MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Odd Semester)
Session: 2020-21

Name of the Teacher: Ms. Priyanka

Department: Computer Science and Application

Class: BCA-I (1st semester) **Section(s):** A & B

Subject: Fundamentals of Math. Statistics (BCA-16-102)

S.No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1.	1 Sept,2020	30 Sept,2020	**Basic Statistics:** Types of Statistics, Different Statistical Techniques, steps in Statistical Investigation, Uses and Limitations of statistics, Collection of Data: Sources of collecting primary and Secondary Data, Limitations of Secondary Data, Criteria of evaluating secondary data, Organization of data, Graphs of Grouped Frequency Distribution, Tabulation of Data, Parts of Table: **Measures of Central Tendency:** Kinds of measures of central tendency (statistical averages or averages)	Class test, Lecture Method, notes from other books and Online Sources,
2.	1 Oct, 2020	31 Oct, 2020	**Arithmetic Mean:** Simple Arithmetic Mean, Methods of calculating Simple Arithmetic Mean, Arithmetic Mean in case of Individual Series, Discrete series and continuous series, Weighted Arithmetic Mean, Combined Arithmetic Mean. **Geometric Mean:** Simple Geometric Mean, Methods of calculating Simple Geometric Mean, Geometric Mean in case of Individual Series, Discrete series and continuous series, Weighted Geometric Mean, Combined Geometric Mean. **Harmonic Mean:** Simple Harmonic Mean, Methods of calculating Simple Harmonic Mean, Harmonic Mean in case of Individual, Discrete series and continuous series, Weighted Harmonic Mean, Combined Harmonic Mean.	Class test, Lecture Method, notes from other books and Online Sources, discussion on the previous year question paper of covered topic
3.	3 Nov,2020	30 Nov,2020	**Median:** Methods of Calculating Median in case of Individual, Discrete series and continuous series **Partition Value:** Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles Mode: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series Range: Computation of Range, Inter Quartile Range, Computation of Inter Quartile Range, Percentile Range and Computation of Percentile Range. **Mean Deviation**, Computation of Mean Deviation, **Standard Deviation**, Calculation of Standard Deviation, Variance, Calculation of Standard Deviation for individual Series, Discrete Series and Continuous Series, Coefficient of Standard Deviation and coefficient of variation, Combined Standard Deviation, Correcting incorrect Standard Deviation	Class test, Lecture Method, notes from other books, discussion on the previous year question paper of covered topics
4.	1 Dec, 2020	31 Dec, 2020	**Correlation Analysis:** Correlation Analysis: Definition, Types of Correlation: Positive, Negative, Simple, Multiple, Partial, Total, Linear and Non-Linear. Need of Correlation Analysis, Correlation and Causation, Techniques for Measuring Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation: Correcting incorrect coefficient of correlation, calculating Karl Pearson's coefficient of correlation in case of grouped series, Probable Error, Coefficient of Determination, Spearman's coefficient of Correlation (Rank correlation): Calculation of Correct Coefficient of rank correlation, Difference between Rank Coefficient and Karl Pearson's coefficient of coefficient, Coefficient of concurrent deviation.	Class test, Lecture Method, notes from other books, discussion on the previous year question paper of covered topics
5.	1 Jan, 2021	Till end of semester	**Regression Analysis (Linear Regression):** Definition, Difference between Correlation and Regression, Types of Regression Analysis: Simple, Multiple, Partial, Total, Linear and Non-Linear, Objectives of Regression Analysis, Methods of obtaining regression analysis: Regression Lines, Regression Equations. Methods of obtaining regression equations: Normal Equations and Regression Coefficient, Properties of Regression Coefficient, Standard Error of Estimate, Regression Coefficient in case of Grouped Data, Uses of Regression Analysis and Limitations of Regression Analysis. **Revision of syllabus**	Class test, Lecture Method, notes from other books, discussion on the previous year question paper of covered topics

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Odd Semester)
Session: 2020-21

Name of the Teacher(s): Ms. Navdeep Kaur & Ms.Sandeep Kaur

Department: Computer Science & Applications

Class: BCA 1 (1st semester) **Section(s):** A & B

Subject: Computer Fundamentals and Computing Software (BCA-16-103)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
1	1 Sep,2020	30 Sep,2020	**Computer Appreciation:** Introduction to computers, characteristics of computer; History of computers; Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles, Generations; Applications of computers; commonly used terms– Hardware, Software, Firmware. **Basic Computer Organization:** Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters. **Basic Computer Organization:** Block diagram of computer system, Input unit, Processing Unit and Output Unit; Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.	PPT, Assignments, Online videos, Images.
2	1 Oct, 2020	31 Oct, 2020	**Computer Memory:** Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: Storage evaluation criteria, main memory organization, RAM, ROM, PROM, EPROM; Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card; **Types of software:** System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.	PPT,Assignments, Online videos, BrainStorming, Discussions, Oral/ Written Test, Related Material
3	1 Nov, 2020	30 Nov, 2020	**Word Processing Package:** Opening, saving and closing an existing document; renaming and deleting files; Using styles and templates: Introduction to templates and styles; applying, modifying and creating new (custom) styles; using a template to create a document, creating a template, editing a template, organizing templates, examples of style use, Changing document views, Moving quickly through a document, Working with text: select, cut, copy, paste, find and replace, inserting special characters, setting tab stops and indents, Checking spelling and Grammar, Autocorrect, Using built-in language tools, word completion, Autotext, Formatting text: Using Styles, formatting paragraphs, formatting characters, autoformatting, creating lists; Formatting pages: Using layout methods, creating headers and footers, Numbering pages, Changing page margins, Adding comments to a document, Creating a table of contents, Creating indexes and bibliographies, Printing a document, Using mail merge, Tracking changes to a document, Using fields, Linking to another part of a document, Using master documents, Creating fill-in forms	PPT, Assignments, Live demonstration of OpenOffice, Peer Learning, Related Material
4	1 Dec, 2020	31 Dec, 2020	**Understanding Operating System using DOS:** Introduction to operating systems and its functions, DOS and versions of DOS, Booting sequence; Warm and Cold Boot; Concepts of files and directories, Redirecting command input and output using pipes, Wildcard characters **Types of DOS commands:** Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FIND, SYS, FORMAT, CHKDSK, DISKCOPY, LABEL, MOVE, TREE, DELTREE, DEFRAG, SCANDISK, UNDELETE. **Batch Files:** Introduction to simple batch files; Introduction to CONFIG.SYS and AUTOEXEC.BAT files. **Understanding Graphical User Interface using Windows:** Fundamentals of Windows, Types of Windows, Anatomy of windows, Icons, Recycle bin, Operations on Folders, Registry of Windows: Basics, Editing; Control panel.	Assignments, Live demonstration of DOS commands and Windows and OpenOffice, Peer Learning, Related Material

			Spreadsheet Package: Introduction to Spreadsheets, sheets and cells; Opening and saving spreadsheet files; Working with sheets: inserting new sheet, deleting and renaming sheets, Viewing a spreadsheet: freezing rows and columns, splitting screen, Entering data: cell referencing, formatting cells, entering numbers, entering numbers as text, entering formulae, entering date and time, deactivating automatic changes	
5	1 Jan, 2021	Till End of Semester	**Spreadsheet Package:** Speeding up data entry: using fill tool, fill series, defining fill series, Validating cell contents, Formatting data: formatting text, numbers, cells, Autoformatting cells and sheets, defining new autoformat, Using conditional formatting, Hiding and showing data, Sorting records, Printing a spreadsheet document: using print ranges, page formats, inserting page breaks, headers and footers; Working with Graphs and Charts : Creating Embedded Chart, formatting chart: Changing chart types, adding Titles, Legends and Gridlines, Printing Charts; Adding database functions: defining database ranges, sorting, filtering and grouping database ranges; Evaluating data: using DataPilot; Functions and Macros: using and editing existing macro, Creating Macros, Recording Macros, Running Macros. **Presentation Packages:** Basics of creating a presentation, Parts of main window, workspace views, creating a presentation, Incorporation of Animation. **Revision of syllabus**	Assignments, Online videos, Live demonstration of OpenOffice, Peer Learning, Related Material, Discussion

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Odd Semester)
Session: 2020-21

Name of the Teacher(s): Dr. Ritika Bansal & Ms.Sandeep Kaur

Department: Computer Science and Applications

Class: BCA-I (1ˢᵗ semester)   **Section(s):** A & B

Subject- Problem Solving through C (BCA-16-104)

S.No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1.	1 Sep,2020	30 Sep,2020	Programming Process: Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging. Fundamentals of C Languages: History of C, Character Set, Identifiers and Keywords, Constants, Types of C Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables.	PPT, Lecture Method, Assignments, Online Videos, Practical demonstration.
2.	1 Oct, 2020	31 Oct, 2020	Operators and Expressions: C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations, Standard and Formatted Statements, Structure of a C program , Compilation and Execution.	PPT, Lecture Method, Class Test, Practical demonstration, Assignments, Case Study, Peer Learning,
3.	1 Nov, 2020	30 Nov, 2020	Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause. Loop Control Structure: While and do-while, for loop and Nested for loop, Case Control Structure: Decision using switch, The goto statement	Lecture Method, Practical demonstration, PPT, Assignments, Peer Learning,
4.	1 Dec 2020	31 Dec 2020	Functions: Library functions and user defined functions, Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C. Arrays: Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function: Call by value and call by reference, Arrays of characters, Insertion and deletion operations, Searching the elements in an array, Using matrices in arrays, Passing an Entire Array to a Function	Lecture Method, PPT, Practical demonstration, Peer Learning
5.	1 Jan 2021	Till end of Semester	Pointers: Pointer declaration, Address operator "&", Indirection operator "*", Pointer and arrays, Pointers and 2-Dimensional Arrays, Pointer to an Array, Passing 2-D array to a Function, Array of Pointers. Dynamic Memory Allocation: malloc(), calloc(), realloc(), free() functions. String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String Handling functions(strlen(), strcpy(), strcmp(), strcat()). Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members, Arrays of structure, Nested structures, Structure with pointers, Union. Files in C: Introduction, Opening and Closing files, Basic I/O operation on files. **Revision of syllabus**	Lecture Method, Practical demonstration, PPT, Assignments, Peer Learning,

Name of the Teacher:

Department: Computer Science and Application

Class: BCA-I (2nd semester)   **Section(s):** A & B

Subject: Computer Organization (BCA-16-202)

S. No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1.	Month 1	Month 1	**Computer Organisation:** Evolution of Computers, Von Neumann Architecture, Combinatorial Blocks : Gates, Half Adder, Full Adder, Multiplexers, Decoders, Encoders	Class test, Lecture Method, Online Sources,
2.	Month 2	Month 2	Sequential Building block: Flip Flops, Registers, Counters, Information representation: codes, fixed and floating point representation Arithmetic: Addition and subtraction for sign magnitude and 2's complement numbers, integer multiplication using Booth's algorithms **Architecture of a Simple Processor:** Architecture of 8086/8088 microprocessor, instruction set, Addressing Modes. Instruction: Microinstructions: Register Transfer, Arithmetic, Logical and Shift	Lecture Method, Notes from other Books and Online Sources, Class test, discussion on the previous year question paper of covered topics
3.	Month 3	Month 3	Types of Instructions, Instruction Cycle. Interrupt: Types, Interrupt Cycle I/O organization: Strobe based and Handshake based communication, DMA based data transfer **Memory Organisation:** Memory Hierarchy, RAM (Static and Dynamic), ROM Associative memory, Cache memory organisation, Virtual memory organisation. Assembly Language: Features of Assembly Language, Machine Language vs Assembly Language, Pseudo Instruction; use of Assembly for programs: Addition, Subtraction, Multiplication using Subroutines and Basic Input/ Output.	Lecture Method, Notes from other Books and Online Sources, discussion on the previous year question paper of covered topics
4.	Month 4	Month 4	**System Maintenance:** Introduction to various physical components of a computer, Physical Inspection and Diagnostics on PC, Functional description of various Internal and External cards; Viruses: Types of Computer Viruses, Detection, prevention and protection from Viruses	Lecture Method, Notes from other Books and Online Sources, discussion on the previous year question paper of covered topics
5.	Month 5	Till end of semester	**Revision of syllabus**	Discussions and class Tests

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Even Semester)
Session: 2020-21

Name of the Teacher:

Department: Computer Science and Application

Class: BCA-I (2nd semester)   **Section(s):** A & B

Subject: Fundamentals of Web Programming (BCA-16-203)

S.No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1.	Month 1	Month 1	**Basic Terminology:** Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL **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.)	PPT, Lecture Method, Assignments, Online Videos, Images, Practical demonstration on creating webpages
2.	Month 2	Month 2	**Lists:** Unordered List, Ordered Lists, Definition lists Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes **Tables:** Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes. **Linking Documents:** Anchor tag, External Document References, Internal Document References and Image Maps **Frames:** Introduction to Frames: The tag, The tag, Targeting Named Frames **DHTML:** Introduction to cascading style sheets (CSS), Style tag, Link tag, Types of CSS: In-Line, Internal, External	PPT, Lecture Method, Class Test, Practical demonstration on Developing website, Assignments, Case Study, Project Work, Peer Learning,
3.	Month 3	Month 3	**Forms:** Attributes of Form element, Input element, The Text Element, Password, Button, Submit Button, Reset Button, The Checkbox, Radio, TextArea, Select and Option **Java Script:** Introduction and Features of JavaScript, Writing JavaScript into HTML, 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, The Date Object;	Lecture Method, Practical demonstration on developing website, PPT, Assignments, Peer Learning,
4.	Month 4	Month 4	**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. **Web Hosting:** Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools	Lecture Method, PPT, Practical demonstration on Dreamweaver, Peer Learning
5.	Month 5	Till end of semester	**Revision of syllabus**	Discussions and class Tests

Monthly Teaching Plans (Even Semester)
Session: 2020-21

Name of the Teacher:

Department: Computer Science and Application

Class: BCA-I (2nd semester)   **Section(s):** A & B

Subject: Object Oriented Programing using C++ (BCA-16-204)

S. No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1.	Month 1	Month 1	OOPS concepts, basic C++ concepts, Structure of a C++ Program, Memory management & other C++ operators, Introducing Classes	Lecture Method, PPT, Class test
2.	Month 2	Month 2	Creating classes & objects, defining member functions, Static/inline/friend functions, arrays, passing objects, Constructors, Operator Overloading & Type Conversion	Lecture Method, Class (Re)test, practical demos, Sample programs discussion
3.	Month 3	Month 3	Concept of inheritance, various types, visibility modes, Polymorphism: concept, types, pointer to objects	Lecture Method, Class test, PPT, practical demos, Group revisions, attempting multiple choice questions
4.	Month 4	Month 4	Polymorphism(contd): with pointers, Virtual functions, Late binding, pure virtual functions, Exception Handling, File Processing and operations	Lecture Method, practical demos, Class test, preparing for viva voce
5.	Month 5	Till end of semester	**Revision of syllabus**	Discussions and class Tests