

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 & Dr. Geetika Singh

Department- Computer Science and Applications

Class- PGDCA

Section-(s)- NA

Subject-Computer Fundamentals (PGD-1101)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	24 July, 2019	31 August, 2019	<p>Basics of Computers: Characteristics of computer; History of computers; classification of computers based on size, architecture, and chronology; Applications of computers; Hardware, Software, and Firmware. Types of software: System and Application software; Input, Process and Output, Block diagram of a computer. Representation of information: BIT, BYTE, Memory, Memory size; RAM, ROM, PROM, EPROM, Basics of Word Processing: creating, opening, saving, and printing document, Menu Toolbars. Editing Text: Copy, Paste, Delete, Move etc</p>	Lecture Method, Class Test, Practical demonstration Assignment, Online Sources
2.	1 Sept, 2019	30 Sept, 2019	<p>Representation of information: Magnetic tapes, Disks, Organization of data on disks: Tracks, sectors, cylinders, heads, access time, seek time and latency time. ASCII and EBCDIC Codes, Binary, Octal, Decimal and Hexadecimal Number Systems and their Conversion, Integer and Floating Point Representation, Input/Output devices. Disk Operating System: Booting sequence; Warm and Cold Booting; Concept of File and directory, Types of DOS commands: Internal and External; Internal Commands: DIR, MD, CD, CLS, COPY, DATE, DEL, PATH, PROMPT, REN, RD, TIME, TYPE, VER, VOL; Editing Text: Finding and Replacing Text, Spell Check, Autocorrect feature, language setting and thesaurus. Formatting: Character, Paragraph and Page formatting, working with indents, Bulleted and numbered lists, adding Headers and Footers, setting up Multiple Columns. Working with tables: Inserting/creating table using toolbar and drawing, formatting table, adding/deleting rows/columns, Applying borders to tables. Clipart: Using clip art, Creating Word Art.</p>	Lecture Method, Practical demonstration, Assignments, Online Sources
3.	1 Oct, 2019	31 Oct, 2019	<p>Disk Operating System: External Commands: XCOPY, ATTRIB, BACKUP, RESTORE, FORMAT, DISKCOPY, Introduction to CONFIG.SYS and AUTOEXEC.BAT files. Windows: GUI, Icons, Toolbar, Control panel, Files and folder management. Mail merge: Creating merged envelopes, creating merged mailing labels. Presentation Software: Basic features, selecting design templates, creating, saving and printing a simple presentation, various views, Adding pictures, shapes, clipart, audio and movie.</p>	Lecture Method, Class Test, Practical demonstration, Assignment
4.	1 Nov, 2019	30 Nov, 2019	<p>LINUX: Overview of LINUX structure, Basic Linux commands such as date, echo, cal, bc, passwd, File and Directory commands such as ls, mkdir, pwd, cd, rmdir, cat, cp, mv, rm Understanding File Access Permissions using chmod, chown, chgrp. Comparison of main features of DOS, LINUX and Windows Operating Systems. Spreadsheet Software: Worksheet overview: Row, Column, Cells, Menus, creating, opening, saving, and printing worksheet; working with Range Editing information: Entering text, numbers and formulae, AutoSum, AutoFill, spell checking Working with Functions: Statistical, Mathematical and String functions, date and Time functions, Trigonometric functions Working with charts: Line graphs, Pie charts, Bar graphs, adding Titles, Legends etc. to charts, Printing Charts</p>	Lecture Method, Class Test, Practical demonstration, Assignment

Name of the Teacher/s Ms. Deepti Sharda

Department Department of Computer Science & Applications

Class PGDCA

Section-(s)- NA

Subject PGD-1102 (Computer Programming using C)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	24 th Jul'19	31 st Aug'19	Problem Solving: Problem Identification, Analysis, Flow charts, Decision Tables, Pseudo code and algorithms, Program Coding, Program Testing and Execution. C Language Fundamentals: 'C' Language: History, Structure of a C program, Data types, Constants and variables, Operators and Expressions, Type casting, Type conversion, Scope Rules:Local and Global variables, I/O functions, Control constructs(Sequencing, alteration and iteration) Header files: stdio.h, ctype.h, string.h, math.h, stdlib.h, time.h Storage classes: automatic, external, static, register Preprocessor: #define, #include, #undef, #conditional compilation directives (#if, #else, #elif, #endif, #ifdef and #ifndef)	Lecture Method, PPT, Periodic Test, Assignment
2	1 st Sep'19	30 th Sep'19	Functions: library functions, user defined functions, scope rule of functions, Parameter passing: call by value and call by reference, Recursion Arrays: One dimensional and two dimensional arrays, declaring arrays, initializing arrays, processing of arrays, passing arrays as arguments to functions Pointers: Definition, Declaring pointers, accessing values via pointers, pointer arithmetic, pointer to strings, passing arguments using pointers, array of pointers	Lecture Method, PPT, Periodic Test, Assignment
3	1 st Oct'19	31 st Oct'19	Strings: Declaring String, built-in string functions-strlen(),strcpy(), strcat(), strcmp(), array of strings, two dimensional array of characters, Array of Pointers to Strings Structure: Defining a structure type, declaring variables of structure type, initializing structures. Accessing Structure Elements, array of structures, Array in Structures, Difference between array and structure, nested structures Unions: Declaring a Union, Accessing elements of a type union.	Lecture Method, PPT, Periodic Test, Assignment
4	1 st Nov'19	30 th Nov'19	Console Input/Output: Console I/O Functions, Formatted Console I/O Functions, printf() and scanf() Functions, Unformatted Console I/O Functions, gets(), puts() File Input/Output: File Operations, Opening a File, File Opening Modes, Reading from a File, Trouble in Opening a File, Writing to a File, Closing the File.	Lecture Method, PPT, Periodic Test, Assignment

Name of the Teacher/s: Ms Navdeep Kaur

Department: Department of Computer Science & Applications

Class: PGDCA

Semester: 1st

Subject: DBMS

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	24 July, 2019	31 Aug, 2019	<p>Data Base Concept: Data Base Vs File Oriented Approach, Basic DBMS terminology, Data Independence, General Architecture of a Data Base Management Software, Components of DBMS, Advantages and Disadvantages of DBMS. Distributed Databases, Structure and Design of Distributed Databases.</p> <p>Data Base Design: Introduction to Data Models, Entity Relationship Model, Entities, Attributes, E-R Diagrams, Conceptual Design of a relational data base model.</p>	PPT, Chalk & Talk, Assignments, Online videos, pictures.
2	1 Sep, 2019	30 Sep, 2019	<p>Understanding SQL-I: Data Types, Creating Tables, Creating a Table with data from Another table, Inserting Values into a Table, Updating Column(s) of a Table, Deleting Row(s) from a Table, Dropping a Column, Querying database tables, Conditional retrieval of rows, Working with Null Values, Matching a pattern from a table, Functions: Character Functions, Date Functions, Group Functions, Ordering the result of a Query Aggregate Functions, Grouping the Result of a Query.</p>	Chalk & Talk, Assignments, Live demonstration of SQL, Peer Learning
4	1 Oct, 2019	31 Oct, 2019	<p>Relational Model: Storage organization for Relations, Relational Algebra, Relational Calculus, Functional dependencies, multivalued dependencies, Candidate Key and Primary Key in a Relation, Foreign Keys, Normalization - Introduction, 1NF, Partial Dependencies, 2N, data Anomalies in 2NF Relations, Transitive Dependencies 3NF</p> <p>Database Security: Database Security and Integrity: Data security risks, Password related threats, Protecting the data within the database- database privileges, system privileges and object privileges, granting and revoking privileges and Roles. Concurrency: locking techniques for concurrency control. Recovery: Causes of failures, recovery from failures, Log based recovery, checkpoints</p>	PPT, Chalk & Talk, Assignments, Online videos, pictures, Case Studies
5	1 Nov, 2019	30 Nov, 2019	<p>Understanding SQL-II: Definition and Advantages of Views, Creating and Altering Views, Using Views, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries, Define Transaction, COMMIT and ROLLBACK</p>	Chalk & Talk, Assignments, Live demonstration of SQL, Peer Learning, Group Discussion

Name of the Teacher/s : Mrs Pooja Jain

Dept : Dept. Of Computer Science & Applications

Class : PGDCA 1st Sem

Subject : Data Communications and Network (PGD-1104)

Section : NA

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	24 th July 2019	31 st August 2019	Introduction to Computer networks and applications, Network Structure and Architecture, Network Hardware and Software. Protocol hierarchies, design issues for layers, interfaces and services: connection oriented and connection less, Network structure and architecture-point to point, multicast, broadcast, Classification of networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) , LAN topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). Network Connecting Devices: Repeaters, Hubs, Bridges, Routers, Gateways and Switches. Network Reference models: OSI model, TCP / IP model. Comparison between OSI and TCP/IP.	Lecture Method, PPT
2.	1 st Sep 2019	30 th Sep 2019	Introduction to Data Communication: Analog Signal, Digital Signal, Analog vs Digital Communication; Band Width Limitation, Data rate of a channel; Physical Layer: Transmission media: Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, Telephone system, modems. Modulation techniques: AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM	Lecture Method, PPT, Class Test
3.	1 st October 2019	31 st October 2019	The Data Link Layer: Design Issues, Error Detection and Correction: Nature of errors, Parity Check, CRC, Hamming Code, Elementary Data Link Protocols: Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sliding windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.	Lecture Method, PPT, Assignment on important topics covered, MST
4.	1 st Nov 2019	30 th Nov 2019	The Network Layer: Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast, Hierarchical Routing), Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket); Internetworking: tunneling, Internet Routing, fragmentation.	Lecture Method, PPT, Discussion of old question papers

Name of the Teacher/s Ms. Deepti Sharda

Department Department of Computer Science & Applications

Class PGDCA 2nd Sem

Subject PGD-2101 (Object Oriented Concepts Using JAVA)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	9 th Jan' 20	31 st Jan' 20	OOPs concepts: Basic Concepts of Object-Oriented Programming, difference between procedure oriented and object oriented approach, Benefits , Applications of OOP's Object oriented programming with JAVA: Byte code, Java virtual machine, Java Development Kit, java tokens, constants, variables, data types, operators, expressions, control structures, defining class, creating objects, accessing class members, method overloading, static members	Lecture Method, PPT, Periodic Test, Assignment
2	1 st Feb' 20	29 th Feb' 20	Inheritance: Defining a subclass, subclass constructor, multilevel inheritance, Hierarchical inheritance. Overriding methods, Final variables, methods, and classes, Abstract Methods and Classes. Visibility Control: Public access, friendly access, protected access, private access, private protected access. Arrays: One dimensional array, declaration, creation and initialization of arrays, Array length, Two dimensional array	Lecture Method, PPT, Periodic Test, Assignment
3	1 st Mar' 20	31 st Mar' 20	Strings: String arrays, String methods, StringBuffer class Interfaces: Defining interfaces, Extending Interfaces, Implementing Interfaces. Accessing Interface variables Packages: Java API packages, Defining a package, Creating and Accessing packages, Adding class to a package, Hiding Classes Multithreaded Programming: Creating Thread, Extending the Thread class, Stopping and Blocking a Thread, Life cycle of a Thread.	Lecture Method, PPT, Periodic Test, Assignment
4	1 st Apr' 20	30 th Apr' 20	Errors and Exception Handling: Fundamentals, error types, exception types, using Try and catch, finally statement, Built-in exceptions. Applet Programming: Local and remote applets, Applet Life Cycle, Creating an executable Applet, Applet tag, Adding Applet to a HTML file, Passing parameters to Applets	Lecture Method, PPT, Periodic Test, Assignment

Name of the Teacher/s: Ms Navdeep Kaur

Department: Department of Computer Science & Applications

Class: PGDCA

Semester: 2nd

Subject: Web Technologies (PGD – 2102)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	9 th Jan, 2020	31 st Jan, 2020	Introduction to HTML/DHTML: Brief history of HTML, Building blocks of HTML, lists, links, images, image map, tables, frames, forms 2. Introduction to cascading style sheets (CSS): Introduction to Style Sheets, Types of style Sheets-Inline, embedded and external style sheets.	PPT, Chalk & Talk, Assignments, Online videos, pictures.
2	1 st Feb, 2020	29 th Feb, 2020	Fundamentals of Javascript: Features, tokens, data types, variables, operations, control constructs, strings, arrays, functions, Document Object Model, event handling. Applications related to client side form validation. 4. Javascript Objects: Core language objects, The String Object, The Math Object, and The Date Object; User Defined Objects: Creating a User Defined Object, Instances, Objects within Objects	Chalk & Talk, Assignments, Live demonstration of SQL
3	1 st Mar, 2020	31 st Mar, 2020	Introduction to PHP: Embedding PHP code in a Web Page, Basic Syntax, Defining variable and constant, PHP Data types, Operators and Expressions 6. Control Structures: Making Decisions, Doing Repetitive task with looping, File inclusion statements. 7. Functions: Defining a function, Call by value and Call by reference, recursive function, Library functions 8. Strings: Creating and accessing String, Searching & Replacing String, Formatting String, String Related Library function.	PPT, Chalk & Talk, Assignments, Online videos, pictures.
4	1 st Apr, 2020	30 th Apr, 2020	Arrays: Anatomy of an Array, Creating index based and Associative array, Accessing array Element, Looping with associative array using each() and foreach(), Some useful Library function: current(), next(), prev(), reset(), end(). Working with Forms: Super global variables, super global array, Importing and accessing user input, Combine HTML and PHP code. Working with files and Directories: Opening, closing, Coping, renaming and deleting a file, working with directories, File Uploading & Downloading	Chalk & Talk, Assignments, Live demonstration of SQL

Name of the Teacher/s : Mrs Manmeet

Dept : Dept. Of Computer Science & Applications

Class : PGDCA 2nd Sem

Subject : Software Engineering (PGD -2103)

Section : NA

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	9 th Jan 2020	31 st Jan 2020	Software Engineering Fundamentals: Characteristics, Components, Applications, Principles of software engineering, Skills of software engineer. Software Process Models: Software Development Life Cycle, Waterfall Life Cycle Model, Boehm's Spiral Life Cycle Model, Win Win Spiral Model	Lecture Method, PPT
2.	1 st Feb 2020	28 th Feb 2020	Software Project Management: Software Project management Plan(SPMP), Project scheduling Techniques- Work Breakdown Structure(WBS), Project Evaluation Review Technique (PERT), Gantt Charts, Critical path method (CPM) , Software Project Estimation and risk Management: Problem-based estimation, Process based estimation, Cost Estimation Model- COCOMO Model, Software Risks, software Risk management, Risk Management activities- Risk Assessment and Risk Control, Benefits of Risk management, SRS	Lecture Method, PPT, Group Discussion, Assignment on important topics covered
3.	1 st March 2020	31 st March 2020	Software Design Process, Design Failures and Remedies, Structured Analysis and Structured Design (SASD)-Goals and Benefits, Data Flow Diagrams (DFD), Data Dictionary(DD), Entity-Relationship diagram(ERD)	Lecture Method, PPT, MST
4.	1 st April 2020	30 th April 2020	Software Testing: Objectives of software Testing, Principles of Software Testing, Software Testing Process, Black Box Testing, White Box Testing	Lecture Method, PPT, Discussion of old question papers

Name of the Teacher/s Ms. Manpreet

Department: Department of Computer Science & Applications

Class PGDCA

Subject Computer Based Accounting (2104)

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken
	From	To		
1	9 th Jan' 20	31 st Jan' 20	Accounting: Principles, concepts and conventions, double entry system of accounting, introduction of basic books of accounts of sole proprietary concern, control accounts for debtors and creditors, closing of books of accounts and preparation of trial balance. Final Accounts: Trading, profit and loss accounts and balance sheet of sole proprietary concern with normal closing entries.	Lecture Method Problem solving
2	1 st Feb' 20	29 th Feb' 20	Introduction to Manufacturing Account, final accounts of partnership firms, limited company. Introduction to Computerized Financial Accounting, coding logic and codes required, master files, Transaction files, Introduction to documents used data collection, processing of different files, outputs obtained	Lecture Method Problem solving
3	1 st Mar' 20	31 st Mar' 20	Introduction to Computerized Inventory Control, types of inventory and associated documents, Inventory reports-nature and types, Inventory Control : ABC and Ageing analysis, Methods of Stock validation : LIFO, FIFO, actual bases, Interfacing Inventory with Financial Accounting, Purchasing Sub-Systems, Sales Order processing.	Lecture Method and Practical Examples
4	1 st Apr' 20	30 th Apr' 20	Introduction to Computerized Payroll & Invoicing Applications, Exposure to Structure, Processing and Reports, Interfacing these applications to financial Accounting. Use of Accounting package Tally: Introduction to Tally, Groups, Ledgers, Vouchers, Orders, Cost Centers and Categories, Stock, Reports in Tally	Lecture Method and Group Discussion Hands-on training on Tally