MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Third Semester)
Session – (2019-20)

Name of the Teacher/s   **Mrs. Vandana Syal**
Department   **Computer Science & Applications**
Class <u>B.Sc II</u>   Subject <u>**Computer Applications**</u> Section <u>**Voc.**</u> **Paper CA05: Programming in C++**

S.No.	Date (Monthly) From	To	Topics to be Covered	Academic Activity Undertaken
		Aug 31	• **Introduction to OOP**: Object, Class, Encapsulation, Data hiding, Inheritance and Polymorphism; • Analysis and design of system using object oriented approach • **C++ Basics**: Token, keywords, Identifiers, Basic data types, user defined and derived data types, symbolic constants, declaration of variables, dynamic initialization of variables, reference variables, • operators in C++, • I/O streams, • Control structures • **Classes and Objects**: data members and Specifying a class, defining data members and member functions, private and public member functions, member function definition inside/outside the class declaration, scope resolution operator, nesting of member functions, creating and declaring objects, accessing class data members, accessing member functions, static member functions	Lecture Method, PPT, Online Sources and demo in Practical

	Sept 1	Sept 30	• **Functions in C++:** Function prototyping, pass by value, pass by reference, In line functions, default arguments, const arguments, function overloading, Friend functions, Objects as function rguments, returning objects
			• **Arrays and Strings**: creating and manipulating arrays with in a class, arrays of objects, Creating and manipulating String Objects, Accessing Characters in strings
			  • **Constructors :** default constructors, parameterized constructors,multiple constructors in a class, copy constructors, dynamic constructors;
			    • **Destructors:** Definition and use
				Lecture Method, PPT, Online Sources and demo in Practical

	Oct 1	Oct 31	• **Extending Classes using Inheritance**: base class, derived class, efining derived classes, visibility modes: private, public, protected; single inheritance: privately derived, publicly derived; making a protected member inheritable, access control to private and protected members by member functions of a derived class, multilevel inheritance, virtual base classes, abstract classes, nesting of classes Pointers • **Virtual Functions and polymorphism**: virtual and pure virtual functions, Function overloading, operator overloading	Lecture Method, PPT, Online Sources and demo in Practical
	Nov 1	Nov 20	• **Console I/O Operations**: C++ Stream Classes, Unformatted I/O functions-put(), get(), getline(), write(), Formatting with ios class functions and flags, Manipulators • **Files and Streams:** Text and binary streams, The stream class hierarchy, Processing files, declaring files, opening files using open() function or constructor function, closefiles,opening files using open() function or constructor function, closing files, String I/O, Sequential and random Access, File updation	Lecture Method, PPT, Online Sources and demo in Practical

Class B.Sc II   Subject Computer Applications Section Voc. Paper-CA06: Web Designing

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
		Aug 31	**Web Terminology**: Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Internet, Intranet, Extranet, WWW, URL **Introduction to HTML:** Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.) ; **Lists:** Unordered List, Ordered Lists, Definition lists; **Adding Images**: Img element using Border, Width, Height, Align, ALT Attributes; **Tables**: Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attribute	Lecture Method, PPT, Online Sources and demo in Practical
	Sept 1	Sept 30	**Linking Documents**: Anchor tag, External Document References, Internal Document **References and Image Maps** **Frames**: understanding frames, creating frames, Targeting Named Frames **Cascading style sheets** (CSS): Style tag, Link tag, Types of CSS: In-Line, Internal, External **Forms**: Attributes of Form element, Input element: Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option	Lecture Method, PPT, Online Sources and demo in Practical
	Oct 1	Oct 31	**Java Script**: Features, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. - Applications related to client side form validation - Other Built-In Objects in JavaScript: The String Object, The Math Object, and The Date Object; - User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects	Lecture Method, PPT, Online Sources and demo in Practical
	Nov 1	Nov 20	**Creating WebPages using Dreamweaver** Introduction to Dreamweaver, Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.	Lecture Method, PPT, Online Sources and demo in Practical

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Fourth Semester)
Session – (2019-20)

Name of the Teacher/s   **Mrs. Vandana Syal**
Department   **Computer Science & applications**
Class <u>**B.Sc II**</u>   **Subject** <u>**Computer Applications**</u> **Section** <u>**Voc.**</u> **Paper CA05: Programming in C++**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
		Jan 31	• **Introduction to data structure**: basics and notations, introduction to complexity • **Arrays:** Introduction, various operations on Arrays like insertion, deletion, • **Searching** (Binary and Linear Search) and **Sorting** (Bubble sort, Insertion sort, Selection sort)	Lecture Method, PPT, Online Sources and demo in Practical
	Feb 1	Feb 28	• Linked list: Introduction, declaration, operations:-traversing, searching, inserting, deleting • Introduction to circular list • Stacks: Array representation of a stack, operations- initialization, push, pop, empty, and full; • Applications: Expression evaluation, expression conversion, recursion	Lecture Method, PPT, Online Sources and demo in Practical
	Mar 1	Mar 31	• **Queues**: Introduction, memory representation, operations- add, removes, initialization; applications • **Trees:** Definition and Basic concepts, Linked Tree Representation, Representation in Contiguous Storage, Binary Tree, Binary Tree Traversal, Searching, Insertion and deletion in Binary trees	Lecture Method, PPT, Online Sources and demo in Practical
	Apr 1	Apr 20	• **Graphs:** Graphs and their application, Sequential and Linked representation of Graph, Traversing a graph (DFS and BFS).	Lecture Method, PPT, Online Sources and demo in Practical

Name of the Teacher/s   **Mrs. Vandana Syal**
Department   **Computer Science & applications**
Class <u>B.Sc II</u>   **Subject <u>Computer Applications</u> Section <u>Voc.</u>   Paper CA08: Java Programming**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
		Jan 31	• **Fundamentals of Java**: Introduction to Java and its features, Java Vs. C++, ByteCode, Java virtual machine, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, constructors, method overloading • **Inheritance**: Basics, member access, using super to call super class constructors, creating a multi level hierarchy, method overriding, Dynamic method dispatch, using abstract classes, using Final.	Lecture Method, PPT, Online Sources and demo in Practical
	Feb 1	Feb 28	• Arrays and String handling: creating and using arrays, understanding string and StringBuffer class and various string functions • Interfaces: creating and using Interfaces, Implementing inheritance and multiple inheritance using Interfaces. • Packages: understanding packages and system defined packages, creating and using user defined packages	Lecture Method, PPT, Online Sources and demo in Practical
	Mar 1	Mar 31	• **Exception Handling**: Fundamentals, exception types, using Try and catch, Multiple Try and Catch clauses, Nested Try statements, Built –in exceptions. • **Multi-threaded Programming**: Understanding Multithreading, Thread Life Cycle, Creating threads using The thread class and runnable Interface, creating Multiple Threads, Resuming and stopping Threads, Thread priorities, synchronizations	Lecture Method, PPT, Online Sources and demo in Practical
	Apr 1	Apr 20	• **Applet fundamentals**: Introduction, Types of applet, Life Cycle, Incorporating an applet into web page using Applet Tag, running applets; using Graphics class and its methods to draw lines, rectangles, circles, ellipses, arcs and polygons	Lecture Method, PPT, Online Sources and demo in Practical