

Govt. Shivalik College Naya Nangal

Teaching Plan (2025-26)

Class: BCA-II(sem 3)

Subject: Computer Science

Paper: OOPs

Name: Nidhi Parmar

Sr. No.	Dates	Topics
1.	1-8 Aug.	Evolution of OOP: Procedure Oriented Programming, OOP Paradigm, Advantages and disadvantages of OOP over its predecessor paradigms. Characteristics of Object Oriented Programming:
2.	9-16 Aug.	Abstraction, Encapsulation, Data hiding. Inheritance, Polymorphism, code Extensibility and Reusability. User defined DataTypes.
3.	17-24 Aug.	Introduction to C++: Identifier and keywords, Constants, Operators Pointers: Pointer Operations, Pointer Arithmetic, Pointers and Arrays, Multiple indirections, Pointer to functions. Function Prototyping.
4.	25-02 Sep	Definition and Call, Scope Rules, Parameter Passing Value, by address and by reference, Functions returning references, Const Functions, recursion,function overloading
5.	3-10 Sep	Classes, Objects and Members: Class Declaration and Class Definition, Defining member functions, Defining Object, making functions inline, Members access control, Nested Classes, This Pointer.
6.	11-17 Sep	Object as function arguments, array of objects, functions returning objects, const members and member functions, Static data members and static member functions, Friend functionsand Friend classes.
7.	18-25 Sep	Constructors: Properties, types of constructors (Default, parameterized and copy), Dynamic constructors, Multiple
8.	26-4 oct.	Destroying objects, Rules for constructors and destructors, Array of objects .Dynamic memory allocation using new and delete operators.
9.	5-14 cot.	Inheritance: Defining derived classes, inheriting private members, single inheritance, typeof derivation, function, function redefining, constructors in derived class. Types of inheritance: Single Multiple, Multi level and Hybrid,Types of base classes: Direct, Indirect, Virtual, Abstract, Code Reusability.
10.	15-24 oct	Destructors: Properties, Virtual destructors,. Polymorphism: Methods of achieving polymorphic behavior.

Sr. No.	Dates	Topics
11.	25-04 nov.	constructors in classes. virtual functions, late binding, pure virtual functions and abstract
12.	06-20 nov	MST exams
13.	21-04 dec.	. Default Arguments, Const Arguments.
14.	23 Nov. to 3 Dec.	Difference between function overloading, redefining and overriding.

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Teaching Plan (2024-25)

Class: BCA-III(sem -5)

Subject: Computer Science

Paper: Java

Name: Nidhi Parmar

Sr. No.	Dates	Topics
1.	1-8 Aug.	Introduction to java: evolution, features
2.	9-16 Aug.	comparison with C and C++, Java program structure;
3.	17-24 Aug.	constants, variables, data types, type casting,
4.	25-02 Sep	statements. Operators and expressions: arithmetic, relational,
5.	3-10 Sep	decrement, conditional, bitwise and special operators.
6.	11-17 Sep	Operator precedence & associativity rules.
7.	18-25 Sep	Control statements: if else, switch case, for, while
8.	26-4 oct.	do while, break, continue, labeled loops.
9.	5-14 oct.	class: syntax, instance variable class
10.	15-24 oct	logical, assignment, increment,
11.	25-04 nov.	variables, methods
12.	06-20 nov	tokens, keywords
13.	21-04 dec.	MST EXAMS
14.	23 Nov. to 3 Dec.	Operator precedence & associativity rules.

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Teaching Plan (2025-26)

Class: BSC minor-2(sem 3)

Subject: Computer Science

Paper: Digital Electronics

Name: Nidhi Parmar

Sr. No.	Dates	Topics
1.	1-8 Aug.	Introduction to Analog and Digital systems,Digital signals,Basic Digital circuits AND,OR,NOT,NAND,NOR,XOR and XNOR gates
2.	9-16 Aug.	Boolean Algebra theorems,Characteristics of Digital IC
3.	17-24 Aug.	Boolean Algebra theorems,Characteristics of Digital IC Number system:Positional and Positional number system
4.	25-02 Sep	Binary and Decimal number system
5.	3-10 Sep	Octal and Hexadecimal Number system
6.	11-17 Sep	Base Conversions Binary arithmetic-Addition and Subtraction
7.	18-25 Sep	1's and 2's Complement,subtraction using 1's complement and 2's Complement
8.	26-4 oct.	Introduction to combinational circuit SOP and POSrepresentation of logic functions
9.	5-14 oct.	K-map representation,K-map simplification upto 4 variable expressions,Don't care condition
10.	15-24 oct	Design of Half Adder and Full Adder Introduction to Flip-Flops:Latch,clocked FF,Preset and Reset signals,D-FF
11.	25-04 nov.	Introduction to Flip-Flops:Latch,clocked FF,Preset and Reset signals,D-FF
12.	06-20 nov	Digital to Analog converters,Analog to digital converter
13.	21-04 dec.	MST EXAMS
14.	23 Nov. to 3 Dec.	Excitation Tables of Flip-Flops,Edge triggered FF

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Teaching Plan (2025-26)

Class: BCA-I(sem 2)

Subject: Computer Science

Paper: C++

Name: Nidhi Parmar

Sr. No.	Dates	Topics
1.	20 -30 jan	Evolution of OOP: Procedure Oriented Programming, OOP Paradigm, Advantages and disadvantages of OOP over its predecessor paradigms. Characteristics of Object Oriented Programming:
2.	1-6 Feb.	Abstraction, Encapsulation, Data hiding. Inheritance, Polymorphism, code Extensibility and Reusability. User defined DataTypes.
3.	8-13 Feb.	Introduction to C++: Identifier and keywords, Constants, Operators Pointers: Pointer Operations, Pointer Arithmetic, Pointers and Arrays, Multiple indirections, Pointer to functions. Function Prototyping.
4.	15-20Feb.	Constructors: Properties, types of constructors (Default, parameterized and copy), Dynamic constructors, Multiple
5.	22-27 Feb.	Destroying objects, Rules for constructors and destructors, Array of objects .Dynamic memory allocation using new and delete operators.
6.	1-6 March	Inheritance: Defining derived classes, inheriting private members, single inheritance, type of derivation, function, function redefining, constructors in derived class
7.	8-13 March	. Types of inheritance: Single Multiple, Multi level and Hybrid, Types of base classes: Direct, Indirect, Virtual, Abstract, Code Reusability.
8.	15-20 March	Destructors: Properties, Virtual destructors,. Polymorphism: Methods of achieving polymorphic behavior.
9.	22 Mar to 3 Apr	Default Arguments, Const Arguments.
10.	5-17 April	MST Exams

Govt. Shivalik College Naya Nangal

Teaching Plan (2025-26)

Class: BCA-II(sem 4)

Subject: Computer Science

Paper: Computer Network

Name: Nidhi Parmar

Sr. No.	Dates	Topics
1.	20 -30 jan	Introduction to Computer networks. Applications, Network hardware and Software (protocol hierarchies)
2.	1-6 Feb.	design issues for layers, interfaces and services: connection oriented and connection less).
3.	8-13 Feb.	Network structure and architecture- point to point, multicast, broadcast, Classification of networks- LAN, MAN and WAN Reference models, the OSI reference model,
4.	15-20Feb.	TCP/IP reference model. Comparison between OSI and TCP/IP models. Data Link Layer: Design issues, Services to network layer
5.	22-27 Feb.	Framing. Error control, Flow control, Elementary data link protocols unrestricted simplex protocol, simplex stop and wait protocol, simplex protocol for a noisy channel.
6.	1-6 March	Network layer. Design issues, Services to the transport layer, Routing algorithms- Static non-adaptive and dynamic/adaptive algorithms.
7.	8-13 March	Congestion control algorithms the leaky bucket algorithm, the token bucket algorithm. symmetric key signatures, public key-signatures, message digests Revision
8.	15-20 March	Transport layer, design issues, connection management-addressing establishing and releasing connection, transport layer protocols
9.	22 Mar to3 Apr	TCP, UDP Application layer:The DNS Name Space, Electronic Mail, The World Wide Web, Network security Introduction to cryptography
10.	5-17 April	MST Exams

