – Definition and Basic concepts, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees, Binary Search tree.	Lecture Method, Online Resources Reading & Discussion, Programs Discussion, Presentation, Assignment submission
5	1.11.25	13.11.25	**Graphs**: Introduction, Memory Representation, Graph Traversal (DFS and BFS) **Searching:** Binary and Linear Search**;** **Sorting:** Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort. Comparison of various Searching and Sorting algorithms.	Lecture Method, Presentation, Programs Discussion, Referring online resources Sample Questions Discussion

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (BCA III: Odd Semester)
(2025-26)

Name of the Teacher/s: Dr. Deeksha Gupta
Department: Computer Science & Applications **Class: BCA-III Sem**
Subject: Computer Oriented Numerical Methods (BCA-DSC-3(Min)-303) **Section (s):A& B**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	14.7.25	31.7.25	**Numerical and Error Analysis :** Introduction, need of numerical methods, numerical analysis vs numerical methods ; Concept of exact and approximate numbers, accuracy and precision, significant digits ; Measures of Error: absolute error, relative error and percentage error;	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
2	1.8.25	31.8.25	Types of error; Error Propagation; Arithmetic of normalized floating point numbers and its error consequences. Types of Equations, Non-Linear Equations: Methods to find solution of a non-linear equation : direct vs indirect method,bracketing vs open end iterative method ; Choosing initial approximation: largest possible root, search bracket, search interval; Termination criteria; Intermediate value theorem; Algorithm and methods to find roots of a non-linear equation : Bisection Method, False position method, Newton Raphson Method, BirgeVieta Method.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
3	1.9.25	30.9.25	**Simultaneous Linear Equations:**Algorithm and methods to find solution of simultaneous linear equations :Direct Methods – Gauss Elimination Method, Concept of Pivoting , Gauss-Jordan Method ; Iterative Method – Gauss Seidal Method. **Interpolation:** Need of interpolation, interpolation vs extrapolation ; Finite Differences – forward, backward, divided difference tables ;	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Class Test, Assignment Submission
4	1.10.25	31.10.25	Methods to interpolate for given value using Newton's Forward Difference Method, Newton's Backward Difference Method, Newton's Divided Difference Method andLagrange'sMethod. Concept of Inverse Interpolation. **Numerical Integration:**Methods and algorithm ofNewton-Cotes Integration Formulae: Trapezoidal Rule, Simpson's 1/3rd Rule, Simpson's 3/8th Rule.	Lecture Method, Online Resources Reading & Discussion, Programs Discussion, Presentation, Assignment submission
5	1.11.25	13.11.25	**Ordinary Differential Equations:** Methods and algorithm to find solution of ODEs using Euler's Method, Runge–Kutta Methods - 2nd order & 4th order, Predictor Corrector Method - Modified Euler's Method.	Lecture Method, Presentation, Programs Discussion, Referring online resources Sample Questions Discussion

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (BCA III: Odd Semester)
(2025-26)

Name of the Teacher/s: Dr. Deeksha Gupta, Ms. Ashita Jain
Department: Computer Science & Applications **Class: BCA-III Sem**
Subject: Introduction to Machine Learning (BCA-DSC-3(Maj)-304) **Section (s):A& B**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	14.7.25	31.7.25	**Introduction:** Concept of Machine Learning, Supervised and Unsupervised learning	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
2	1.8.25	31.8.25	Training vs Test Data, Reinforcement learning, Designing a Learning System, Issues in Machine Learning, Applications of Machine Learning.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
3	1.9.25	30.9.25	**Data Preprocessing**: Understanding of data and its preprocessing, normalizing data, feature scaling and feature selection techniques, Overfitting, Data reduction using Principal Component Analysis.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Class Test, Assignment Submission
4	1.10.25	31.10.25	**Supervised Learning:** Concept of Classification, Decision tree, k-nearest neighbor, Naïve Bayes Classifier, Support Vector Machine, Neural Networks and backpropagation algorithm, Classification evaluation metrics.	Lecture Method, Online Resources Reading & Discussion, Programs Discussion, Presentation, Assignment submission
5	1.11.25	13.11.25	**Unsupervised Learning and Deep Learning:** K-means Clustering, Limits of K-Means, DBSCAN, Concept of Deep Learning, Architecture of Convolutional Neural Networks and Recurrent Neural Networks. e.	Lecture Method, Presentation, Programs Discussion, Referring online resources Sample Questions Discussion

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (BCA III: Odd Semester)
(2025-26)

Name of the Teacher/s: Dr. Mandeep K. Chawla/ Dr. Navdeep Kaur
Department: Computer Science & Applications **Class: BCA-III Sem**
Subject: Backend Web Development (CSA-SEC-103/203/303) **Section (s):A& B**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	14.7.25	31.7.25	**Introduction to Internet Technologies:** Internet, Internet protocols: TCP/IP, HTTP, DNS, SMTP., IP addressing, Domain Name System (DNS), Hypertext Markup Language (HTML). Web Programming: JavaScript programming fundamentals, Front-end scripting vs server-side scripting.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
2	1.8.25	31.8.25	**Introduction to PHP:** Basic Syntax, defining variables and constants, data types, operators and expressions, decision making statements, looping constructs, mixing decisions and looping with HTML String Handling: Creating a string and accessing its content, searching and replacing the content of a string, formatting a string, and string built-in functions.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
3	1.9.25	30.9.25	**Handling HTML Form with PHP:** Creating a form, submitting data to the server at the backend using GET and POST methods, GET vs POST methods, create a student registration form and login form using server-side validation.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Class Test, Assignment Submission
4	1.10.25	31.10.25	**Database Connectivity with MySQL:** Connectivity with database, database creation, creating tables, insertion and retrieval of the data from the database, and data manipulation.	Lecture Method, Online Resources Reading & Discussion, Programs Discussion, Presentation, Assignment submission
5	1.11.25	13.11.25	Implementation of Database based sample application	Lecture Method, Presentation, Programs Discussion, Referring online resources Sample Questions Discussion

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (BCA III: Odd Semester)
(2025-26)

Name of the Teacher/s: Ms. Komal Rathi/ Ms. Ritu Param
Department: Computer Science & Applications **Class: BCA-III Sem**
Subject: Computer Programming and Problem Solving (CSA-MDC-105/205/305) **Section (s):A& B**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	14.7.25	31.7.25	**Introduction to problem solving using computers.** Problem solving steps, What are programs, Computing based applications of programming, Steps followed in Program Development, Good Programs and Bad Programs, Programming Languages as tools, types of languages , programming paradigms	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
2	1.8.25	31.8.25	**Introduction to Basic Computing Tools:** Algorithms; Flowcharts; Pseudo codes; Decision Tables; comparison between algorithms, flowchart and pseudo codes.	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Online Resources
3	1.9.25	30.9.25	**Converting pseudo-code to programs:** Compilation process, linking and loading, syntax and semantic errors, testing a program, Good Programming Practices, Difference between algorithms and programs **Basic Elements of a Program:** Identifiers, keywords, notion of data types, variables and constants, statements, operators, syntax, program execution environment: Compilation/interpretation, debugging and testing, types of errors, source program, object program	Lecture Method, Reading & Discussion, Presentation, Programs Discussion, Class Test, Assignment Submission
4	1.10.25	31.10.25	**Sequential and Branching statements:** Sequential statements, Branching: conditional (if, if..else, if..else ladder, nested if), unconditional (goto) **Iterative statements:** what is iteration, iteration body, initialization, termination condition, iteration step, Loop controls: while do, do..while, for.	Lecture Method, Online Resources Reading & Discussion, Programs Discussion, Presentation, Assignment submission
5	1.11.25	13.11.25	**Aspects of loop design:** Avoiding infinite loops, comparison between while do, do while and for loops, Loop control flow statements: break and continue **Functions:** introduction, advantages, defining, declaring and calling a function	Lecture Method, Presentation, Programs Discussion, Referring online resources Sample Questions Discussion

***Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.
Other Methods adopted by the teacher – Please write the specific teaching method

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Even Semester)
Session – (2025-26)

Name of the Teacher/s Dr. Deeksha Gupta
Department Computer Science and Applications
Class: BCA-II (4th Semester)
Subject: Operating System Concepts (BCA-DSC-4 (Maj)-401) Section (s) A & B

S.No	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	10.1.26	31.01.26	● **Operating Systems (OS):** Introduction, its needs and services, Types of OS ● **Process Management:** Introduction to Process, PCB, Process States ● **CPU Scheduling:** Scheduling Criteria, Algorithms	Lecture method Periodic Test Assignments PPT, Quiz, Question Bank, Online Sources and Content
2	1.2.26	28.2.26	● **Introduction to Linux**: Linux's shell, Kernel, Features, History, Minimum system requirements, Boot and Root disks, General Purpose commands, Terminal Handling commands, wildcards, ● **Deadlocks**	Lecture method Periodic Test Assignments, PPT, Quiz, Question Bank Online Content
3	1.3.26	31.3.26	● **Memory Management** ● **File system:**Introduction File and Directory handling commands: (cat, mkdir, cd, ls, pwd, mv, cp, rm, rmdir, wc, cmp, comm, diff), moving directories, using wildcards with files and directories. File and directory permissions, change/set file permissions using relative and absolute methods, Changing group ownership, umask settings, Understanding wildcards, Environment variables. Understanding I/O Redirection and Piping, tee; Simple filters: pr, head, tail, cut, paste, sort, uniq; Introduction to Regular Expressions and grep.	Lecture method Periodic Test Assignments, PPT, Online Source and Content, Quiz Question Bank
4	1.4.26	Till the end of semester	● **Process Management:** Types of processes, ps, bg, fg, nice, kill. ● **vi editor:** starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text. ● **Basic Shell Programming:** Shell script, read, if statement, numeric and string comparison, case statement, expr command, loops (while and for). ● **System Administration activities:** Superuser (su) command, Taking backups using tar, Managing	Lecture method Periodic Test Assignments PPT, Seminar Online Source and Content, Quiz Question Bank

			disk space, Mounting and Un-mounting file system, Managing users, Managing printers with lpd, mknod, lpc, lpq, lprm.	

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Even Semester)
Session – (2025-26)

Name of the Teacher- Dr. Deepti Sharda & Ms Punam

Department Computer Science & Applications

Class BCA-II (4th Semester)
Subject: Database Management System (BCA-DSC-4(Maj)-402) Section (s): A & B

S.No	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	10.1.26	31.01.26	Basic Concepts: A Historical perspective, File Systems vs. DBMS, Characteristics of theData Base Approach, Abstraction and Data Integration, Database users, Advantages and Disadvantages of DBMS	Lecture method Periodic Test Assignments PPT, Quiz, Question Bank, Online Sources and Content
2	1.2.26	28.2.26	Implication of Database approach. Data Base Systems Concepts and Architecture: Data Models, Schemas and Instances, DBMS architecture and Data Independence, Data base languages & Interfaces, DBMS functions and component modules. Relational Data Model : Relational model concepts, Integrity constraints over Relations, Relational Algebra - Basic Operations. Conventional Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, ordering the result of a query, **Understanding SQL-II:** Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries	Lecture method Periodic Test Assignments, PPT, Quiz, Question Bank Online Content
3	1.3.26	31.3.26	Data Models : An overview of Network and Hierarchical Data Models. **RDBMS:** Terminology, The 12 Rules (Codd's Rule) for an RDBMS. Aggregate Functions, Grouping the Result of a Query, creation and deletion of Views,Managing privileges with Grant and Revoke Command, COMMIT and ROLLBACK, Functions: Character Functions, Date Functions, Group Functions Relational Data Base Design : Functional Dependencies, Decomposition, Desirable properties of decomposition, Normal forms based on primary keys **PL/SQL:** Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Conditional and Iterative Control	Lecture method Periodic Test Assignments, PPT, Online Source and Content, Quiz Question Bank

4	1.4.26	Till the end of sem	Cursor Management in PL/SQL, Implicit/explicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions, Database Trigger, types of triggers, dropping triggers, storage for triggers. Entity Relationship Model: Entity Types, Entity Sets, Attributes & Keys, Relationships, Relationship Types, Roles and Structural Constraints, Design issues, weak entity types, ER Diagrams. Design of an E-R Database Schema, Reduction of an E-R Schema to Tables.	Lecture method Periodic Test Assignments PPT, Seminar Online Source and Content, Quiz Question Bank

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans (Even Semester)

Session – (2025-26)

Name of the Teacher- Dr. Mandeep K Chawla

Department Computer Science & Applications

Class BCA-II (4th Semester)

Subject: Information System Design and Implementation (BCA-DSC-4(Maj)-403) Section (s): A & B

S.No	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	10.1.26	31.01.26	Systems Concepts and Information Systems Environment: Definition and characteristics of a system. Elements of a system Environment: Boundaries and interface. Types of systems: Physical or Abstract Systems, Open and Closed System, Man - made information systems. Types of System Models. System Development Life Cycle: Introduction to various phases-Recognition of Need, Feasibility Study, Analysis, Design, Implementation, Post– Implementation and Maintenance. The Role of System Analyst: Skills of a System Analyst, Duties of the System Analyst.	Lecture method Periodic Test Assignments PPT, Quiz
2	1.2.26	28.2.26	System Planning and the Initial Investigation: Bases for planning in system analysis, Initial investigation, determining the user's information requirements, Problem definition and Project Initiation, Background Analysis, Fact Finding, Fact Analysis, Determination of Feasibility. Information Gathering: Introduction, Information Gathering tools: Review of Literature, Procedures and forms. On -site observation. Interviews and questionnaires. Tools of Structured Analysis: SRS features and structure, Various tools of structured analysis: Data flow diagram (DFD), Data Dictionary, Decision tree and structured English, Decision table, Pros and cons of each tools, ER-Diagrams	Lecture method Periodic Test Assignments, PPT, Quiz, Question Bank
3	1.3.26	31.3.26	Feasibility Study: System Performance-statement of Constraints, Identification of Specific System Objectives, description of Outputs. Feasibility Study – Feasibility considerations, Steps in feasibility analysis. Feasibility Report. System Design: The Process of Design-Logical and Physical Design, Design methodologies: Structured design, Functional Decomposition System Testing: Testing, System testing, test phases, types of System Testing, WBT and BBT techniques, OO testing. Quality Assurance: Quality assurance and its goals in its system life cycle, Levels of quality assurance, Trends in testing.	Lecture method Periodic Test Assignments, PPT, Online Source and Content, Quiz
4	1.4.26	Till the end of semester	Implementation and Software Maintenance: Introduction, Conversion- Activity network for Conversion, File Conversion, User Training: Elements of user Training Post implementation Review. Software Maintenance - Primary activities of a Maintenance Procedure, Reducing Maintenance Costs. Types of Software Maintenance. Hardware and Software Selection: Types of Software, Procedure for Hardware/Software selection: Major phases in selection, Evaluation and Validation, Vendor Selection, Post – Installation Review. Software selection- Criteria for Software Selection, the evaluation process.	Lecture method PPT, Revision

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans (Even Semester)

Session – (2025-26)

Name of the Teacher- Dr. Deeksha Gupta

Department Computer Science & Applications

Class BCA-II (4th Semester)

Subject: Cyber Security (BCA-DSC-4(Maj)-404) **Section (s): A & B**

S.No	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	10.1.26	31.01.26	Introduction to Cyber security: Defining Cyberspace and Overview of Computer and Web-technology, Architecture of cyberspace, Communication and web technology, Internet, World wide web, Advent of internet, Internet infrastructure for data transfer and governance, Internet society, Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security. Defining Cyber Security, Cyber security terminologies- Cyberspace, attack, attack vector, attack surface, threat, risk, vulnerability, exploit, exploitation, hacker, Controls, Authentication, Access Control and Cryptography.	Lecture method Periodic Test Assignments PPT, Quiz, Question Bank, Online Sources and Content
2	1.2.26	28.2.26	Web attack: Browser Attacks, Web Attacks Targeting Users, Obtaining User or Website Data, Email Attacks. Network Vulnerabilities: Overview of vulnerability scanning, Open, Port / Service Identification, Banner /Version Check, Traffic Probe, Vulnerability Probe, Vulnerability Examples, Open VAS, Meta sploit. Networks Vulnerability Scanning (Netcat, Socat), Network Sniffers and Injection tools.	Lecture method Periodic Test Assignments, PPT, Quiz, Question Bank Online Content
3	1.3.26	31.3.26	Cyber-crime and Cyber law: Classification of cyber-crimes, Common cyber-crimes- cybercrime targeting computers and mobiles, cyber-crime against women and children, financial frauds, social engineering attacks, malware and ransom-ware attacks, zero day and zero click attacks, Cybercriminals modus-operandi, Reporting of cybercrimes, Remedial and mitigation measures, Legal perspective of cybercrime, IT Act 2000 and its amendments, Cybercrime and offences, Organizations dealing with Cybercrime and Cyber security in India.	Lecture method Periodic Test Assignments, PPT, Online Source and Content, Quiz Question Bank
4	1.4.26	Till the end of semester	Data Privacy and Data Security: Defining data, meta-data, big data, non-personal data. Data protection, Data privacy and data security, Personal Data Protection Bill and its compliance, Data protection principles, Big data security issues and challenges, Data protection regulations of other countries- General Data Protection Regulations (GDPR), 2016 Personal Information Protection and Electronic Documents Act (PIPEDA), Social media- data privacy and security Issues. Firewalls and Packet Filters, password Cracking, Key loggers and Spyware, Virus and Warms, Trojan and backdoors, Steganography, DOS and DDOS attack, SQL injection, Buffer Overflow, Attack on wireless Networks.	Lecture method Periodic Test Assignments PPT, Seminar Online Source and Content, Quiz Question Bank

Mehr Chand Mahajan DAV College for Women, Sector – 36A, Chandigarh

Monthly Teaching Plans (Even Semester)

Session – (2025-26)

Name of the Teacher- Dr.Mandeep K Chawla

Department Computer Science & Applications

Class BCA-II (4th Semester)

Subject: Python Programming (BCA-DSC-4 (Min)-405) **Section (s): A & B**

S.No	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	10.1.26	31.01.26	Introduction to Python Programming, Data Types, Operators, Expressions, Variables, Scope of a variable, Type Conversion in Python, if statement: simple if, if-else, if-elif-else chain, if statement with lists; Loops: Selection, Indentation, Repetition, Break and Continue statement, Nested Loops, while loop with lists and dictionaries, Strings: Introduction to String, String Operations, Transversal of string, Methods and Inbuilt Functions.	Lecture method Assignments PPT, demonstrations
2	1.2.26	28.2.26	Lists: Definition, Operations, Traversal, Methods and Inbuilt Functions, Nested Lists, Copying Lists, List as an argument, Mutable and Immutable Data types. Tuples: Introduction, Operations, Traversal, Methods and Inbuilt Functions, Nested Tuples Dictionaries: Introduction, Traversal, Methods and Inbuilt Functions, Manipulating Dictionary.	Lecture method, practical assignments, PPT, demonstrations
3	1.3.26	31.3.26	Function: definition, advantages, User defined functions: defining a function, passing arguments, return values, passing a list, Python standard Libraries. Classes: creating and using a class, working with classes and instances, importing classes, Python standard library.	Lecture method, practical assignments, PPT, demonstrations, revision
4	1.4.26	Till the end of semester	Exception Handling: exceptions and errors, try-except block, the else block, handling the ZeroDivisionError and FileNot FoundError exception.File Handling: Introduction, Types of Files, Opening and Closing File, Writing to a file, Reading from a file, Setting offset in a file, Creating and Traversing a file.	Lecture method, practical assignments, PPT, demonstrations, revision