MEHR CHAND MAHAJAN DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (Odd Semester- 1st Semester)
Session – (2019-20)

Name of the Teacher/s- Ms. Priyanka
Department- Computer Science and Application
Class- BCA-I   **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.	24th July,2019	31st Aug, 2019	**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): **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.	Class test, Lecture Method, notes from other books and Online Sources, discussion on the previous year question paper of covered topics
2.	1st Sept, 2019	23rd Sept, 2019	**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. **Median**: Methods of Calculating Median in case of Individual, Discrete series and continuous series **Mode**: Methods of Calculating Mode in case of Individual Series, Discrete series and continuous series **Partition Value**: Quartile, Quintiles, Hexiles, Septiles, Octiles, Deciles, Percentiles. **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.	Class test, Lecture Method, notes from other books and Online Sources, discussion on the previous year question paper of covered topics
3.	1st Oct , 2019	30th Oct, 2019	**Range:** 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. **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	Class test, Lecture Method, notes from other books, discussion on the previous year question paper of covered topics
4.	1st Nov, 2019	30th Nov, 2019	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. **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.	Class test, Lecture Method, notes from other books, discussion on the previous year question paper of covered topics

Name of the Teacher/s- Ms. Navdeep Kaur & Dr. Geetika Singh
Department: Department of Computer Science & Applications
Class: BCA 1   **Section (s):** A & B   **Semester:** 1st
Subject: Computer Fundamentals and Computing Software (BCA-16-103)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
1	24th Jul 2019	31st Jul 2019	**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.	PPT, Chalk & Talk, Assignments, Online videos, Images.
2	1st Aug 2019	31st Aug 2019	**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. **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, Chalk & Talk, Assignments, Online videos, BrainStorming, Discussions, Oral/ Written Test, Related Material
3	1st Sep 2019	30th Sep 2019	**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, Chalk & Talk, Assignments, Live demonstration of OpenOffice, Peer Learning, Related Material
4	1st Oct. 2019	31st Oct 2019	**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. **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	Chalk & Talk, Assignments, Live demonstration of DOS commands and Windows and OpenOffice, Peer Learning, Related Material
5	1st Nov 2019	30th Nov 2019	**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	Chalk & Talk, Assignments, Online videos, Live demonstration of OpenOffice, Peer Learning, Related Material,

			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.	Discussion

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Name of the Teacher/s: Dr. Mandeep K. Chawla, Dr. Ritika Bansal

Dept.: Department of Computer Sci. & Appl.   **Class:** BCA 1st Sem

Subject: Problem solving through C (BCA-16-104**)**   **Section (s):** A & B

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
1.	27th Jul 2019	31st Jul 2019	Steps in Solving a Program, Algorithms, DFD, Flowchart, Testing, Debugging	Lecture method, PPT, Online sources and discussions.
2.	1st Aug 2019	31st Aug 2019	Character Set, Constants, Keywords, Variables, Data Types, Operators and its types, structure of C program, standard and formatted statements, decision control structures.	Lecture method, program demonstrations through software and discussions.
3.	1st Sep 2019	30th Sep 2019	Loop control structures and case control structures, Functions, recursion, storage classes in C.	Lecture method, PPT, Online sources, program demonstrations through software, class tests, and discussions.
4.	1st Oct. 2019	31st Oct 2019	Array declaration, Single and two dimensional arrays, Passing array elements to function, Insertion, deletion and searching operation in arrays, Pointers, Dynamic memory allocation.	Lecture method, PPT, Online sources, sample programs, class tests, and revisions.
5.	1st Nov 2019	30th Nov 2019	Reading and writing strings, string handling functions, structures, array of structures, union, opening and closing files, Basic I/O operation on files.	Lecture method, PPT, program demonstrations, class tests and old paper discussions.

Name of the Teacher/s- Ms. Priyanka
Department: Department of Computer Science & Applications
Class: BCA 1   **Section (s):** A & B   **Semester:** 1st
Subject: Computer Organization (BCA-16-202)

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	9th Jan 2020	31st Jan 2020	**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.	1st Feb 2020	29th Feb 2020	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.	1st Mar 2020	31st Mar 2020	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.	1st Apr 2020	30th Apr 2020	**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

Name of the Teacher/s- Ms. Navdeep Kaur & Dr. Geetika Singh
Department: Department of Computer Science & Applications
Class: BCA 1   **Section (s):** A & B   **Semester:** 1st
Subject: Web Programming (BCA-16-203)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
1.	9th Jan 2020	31st Jan 2020	**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.	1st Feb 2020	29th Feb 2020	**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.	1st Mar 2020	31st Mar 2020	**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.	1st Apr 2020	30th Apr 2020	**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	LectureMethod, PPT, Practical demonstration on Dreamweaver, Peer Learning

Name of the Teacher/s- Ms. Mandeep K. Chawla/Ritika Bansal
Department: Department of Computer Science & Applications
Class: BCA 1   **Section (s):** A & B   **Semester:** 1st
Subject: Object Oriented Programming using C++ (BCA-16-204)

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	**To**		
1.	9th Jan 2020	31st Jan 2020	OOPS concepts, basic C++ concepts, Structure of a C++ Program, Memory management & other C++ operators, Introducing Classes	Lecture Method, PPT, Class test
2.	1st Feb 2020	29th Feb 2020	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.	1st Mar 2020	31st Mar 2020	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.	1st Apr 2020	30th Apr 2020	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