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

Name of the Teacher: Dr. Indu Arora

Department: Computer Science & Applications

Class: BSc-III (5th semester) **Section:** Voc.(Computer Applications)

Subject: Programming with VB.NET (CA09)

S. No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1	Aug, 2020	Sep, 2020	**UNIT- I Overview of the Visual Studio .NET IDE:** Introduction to .NET Framework and the Common Language Runtime, Introduction to Visual Studio.NET IDE: Menu Bar and Tool Bar, Design Window, Code Editor, Server Explorer, Solution Explorer, Toolbox, Properties Window, Object Browser, Class view Window, Working with windows forms and events, Adding different controls of Toolbox (Text Box, Label, Check Box, Radio Button, Button, Frame, List Box, Combo Box, Picture Box, Progress Bar, Timer) to Forms , Setting their Tab orders, enabling and disabling controls **UNIT- II Basics of VB.Net:** Constants, Variables, data types, Operators: Arithmetic, Concatenation, Comparison, logical operators, and assignment operators, Control structures: If, if/then/else selection structures, Select case Multiple-selection structure, While, do while, do until, For/Next, For each repetition structure	On line-Demonstrations, Lecture method, PPT, On line resources, Case studies, assignments
2	Oct, 2020	Nov, 2020	**UNIT-III Procedures:** Introduction, sub Procedures, function procedures, event procedures, commonly used Form events, creating message boxes, input boxes **Arrays and Strings:** declaring and allocating Arrays, Using Strings and String functions: len, right, left, ucase, lcase, ltrim, trim **UNIT - IV Working with Data and ADO.NET:** Understanding ADO.net Object model, components, Basic operations in ADO.net, Data Reader, Data Adapter and Data sets, connecting to and querying a data source, Using Data Grid view for viewing the records from tables.	On line-Demonstrations, Lecture method, PPT, On line resources, Case studies, assignments
3	Dec, 2020	Dec 2020	**Revision and MSTs**	Discussions and class Tests
4	Jan, 2021	Till the end of session	**UNIT- I Few options of** Menu Bar and Tool Bar, Object Browser, Class view Window, Mouse and keyboard events **Unit III: Designing Menus:** The MenuStrip control and ToolStripMenuItem objects, Different types of dialog boxes Practical File	On line-Demonstrations, Lecture method, PPT, On line resources, Case studies, assignments

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

Name of the Teacher: Dr. Indu Arora

Department: Computer Science & Applications

Class: BSc-III (5th semester)　　　　　　**Section:** Voc.(Computer Applications)

Subject: Database Management using Oracle (CA10)

S. No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1	Aug, 2020	Sep, 2020	**UNIT-I: Database Concepts:** Introduction to databases, need, database architecture, Terminology: Tuple, Degree, Attributes, Domain, Primary key, Foreign keys, candidate keys; The 12 Rules (Codd's Rule) for an RDBMS, Normalization: First, second and third Normal Form, Boyce Codd Normal Form **UNIT-II : Understanding SQL-1:** 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, ordering the result of a Query Aggregate Functions, Grouping the Result of a Query, creation and deletion of Views	On line-Demonstrations, Lecture method, PPT, On line resources, Case studies, assignments
2	Oct, 2020	Nov, 2020	**UNIT-III: Understanding SQL-II:** Managing privileges with Grant and Revoke Command, COMMIT and ROLLBACK, Functions: Arithmetic Functions, Character Functions, Date Functions, Group Functions, Querying Multiple Tables using Equi-Joins, Cartesian Joins, Outer Joins, Self-Joins, SET Operators: Union, Intersect, Minus; Introduction to Nested Queries **UNIT-IV: PL/SQL:** Introduction to PL/SQL, The Advantage of PL/SQL, PL/SQL Block Structure, PL/SQL Architecture, Fundamentals of PL/SQL, PL/SQL Data Types, Variables and Constants, Scope and Visibility of a Variable, Assignments and Expressions, Operator Precedence, Conditional and Iterative Control, Cursor Management in PL/SQL, Implicit/explicit Cursor Attributes, Exception Handling in PL/SQL; Predefined Exceptions, User Defined Exceptions.	On line-Demonstrations, Lecture method, PPT, On line resources, Case studies, assignments
3	Dec, 2020	Dec 2020	**Revision and MSTs**	On line written paper
4	Jan, 2021	Till the end of session	**Case studies of RDBMS, Practical File, composite data types and Views**	On line-Demonstrations, Lecture method, PPT, On line resources, Case studies, assignments

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

Name of the Teacher: Dr. Indu Arora

Department: Computer Science & Applications

Class: BSc-III (6th semester) **Section:** Voc.(Computer Applications)

Subject: Computer Networks (CA11)

S. No.	Date (Monthly) From	Date (Monthly) To	Topics to be Covered	Academic Activity Undertaken*
1	Month 1	Month 1	**UNIT-I 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 **Introduction to Data Communication:** Analog Signal, Digital Signal, Analog vs Digital Communication	Lecture method, PPT, On line resources, Demonstrations, assignments,
2	Month 2	Month 2	**UNIT-II: Network models:** OSI reference model, TCP/IP model and their Comparison. **Physical Layer:** Types of Transmission media, Guided (Twisted-pair, Coaxial and Optical fiber) and Unguided (Radio, Microwave and infrared), Switching: Circuit switching, Packet Switching, Message Switching, modems, Modulation techniques: AM, PM, FM; Multiplexing Techniques: definition and Types.	Lecture method, PPT, On line resources, Case studies, Assignments
3	Month 3	Month 3	**UNIT-III: The Data Link Layer:** Design Issues, Error Detection and Correction: Nature of errors, Parity Check, checksum, 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, Assignments, Peer Learning
4	Month 4	Month 4	**UNIT-IV:** The Network Layer: Design Issues, Routing Algorithms (Shortest Path, Flooding, Flow Based, Distance Vector, Link State, Broadcast), Congestion Control Algorithms and their general principles (Leaky Bucket, Token Bucket)	Lecture method, PPT, Case studies, assignments Question Banks, Peer Learning
5.	Month 5	Till end of semester	**Revision of syllabus**	Discussions and class Tests

Name of the Teacher: Dr. Indu Arora

Department: Computer Science & Applications

Class: BSc-III (6th semester)   **Section:** Voc.(Computer Applications)

Subject: Working with Linux (CA12)

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	Month 1	Month 1	**UNIT- I Introduction to Linux:** Kernel, Linux's shell, Features of Linux, History, Minimum system requirements, Boot and Root disks, Starting and stopping Linux system, passwords, logging in and out, terminal Handling commands: who, understanding wildcards, Environment variables, Understanding I/O Redirection and Piping: Introduction, cut, paste, sort, tee; Introduction to Regular Expressions and grep, Process Management: Types of processes, managing processes with ps, bg, fg, nice, kill	Online Lecture method, PPT, On line resources, Demonstrations,
2	Month 2	Month 2	**UNIT- II Using file system:** Introduction to common types of files, Filenames, Introduction to different types of directories: Parent, Subdirectory, Home directory; rules to name a directory, understanding Important directories in Linux File System, Absolute and relative filenames, creating and using files and directories(mkdir, cd cat), listing files (ls, ls-l), pwd, moving and copying files and directories (mv, cp), Removing files and directories (rm, rmdir), using wildcards with files and directories, File and directory permissions using relative and absolute methods, Changing group ownership, umask settings	Online Lecture method, PPT, On line resources, Demonstrations, Case Studies,
3	Month 3	Month 3	**UNIT - III Vi editor:** starting vi, vi modes, inserting text, quitting vi, deleting text, copying and moving text, searching and replacing text **Introduction to shell programming:** Defining Variables, Unsetting Variables, Environment Variables, Substitution, Filename Substitution (Globbing), Variable Substitution, Command and Arithmetic Substitution, Quoting, Quoting with Backslashes, Using Single Quotes, Using Double Quotes, Quoting Rules and Situations, the if Statement, the case Statement, the while Loop, the for and select Loops, Loop Control	Online Lecture method, PPT, On line resources, Demonstrations, Case studies
4	Month 4	Month 4	**UNIT-IV: Understanding System Administration activities:** Superuer (su) command, taking backups using tar, managing disk space with df and du, Mounting and Un-mounting file system with mount and unmount, Managing users	Online Lecture method, PPT, On line resources, Demonstrations,
5	Month 5	Month 5	**Revision**	Question banks Case studies