Lesson Plan

Class - BCA5thSem
Faculty – Ms. Suman
Subject –BCA – 303 (Data Communication and Networking)
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	Introduction to Computer Communications and Networking Technologies; Uses of Computer Networks; Network Devices, Nodes, and Hosts;
Week 2	Types of Computer Networks and their Topologies; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services;
Week 3	Network Applications and Application Protocols; Computer Communications and Networking Models: Decentralized and Centralized Systems, Distributed Systems,
Week 4	Client/Server Model, Peer-to-Peer Model, Web Based Model, Network Architecture and the OSI Reference Model, TCP/IP reference model,
Week 5	Example Networks: The Internet, X.25, Frame Relay, ATM, Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate , maximum data-rate of channel,
Week 6	Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Asynchrous and synchrous transmission, data encoding techniques, Modulation techniques,
Week 7	Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Dialup Networking;
Week 8	Analog Modem Concepts; DSL Service, Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction; Sliding Window Protocols;
Week 9	Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring; Introduction to LAN technologies: Ethernet, switched Ethernet,
Week 10	VLAN, fast Ethernet, gigabit Ethernet, token ring, FDDI, Wireless LANs; Bluetooth; Network Hardware Components: Connectors, Transceivers,
Week 11	Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways
Week 12	**Diwali Break**
Week 13	Network Layer and Routing Concepts: Virtual Circuits and Datagrams; Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing;

Week 14	Link State Routing, Hierarchical Routing; Congestion Control Algorithms; Internetworking; Network Security Issues: Security threats;
Week 15	Encryption Methods; Authentication; Symmetric Key Algorithms; Public-Key Algorithms.
Week 16	**Revision**

Lesson Plan

Class - BCOM 3rd Sem
Faculty – Ms Suman
Subject – 25CSC403MI01(MINOR) Object-Oriented Programming using C++
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	Basic concept of OOP, Comparison of Procedural programming and OOP, Application of object-oriented programming.
4 Aug – 09 Aug	Characteristic of OOP: Objects, classes, Encapsulation, Data Abstraction, Inheritance, Polymorphism, Dynamic Binding, Message Passing.
11 Aug – 16 Aug	**Structure of C++ programming language:** Basic syntax and structure of C++ programs, Data types, variables, and constants in C++,
18 Aug –23 Aug	Control structures: decision making and looping constructs. Functions and parameter passing in C++, Arrays and strings in C++,
25 Aug – 30 Aug	Pointers.
1 Sep – 6 Sep	**Object Oriented Concepts:** Class, Object, Memory allocation for objects, Member functions and data members
8 Sep – 13 Sep	**Access Specifiers**: public, private, protected, Encapsulation and data hiding, Constructors and destructors. Accessor and mutator functions, Friend functions.
15 Sep –20 Sep	**Memory Management:** Dynamic Memory allocation: new and delete, Static class members, Constructors, parameter Constructors and copy Constructors, Destructors.
22 Sep – 27 Sep	**Inheritance:** Types of Inheritance, Overriding Base Class members in a derived class, Public, Protected and Private Inheritance
29 Sep – 4 Oct	Constructors and destructors in derived classes, Virtual Inheritance.
6 Oct – 13 Oct	**Polymorphism:** function overloading, Operator overloading, Overloading Unary and Binary Operators, Abstract classes
14 Oct – 22 Oct	Diwali Break

23 Oct – 25 Oct	pure virtual functions, Dynamic polymorphism
27 Oct – 1 Nov	**Exception handling:** Try, Throw, Catch, Multiple catch, Re-Throwing an Exception specifications, Processing unexpected exceptions
3 Nov – 8 Nov	**Templates:** Function Templates, Overloading Template function, Class Templates, namespaces and Overview of Standard Template Library.
10 Nov – 18 Nov	Revision

Lesson Plan

Class – BSc Life Science 3rd sem
Faculty – Ms. Suman
Subject – 25CSCX03MD01 Web Designing
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	Introduction: Concept of Web Design; Web Servers; Hypertext Transfer Protocol,
4 Aug – 09 Aug	URLs; Searching and WebCasting Techniques; Search Engines and Search Tools, Domain Name System, Home Page, Web page and Website.
11 Aug – 16 Aug	Domain Name System, Home Page, Web page and Website.
18 Aug –23 Aug	Web Publishing: Hosting your Site; Internet Service Provider; Phases of Planning and designing your Website
25 Aug – 30 Aug	Steps for developing your Site; Choosing the contents;
1 Sep – 6 Sep	Web Development: Introduction to HTML; Hypertext and HTML
8 Sep – 13 Sep	HTML Document Features; HTML command Tags;
15 Sep –20 Sep	Headers; Text styles; Text Structuring;
22 Sep – 27 Sep	Text colors and Background; Formatting text. Taking queries +test
29 Sep – 4 Oct	List: Definition and types of Lists - Ordered and Unordered,

6 Oct – 13 Oct	Table Creation and Layouts. Images; Inserting Graphics; Frame Creation and Layouts; Creating Links;
14 Oct – 22 Oct	Diwali Break
23 Oct – 25 Oct	Working with Forms and Menus;Working with Radio Buttons and Check Boxes; Text Boxes; Page layouts
27 Oct – 1 Nov	Cascading Style Sheets (CSS): Basic Concepts, Properties, Creation of Style Sheets Test
3 Nov – 8 Nov	Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors. Marquee. Mouse Overs. Filters and Transitions
10 Nov – 18 Nov	Adding Links. Adding Tables. Adding Forms. Adding Image and Sound. Use of CSS in HTML Documents, Linking and Embedding of CSS in HTML
18 Nov onwards	Revision

Lesson Plan

Class - BCA 3rd Sem
Faculty – Archana
Subject - 24BCA403DS03 Database Management System
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	Database Management System: Introduction, Database System Applications, History of Database Systems, Database System Vs. File Processing System, View of Data, Data Abstraction, Instances and Schemas.
4 Aug – 09 Aug	DBMS Environment, Database languages, Database Models. Database design and ER Model: Physical, Conceptual and Logical Database design, Entity- Relationship Model: Entities, Relationships, Representation of entities, attributes
11 Aug – 16 Aug	Representation of relationship set, Generalization, Aggregation, Conceptual design with ER Model Unit – II Relational Model: Introduction to the Relational Model, Attributes, Domains, Tuples, Relations and their schemes
18 Aug –23 Aug	relation representation, Keys, relationship, relational operations, , Integrity Constraint Over relations, Enforcing Integrity constraints, Querying relational data, View: Introduction to Views, Destroying / altering Views.
25 Aug – 30 Aug	Relational Algebra and Calculus: Relational Algebra & its operations, Relational calculus & its types, Power of Algebra and calculus Test and assignment
1 Sep – 6 Sep	Normalization: Schema Refinement, Problems caused by redundancy, Decomposition & its properties; Normalization: First, Second, Third Normal forms,
8 Sep – 13 Sep	BCNF, Multivalued Dependencies, Join Dependencies. Transaction Management & Concurrency Control: ACID properties, Transactions and Schedules
15 Sep –20 Sep	Concurrent execution of transaction, Serializability and Recoverability, Lockbased Concurrency control, Lock Management, Lock Conversion,,
22 Sep – 27 Sep	, Dealing with deadlocks, Concurrency without Locking. Unit – IV Crash Recovery and Backup: Failure classifications, storage structure, Recovery & Atomicity,
29 Sep – 4 Oct	Log base recovery, Recovery with concurrent transactions, Failure with loss of nonvolatile storage,
6 Oct – 13 Oct	Database backup & recovery from catastrophic failure, Remote Backup System.
14 Oct – 22 Oct	Diwali Break
23 Oct – 25 Oct	Database backup & recovery from catastrophic failure, Remote Backup System. Test and assignment
27 Oct – 1 Nov	File organization, Operations on Files, Serial Files,
3 Nov – 8 Nov	Sequential Files , Index-Sequential Files, Direct Files.
10 Nov – 18 Nov	Revision

Lesson Plan

Class – BA Pass 3rd Sem
Faculty – Archana
Subject – 24CSC402MI01 (MINOR) Internet and Web Design
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	**Introduction to Internet and World Wide Web:** A brief Introduction to the Internet, Evolution of World Wide Web; Basic features;
4 Aug – 09 Aug	Web Browsers; Web Servers; Hypertext Transfer Protocol, URLs; Searching and Web-Casting Techniques;
11 Aug – 16 Aug	Search Engines and Search Tools, Domain Name System, Home Page, Web page and Website.
18 Aug –23 Aug	**Web Publishing**: Hosting your Site; Internet Service Provider; Phases of Planning and designing your Website; Steps for developing your Site; Choosing the contents;
25 Aug – 30 Aug	**Web Development:** Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML command Tags;
1 Sep – 6 Sep	Headers; Text styles; Text Structuring; Text colors and Background; Formatting text
8 Sep – 13 Sep	**List:** Definition and types of Lists - Ordered and Unordered, Table Creation and Layouts. Images; Inserting Graphics;
15 Sep –20 Sep	Frame Creation and Layouts; Creating Links;
22 Sep – 27 Sep	Working with Forms and Menus; Working with Radio Buttons and Check Boxes
29 Sep – 4 Oct	Text Boxes; Page layouts.
6 Oct – 13 Oct	**Cascading Style Sheets (CSS):** Basic Concepts, Properties, Creation of Style Sheets. Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors.
14 Oct – 22 Oct	Diwali Break
23 Oct – 25 Oct	Marquee. Mouse Overs. Filters and Transitions. Adding Links.
27 Oct – 1 Nov	Adding Tables. Adding Forms. Adding Image and Sound.
3 Nov – 8 Nov	Use of CSS in HTML Documents, Linking and Embedding of CSS in HTML.
10 Nov – 18 Nov	Revision

Lesson Plan

Class – BA Pass 1st Sem – (Minor)
Faculty – Ms. Archana

Subject Code – 24CSC401MI01
Subject Name – Fundamentals of Computing and Problem-Solving using C
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
15 July- 19 July	Computing Fundamentals: Overview of computing principles and history, Generations of Computers, Block Diagram along with its components, Classification of computers, Applications of computers in various fields. Input/Output Devices,
21 July -26 July	Memory: Concept of primary & secondary memory, Cache Memory, Secondary storage devices.
28 July – 02 Aug	Basics of Networking & Operating System: Introduction to computer networking, Network types, Network topologies, Internet and its applications;
04 Aug –09 Aug	Operating system and its functions.
11 Aug – 16 Aug	Introduction to software development methodologies: Basics of algorithmic thinking and problem-solving strategies.
18 Aug – 23 Aug	Planning the Computer Program: Problem definition, Program design, Debugging, Types of errors in programming, Techniques of Problem Solving-Flowcharting, Algorithms
25 Aug – 30 Aug	Introduction to the C programming language: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant, Revision and Tests
01 Sep – 06 Sep	Structure of a C Program, printf(), scanf()Functions, Operators & Expression, type casting and conversion, operator hierarchy & associativity.
08 Sep – 13 Sep	Decision making & Branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.
15 Sep – 20 Sep	Decision making & Looping: while, do-while and for loop, jumps in loops, break, continue statement, Nested loops.
22 Sep – 27 Sep	Functions and modular programming concepts: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C, Input functions, output functions, string manipulation functions.
28 Sep – 04 Oct	User defined functions: Introduction/Definition, function prototype, Local and global variables, passing parameters, recursion. Revision and Tests
06 Oct – 13 Oct	Arrays & Pointers: Definition, types, initialization, processing an array, passing arrays to functions declaration and initialization of string, Input/output of string data, Introduction to pointers.
14 Oct – 22 Oct	Diwali Break
23 Oct – 1 Nov	Advance Concepts of C Programming: Pointers and memory management in C; File input/output operations in C
3 Nov – 8 Nov	Dynamic memory allocation and deallocation; Advanced control structures: switch, break, and continue statements.
10 Nov – 15 Nov	Practical applications of C programming in software development: Algorithmic problem-solving using C programming constructs; Design and implementation of C programs;
17 Nov – 22 Nov	Debugging and testing techniques for C programs; Best practices and coding standards in C programming.
22 Nov onwards	Revision and Tests

Name of Assistant Professor: Dr Anju Bala

Class and Section: **APGDCA 1st Sem (Computer Sc.)**

Subject: **Programming in C and Data Structure**

Paper Code: **103**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
27 July- 3 August	Introduction to Problem Solving : Top Down Design, Algorithm, Characteristics of Algorithm,	
27 July- 3 August	Implementation of Algorithms, Efficiency of Algorithms, Analysis of Algorithm.	
11th Aug to 16th Aug	Fundamental algorithms, Array Techniques, Merging, Sorting & Searching Techniques, Text Processing and Pattern Search,.	
18th Aug to 23rd Aug	Dynamic Data Structure Algorithms, Recursive Algorithms,	
25th Aug to 30th Aug	Elements of Program Style, Flowcharts : Flowchart Symbols, Its Types, Benefits and Limitations; Decision Tables,	Assignment based on Topics covered
1st Sep to 6th Sep	Pseudocodes : Using User Input, Files, Reports and Output on Paper/Console	
8th Sep to 13th Sep	Practice of Algorithm Development and Flowcharting	
15th Sep to 20th Sep	Basic concepts of programming, problem solving, algorithm designing and flowcharting,	
22nd Sep to 27th Sep	concept of structured programming, evolution of C language, advantages of C	Assignment based on Topics covered
29th Sep to 4th Oct	Variables and constants, operators, expressions, loops, arrays, functions, structures, pointers, file-handling.	
6th Oct to 13th Oct	Fundamental Notations: Primitive and Composite data types. Time and Space complexity of algorithms.	
14th Oct to 22nd Oct	**Vacations (Diwali)**	
23rd Oct to 25th Oct	Data structures: Arrays, Stacks,	Test

	Queues, Linked Lists,	
27th Oct to 1st Nov	Trees and Graphs	
3rd Nov to 8th Nov	File Structures, Concepts of fields	
10th Nov to 15th Nov	records and files. Sequential file organisation, ISAM	
17th Nov to 22nd Nov	Hashing techniques, Inverted Lists and Multilists.	
24th Nov Onwards	Internal and External sorting. Searching techniques and Merging algorithms	Test and Revision

Name of Assistant Professor: Dr Anju Bala

Class and Section: **APGDCA 1st Sem (Computer Sc.)**

Subject: **COMPUTER ORGANISATION AND ARCHITECTURE**
Paper Code: **104**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
27 July- 3 August	Number Systems, Integer and Floating-point representation, Character codes – ASCII and EBCDIC	
4 Aug – 09 Aug	OR, AND, NOT, XOR Gates; De Morgan's theorem, Universal building blocks, laws and theorems of boolean algebra,	
11th Aug to 16th Aug	Simplifying logic circuits – sum of product and product of sum form, algebraic simplification, Karnaugh simplification	
18th Aug to 23rd Aug	arithmetic circuits; flip-flops, counters; shift registers; encoder, decoder multiplexor, demulti-plexor circuits.	
25th Aug to 30th Aug	Register Transfer Language, Bus and memory. Transfers, Arithmetic. Logic Micro-operations, Shift Micro-operations	Assignment based on Topics covered
1st Sep to 6th Sep	Instruction and instructions Codes, Computer instructions, Timing and Control, Instruction Cycle, Memory Reference Instructions, Input-Output and Interrupts; Complete Computer Description	
8th Sep to 13th Sep	Machine Language, Assembly Language, The assembler, program loops, programming Arithmetic and Logic	
15th Sep to 20th Sep	Subroutines, Inputs-Outputs programming. Micro-programmed Control;	
22nd Sep to 27th Sep	Control Memory, Address Sequencing, Micro-program Example, Design of Control Unit.	Assignment based on Topics covered
29th Sep to 4th Oct	General Register Organization Stack Organization Instruction Formats, Addressing Modes, Data and Transfer Manipulation, Program Control, Reduced Instruction Set Computer,	

6th Oct to 13th Oct	Pipeline and Vector Processing parallel processing Pipelining, Arithmetic Pipeline, RISC Ouoekubem Vector Processing, Arrays Processors	
14th Oct to 22nd Oct	**Vacations (Diwali)**	
23rd Oct to 25th Oct	Addition and Subtraction, Multiplication Algorithms, Division algorithm,	
27th Oct to 1st Nov	Floating-Point Arithmetic Operations, decimal arithmetic Unit, Decimal Arithmetic Operations.	
3rd Nov to 8th Nov	Peripheral Devices, Input-Output interface, Asynchronous Data Transfer, Modes of transfer	Test
10th Nov to 15th Nov	, Priority interrupt, Direct Memory Access(DMA), input-output processors(IOP),	
17th Nov to 22nd Nov	serial communication multi-processors, characteristics of multi-processors, Interconnection structures	
24th Nov Onwards	Inter-processor Arbitration, Inter-processor Communication and Synchronization, Cache Coherence.	Test and Revision

Name of Assistant Professor: Dr. Rohini Sharma

Class and Section: **M.Sc. 3RD Sem (Computer Sc.)**

Subject: **Computer Security**

Paper Code: **25CSC203DS03**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
27 July- 2 August	**Fundamentals of Computer Security:** Overview of Computer Security: Key Concepts and Importance, Security Threats and Vulnerabilities. Malware, Phishing, Ransomware.	Assignment based on Topics covered
3 August- 9 August	Access Control Models: Discretionary, Mandatory, and Role-Based Access Control (RBAC), Cryptographic Principles: Symmetric and Asymmetric Encryption.	Assignment based on Topics covered
11th Aug to 16th Aug	Digital Signatures, Case Studies: Notable Cyber Attacks and their Impact.	Test of unit 1
18th Aug to 23rd Aug	**Secure Systems and Applications:** Secure Software Development Practices, Operating System Security: Process Isolation.	Assignment based on Topics covered
25th Aug to 30th Aug	Secure Boot, Anti-malware Tools, Database Security: SQL Injection Prevention, Role-based Access,	Assignment based on Topics covered
1st Sep to 6th Sep	Application Security: OWASP Top 10 and Secure APIs, Penetration Testing and Vulnerability Assessment	Test unit 2
8th Sep to 13th Sep	**Network and Wireless Security:** Network Security Fundamentals: Firewalls, IDS/IPS, VPNs.	Assignment based on Topics covered
15th Sep to 20th Sep	Wireless Network Security: WEP, WPA/WPA2.	Assignment based on Topics covered

22nd Sep to 27th Sep	Emerging Protocols, Secure Network Design: Zero Trust Architecture	Assignment based on Topics covered
29th Sep to 4th Oct	Threat Monitoring and Incident Response.	Assignment and test based on Topics covered
6th Oct to 13th Oct	Case Studies: Securing IoT Devices.	Test unit 3
14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	**Advanced Topics and Legal Aspects:** Emerging Threats: Quantum Computing in Cryptography.	Assignment based on Topics covered
27th Oct to 1st Nov	AI in Cybersecurity, Blockchain for Secure Transactions.	Assignment based on Topics covered
3rd Nov to 8th Nov	Digital Forensics and Cybercrime Investigation	Assignment based on Topics covered
10th Nov to 15th Nov	Cybersecurity Laws and Frameworks: GDPR, HIPAA, NIST, Security Management: ISO 27001 Standards.	Test of unit 4
17th Nov onwards	**Revision**	Test of all units

Name of Assistant Professor: Dr. Rohini Sharma

Class and Section: **M.Sc. 3RD Sem (Computer Sc.)**

Subject: **Computer Graphics**

Paper Code: **25CSC203DS05**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
27 July- 2 August	**Unit -1:** Introduction: History, applications, and scope of computer graphics. Working of Raster and vector graphics.	Assignment based on Topics covered
3 August- 9 August	**Graphics Systems:** working of display devices output devices, and color models (RGB, CMYK, HSV). 2D Graphics and Picture Construction: 2D Primitives: Line-DDA.	Assignment based on Topics covered
11th Aug to 16th Aug	Bresenham's, Mid-point method, circle . Cartesian, Polar, Mid-point method. Polygon drawing algorithms.	Test of unit 1
18th Aug to 23rd Aug	**Unit – II:** Transformations: Translation, scaling, rotation, reflection, and shearing, composite transformation and coordinate	Assignment based on Topics covered

	transformations. Window-viewport transformation. Isolation.	
25th Aug to 30th Aug	Clipping: Line Clipping - Midpoint subdivision, Cohen-Sutherland, Liang-Barsky, NLN. Polygon clipping algorithms – Area sub-division method, Sutherland Hodgman	Assignment based on Topics covered
1st Sep to 6th Sep	**Picture Construction Techniques:** Geometric primitives and their representation. Filling Algorithms: boundary fill, flood fill, Scan line filling algorithms, Aliasing problem, anti-aliasing techniques	Test unit 2
8th Sep to 13th Sep	**Unit-III:** Interactive Graphics: basic positioning methods, constraints, grids, gravity field, rubber-band methods, dragging, painting and drawing.	Assignment based on Topics covered
15th Sep to 20th Sep	**3D Primitives:** Display methods: Projections: Perspective, Parallel, anomalies associated with projections, depth cueing, visible line and surface rendering, stereoscopic views.	Assignment based on Topics covered

22nd Sep to 27th Sep	Emerging Protocols, Secure Network Design: Zero Trust Architecture	Assignment based on Topics covered
29th Sep to 4th Oct	**3D Transformations:** Translation, rotation, scaling, and perspective projections. Visible-surface detection methods, back-face detection,	Assignment and test based on Topics covered
6th Oct to 13th Oct	Depth-buffer method, A-buffer method, scan line method, depth sorting, and Area-subdivision method.	Test unit 3
14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	**Unit-IV:** Lighting and Shading: Basic lighting models, Flat shading, Gouraud shading, Phong shading.	Assignment based on Topics covered
27th Oct to 1st Nov	Introduction to Blender: Interface overview, navigation, and basic modeling tools.	Assignment based on Topics covered
3rd Nov to 8th Nov	Mesh modeling, modifiers, and sculpting techniques. Materials, textures,	Assignment based on Topics covered

	and UV mapping. Keyframing and simple animations in Blender.	
10th Nov to 15th Nov	Basic Animation: Keyframing, interpolation techniques, and introduction to physics-based animation.	Test of unit 4
17th Nov onwards	**Revision**	Test of all units

Faculty – Dr. Rohini Sharma
Class – B. Com Ist Semester Section A
Subject – Fundamentals of Computing and Problem-Solving using C
Course Code: 24CSC401MI01

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
15 July – 19 July	**Unit -1:** Historical evolution of computing, Computers and their classification; Working of a computer;	Assignment based on Topics covered
21 July – 26 July	Block Diagram and its components; Classification of computers, Applications of computers in various fields. Input/Output Devices.	Assignment based on Topics covered
28 July to 2nd Aug	Memory: Concept of primary & secondary memory, Cache Memory, Secondary storage devices.	Assignment based on Topics covered
4 August – 9 August	Basics of Networking & Operating System: Introduction to computer networking, Network types, Network topologies, Internet and its applications; Operating system and its functions	Assignment and Test of unit 1
11 August – 16 August	**Unit– II:** Introduction to software development methodologies: Basics of algorithmic thinking and problem-solving strategies. Planning the Computer Program: Problem definition, Program design, Debugging	Assignment based on Topics covered
18 to 23 August	Types of errors in programming, Techniques of Problem Solving-Flowcharting, Algorithms	Assignment based on Topics covered
25-30 August	Introduction to the C programming language: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables	Assignment based on Topics covered
1- 6 September	Assignment statement, Symbolic	Assignment and Test of unit 2

	constant, Structure of a C Program, printf(), scanf()Functions, Operators & Expression, type casting and conversion, operator hierarchy & associativity.	
8-13 September	**Unit–III:** Decision making & Branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.	Assignment based on Topics covered
15-20 September	Decision making & Looping: while, do-while and for loop, jumps in loops, break, continue statement, Nested loops.	Assignment based on Topics covered
22-27 September	Functions and modular programming concepts: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C, Input functions, output functions,	Assignment based on Topics covered
29 September – 4 October	string manipulation functions. User defined functions: Introduction/Definition, function prototype, Local and global variables, passing parameters, recursion.	Assignment and Test of unit 3
6-13 October	**Unit– IV:** Arrays & Pointers: Definition, types, initialization, processing an array, passing arrays to functions declaration and initialization of string, Input/output of string data, Introduction to pointers	Assignment based on Topics covered
14-22 October	**Vacations (Diwali)**	
23-25 October	Advance Concepts of C Programming: Pointers and memory management in C.	Assignment based on Topics covered
27 October – 01 November	File input/output operations in C; Dynamic memory allocation and deallocation; Advanced control structures: switch, break, and continue statements.	Assignment based on Topics covered

03-08 November	Practical applications of C programming in software development: Algorithmic problem-solving using C programming constructs	Assignment based on Topics covered
10-15 November	Design and implementation of C programs; Debugging and testing techniques for C programs; Best practices and coding standards in C programming.	Assignment based on Topics covered and Test of Unit 4
17th November onwards	**Revision**	

Lesson Plan

Class - BA Pass 1st Sem
Faculty – Ms. Meenakshi Dalal
Subject – Fundamentals of Computing (MDC)
Subject Code – 24CSCX01MD01
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	**Introduction**: Historical evolution of computing, Computers and their classification; Working of a computer; Block Diagram and its components; Characteristics, Benefits and Limitations of Computers. Human being Vs. Computer. Computer Codes and their types.
Week 2	**Input and Output Devices**: Introduction to I/O concepts, Hardcopy and Softcopy Devices; Keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition, optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems, Printer & its types. **Assignment and Test**
Week 3	**Memory & Mass Storage Devices**: Characteristics of memory systems, types of memory, RAM, ROM, magnetic disks-floppy disk, hard-disk; optical disks; Magnetic tapes; Concepts of Virtual and Cache memory
Week 4	**Software and Operating System Concepts:** Introduction, Software and its types, Language translators, Operating System and its Functions, Measuring System Performance, Assemblers, Compilers and Interpreters
Week 5	Batch Processing, Multiprogramming, Multi-tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux. **Assignment and Test**
Week 6	**Problem Solving and Programming Languages:** Concept of problem solving, Problem definition, Programming Languages and their classification, Problem solving with computer,
Week 7	Concept of a programming and design techniques, computer program lifecycle and program development process.
Week 8	**Data Communication:** Introduction, forms of data transmission, modem and its types, communication channels, data transmission modes.
Week 9	Computer Networks**:** Introduction to Computer Network, types of Computer Network, Network Topologies, Network Protocols, Applications of Computer Networks. **Assignment and Test**
Week 10	**Internet:** Introduction to Internet, WWW, Web Browsers, Evolution of Internet, Applications of Internet, Connecting to Internet, Internet tools.

Week 11	Electronic Mail: Introduction to E-mail, Setting Up an E-mail Account, Composing and Sending E-mails, E-mail Etiquette and Best Practices, Managing E-mails, Security and Privacy, Advanced E-mail Features, E-mail in Professional Settings, Troubleshooting Common E-mail Issues. **Assignment and Test**
Week 12	**Diwali Break**
Week 13	**Computer Applications:** Computer applications in Artificial Intelligence, Banking, Education, Marketing, Desktop publishing,
Week 14	CAD/CAM, Project Management, Military, Sports, Research & Development.
Week 15	**Assignment and Test**
Week 16	**Revision**

Lesson Plan

Class – BBA 3rd Sem & B.Com 3rd Sem
Faculty – Ms. Meenakshi Dalal
Subject – Web Designing (MDC)
Subject Code - 25CSCX03MD01
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	Introduction: Concept of Web Design; Web Servers; Hypertext Transfer Protocol
Week 2	URLs; Searching and WebCasting Techniques; Search Engines and Search Tools, Domain Name System, Home Page, Web page and Website.
Week 3	Domain Name System, Home Page, Web page and Website. **Assignment and Test**
Week 4	**Web Publishing:** Hosting your Site; Internet Service Provider; Phases of Planning and designing your website.
Week 5	Steps for developing your Site; Choosing the contents
Week 6	**Web Development:** Introduction to HTML; Hypertext and HTML; HTML Document Features.
Week 7	HTML command Tags; Headers; Text styles; Text Structuring; Text colors and Background; Formatting text. **Assignment and Test**
Week 8	**List:** Definition and types of Lists - Ordered and Unordered,
Week 9	Table Creation and Layouts. Images; Inserting Graphics;
Week 10	Frame Creation and Layouts; Creating Links; Working with Forms and Menus
Week 11	Working with Radio Buttons and Check Boxes; Text Boxes; Page layouts. **Assignment and Test**
Week 12	**Diwali Break**
Week 13	**Cascading Style Sheets (CSS):** Basic Concepts, Properties, Creation of Style Sheets.
Week 14	Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors. Marquee. Mouse Overs. Filters and Transition
Week 15	Adding Links. Adding Tables. Adding Forms. Adding Image and Sound. Use of CSS in HTML Documents, Linking and Embedding of CSS in HTML. **Assignment and Test**
Week 16	**Revision**

Lesson Plan

Class – B.Sc Physical Science 1st Sem
Faculty – Ms. Meenakshi Dalal
Subject – Web Development-I (SEC)
Subject Code - 24CSC401SE01
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	**Introduction to Internet:** Overview of Internet, World Wide Web, Evolution and History of WWW; Basic Features; Evolution of Web development.
Week 2	Web Browsers: Web Servers; Hypertext Transfer Protocol; URLs; IP Addresses; Domain Names; Searching and Web- Casting Techniques; Search Engines and Search Tools;
Week 3	Internet Security; The Web Programmers; Toolbox. **Web Technologies:** Introduction Web Technologies.
Week 4	**Introduction to HTML** CSS, and JavaScript; Client-Side vs. Server- Side Scripting. **Assignment and Test**
Week 5	**Web Publishing:** Hosting your Site; Internet Service Provider; Planning and designing your Web Site; Steps for developing your Site;
Week 6	Choosing the contents; Home Page; Domain Names; Creating a Website and the Markup Languages (HTML, DHTML).
Week 7	**Web Development:** Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML command Tags; Creating Links; Headers; Text styles; Text Structuring; Text colors and Background; Formatting text; Page layouts;
Week 8	Lists, Tables; meta element; New HTML5 Form input Types; input and data list elements; auto complete Attribute; Page-Structure Elements; Introduction to DHTML and its features. **Assignment and Test**
Week 9	**Brief Introduction to Interactivity tools:** CGI; Features of Java; Java Script; Features of ASP; VBScript; Macromedia Flash; Macromedia Dreamweaver;
Week 10	**JavaScript:** The JavaScript execution environment; The Document Object Model ; Element access in JavaScript; Events and event handling ; Handling events from the Body elements, Button elements, Text box, and Password elements
Week 11	The DOM 2 event model ; The navigator object ; DOM tree traversal and modification **Assignment and Test**
Week 12	**Diwali Break**
Week 13	**Introduction to CSS:** Introduction to CSS, Block and Inline Elements, Inline Styles, using internal CSS, using external CSS, How CSS rules cascade, inheritance, external style sheets

Week 14	**CSS3 Basics:** CSS selectors, color: foreground color, background color, contrast, opacity; text: Typeface terminology, Specifying Typefaces, fonts; list tables and forms: list-style, table properties, styling forms, styling text input.
Week 15	**Layout and positioning:** layout: key concepts in positioning elements, controlling the position of elements: relative positioning, absolute positioning, fixed positioning, z-index, float, clear, creating multi column layout with float, fixed width layout, liquid layout, layout grids, Images: controlling size of images in CSS, aligning images using CSS, centering images using CSS, background images, gradients, Media Queries. **Assignment and Test**
Week 16	**Revision**

Lesson Plan

Class – BSc Physical Sc 1st Sem and BA Pass 1st Sem – (Minor)
Faculty – Ms. Tarika Verma
Subject Code – 24CSC401MI01
Subject Name – Fundamentals of Computing and Problem-Solving using C
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
15 July- 19 July	Computing Fundamentals: Overview of computing principles and history, Generations of Computers, Block Diagram along with its components, Classification of computers, Applications of computers in various fields. Input/Output Devices,
21 July -26 July	Memory: Concept of primary & secondary memory, Cache Memory, Secondary storage devices.
28 July – 02 Aug	Basics of Networking & Operating System: Introduction to computer networking, Network types, Network topologies, Internet and its applications;
04 Aug –09 Aug	Operating system and its functions.
11 Aug – 16 Aug	Introduction to software development methodologies: Basics of algorithmic thinking and problem-solving strategies.
18 Aug – 23 Aug	Planning the Computer Program: Problem definition, Program design, Debugging, Types of errors in programming, Techniques of Problem Solving-Flowcharting, Algorithms
25 Aug – 30 Aug	Introduction to the C programming language: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant, Revision and Tests
01 Sep – 06 Sep	Structure of a C Program, printf(), scanf()Functions, Operators & Expression, type casting and conversion, operator hierarchy & associativity.
08 Sep – 13 Sep	Decision making & Branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.
15 Sep – 20 Sep	Decision making & Looping: while, do-while and for loop, jumps in loops, break, continue statement, Nested loops.
22 Sep – 27 Sep	Functions and modular programming concepts: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C, Input functions, output functions, string manipulation functions.
28 Sep – 04 Oct	User defined functions: Introduction/Definition, function prototype, Local and global variables, passing parameters, recursion. Revision and Tests
06 Oct – 13 Oct	Arrays & Pointers: Definition, types, initialization, processing an array, passing arrays to functions declaration and initialization of string, Input/output of string data, Introduction to pointers.
14 Oct – 22 Oct	Diwali Break
23 Oct – 1 Nov	Advance Concepts of C Programming: Pointers and memory management in C; File input/output operations in C

3 Nov – 8 Nov	Dynamic memory allocation and deallocation; Advanced control structures: switch, break, and continue statements.
10 Nov – 15 Nov	Practical applications of C programming in software development: Algorithmic problem-solving using C programming constructs; Design and implementation of C programs;
17 Nov – 22 Nov	Debugging and testing techniques for C programs; Best practices and coding standards in C programming.
22 Nov onwards	Revision and Tests

Lesson Plan

Class – BA Pass 1st Sem
Faculty – Ms. Tarika Verma
Subject – Fundamentals of Computing (MDC)
Subject Code – 24CSCX01MD01
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1 (15 July 2025 onwards)	**Introduction**: Historical evolution of computing, Computers and their classification; Working of a computer; Block Diagram and its components; Characteristics, Benefits and Limitations of Computers. Human being Vs. Computer. Computer Codes and their types.
Week 2	**Input and Output Devices**: Introduction to I/O concepts, Hardcopy and Softcopy Devices; Keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition, optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems, Printer & its types. **Assignment and Test**
Week 3	**Memory & Mass Storage Devices**: Characteristics of memory systems, types of memory, RAM, ROM, magnetic disks-floppy disk, hard-disk; optical disks; Magnetic tapes; Concepts of Virtual and Cache memory
Week 4	**Software and Operating System Concepts:** Introduction, Software and its types, Language translators, Operating System and its Functions, Measuring System Performance, Assemblers, Compilers and Interpreters
Week 5	Batch Processing, Multiprogramming, Multi-tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux. **Assignment and Test**
Week 6	**Problem Solving and Programming Languages:** Concept of problem solving, Problem definition, Programming Languages and their classification, Problem solving with computer,
Week 7	Concept of a programming and design techniques, computer program lifecycle and program development process.
Week 8	**Data Communication:** Introduction, forms of data transmission, modem and its types, communication channels, data transmission modes.
Week 9	Computer Networks**:** Introduction to Computer Network, types of Computer Network, Network Topologies, Network Protocols, Applications of Computer Networks. **Assignment and Test**
Week 10	**Internet:** Introduction to Internet, WWW, Web Browsers, Evolution of Internet, Applications of Internet, Connecting to Internet, Internet tools.
Week 11	Electronic Mail: Introduction to E-mail, Setting Up an E-mail Account, Composing and Sending E-mails, E-mail Etiquette and Best Practices, Managing E-mails, Security and Privacy, Advanced E-mail Features, E-mail in Professional Settings, Troubleshooting Common E-mail Issues. **Assignment and Test**

Week 12	**Diwali Break**
Week 13	**Computer Applications:** Computer applications in Artificial Intelligence, Banking, Education, Marketing, Desktop publishing,
Week 14	CAD/CAM, Project Management, Military, Sports, Research & Development.
Week 15	**Assignment and Test**
Week 16	**Revision**

Lesson Plan

Class – BSc Physical Sc 1st Sem – Major
Faculty – Ms. Tarika Verma
Subject – Computing Fundamentals and C Programming
Subject Code – 24CSCM401DS01
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1 (15 July 2025 onwards)	Computing Fundamentals: Overview of computing fundamentals principles and history, Generations of Computers, Major components of Computer, Classification of computers, Applications of computers in various fields. Input/ Output Devices
Week 2	Memory: Concept of primary & secondary memory, Cache Memory, Secondary storage devices.
Week 3	Basics of Networking & Operating System: Introduction to computer networking, Types of Network, Network Topologies, Internet and its applications; Operating system and its functions.
Week 4	Introduction to software development methodologies: Basics of algorithmic thinking and problem-solving strategies.
Week 5	Planning the Computer Program: Problem definition, Program design, Debugging, Types of errors in programming, Techniques of Problem Solving-Flowcharting, Algorithms
Week 6	Introduction to the C programming language: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant, Structure of a C Program, printf(), scanf() functions
Week 7	Operators & Expression, type casting and conversion, operator hierarchy & associativity.
Week 8	Decision making & Branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.
Week 9	Decision Making and Looping: While loop, do-while loop, for loop, jumps in loops, break statement, continue statement, nested loops.
Week 10	Functions and Modular Programming Concepts: Standard mathematical functions, input/output: unformatted and formatted I/O functions in C, input functions, output functions, string manipulation functions.
Week 11	User-defined functions: introduction/definition, function prototype, local and global variables, passing parameters, recursion.
Week 12	Arrays & Pointers: Definition, types, initialization, processing an array, passing arrays to functions declaration and initialization of string, Input/output of string data, Introduction to pointers.
Week 13	Advance Concepts of C Programming: Pointers and memory management in C; File input/output operations in C; Dynamic memory allocation and deallocation; Advanced control structures: switch, break, and continue statements.
Week 14	Practical applications of C programming in software development: Algorithmic problem-solving using C programming constructs; Design and implementation of C programs;

Week 15	Debugging and testing techniques for C programs; Best practices and coding standards in C programming. **Assignment and Test**
Week 16	**Revision and Test**

Lesson Plan

Class - BCA 5th Sem
Faculty – Ms. Navita
Subject – BCA301 (MANAGEMENT INFORMATION SYSTEM)
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	Introduction to system and Basic System Concepts, Types of Systems, The Systems Approach
Week 2	Information System: Definition & Characteristics, Types of information, Role of Information in Decision-Making
Week 3	Sub-Systems of an Information system: EDP and MIS management levels, EDP/MIS/DSS **Assignment and Test**
Week 4	An overview of Management Information System: Definition & Characteristics
Week 5	Components of MIS, Frame Work for Understanding MIS
Week 6	Information requirements & Levels of Management
Week 7	Simon's Model of decision-Making, Structured Vs Un-structured decisions
Week 8	Formal vs. Informal systems. **Assignment and Test**
Week 9	Developing Information Systems: Analysis & Design of Information Systems.
Week 10	Implementation & Evaluation, Pitfalls in MIS Development.
Week 11	**Assignment and Test**
Week 12	**Diwali Break**
Week 13	Functional MIS: A Study of Personnel, Financial and production MIS,
Week 14	Introduction to e business systems, ecommerce – technologies, applications
Week 15	Decision support systems support systems for planning, control and decision-making
Week 16	**Revision**

Lesson Plan

Class - BCA 5th Sem
Faculty – Ms. Navita
Subject – BCA – 303 (Data Communication and Networking)
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	Introduction to Computer Communications and Networking Technologies; Uses of Computer Networks; Network Devices, Nodes, and Hosts;
Week 2	Types of Computer Networks and their Topologies; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services;
Week 3	Network Applications and Application Protocols; Computer Communications and Networking Models: Decentralized and Centralized Systems, Distributed Systems,
Week 4	Client/Server Model, Peer-to-Peer Model, Web Based Model, Network Architecture and the OSI Reference Model, TCP/IP reference model,
Week 5	Example Networks: The Internet, X.25, Frame Relay, ATM, Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate , maximum data-rate of channel,
Week 6	Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Asynchrous and synchrous transmission, data encoding techniques, Modulation techniques,
Week 7	Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Dialup Networking;
Week 8	Analog Modem Concepts; DSL Service, Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction; Sliding Window Protocols;
Week 9	Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring; Introduction to LAN technologies: Ethernet, switched Ethernet,
Week 10	VLAN, fast Ethernet, gigabit Ethernet, token ring, FDDI, Wireless LANs; Bluetooth; Network Hardware Components: Connectors, Transceivers,
Week 11	Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways
Week 12	**Diwali Break**
Week 13	Network Layer and Routing Concepts: Virtual Circuits and Datagrams; Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing;
Week 14	Link State Routing, Hierarchical Routing; Congestion Control Algorithms; Internetworking; Network Security Issues: Security threats;
Week 15	Encryption Methods; Authentication; Symmetric Key Algorithms; Public-Key Algorithms.
Week 16	**Revision**

Lesson Plan

Class – M.Sc (Comp. Sc.) 1st Sem.
Faculty – Ms. Vandna
Subject –Paper Code- 24CSC201DS01(Discrete Mathematics)
Lesson Plan Duration - From Aug 2025 to Dec2025

Time Period	Topics
August	
Week 2	Set Theory: Definition of sets, countable and uncountable sets, Venn Diagrams
Week 3	Proofs of some general identities on sets.
Week 4	**Problems Solved based on each topic and Test and Assignment**
September	
Week 1	Relation Definition, Pictorial representation of relation, Operations
Week 2	Types of relation, composition of relations, Equivalence relation, partial ordering relation.
Week 3	**Problems Solved based on each topic and Test and Assignment**
Week 4	Function: Definition, type of functions, One to one, into and onto function, inverse function, Composition of functions, Recursive Functions
October	
Week 1	**Problems Solved based on each topic and Test and Assignment**
Week 2	Propositional Logic: Proposition logic, basic logic, Logical Connectives, truth tables
Week 3	Tautologies, Contradiction, Logical implication
Week 4	Predicate Calculus: Predicates and quantifiers. Mathematical Induction **Problems Solved based on each topic and Test and Assignment**
November	
Week 1	Formal Languages: Introduction to defining language, Kleene Closure, Arithmetic expressions, Chomsky Hierarchy, Regular expressions
Week 2	Automata Theory: Conversion of regular expression to Finite Automata, NFA, DFA
Week 3	Conversion of NFA to DFA, FA with output: Moore machine, Mealy machine
Week 4	**Problems Solved based on each topic and Test and Assignment**

Lesson Plan

Class – M.Sc (Comp. Sc.) 1st Sem.
Faculty – Ms. Vandna
Subject –Paper Code- 24CSC202MV01(Web Development)
Lesson Plan Duration - From Aug 2025 to Dec 2025

Time Period	Topics
August	
Week 2	Introduction: Internet, Evolution of Internet, Types of Computer Network: LAN, WAN, MAN Internet Protocol
Week 3	Internet Services, WWW, Working of Internet
Week 4	Introduction to Intranet, DNS working, Configuring Internet Connection, Connecting LAN to Internet;
September	
Week 1	Client-Server environment: Single User, Multi User, Server, Workstation, Computer Network; Network Topologies; Network Protocols
Week 2	E-Mail Concepts – Configuring EMail Program, Sending and Receiving Files through E-Mail, Fighting Spam, Sorting Mail, E-Mail mailing lists and avoiding E-Mail viruses **Test and Assignment**
Week 3	Searching and Web Casting Technique: Popular web servers, Web Browsers; basic features of browsers: bookmarks, cookies, progress indicators
Week 4	Customization of browsers, browsing tricks, next generation web browsing, search engines; Hypertext Transfer Protocol (HTTP), URL.
October	
Week 1	Internet Tools: Online Chatting, Messaging, and Conferencing Concepts,
Week 2	Usenet newsgroup concepts: Reading UseNet newsgroups, Instant messaging, Web-Based chat rooms and discussion boards, Voice and Video conferencing.
Week 3	Streamlining Browsing, Keeping track of Favourite Websites, Web Security, Privacy, and SiteBlocking **Test and Assignment**
Week 4	Web Designing using HTML: Understanding HTML, XHTML Syntax and Semantics, HTML Elements: Paragraph, Lists, Tables, Images, Frames, Forms,
November	
Week 1	Linking to other Web Pages: External and Internal linking, Email Links; Working with Background colors and Images;. **Test and Assignment**
Week 2	Marquee; Text Alignment and Text Formatting, Advanced Layout with Tables; Publishing HTML Pages, Cascading Style Sheets (CSS): Introduction, Inline, Internal, External CSS, Linking CSS to Web Page,
Week 3	Client–Side Programming: Introduction to JavaScript, Basic Syntax, Variables and Data types, Statements, Operators, Literals, Functions, Objects, Arrays.
Week 4	XML: Relation between XML and HTML, Goals of XML, Structure and Syntax of XML, Well Formed XML, DTD and its Structure, tree structures in data organization, Searching with XPath. **Test and Assignment**

Name of Guest Lecturer: **MS. SHALU**

Class and Section: **BCA 5th SEM (Computer Sc.)**

Subject: **VISUAL BASIC**

Paper Code: **BCA 304**

Lesson Plan: **July 2025 to November 2025**

Week of Month	Topics to be covered	Assignment/Test to be given
28th July to 2nd Aug	Introduction to VB: Visual &Non-Visual programming, Procedural, Object-oriented and Event driven programming languages	
4th Aug to 9th Aug	VB environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties window	Assignment based on Topics covered
11th Aug to 16th Aug	Form designer, Form layout, Immediate window, Visual Development and Event Driven Programming	Assignment based on Topics covered
18th Aug to 23rd Aug	Basics of Programming: Variables: Declaring variables, Types of variables, Converting variables types, User-defined data types, Forcing variable declaration, Scope & lifetime of variables	Assignment based on Topics covered
25th Aug to 30th Aug	Constants: Named & intrinsic. Operators: Arithmetic ,Relational & Logical Operators	Assignment based on Topics covered
1st Sep to 6th Sep	VB: Various controls for I/O in	Assignment based on Topics

	VB, Message box, Input Box, Print statement With Example	covered
8th Sep to 13th Sep	Programming with VB: Decisions and conditions: If statement, If-then-else, Select-case	Assignment based on Topics covered
15th Sep to 20th Sep	Looping Statements: Do-loops, For-next, While-wend, Exit statement. Nested control structures	Assignment based on Topics covered
22nd Sep to 27th Sep	Arrays: Declaring and using arrays, one-dimensional Array with example	Assignment based on Topics covered
29th Sep to 4th Oct	Multi-dimensional arrays, Static & dynamic arrays, Arrays of array with example	Assignment based on Topics covered
6th Oct to 13th Oct	Collections: Adding, Removing, Counting, Returning items in a collection, Processing a collection	Assignment and test based on Topics covered
14th Oct to 22nd Oct	Vacations (Diwali Break)	
23rd Oct to 25th Oct	Programming with VB: Procedures: General & event procedures, Subroutines, Functions	Assignment based on Topics covered
27th Oct to 1st Nov	Calling procedures, Arguments-passing mechanisms, Optional arguments, Named Arguments, Functions returning	Assignment based on Topics covered

	custom data types, Functions returning arrays	
3rd Nov to 8th Nov	Working with forms and menus, How to Add multiple forms in VB, Hiding & showing forms	Assignment and test based on Topics covered
10th Nov to 15th Nov	How to Load & unload statements, Creation of menu with example	Assignment and test based on Topics covered
17th Nov to 22nd Nov	Create a submenu, How to Create popup menus, Activate & deactivate Menu, Events, Form-load event, Menu designing in VB, Simple programs in VB	Assignment based on Topics covered
24th Nov Onwards	Revision	Test and Presentation

Name of Guest Lecturer: **MS. SHALU**

Class and Section: **BSC LIFE SC 3RD SEM (MINOR)**

Subject: **INTERNET AND WEB DESIGN**

Paper Code: **24CSC402MI01**

Lesson Plan: **July 2025 to November 2025**

Week of Month	Topics to be covered	Assignment/Test to be given
28th July to 2nd Aug	Introduction to Internet and World Wide Web: A brief Introduction to the Internet, Evolution of World Wide Web- Basic features	
4th Aug to 9th Aug	Web Browsers; Web Servers; Hypertext Transfer Protocol, URLs; Searching and Web-Casting Techniques	Assignment based on Topics covered
11th Aug to 16th Aug	Search Engines and Search Tools, Domain Name System, Home Page, Web Page and Website	Assignment based on Topics covered
18th Aug to 23rd Aug	Web Publishing: Hosting your Site; Internet Service Provider; Phases of Planning and designing your Website; Steps for developing your Site; Choosing the contents	Assignment based on Topics covered
25th Aug to 30th Aug	Web Development: Introduction to HTML, Hypertext and HTML, HTML Document Features; HTML command Tags	Assignment based on Topics covered
1st Sep to 6th Sep	Headers, Text styles, Text Structuring, Text colors and	Assignment based on Topics covered

	Background, Formatting text	
8th Sep to 13th Sep	List: Definition and types of Lists - Ordered and Unordered, Table Creation and Layouts. Images, Inserting Graphics	Assignment based on Topics covered
15th Sep to 20th Sep	Frame Creation and Layouts, Creating Links	Assignment based on Topics covered
22nd Sep to 27th Sep	Working with Forms and Menus, Working with Radio Buttons and Check Boxes	Assignment based on Topics covered
29th Sep to 4th Oct	Text Boxes, Page layouts	Assignment based on Topics covered
6th Oct to 13th Oct	Cascading Style Sheets (CSS): Basic Concepts, Properties, Creation of Style Sheets	Assignment and test based on Topics covered
14th Oct to 22nd Oct	Vacations (Diwali Break)	
23rd Oct to 25th Oct	Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors	Assignment based on Topics covered
27th Oct to 1st Nov	Marquee, Mouse Overs	Assignment based on Topics covered
3rd Nov to 8th Nov	Filters and Transitions. Adding Links, Adding Tables	Assignment based on Topics covered
10th Nov to 15th Nov	Adding Forms ,Adding Image and Sound	Assignment and test based on Topics covered
17th Nov to 22nd Nov	Use of CSS in HTML Documents, Linking and Embedding of CSS in HTML	Assignment based on Topics covered

24th Nov Onwards	Revision	Test and Presentation

Name of Guest Lecturer: **Ms. Shalu**

Class and Section: **BCA 5th Sem (Computer Sc.)**

Subject: **Practical- Software Lab**

Paper Code: **BCA 305**

Practical Syllabus will be met as per schedule of concerned theory paper i.e. based on BCA 304

Name of Assistant Professor: **Dr. Suman Ahlawat**

Class and Section: **M.Sc. 1st Sem (Computer Sc.)**

Subject: **Computer Networks**

Paper Code: **24CSC201DS02**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
1st Aug to 9th Aug	Introduction to Computer Network: Types of Networks, Network Topologies,	Assignment based on Topics covered
11th Aug to 16th Aug	OSI and TCP/IP Reference Models; Data Communications Concepts: Digital Vs. Analog communication; Parallel and Serial Communication	Assignment based on Topics covered
18th Aug to 23rd Aug	Synchronous, Asynchronous and Isochronous Communication; Communication modes: simplex, half duplex, full duplex; Multiplexing	Assignment based on Topics covered
25th Aug to 30th Aug	Transmission media: Wired-Twisted pair, Coaxial cable, Optical Fibre, Wireless transmission: Terrestrial, Microwave, Satellite, and Infrared	Assignment based on Topics covered
1st Sep to 6th Sep	Communication Switching Techniques: Circuit Switching, Message	Assignment based on Topics covered

	Switching, Packet Switching.	
8th Sep to 13th Sep	Data Link Layer Fundamentals: Framing, Basics of Error Detection, Forward Error Correction	Assignment based on Topics covered
15th Sep to 20th Sep	Cyclic Redundancy Check codes for Error Detection, Flow Control. Media Access Protocols: ALOHA	Assignment based on Topics covered
22nd Sep to 27th Sep	Carrier Sense Multiple Access (CSMA), CSMA with Collision Detection (CSMA/CD), Token Ring, Token Bus	Assignment based on Topics covered
29th Sep to 4th Oct	High-Speed LAN: Standard Ethernet, Fast Ethernet, Gigabit Ethernet, 10G	Assignment and test based on Topics covered
6th Oct to 13th Oct	Wireless LANs: IEEE 802.11, Bluetooth. Network Layer: IP Addressing and Routing	Assignment based on Topics covered
14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	Network Layer Protocols: IPv4 (Header Format and Services)	Assignment based on Topics covered
27th Oct to 1st Nov	ARP, ICMP (Error Reporting and Query message); IPv6 (Header Format and Addressing)	Assignment based on Topics covered

3rd Nov to 8th Nov	Transport Layer: Process-to-Process Delivery: UDP, TCP; Application Layer: Domain Name System (DNS); SMTP; HTTP; WWW	Assignment based on Topics covered
10th Nov to 15th Nov	Network Security: Security Requirements and attacks	Assignment based on Topics covered
17th Nov to 22nd Nov	Cryptography: Symmetric Key (DES, AES), Public Key Cryptography (RSA); Firewall	Assignment based on Topics covered
24th Nov Onwards	Revision of all Syllabus	Test and Presentation

Name of Assistant Professor: **Dr. Suman Ahlawat**

Class and Section: **M.Sc. 1st Sem (Computer Sc.)**

Subject: **Database Management Systems**

Paper Code: **24CSC201DS05**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
1st Aug to 9th Aug	**Introduction:** Characteristics of database approach, data models,	Assignment based on Topics covered
11th Aug to 16th Aug	DBMS architecture and Data independence, Database Languages, Classification of DBMS, Database Users and Administrator.	Assignment based on Topics covered
18th Aug to 23rd Aug	DBMS Environment: Database Access for applications Programs, Transaction Management, Database system Structure, Storage Manager, Query Processor	Assignment based on Topics covered
25th Aug to 30th Aug	E-R Modeling: Entity types, Entity set, attribute and key, Relationships, Relation types, Roles and Structural constraints, Weak entities, Enhanced ER Model	Assignment based on Topics covered
1st Sep to 6th Sep	Relational Model:	Assignment based on Topics

	Introduction to the Relational Model, Integrity Constraint over Relations, Enforcing Integrity constraints, Querying relational data	covered
8th Sep to 13th Sep	Introduction to views, Destroying/altering Tables and Views	Assignment based on Topics covered
15th Sep to 20th Sep	Relational Algebra and Calculus: Relational Algebra, Set operations, Selection and projection, renaming, Joins, Division, Examples of Algebra overviews	Assignment based on Topics covered
22nd Sep to 27th Sep	Relational calculus: Tuple relational Calculus, Domain relational calculus, Expressive Power of Algebra and Calculus	Assignment based on Topics covered
29th Sep to 4th Oct	Schema Refinement, Functional dependencies: Schema refinement in Data base Design, Problems Caused by redundancy, Decompositions & its properties , Problem related to decomposition, Functional Dependency	Assignment and test based on Topics covered
6th Oct to 13th Oct	Normalization: FIRST, SECOND, THIRD Normal forms, BCNF, Lossless join Decomposition, Dependency	Assignment based on Topics covered

	preserving Decomposition, Multi valued Dependencies, Fourth Normal Form	
14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	Transaction Management: ACID Properties, Transactions and Schedules, Concurrent Execution of transaction, Serializability and recoverability	Assignment based on Topics covered
27th Oct to 1st Nov	Concurrency Control: Introduction to Lock Management, Lock Conversions, Dealing with Dead Locks, Concurrency without Locking, Recovery Techniques, Database Security Vacations (Diwali)	
3rd Nov to 8th Nov	Introduction to MySQL/Oracle: Working with MySQL/Oracle. Getting started, Modules of MySQL/Oracle	Assignment based on Topics covered
10th Nov to 15th Nov	Invoking SQL*Plus/MySQL Command-line client ('mysql'), Data types, Data Constraints, Operators	Assignment based on Topics covered
17th Nov to 22nd Nov	Data manipulation - Create, Modify, Insert, Delete and Update; Searching, Matching and Oracle Functions.	Assignment based on Topics covered

24th Nov Onwards	Revision of all Syllabus	Test and Presentation

Name of Assistant Professor:	**Dr. Suman Ahlawat**
Class and Section:	**M.SC 1st Sem(Computer Sc.)**
Subject:	**Practical Software Lab**
Paper Code:	**24CSC201DS02, 24CSC201DS05**

Name of Assistant Professor: **Dr. Suman Ahlawat**

Class and Section: **BA Pass 1st Sem (Minor)**

Subject: **Practical Software Lab**

Paper Code: **24CSC401MI01**

Name of Assistant Professor: **Dr.Nisha Malik**

Class and Section: **M.Sc. 1st Sem (Computer Sc.)**

Subject: **Computer Organisation and Architecture**

Paper Code: **24CSC201DS04**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
1st Aug to 9th Aug	Number Systems: Binary, Octal and Hexadecimal, Integer and Floating-point representation, Character codes: ASCII and EBCDIC	Assignment based on Topics covered
11th Aug to 16th Aug	Boolean Algebra and Logic Gates: OR, AND, NOT,XOR Gates	Assignment based on Topics covered
18th Aug to 23rd Aug	De Morgan's theorem; Universal building blocks; Simplifying logic circuits: sum of product and product of sum form	Assignment based on Topics covered
25th Aug to 30th Aug	Karnaugh Map simplification ion; Combinational logic blocks (Adders, Multiplexers, Encoders, Decoder)	Assignment based on Topics covered
1st Sep to 6th Sep	Sequential logic blocks (Latches, Flip-Flops, Registers, Counters), Register Transfer Language, Bus and Memory Transfer	Assignment based on Topics covered
8th Sep to 13th Sep	Micro operations: Arithmetic,	Assignment based on Topics

	Logic & Shift Micro operations	covered
15th Sep to 20th Sep	Basic Computer Organization and Design: Instructions Codes, Register reference, Memory Reference & Input-Output instructions	Assignment based on Topics covered
22nd Sep to 27th Sep	Instruction Cycle, Timing and Control, Interrupts; Design of Control unit: Hardwired control unit, Micro-programmed control unit	Assignment based on Topics covered
29th Sep to 4th Oct	Register Organization: General Register Organization, Stack Organization, Instruction Formats, Addressing Modes; Data Transfer & Manipulation Instructions, Introduction to x86 Assembly Language programming	Assignment and test based on Topics covered
6th Oct to 13th Oct	Memory Organization: Memory Hierarchy, Main Memory, Auxiliary Memory, Cache Memory, Virtual Memory	Assignment based on Topics covered
14th Oct to 22nd Oct	Vacations (Diwali)	
23rd Oct to 25th Oct	Input-Output Organization: Peripheral Devices, Input-Output interface, Asynchronous Data Transfer, Modes of transfer	Assignment based on Topics covered

27th Oct to 1st Nov	Priority interrupt, Direct Memory Access (DMA), Input-output processors (IOP), Serial communication	Assignment based on Topics covered
3rd Nov to 8th Nov	**Parallel Computing:** CISC and RISC - Features and Comparison, Pipeline and Vector Processing	Assignment based on Topics covered
10th Nov to 15th Nov	Parallel processing, Pipelining, Arithmetic Pipeline, Instruction pipeline and Arrays Processors	Assignment based on Topics covered
17th Nov to 22nd Nov	**Advanced Architecture** Multi-processors, characteristics of multi-processors, Interconnection structures, Inter-processor Arbitration, Inter-processor Communication and Synchronization, Cache Coherence	Assignment based on Topics covered
24th Nov Onwards	Revision of all Syllabus	Test and Presentation

Name of Assistant Professor: **Dr.Nisha Malik**

Class and Section: **M.Sc. 1st Sem (Computer Sc.)**

Subject: **Computer Fundamentals and Programming in C**

Paper Code: **24CSC201DS03**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
1st Aug to 9th Aug	Concept of data and information; Components of Computer: Hardware, Input Device, Output Device	Assignment based on Topics covered
11th Aug to 16th Aug	CPU: Components of CPU; Memory and Storage Devices; Computer Software: System Software and Application Software; Functions of Operating System. Programming Languages: Machine, Assembly, High Level Language, 4GL; Language Translator; Linker, Loader	Assignment based on Topics covered
18th Aug to 23rd Aug	Classification of Computers: Micro, Mini, Mainframe, Super computer. Advantages of Computer, Limitations of Computer, Range of Applications of Computer, Social concerns of Computer Technology: Positive and Negative Impacts, Computer Crimes,	Assignment based on Topics covered

25th Aug to 30th Aug	Viruses and their remedial solutions. Problem Solving: Problem Identification, Analysis, Flowcharts, Decision Tables, Pseudo codes and algorithms, Program Coding, Program Testing and Execution	Assignment based on Topics covered
1st Sep to 6th Sep	C Programming Fundamentals: Keywords, Variables and Constants, Structure of a C program. Operators & Expressions: Arithmetic, Unary, Logical, Bit-wise, Assignment & Conditional Operators, Library Functions,	Assignment based on Topics covered
8th Sep to 13th Sep	Control Statements: Looping using while, do…while, for statements, Nested loops; decision making using if…else, Else If Ladder	Assignment based on Topics covered
15th Sep to 20th Sep	Switch, break, Continue and Goto Statements. Declaration, initialization of Multidimensional Arrays	Assignment based on Topics covered
22nd Sep to 27th Sep	String: Operations of Strings; Functions: Defining & Accessing User defined functions, Function Prototype	Assignment based on Topics covered
29th Sep to 4th Oct	Passing Arguments, Passing array as argument, Recursion, Use of Library Functions; Macro vs. Functions	Assignment and test based on Topics covered

6th Oct to 13th Oct	Pointers: Declarations, Operations on Pointers, Passing to a function, Pointers & Arrays	Assignment based on Topics covered
14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	Array of Pointers, Array accessing through pointers, Pointer to functions, Function returning pointers	Assignment based on Topics covered
27th Oct to 1st Nov	Dynamic Memory Allocations, Structures and Union: Defining and Initializing Structure , Array within Structure ,Array of Structure, Nesting of Structure , Pointer to Structure, Passing structure and its pointer to Functions	Assignment based on Topics covered
3rd Nov to 8th Nov	Unions: Introduction to Unions and its Utilities. Files Handing: Opening and closing file in C; Create, Read and Write data to a file	Assignment based on Topics covered
10th Nov to 15th Nov	Modes of Files	Assignment based on Topics covered
17th Nov to 22nd Nov	Operations on file using C Library Functions; Working with Command Line Arguments. Program Debugging and types of errors	Assignment based on Topics covered

24th Nov Onwards	Revision of all Syllabus	Test and Presentation

Name of Assistant Professor:	**Dr. Nisha Malik**
Class and Section:	**M.SC 1st Sem(Computer Sc.)**
Subject:	**Practical Software Lab**
Paper Code:	**24CSC201DS03, 24CSC201DS03**

Name of Assistant Professor: **Dr. Nisha Malik**

Class and Section: **BA Pass 1st Sem (Minor)**

Subject: **Practical Software Lab**

Paper Code: **24CSC401MI01**

Lesson Plan (Odd Semester)

Session – 2025-26

Class - BCA – 1st Semester
Faculty – ASHISH MALIK
Subject – Computer Fundamentals & Problem Solving using C
Course Code: 25BCA401SEC01 (On sharing basis)

Time Period	Topics
JULY (Week 2 & 3)	Itroduction & Basic knowledge of computers
(Week 4)	**(Unit 2):** Introduction to the C programming language: History of C, Importance of C
AUGUST	
(Week 1)	Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables,
(Week 2)	Assignment statement, Symbolic constant, Structure of a C Program, printf(), scanf() functions,
(Week 3)	Operators & Expression, type casting and conversion, operator hierarchy & associativity
(Week 4)	***(U*nit 3):** Decision making & Branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.
SEPTEMBER	
(Week 1)	Decision Making and Looping: While loop, do-while loop, for loop, jumps in loops, break statement, continue statement, nested loops. REVISION AND TEST
(Week 2)	***(U*nit 4):** Functions: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C, Input functions output functions
(Week 3)	String manipulation functions. User defined functions: Introduction/Definition, function prototype, Local and global variables, passing parameters, recursion.
(Week 4)	Arrays & Pointers: Definition, types, initialization, processing an array, passing arrays to functions,
OCTOBER	
(Week 1)	Declaration and initialization of string, Input/output of string data, Introduction to pointers. REVISION AND TEST
(Week 2)	**(Unit 1):** Computing Fundamentals: Overview of computing fundamentals principles and history, Generations of Computers
(Week 3)	Computer Fundamentals: Generations of Computers, Block Diagram along with its components, classification of computers, Applications of computers in various fields.
(Week 4)	Input/Output Devices, Memory: Concept of primary & secondary memory, Cache Memory, Secondary storage devices.
NOVEMBER	
(Week 1)	Overview of Networking & Operating System: Introduction to computer networking, Network types, Network topologies, Internet and its applications; Operating system and its functions.

(Week 2)	***(U*nit 2):** Planning the Computer Program: Problem definition, Program design, Debugging, Types of errors in programming, Techniques of Problem Solving- Flowcharting, Algorithms
(Week 3)	REVISION and TESTS
(Week 4)	REVISION and TESTS

Class - BCA – 1st Semester
Faculty – ASHISH MALIK
Subject – Mathematical Foundations of Computer Science
Course Code: 25BCA401DS01

Time Period	Topics
July (Week 2 & 3) Basic knowledge of Mathematical terms	
Week 4	Sets: Sets, Subsets, Equal Sets Universal Sets
August	
Week 1	Finite and Infinite Sets, Operation on Sets, Union, Intersection
Week 2	Complements of Sets, Cartesian Product, Cardinality of Set, Practical applications of set theory.
Week 3	Relations And Functions: Properties of Relations, Equivalence Relation, Partial Order Relation.
Week 4	Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions.
September	
Week 1	Limits & Continuity: Limit at a Point, properties of limit, computation of limits of various types of functions
Week 2	Continuity of a function at a point, Continuity over an interval. TEST
Week 3	Trigonometry: Introduction, Measurement of angles, trigonometric functions, relation between trigonometric functions,
Week 4	signs of trigonometric functions, trigonometric functions of standard angles. Basic of inverse trigonometry.
October	
Week 1	Differentiation: Derivative of a function, Derivatives of sum, differences, product & quotient of functions
Week 2	Derivatives of polynomial, trigonometric, exponential, logarithmic, inverse trigonometric
Week 3	implicit functions, Logarithmic Differentiation, Chain rule and differentiation by substitution. TEST

Week 4	Matrices: Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices.
November	
Week 1	Determinants: Definition, Minors, Cofactors, Properties of Determinants, Applications of determinants in finding area of triangle
Week 2	Adjoint of matrix, Inverse of matrix, solving a system of linear equations using matrix method
Week 3	REVISION and TESTS
Week 4	REVISION and TESTS

Name of Assistant Professor: Ms. Monica Rathee

Class and Section: M.Sc. 3RD Sem (Computer Sc.)

Subject: Java Programming

Paper Code: 25CSC203DS02

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
27 July- 3 August	**Introduction to Java:** History and Evolution of Java, Its Features, Java Development Kit (JDK) and Java Runtime Environment (JRE), Understanding JVM and Bytecode.	Assignment based on Topics covered
27 July- 3 August	Java Syntax and Structure, Identifiers, Keywords, Literals, Comments, Operators Assignments, Data Types, Variables and its types, Constants, Expressions	
11th Aug to 16th Aug	Statements: if-else, switch, loops (for, while, do-while).	Assignment based on Topics covered
18th Aug to 23rd Aug	**Class Fundamentals:** Object & Object reference, Object Life time & Garbage Collection, Creating and Operating Objects,	Assignment based on Topics covered
25th Aug to 30th Aug	Constructor & initialization code block, Access Control, Modifiers, methods Nested, Inner Class &Anonymous Classes	Assignment based on Topics covered
1st Sep to 6th Sep	Abstract Class & Interfaces Defining Methods, Argument Passing Mechanism, Method Overloading, Recursion, Dealing with Static Members, Finalize() Method, Native Method. Use of Access Modifiers with Classes & Methods, Design of Accessors.	Assignment based on Topics covered

8th Sep to 13th Sep	**Array:** Initializing & Accessing Array, Multi –Dimensional Array, Operation on String, Mutable & Immutable String, Using Collection, Bases Loop for String, Creating Strings using StringBuffer	Assignment based on Topics covered
15th Sep to 20th Sep	**Introduction to Inheritance:** Use and Benefits of Inheritance in OOPs, Types of Inheritance in Java, Inheriting Data members and Methods, Role of Constructors in inheritance, Overriding Super Class Methods, Use of "super", Polymorphism in Java.	Assignment based on Topics covered
22nd Sep to 27th Sep	**Interface:** Purpose of interface, defining an interface, implementing interfaces, Interface reference variables, Interface with variables, Extending interfaces.	Assignment based on Topics covered
29th Sep to 4th Oct	**Exception Handling:** Types of Errors in Java, Try-Catch Blocks and Finally Clause, Throw and Throws Keywords, Creating Custom Exceptions.	Assignment and test based on Topics covered
6th Oct to 13th Oct	**Packages:** Package as Access Protection, Defining Package, CLASSPATH Setting for Packages, Import and Naming Convention for Packages	Assignment based on Topics covered
14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	**Multithreading and Concurrency:** Introduction to Threads and Processes, Creating and Managing Threads, Thread Synchronization and Inter-thread Communication.	Assignment based on Topics covered
27th Oct to 1st Nov	**File Handling in Java:** Working with Files and Directories, I/O	Assignment based on Topics covered

	Basic, Byte and Character Structures, I/O Classes, Reading Console Input Writing Console Output, BufferedReader and BufferedWriter, Serialization and Deserialization, Random Access Files, Storing and Retrieving Objects from File, Stream Benefits.	
3rd Nov to 8th Nov	**Collection API:** ArrayList, Vector, LinkedList, Stack. **Applet Programming:** How Applets differs from Java Application, Applet Life Cycle, APPLET Tag, Running an Applet, Passing Parameters to Applet.	Assignment based on Topics covered
10th Nov to 15th Nov	Event Handling: Mechanism, The Delegation Event Model, Event Classes, Event Listener Interfaces, Adapter and inner classes.	Assignment based on Topics covered
17th Nov to 22nd Nov	**GUI Programming:** Designing Graphical User Interfaces in Java, Components and Containers, Basics of Components, Using Containers	Assignment based on Topics covered
24th Nov Onwards	Layout Managers, AWT Components, adding a Menu to Window, Working with Buttons, TextFields, and Labels. Revision of all Syllabus	Test and Presentation

Name of Assistant Professor: Ms. Monica Rathee

Class and Section: M.Sc. 3RD Sem (Computer Sc.)

Subject: Data Warehousing & Mining

Paper Code: 25CSC203DS04

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
27 July- 3 August	Introduction, Data Warehouse and Database Systems, Data Warehouse Architecture, Data Warehouse Models,	Assignment based on Topics covered
4 Aug – 09 Aug	Data Cube and OLAP, Multidimensional data Model, Concept Hierarchies, OLAP operations, Data Warehouse Implementation.,	
11th Aug to 16th Aug	**Data Mining:** Overview and its Importance,	Assignment based on Topics covered
18th Aug to 23rd Aug	Knowledge Discovery Process, Classification of Data Mining Systems,	Assignment based on Topics covered
25th Aug to 30th Aug	Data Mining Applications and Challenges.	Assignment based on Topics covered
1st Sep to 6th Sep	**Data Pre-processing:** Need for pre-processing, Data	Assignment based on Topics covered
8th Sep to 13th Sep	**Data Mining Associations and Correlations:** Mining Frequent Patterns,	Assignment based on Topics covered
15th Sep to 20th Sep	Relational Algebra and	Assignment based on Topics covered
22nd Sep to 27th Sep	**Advanced Pattern Mining:**	Assignment based on Topics covered
29th Sep to 4th Oct	Pattern Mining in Multilevel and	Assignment and test based on Topics covered
6th Oct to 13th Oct	Multidimensional Space, Constraint-Based Frequent Pattern Mining.	Assignment based on Topics covered

14th Oct to 22nd Oct	Vacations (Diwali)	Assignment based on Topics covered
23rd Oct to 25th Oct	**Classification:** Introduction, Classification using Decision Tree Induction, Bayesian	Assignment based on Topics covered
27th Oct to 1st Nov	Classification Methods, Rule Based Classification, Model Evaluation and Selection,	
3rd Nov to 8th Nov	Techniques to Improve Classification Accuracy.	Assignment based on Topics covered
10th Nov to 15th Nov	**Cluster Analysis:** Introduction, Basic Clustering characteristics, Partitioning Methods, Hierarchical Methods,	Assignment based on Topics covered
17th Nov to 22nd Nov	Evaluation of Clustering methods.	Assignment based on Topics covered
24th Nov Onwards	Revision of all Syllabus	Test and Presentation

Class – B.Sc Life Science 1st Sem
Faculty – Ms. Monica Rathee
Subject – Fundamentals of Computing
Course Code: 24CSCX01MD01

Time Period	Topics
JULY (Week 2 & 3)	***(U*nit 1):** Historical evolution of computing, Computers and their classification; Working of a computer; Block Diagram and its components;
(Week 4)	Introduction to I/O concepts, Hardcopy and Softcopy Devices; Keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition
AUGUST	
(Week 1)	optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems, Printer & its types.
(Week 2)	***(U*nit 2):** Characteristics of memory systems, types of memory, RAM, ROM, magnetic disks-floppy disk, hard-disk; optical disks; Magnetic tapes; Concepts of Virtual and Cache memory
(Week 3)	Introduction, Software and its types, Language translators, Operating System and its Functions, Measuring System Performance, Assemblers, Compilers and Interpreters.
(Week 4)	Batch Processing, Multiprogramming, Multi-tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.
SEPTEMBER	
(Week 1)	***(U*nit 3):** Concept of problem solving, Problem definition
(Week 2)	Programming Languages and their classification, Problem solving with computer, Concept of a programming

	and design techniques, computer program lifecycle and program development process.
(Week 3)	Introduction, forms of data transmission, modem and its types, communication channels, data transmission modes..
(Week 4)	Computer Networks**:** Introduction to Computer Network, types of Computer Network, Network Topologies, Network Protocols, Applications of Computer Networks.
OCTOBER	
(Week 1)	**(Unit 4):** Introduction to Internet, WWW, Web Browsers, Evolution of Internet, Applications of Internet, Connecting to Internet, Internet tools
(Week 2)	Electronic Mail: Introduction to E-mail, Setting Up an E-mail Account, Composing and Sending E-mails, E-mail Etiquette and
(Week 3)	Best Practices, Managing E-mails, Security and Privacy, Advanced E-mail Features, E-mail in Professional Settings, Troubleshooting Common E-mail Issues.
(Week 4)	Computer applications in Artificial Intelligence
NOVEMBER	
(Week 1)	***(U*nit 4):** Computer applications in Banking, Education, Marketing, Desktop publishing,
(Week 2)	CAD/CAM, Project Management, Military, Sports, Research & Development.
(Week 3)	REVISION and TESTS
(Week 4)	REVISION and TESTS

Name of Assistant Professor: Chain Singh

Class and Section: APGDCA 1st Sem

Subject: COMPUTER NETWORKING & MULTIMEDIA

Paper Code: APGDCA – 102

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
1st Aug to 9th Aug	Introduction to Computer Network, Why Computer Network ? Key Issues for Computer Network, Types of Network : LAN, WAN and MAN;	Assignment based on Topics covered
11th Aug to 16th Aug	Criteria for Classification of Computer Network, LANs : Hardware requirements for LAN, Transmission Channel for LAN, Network Interface Unit, Servers & Workstations, LAN Software.	Assignment based on Topics covered
18th Aug to 23rd Aug	Introduction to Ethernet, Token Ring : Basics and Working, Cables, ring speed. WAN : Transmission Channel for LAN, hardware requirements : Bridges, Routers, Gateways.	Assignment based on Topics covered
25th Aug to 30th Aug	Private Networks, Public Networks : ISDN, PSTN, PSDN, Value Added Networks.	Assignment based on Topics covered
1st Sep to 6th Sep	Connecting PCs : Simple switches, Printer sharing buffers, Zero-slot LANs, Media sharing LANs, Printer Servers, Client and Servers, Interface Cards, Media Access Control,	Assignment based on Topics covered
8th Sep to 13th Sep	Operating System features, OSI Model, TCP/IP Model, Data encoding & Communication Techniques, Multiplexing and Communication Hardware Network topology, Network Protocols, Applications of Computer Network.	Assignment based on Topics covered
15th Sep to 20th Sep	Distributed data processing, Teletext and Videotext Networks Communication Channels : Wire cables (Telegraph, telephone, twisted-pair, co-axial), Microwave, Fibre-optics, Communication satellites; Channel sharing, data-transmission	Assignment based on Topics covered
22nd Sep to 27th Sep	Introduction to multimedia technology - Computers, Communication and Entertainment; Framework for multimedia systems;	Assignment based on Topics covered
29th Sep to 4th Oct	M/M devices, presentation devices and the user interface; M/M presentation and authoring; Digital representation of sound and transmission;	Assignment and test based on Topics covered
6th Oct to 13th Oct	brief survey of speech recognition and generation; digital	Assignment based on

	video and image compression; JPEG image compression standards; MPEG motion video compression; DVI technology; time-based media representation and delivery	Topics covered
14th Oct to 22nd Oct	Vacations (Diwali)	
23rd Oct to 25th Oct	Audio Compression and Decompression, Audio Synthesis, MIDI, Speech Recognition & Synthesis, Video Capturing, Compression & Decompression,	Assignment based on Topics covered
27th Oct to 1st Nov	Real-time 3D, LANs and Multimedia. Applications of M/M; Intelligent M/M system, Desktop Virtual Reality (VR), VR operating System	Assignment based on Topics covered
3rd Nov to 8th Nov	Virtual environment displays and orientation tracking; visually coupled system requirements; intelligent VR software systems.	Assignment based on Topics covered
10th Nov to 15th Nov	Applications of environments in various fields viz. Entertainment, manufacturing, business, education, etc.	Assignment based on Topics covered
17th Nov Onwards	Revision of all Syllabus	Test and Presentation

Name of Assistant Professor: Dr. Subita Kumari

Class and Section: M.Sc. 3rd Sem (Computer Sc.)

Subject: Design and Analysis of Algorithms

Paper Code: 25CSC203DS01

Lesson Plan: **July 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
28 July- 3 August	Space Complexity, Time Complexity	Assignment and test based on unit 1
27 July- 3 August	Recurrence relation and Asymptotic Notation	
11th Aug to 16th Aug	Divide and Conquer: General Methods Binary Search, Quick sort	
18th Aug to 23rd Aug	Merge sort, Strassen's matrix multiplication	
25th Aug to 30th Aug	Introduction, examples of greedy method like Huffman coding, Minimum spanning trees	Assignment and test based on unit 2
1st Sep to 6th Sep	knapsack problem, job sequencing with deadlines, single source shortest path algorithms.	
8th Sep to 13th Sep	Graphs, its basic terminologies, representation, traversal algorithms.	
15th Sep to 20th Sep	Introduction to Dynamic Programming, Longest common subsequence, Matrix chain multiplication	Assignment and test based on unit 3
22nd Sep to 27th Sep	Floyd- Warshall algorithms. Backtracking Concept and its examples,	
29th Sep to 4th Oct	8 Queen's problem, Hamiltonian cycle	
6th Oct to 13th Oct	Graph Colouring problem, Graph Colouring problem	
14th Oct to 22nd Oct	Vacations (Diwali)	

23rd Oct to 25th Oct	Branch and Bound: General method, applications - travelling sales person problem	Assignment and test based on unit 4
27th Oct to 1st Nov	0/1 knapsack problem- LC branch and bound solution	
3rd Nov to 8th Nov	FIFO branch and bound solution	
10th Nov to 15th Nov	NP-Hard and NP-Complete Problems: Basic concepts	
17th Nov to 22nd Nov	Non-Deterministic Algorithms, NP-hard and NPcomplete classes	
24th Nov Onwards	Revision of full Syllabus	Presentations

Name of Assistant Professor: Dr. Subita Kumari

Class and Section: M.Sc. 3rd Sem (Computer Sc.)

Subject: Full Stack Development – I

Paper Code: 25CSC203SE01

Lesson Plan: **July 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
28 July- 3 August	Introduction to Web Development: Client-Server Architecture	Assignment and test based on unit 1
4 Aug – 09 Aug	HTML5: Elements, Forms, Semantic Tags	
11th Aug to 16th Aug	CSS3: Selectors, Box Model, Grid, Flexbox	
18th Aug to 23rd Aug	JavaScript Basics: DOM Manipulation, Events, ES6 Features	
25th Aug to 30th Aug	Browser Developer Tools	
1st Sep to 6th Sep	Responsive Design: Media Queries, Bootstrap, Tailwind CSS	Assignment and test based on unit 2
8th Sep to 13th Sep	JavaScript Libraries: jQuery, AJAX	
15th Sep to 20th Sep	Frontend Frameworks: Introduction to React.js/Angular/Vue.js	
22nd Sep to 27th Sep	Component-based Development and State Management	
29th Sep to 4th Oct	Case Study: Developing a Responsive Website.	
6th Oct to 13th Oct	Introduction to Backend Development: Role and Concepts	
14th Oct to 22nd Oct	Vacations (Diwali)	
23rd Oct to 25th Oct	Node.js: Setting up, Basic Syntax, File System, Modules, RESTful API Development with Express.js,	Assignment and test based on unit 3
27th Oct to 1st Nov	Database Integration: MongoDB Basics and CRUD Operations, Authentication: JWT, OAuth Basics	

3rd Nov to 8th Nov	Version Control: Git Basics and GitHub, Deployment: Using Platforms like Heroku, Vercel	Assignment and test based on unit 4
10th Nov to 15th Nov	Debugging and Testing: Unit Testing, Mocha, and Chai, Continuous Integration/Continuous Deployment (CI/CD) Basics	
17th Nov to 22nd Nov	Case Study: Developing and Deploying a Full Stack Application.	
24th Nov Onwards	Revision of full Syllabus	Presentations

Lesson Plan

Class – BA Pass 3rd Sem (Sec A and Sec C)
Faculty – Ms. Monika Ahlawat
Subject – 25CSCX03MD01 Web Designing
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	Introduction: Concept of Web Design; Web Servers; Hypertext Transfer Protocol,
4 Aug – 09 Aug	URLs; Searching and WebCasting Techniques; Search Engines and Search Tools, Domain Name System, Home Page, Web page and Website.
11 Aug – 16 Aug	Domain Name System, Home Page, Web page and Website.
18 Aug –23 Aug	Web Publishing: Hosting your Site; Internet Service Provider; Phases of Planning and designing your Website
25 Aug – 30 Aug	Steps for developing your Site; Choosing the contents;
1 Sep – 6 Sep	Web Development: Introduction to HTML; Hypertext and HTML
8 Sep – 13 Sep	HTML Document Features; HTML command Tags;
15 Sep –20 Sep	Headers; Text styles; Text Structuring;
22 Sep – 27 Sep	Text colors and Background; Formatting text. Taking queries +test
29 Sep – 4 Oct	List: Definition and types of Lists - Ordered and Unordered,
6 Oct – 13 Oct	Table Creation and Layouts. Images; Inserting Graphics; Frame Creation and Layouts; Creating Links;
14 Oct – 22 Oct	Diwali Break
23 Oct – 25 Oct	Working with Forms and Menus; Working with Radio Buttons and Check Boxes; Text Boxes; Page layouts
27 Oct – 1 Nov	Cascading Style Sheets (CSS): Basic Concepts, Properties, Creation of Style Sheets Test
3 Nov – 8 Nov	Common Tasks with CSS: Text, Fonts, Margins, Links, Tables, Colors. Marquee. Mouse Overs. Filters and Transitions
10 Nov – 18 Nov	Adding Links. Adding Tables. Adding Forms. Adding Image and Sound. Use of CSS in HTML Documents, Linking and Embedding of CSS in HTML
18 Nov onwards	Revision

Lesson Plan

Class –B.Sc (Computer Science) 5th Sem

Faculty – Ms. Monika Ahlawat

Subject – Paper-5.1: Database Management System

Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	Basic Concepts – Data, Information, Records and files. Traditional file – based Systems-File Based Approach-Limitations of File Based Approach,
4 Aug – 09 Aug	Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment,
11 Aug – 16 Aug	DBMS Functions, Advantages and Disadvantages of DBMS.
18 Aug –23 Aug	Classification of Database Management System.
25 Aug – 30 Aug	Roles in the Database Environment - Data and Database Administrator
1 Sep – 6 Sep	Centralized and Client Server architecture to DBMS. Database System Architecture – Three Levels of Architecture,
8 Sep – 13 Sep	External, Conceptual and Internal Levels, Schemas, Mappings and Instances. Data Independence –
15 Sep –20 Sep	Logical and Physical Data Independence. Data Models: Records- based Data Models
22 Sep – 27 Sep	Object-based Data Models, Physical Data Models and Conceptual Modeling. Hierarchical, network and relational model
29 Sep – 4 Oct	Entity-Relationship Model – Entity Types, Entity Sets, Attributes and keys, Relationship, relationship sets
6 Oct – 13 Oct	Role name & recursive relationship and structural constraints, Conceptual design using E-R Diagrams. Relational Data Model:-Introduction, Properties of Relations, Keys, Integrity Constraints over Relations
14 Oct – 22 Oct	Diwali Break
23 Oct – 25 Oct	Views. Relational Database Design: Functional Dependencies, Nor malizat io n:1 st to 3rd Normal Form, BCNF,
27 Oct – 1 Nov	Lossless Join and Dependency preserving decomposition. SQL: Types & components of SQL, Data Definition and data types, Data definition commands
3 Nov – 8 Nov	Data manipulation commands, Data Control Commands Specifying Constraints(Primary Constraint,. Foreign key Unique, Not Null) in SQL, Schema,
10 Nov – 18 Nov	Basic Queries in SQL, Insert, Delete and Update operations. Inbuilt Date, String functions. Commit, Rollback, Save points. Views: Introduction, Advantages of creating views, Features, Destroying/ Altering table& view
18 Nov onwards	Revision

Lesson Plan

Class –B.Sc (Computer Science) 5th Sem
Faculty – Ms. Monika Ahlawat
Subject – Paper-5. 2: Introduction to Internet and Web Technologies
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
27 July- 3 August	Introduction to Internet, Benefits of Internet,
4 Aug – 09 Aug	WWW, Hardware and software requirement for internet, internet protocols
11 Aug – 16 Aug	applications of internet, Internet Tools- Telnet, FTP,Gopher, Archie, Veronica,
18 Aug –23 Aug	Mosaic, WAIS, IRC, Online Chatting, Messaging, and Conferencing Concepts
25 Aug – 30 Aug	resources of internet.E-Mail mailing lists,
1 Sep – 6 Sep	Internet addressing, internet service provider (ISP), internet in India-Shell account, TCP/IP account
8 Sep – 13 Sep	Home page and Web Site, internet accessing, internet terminology, internet security problems and solutions.
15 Sep –20 Sep	Overview of Intranet and its applications, Web Browsers, Search Engines,
22 Sep – 27 Sep	Categories of Search Engines, Searching Criterion, Surfing the Net, Hypertext Transfer Protocol (HTTP), URL
29 Sep – 4 Oct	HTML: Internet Language, Understanding HTML, Create a Web Page
6 Oct – 13 Oct	Linking to other Web Pages, Publishing HTML Pages, Text Alignment and Lists,
14 Oct – 22 Oct	Diwali Break
23 Oct – 25 Oct	Text Formatting Fonts Control, E-mail Links and link within a Page,
27 Oct – 1 Nov	Creating HTML Forms.Creating Web Page Graphics,
3 Nov – 8 Nov	Putting Graphics on a Web Page, Custom Backgrounds and Colors,
10 Nov – 18 Nov	Creating Animated Graphics., Web Page Design and layout, Advanced Layout with Tables, Using Style Sheets.
18 Nov onwards	Revision

Name of Assistant Professor: Sonia

Class and Section: APGDCA 1st Sem

Subject: Foundation Course in IT And MS-Office -

Paper Code: APGDCA – 101

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
1st Aug to 9th Aug	Historical evolution of computers, Classification of computers, Model of a digital computer.	Assignment and test based on unit 1
11th Aug to 16th Aug	Functioning of a digital computerWhy computers are useful? Human being Vs computer. Computer as a tool, Applications of computers (desktop publishing, sports, design and manufacturing, research and design, military, robotics, planning & management, marketing, medicine & health care, arts, communications).	
18th Aug to 23rd Aug	What is Number system, necessity of binary number system, binary, octal and hexadecimal number system	
25th Aug to 30th Aug	Inter-conversion of numbers, binary arithmetic.	
1st Sep to 6th Sep	Punched cards, card-readers, key-punching machines, keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition, optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems	
8th Sep to 13th Sep	Hard- copy devices : Print quality, Impact printers - DMPs, Daisy-wheel printers, Line-printers, Drum printers, Chain printers; Non-impact printers - Inkjet, Laser, Thermal	Assignment and test based on unit 2
15th Sep to 20th Sep	LED; Plotters. Soft-copy devices : monitors, video-standards (VGA and SVGA)	
22nd Sep to 27th Sep	Characteristics of memory systems, types of memory, RAM, ROM, magnetic disks - floppy disk, hard-disk	
29th Sep to 4th Oct	optical disks - CD, CD-I, CD-ROM; Magnetic tapes; Concepts of Virtual and Cache memory.	
6th Oct to 13th Oct	Introduction, types of software - System & Application	

	software; Language translators - Compiler, Interpreter, Assembler. Positive and Negative Impacts of Computer Technology, Viruses and their types, Computer Crimes.	
14th Oct to 22nd Oct	Vacations (Diwali)	
23rd Oct to 25th Oct	Operating system - Characteristics, bootstrapping, types of operating, operating system as a resource manager; BIOS; System utilities - Editor, Loader, Linker, File Manager. Concept of GUI, GUI standards.	Assignment and test based on unit 3
27th Oct to 1st Nov	: Introduction to MS-Word, Standard Toolbar, WordWrap, Text formatting, Formatting Paragraphs, Aplying Effects to Text, Applying Animation to Text.	Assignment and test based on unit 4
3rd Nov to 8th Nov	Introduction to MS-Excel, Working with Toolbars, Formatting, Formulas, Data Management, Graphs & Chart, Macros, and other additional Functions	
10th Nov to 15th Nov	Introduction, PowerPoint Slide Creation, Slide-show, Adding Graphics, Formatting, Customizing and Printing.	
17th Nov Onwards	Revision of full Syllabus	Presentations

Name of Assistant Professor: Sonia

Class and Section: BCA 5th Sem

Subject: VISUAL BASIC

Paper Code: BCA 304

Lesson Plan: **July 2025 to November 2025**

Week of Month	Topics to be covered	Assignment/Test to be given
28th July to 2nd Aug	Introduction to VB: Visual &Non-Visual programming, Procedural, Object-oriented and Event driven programming languages	Assignment and test based on unit 1
4th Aug to 9th Aug	VB environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties window	
11th Aug to 16th Aug	Form designer, Form layout, Immediate window, Visual Development and Event Driven Programming	
18th Aug to 23rd Aug	Basics of Programming: Variables: Declaring variables, Types of variables, Converting variables types, User-defined data types, Forcing variable declaration, Scope & lifetime of variables	Assignment and test based on unit 2
25th Aug to 30th Aug	Constants: Named & intrinsic. Operators: Arithmetic ,Relational & Logical Operators	
1st Sep to 6th Sep	VB: Various controls for I/O in VB, Message box, Input Box, Print statement With Example	
8th Sep to 13th Sep	Programming with VB: Decisions and conditions: If statement, If-then-else, Select-case	

15th Sep to 20th Sep	Looping Statements: Do-loops, For-next, While-wend, Exit statement. Nested control structures	
22nd Sep to 27th Sep	Arrays: Declaring and using arrays, one-dimensional Array with example	
29th Sep to 4th Oct	Multi-dimensional arrays, Static & dynamic arrays, Arrays of array with example	
6th Oct to 13th Oct	Collections: Adding, Removing, Counting, Returning items in a collection, Processing a collection	
14th Oct to 22nd Oct	Vacations (Diwali Break)	
23rd Oct to 25th Oct	Programming with VB: Procedures: General & event procedures, Subroutines, Functions	Assignment and test based on unit 3
27th Oct to 1st Nov	Calling procedures, Arguments- passing mechanisms, Optional arguments, Named Arguments, Functions returning custom data types, Functions returning arrays	
3rd Nov to 8th Nov	Working with forms and menus, How to Add multiple forms in VB, Hiding & showing forms	Assignment and test based on unit 4
10th Nov to 15th Nov	How to Load & unload statements, Creation of menu with example	
17th Nov to 22nd Nov	Create a submenu, How to Create popup menus, Activate & deactivate Menu, Events, Form-load event, Menu designing in VB, Simple programs in VB	
24th Nov Onwards	Revision	Presentations

Name: Ritika

Class : Bsc Life Science 1st sem

Subject: Fundamentals of Computing and Problem Solving Using C

Paper Code: 24CSC401MI01

Lesson Plan: **July 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
28 July- 3 August	Overview of computing principles and history, Generations of Computers, Block Diagram along with its components, Classification of computers	Assignment and test based on unit 1
4 Aug – 09 Aug	Applications of computers in various fields. Input/Output Devices, Memory: Concept of primary & secondary memory,	
11th Aug to 16th Aug	Cache Memory, Secondary storage devices	
18th Aug to 23rd Aug	Introduction to computer networking, Network types, Network topologies,	
25th Aug to 30th Aug	Internet and its applications; Operating system and its functions.	
1st Sep to 6th Sep	Basics of algorithmic thinking and problem-solving strategies. Planning the Computer Program:	Assignment and test based on unit 2
8th Sep to 13th Sep	Problem definition, Program design, Debugging, Types of errors in programming, Techniques of Problem Solving-Flowcharting, Algorithms	
15th Sep to 20th Sep	History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables	
22nd Sep to 27th Sep	Assignment statement, Symbolic constant, Structure of a C Program, printf(), scanf()Functions, Operators & Expression, type casting and conversion, operator hierarchy & associativity.	
29th Sep to 4th Oct	Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.	
6th Oct to 13th Oct	**Decision making & Looping:** while, do-while and for loop, jumps in loops, break, continue statement, Nested loops.	
14th Oct to 22nd Oct	Standard Mathematical functions,	

	Input/output: Unformatted & formatted I/O function in C, Input functions, output functions, string manipulation functions. User defined functions	
23rd Oct to 25th Oct	Introduction/Definition, function prototype, Local and global variables, passing parameters, recursion.	Assignment and test based on unit 3
27th Oct to 1st Nov	**Arrays & Pointers:** Definition, types, initialization, processing an array, passing arrays to functions declaration and initialization of string, Input/output of string data, Introduction to pointers.	
3rd Nov to 8th Nov	**Advance Concepts of C Programming:** Pointers and memory management in C; File input/output operations in C; Dynamic memory allocation and deallocation; Advanced control structures: switch, break, and continue statements.	Assignment and test based on unit 4
10th Nov to 15th Nov	**Practical applications of C programming in software development:** Algorithmic problem-solving using C programming constructs; Design and implementation of C programs;	
17th Nov to 22nd Nov	Debugging and testing techniques for C programs; Best practices and coding standards in C programming.	
24th Nov Onwards	Revision of full Syllabus	Presentations

Name: Ritika

Class: Bcom 1st sem

Subject: Fundamentals of Computing and Problem Solving Using C

Paper Code: 24CSC401MI01

Lesson Plan: **July 2025 to November 2025**

Week of Month	Topics to be covered	Assignment/Test to be given
28 July- 3 August	Overview of computing principles and history, Generations of Computers, Block Diagram along with its components, Classification of computers	Assignment and test based on unit 1

4 Aug – 09 Aug	Applications of computers in various fields. Input/Output Devices, Memory: Concept of primary & secondary memory,	
11th Aug to 16th Aug	Cache Memory, Secondary storage devices	
18th Aug to 23rd Aug	Introduction to computer networking, Network types, Network topologies,	
25th Aug to 30th Aug	Internet and its applications; Operating system and its functions.	
1st Sep to 6th Sep	Basics of algorithmic thinking and problem-solving strategies. Planning the Computer Program:	Assignment and test based on unit 2
8th Sep to 13th Sep	Problem definition, Program design, Debugging, Types of errors in programming, Techniques of Problem Solving-Flowcharting, Algorithms	
15th Sep to 20th Sep	History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables	
22nd Sep to 27th Sep	Assignment statement, Symbolic constant, Structure of a C Program, printf(), scanf()Functions, Operators & Expression, type casting and conversion, operator hierarchy & associativity.	
29th Sep to 4th Oct	Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, go to statement.	
6th Oct to 13th Oct	**Decision making & Looping:** while, do-while and for loop, jumps in loops, break, continue statement, Nested loops.	
14th Oct to 22nd Oct	Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C, Input functions, output functions, string manipulation functions. User defined functions	
23rd Oct to 25th Oct	Introduction/Definition, function prototype, Local and global variables, passing parameters, recursion.	Assignment and test based on unit 3
27th Oct to 1st Nov	**Arrays & Pointers:** Definition, types, initialization, processing an array, passing arrays to functions declaration and initialization of string, Input/output of string data, Introduction to pointers.	
3rd Nov to 8th Nov	**Advance Concepts of C Programming:** Pointers and memory management in C;	Assignment and test based on

	File input/output operations in C; Dynamic memory allocation and deallocation; Advanced control structures: switch, break, and continue statements.	unit 4
10th Nov to 15th Nov	**Practical applications of C programming in software development:** Algorithmic problem-solving using C programming constructs; Design and implementation of C programs;	
17th Nov to 22nd Nov	Debugging and testing techniques for C programs; Best practices and coding standards in C programming.	
24th Nov Onwards	Revision of full Syllabus	Presentations

Name: Ritika

Class : BCA 5th Sem

Subject: Visual Basic

Paper Code: BCA-304

Lesson Plan: **July 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
28 July- 3 August	Introduction to VB: Visual & non-visual programming, Procedural, Object-oriented and eventdriven programming languages,	Assignment and test based on unit 1
4 Aug – 09 Aug	The VB environment: Menu bar, Toolbar, Project explorer, Toolbox, Properties window, Form designer	
11th Aug to 16th Aug	Form layout, Immediate window. Visual Development and Event Driven programming.	
18th Aug to 23rd Aug	Basics of Programming: Variables: Declaring variables, Types of variables, Converting variables types,	
25th Aug to 30th Aug	Scope & lifetime of variables. Constants: Named & intrinsic. Operators: Arithmetic, Relational &	
1st Sep to 6th Sep	Message box, Input Box, Print statement Programming with VB: Decisions and conditions: If	Assignment and test based on unit 2

	statement	
8th Sep to 13th Sep	If-then-else, Select-case. Looping statements: Do-loops, For-next, While-wend, Exit statement.	
15th Sep to 20th Sep	Nested control structures. Arrays: Declaring and using arrays, one-dimensional and multi-dimensional arrays,	
22nd Sep to 27th Sep	Collections: Adding, Removing, Counting, Returning items in a collection, Processing a collection.	
29th Sep to 4th Oct	Programming with VB: Procedures: General & event procedures, Subroutines, Functions,	
6th Oct to 13th Oct	Optional arguments, Named arguments, Functions returning custom data types,	
14th Oct to 22nd Oct	Working with forms and menus : Adding multiple forms in VB, Hiding & showing forms,	
23rd Oct to 25th Oct	Load & unload statements, creating menu, submenu, popup menus, Activate & deactivate events	Assignment and test based on unit 3
27th Oct to 1st Nov	Form-load event, menu designing in VB Simple programs in VB.	
3rd Nov to 8th Nov	Functions returning arrays Calling procedures, Arguments- passing mechanisms,	Assignment and test based on unit 4
10th Nov to 15th Nov	Static & dynamic arrays, Arrays of array. Logical operators. I/O in VB: Various controls for I/O in VB	
17th Nov to 22nd Nov	Forcing variable declaration User-defined data types,	
24th Nov Onwards	Revision of full Syllabus	Presentations

Lesson Plan

Class – BCA 1st Sem
Faculty – Ms. Teena Suneja
Subject –Digital Logic Design
Paper Code- 25BCA401DS02
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	Digital Systems and Binary Numbers: Digital Systems: Digital Signals, Digital Waveforms,
Week 2	Digital Computers and Digital Integrated Circuits.
Week 3	. Number Systems: Binary Number Systems, Octal and Hexadecimal Number System. Number Base Conversions.
Week 4	. Complements, Signed Binary Numbers and Binary Codes, Error Detection and Correction codes.
Week 5	Gate Level Minimization: Karnaugh Map (K-map) Method: Simplification: Algebra postulates and Canonical forms.
Week 6	Prime Implicants: Types, Determination and Selection of Prime implicants.
Week 7	Don't Care Conditions, NAND and NOR implementation
Week 8	Combinational Circuits: Introduction, Characteristics and Designing principles of Combinational circuits. Binary Adder:
Week 9	: Half-Adder & Full-Adder, Subtractor: Half-Subtractor & Full-Subtractor,
Week 10	Parallel binary Adder/Subtractor, Binary Multiplier
Week 11	Multiplier, Comparators, Multiplexers, De-multiplexers, Encoders and Decoders.
Week 12	**Diwali Holidays**
Week 13	Sequential Circuits: Characteristics of Sequential Circuits, Latches,
Week 14	Flip-Flops: Introduction, S-R Flip flop, J-K Flip Flop, D Flip flop , T Flip flop and Master Slave Flip flop.
Week 15	Registers: Shift Registers, Applications of Registers. Counters: Asynchronous & Synchronous Counters. ModuloN Counters and Up-Down Counters.
Week 16	**Presentation, Test and Query discussion**

Lesson Plan

Class – BCA 3rd Sem.
Faculty – Ms. Teena Suneja
Subject –Operating System
Paper Code- 24BCA403DS01
Lesson Plan Duration - July 2025 to Dec 2025

Time Period	Topics
Week 1	Introduction to Operating Systems: Objectives and Characteristics. Classification: Batch, Multi programming, Multi-processing, Multi-tasking, Time-sharing, Distributed, Network and Real time Operating systems.
Week 2	System Calls and Services. Functions and Structures: Operating System Functions- Process management, Memory management, Secondary storage management, I/O management, File management, Protection and Security.
Week 3	Structures- Simple Structure, Monolithic structure, Layered approach, Microkernel, Exokernel and Virtual Machines.
Week 4	Process Management and Scheduling: Process concept- Process State Model, Process Control Block and Threads. Process Scheduling- Scheduling Queues, Schedulers and Context Switch. **Assignment and test**
Week 5	Operations on Processes, Cooperating processes and Inter-Process Communication. Process Scheduling: Scheduling Criteria, Scheduling Algorithms: Single Processor Scheduling: FCFS, SJF, Round Robin, Multi Feedback Queue.
Week 6	Multiple Processor Scheduling and Real Time scheduling. Scheduling Algorithm Evaluation.
Week 7	Memory Management: Concepts of Memory Management, Logical and Physical address space, Swapping, Memory allocation: Contiguous and Non-Contiguous.
Week 8	Paging: Hardware Support. Page Map Table and Protection. Segmentation: Hardware Support and Protection and Sharing. **Assignment and test**
Week 9	Virtual Memory: Need of Virtual Memory, Demand paging, Pure Demand Paging. Handling page faults, Performance of Demand Paging.
Week 10	Page replacement Algorithms and Allocation of Frames: Allocation algorithms and Global vs Local Allocation. Thrashing.
Week 11	I/O Management: Basic I/O Devices, Types of I/O Devices: Block and Character Devices. I/O Software: Device Independent I/O, User Space I/O and Kernel I/O Software. Device Controllers, Device Drivers and Interrupt Handlers. **Assignment and test**
Week 12	**Diwali Break**
Week 13	Communication Approaches to I/O Devices: Special Instruction I/O, Memory Mapped I/O and Direct Memory Access (DMA). Secondary Storage Structure: Disk Structure and Disk Scheduling Algorithms.
Week 14	File System Interface: File Concept: Attributes, Operations and Types. File Access Methods: Sequential Access, Direct Access and Indexed Sequential. Free Space Management.

Week 15	Directory Structures: Single Level, Two level and Tree Structured. File Protection and Sharing. **Assignment and test**
Week 16	**Revision**

Name : **NEHA NARWAL**

Class and Section: **B.SC. PHYSICAL SC. (3RD SEM)**

Subject: **Internet and Web Design**

Paper Code: **24CSC402MI01**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**
28 July- 3 August	**Introduction to Internet and World Wide Web:** A brief Introduction to the Internet, Evolution of World Wide Web; Basic features; Web Browsers; Web Servers; Hypertext Transfer Protocol, URLs;	
27 July- 3 August	Searching and Web-Casting Techniques; Search Engines and Search Tools, Domain Name System, Home Page, Web page and Website	
11th Aug to 16th Aug	**Web Publishing:** Hosting your Site; Internet Service Provider; Phases of	
18th Aug to 23rd Aug	Planning and designing your Website; Steps for developing your Site; Choosing the contents;	
25th Aug to 30th Aug	**Web Development:** Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML command Tags;	Assignment based on Topics covered
1st Sep to 6th Sep	Headers; Text styles; Text Structuring; Text colors and Background; Formatting text.	
8th Sep to 13th Sep	**List:** Definition and types of Lists - Ordered and Unordered,	
15th Sep to 20th Sep	Table Creation and Layouts. Images; Inserting Graphics;	
22nd Sep to 27th Sep	Frame Creation and Layouts; Creating Links; Working with Forms and Menus	Assignment based on Topics covered
29th Sep to 4th Oct	Working with Radio Buttons	
6th Oct to 13th Oct	. Check Boxes; Text Boxes; Page layouts.	
14th Oct to 22nd Oct	**Vacations (Diwali)**	
23rd Oct to 25th Oct	**Cascading Style Sheets (CSS):** Basic	Test

	Concepts, Properties, Creation of Style Sheets	
27th Oct to 1st Nov	Common Tasks with CSS: Text, Fonts,	
3rd Nov to 8th Nov	Margins, Links, Tables, Colors	
10th Nov to 15th Nov	Marquee. Mouse Overs. Filters and Transitions, Adding Links. Adding Tables.	
17th Nov to 22nd Nov	Adding Forms. Adding Image and Sound.	
24th Nov Onwards	Use of CSS in HTML Documents, Linking and Embedding of CSS in HTML.	Test and Revision

Name **: NEHA NARWAL**

Class and Section: **BSC PHYSICAL SC 3 RD SEM MAJOR**

Subject: **Data Structures and Algorithms**

Paper Code: **25CSCM403DS01**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**	
28 July- 3 August	Classification of Data Structures, Application of Data Structure **Role of algorithms in computing, Complexity of algorithms, analysing algorithms, designing algorithms, asymptotic notation.**		
27 July- 3 August	One Dimensional Arrays, Two Dimensional Arrays and Multi-Dimensional Arrays, Sparse Matrices		
11th Aug to 16th Aug	Linear and Binary Search, Sorting: Selection, Insertion, Bubble, Merge Sort and Quick Sort, Radix Algorithms		
18th Aug to 23rd Aug	Definition, Implementation of Stacks and its Operations, Evaluation of Infix, Prefix and Postfix Expression, Inter-conversion of Infix, Prefix and Postfix Expression,		
25th Aug to 30th Aug	Definition, Sequential Implementation of Linear Queues and its Operations, Circular Queue, Dequeue and Priority Queues and its Implementation, Application of Queues.	Assignment based on Topics covered	
1st Sep to 6th Sep	: Need of Dynamic Data structures, Singly Linked list; Operations on list, Linked Stack and Queues. Polynomial representation and manipulation using linked lists.		
8th Sep to 13th Sep	Traversing, Insertion, Deletion.		
15th Sep to 20th Sep	Operations on Single Link Lists		
22nd Sep to 27th Sep	Comparison between Static and Dynamic, Implementation of Linked List	Assignment based on Topics covered	
29th Sep to 4th Oct	Circular linked list,		
6th Oct to 13th Oct	doubly linked lists,		
14th Oct to 22nd Oct	**Vacations (Diwali)**		
23rd Oct to 25th Oct	Dynamic implementation of Primitive Operation on Circular and Doubly Link Lists.	Test	
27th Oct to 1st Nov	Definition, Basic Terminology, Binary tree		
3rd Nov to 8th Nov	External and Internal Nodes, Static and Dynamic Implementation of a Binary		

	tree,		
10th Nov to 15th Nov	Primitive Operations on Binary trees. Binary Tree		
17th Nov to 22nd Nov	Traversal: Pre-Order, In-order and Post Order Traversal. Representation of Infix,		
24th Nov Onwards	Post-fix and Prefix Expression using Trees.	Test and Revision	

Name **: NEHA NARWAL**

Class and Section: **B COM 1 ST SEM MDC**

Subject: **Fundamentals of Computing**

Paper Code: **24CSCX01MD01**

Lesson Plan: **August 2025 to November 2025**

Week of Month	**Topics to be covered**	**Assignment/Test to be given**	
15 July- 3 August	Historical evolution of computing, Computers and their classification; Working of a computer; Block Diagram and its components;		
27 July- 3 August	Characteristics, Benefits and Limitations of Computers. Human being Vs. Computer. Computer Codes and their types.		
11th Aug to 16th Aug	Input and Output Devices: Introduction to I/O concepts, Hardcopy and Softcopy Devices;		
18th Aug to 23rd Aug	Keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition,		
25th Aug to 30th Aug	optical-recognition, scanners, terminals, point-of-sale terminals, machine-vision systems, Printer & its types.	Assignment based on Topics covered	
1st Sep to 6th Sep	Memory & Mass Storage Devices: Characteristics of memory systems, types of memory, RAM, ROM, magnetic disks		
8th Sep to 13th Sep	-floppy disk, hard-disk; optical disks; Magnetic tapes, Concepts of Virtual and Cache memorY		
15th Sep to 20th Sep	Software and Operating System Concepts: Introduction, Software and its types, Language translators,		
22nd Sep to 27th Sep	Operating System and its Functions, Measuring System Performance, Assemblers	Assignment based on Topics covered	
29th Sep to 4th Oct	Compilers and Interpreters. Batch Processing, Multiprogramming, Multi-tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux		
6th Oct to 13th Oct	Concept of problem solving, Problem definition, Programming Languages and their classification, Problem solving with computer,		
14th Oct to 22nd Oct	**Vacations (Diwali)**		
23rd Oct to 25th Oct	Concept of a programming and design techniques, computer program lifecycle and program development process	Test	

27th Oct to 1st Nov	Data Communication: Introduction, forms of data transmission, modem and its types, communication channels,		
3rd Nov to 8th Nov	data transmission modes. Computer Networks: Introduction to Computer Network		
10th Nov to 15th Nov	types of Computer Network, Network Topologies, Network Protocols, Applications of Computer Networks		
17th Nov to 22nd Nov	Internet: Introduction to Internet, WWW, Web Browsers, Evolution of Internet, Applications of Internet, Connecting to Internet, Internet tools. Electronic Mail: Introduction to E-mail, Setting Up an E-mail Account, Composing and Sending E-mails, E-mail Etiquette and Best Practices, Managing E-mails, Security and Privacy, Advanced E-mail Features, E-mail in Professional Settings, Troubleshooting Common E-mail Issues.		
24th Nov Onwards	Computer Applications: Computer applications in Artificial Intelligence, Banking, Education, Marketing, Desktop publishing, CAD/CAM, Project Management, Military, Sports, Research & Development.	Test and Revision	