BHAVAN'S VIVEKANANDA COLLEGE

OF SCIENCE, HUMANITIES AND COMMERCE
(Accredited with 'A' grade by NAAC)
Autonomous College, Affiliated to Osmania University
Department of Computer Science
B.Sc (Computer Science) I Year, I Semester
CS-125 Fundamentals of Computers and Office
Academic Organizer for 2015 - 2016

Unit No.	Sub Unit	Details	Periods Per Sub Unit	Total Periods
I		**Fundamentals of Computers**		15
	a)	Computer Definition, Types of Computer,Logical Organization of a Digital Computer	3	
	b)	Memory & types ,I/O Devices	2	
	c)	Elements of computers (Hardware & Software),Types of intermediate code formats Operating System &types	2	
	d)	**Introduction to DOS, DOS internal commands,DOS external Commands**	2	
	e)	Introduction to Windows, Desktop(File, Folder, My Computer, My Documents, Recycle Bin, Internet Explorer, Windows Explorer)	2	
	f)	Data,information,knowledge,Information system,MIS,E-Commerce,DSS,Expert System	2	
	g)	Types of netwoking topologies	2	
II	a)	Word Basics, Starting Word, Creating a new document	1	15
	b)	opening preexisting document, the parts of a word window	2	
	c)	Typing text, selecting text, Deleting text, Undo, Redo, Repeart Inserting text, Replacing Text	1	
	d)	Formatting text, Cut, Copy, Paste - Printing	1	
	e)	Formatting your text and documents	1	
	f)	Working with Headers and Footers	1	
	g)	Table operations	1	
	h)	Macros,Mailmerge.	2	
	i)	Power point: Basics, Terminology,views,Creating Presentations, Drawing in PowerPoint, Transition and Build effects- Slide effects.	5	
III	a)	**Excel Basics: Overview of Excel features, Creating a new worksh**		15
	b)	Selecting cells entering and editing text, Entering and Editing numbers, Entering and Editing Formulas, Referencing cells, Moving cells, Copying cells ,	3	
	c)	Sorting cell data, Inserting rows, Inserting columns, Inserting cells	3	
	d)	Sheet Formatting and cell formatting. Introduction to Functions: Categories of functions and functions	5	
	e)	Excel Charts: Chart parts and terminology, Insert Charts with the Chart Wizard	4	

CS-125 Fundamentals of Computers and Office

Unit No.	Sub Unit	Details	Periods Per Sub Unit	Total Periods
IV	a)	Creating a Simple Database and Tables- Table structure and data operations. Forms , data operations with forms. Finding, Sorting and Displaying Data: Queries	5	15
	b)	Printing Reports: Simple table, Form and Database printing, Defining advanced Reports, Manual Reporting, Properties in Reports, Saving Reports	5	
	c)	Relational Database: Flat versus Relational, Types of Relationships	5	
		TOTAL NO OF PERIODS		60

Bharatiya Vidya

Bhavan

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Autonomous College, Affiliated to Osmania University
Department of Computer Science
B.Sc (Computer Science) I Year, II Semester
CS-225 Programming in 'C' Language
Academic Organizer for 2015 - 2016

Unit No.	Sub Unit	Details	Periods Per Sub Unit	Total Periods
I	a)	Introduction – Types of Programming Languages. Algorithms- Flow charts.	3	15
	b)	'C' Fundamentals: High Level Languages- Compiling programs – Integrated Development Environment – Language Interpreters –Running the program–Comments	2	
	c)	C-Tokens – Constants, Variable, Data Types, and Arithmetic Expressions. Operators.	4	
	d)	The printf and scanf functions – type casting.	1	
	e)	Decision making: The if statement – if else construct – Nested if statements – The else if construct – switch statement – conditional operator – go to statement.	5	
II	a)	Looping Statements: The while statement – The do statement – for statement, break statement, continue statement. Nesting of loops.	3	15
	b)	Working with Arrays: Defining an Array – Initializing Arrays - Multidimensional Arrays.	4	
	c)	Strings and string functions.	2	
	d)	Working with Functions: Defining a Function – Types of functions. Formal and Actual parameters. Function calling mechanisms – Call by value and Call by reference.	4	
	e)	Recursive Functions. Top down programming. Storage Classes.	2	
III	a)	Working with structures: Defining structure – Array of structures – Nested structures – Arrays within structure. Unions.	6	15
	b)	Enumerated Data types- The typedef statement.	3	
	c)	Pointers: Defining a pointer variable – using pointers in Expressions – Pointers with Memory allocation, de-allocation.	6	
IV	a)	The preprocessors: The # define statement. # include (user defined header files).	4	15
	b)	Input and output operations in 'C': character I/O – formatted I/O	4	
	c)	Input and Output operations with files – special functions for working with files (Sequential and Random).	7	
		TOTAL NO OF PERIODS		60

Department of Computer Science Academic Organizer for 2015-2016
B.Sc(Computers) II Year, OOP With Java & Data Structures
Year Wise Lesson Plan

Month	Unit	Topic	Periods per Subunit	Total Periods
June (20)	I	**Fundamentals of OOP**	4	20
		Object Oriented Paradigm		
		Basic Concepts of QOP		
		Benefits of OOP		
		Applications of OOP		
		Java Evolution	6	
		Java Features		
		How Java Differs from C and C++		
		Java and Internet		
		Java and World WideWeb		
		Web Browsers		
		Hardware and Software Requirements		
		Java Environment		
		Overview of Java Language	8	
		Simple Java Program		
		Java Program Structure		
		Java Tokens		
		Java Statements		
		Implementing a Java Program		
		Java Virtual Machine		
		Command Line Arguments		
		Constants, Variables, and Data Types	2	
		Constants		
		Variables		
July(13)	I	Data Types	4	13
		Declaration of Variables		
		Giving Values to Variables		
		Scope of Variables		
		Symbolic Constants		
		Type Casting		
	II	Operators and Expressions	3	
		Decision Making and Branching	6	
Aug(15)	II	Decision Making and Looping	7	15
		Classes, Objects and Methods	8	
Sep(13)	III	Interfaces: Multiple Inheritance	6	13
		Packages: Putting Classes Together - -	7	
Oct(4)	III	Arrays	4	4

Nov(18)	III	Arrays,Strings and Vectors	8	
	IV	Multithreaded Programming	5	18
		Managing Errors and Exceptions	5	
Dec(20)	IV	Applet Programming	10	
	V	**Simple Sorting**		
		Bubble Sort	1	
		Selection Sort	1	20
		Insertion Sort	2	
		Quick Sort	2	
		Stacks and Queues	4	
Jan(17)	V	Priority queue,circular queue,Linked Lists	6	
		Binary Trees	6	
		Graphs		
		Introduction to Graphs		17
		Searchs	5	
		Minimum Spanning Trees		
		Connectivity in Directed Graphs		
TOTAL NO.OF.CLASSES				120

Department of Computer Science Academic Organizer for 2015-2016
B.Sc(Computers) III Year DBMS
Year Wise Lesson Plan

Month	Unit	Topic	Periods per Subunit	Total Periods
June(18)		**Database Systems Introduction and Fundamentals.**		18
	I	Database Systems: Introducing the database and DBMS, Why the database is important, Historical Roots: Files and File Systems, Problems with File System Data Management, Database Systems.	6	
	I	Data Models: The importance of Data models, Data Model Basic Building Blocks, Business Rules, The evaluation of Data Models, Degree of Data Abstraction.	6	
	I	The Relational Database Model: A logical view of Data, Keys, Integrity Rules, Relational Set Operators, The Data Dictionary and the system catalog, Relationships with in the Relational Database, Data Redundancy revisited, Indexes, Codd's relational database rules.	3	
	III	Introduction to SQL: Data Definition Commands, Data Manipulation Commands	3	
July(12)		**Data Modeling and Normalization**		12
	II	Entity Relationship Model: The ER Model, Developing ER Diagram, Database Design Challenges: Conflicting Goals.	5	
	II	Advanced Data Modeling: The Extended Entity Relationship Model, Entity clustering, Entity integrity: Selecting Primary keys, Design Cases: Learning Flexible Database Design.	5	
	III	Select queries, Advanced Data Definition Commands,	2	
Aug(10)		**Data Modeling and Normalization**		10
	II	Normalization of database tables: Database Tables and Normalization, The need for Normalization, The Normalization Process, Improving the design, Surrogate Key Considerations, High level Normal Forms, Normalization and database design, denormalization.	6	
	III	Advanced Select queries, Virtual Tables, Joining Database Tables.	4	
sept(10)		**Interaction with Databases and Construction of Information System**		10
	III	Database Design: The Information System, The Systems Development Life Cycle, The Database Life Cycle, Database Design Strategies, Centralized Vs Decentralized design.	5	
	III	Advanced SQL: Relational Set Operators, SQL Join Operators, Subqueries and correlated queries.,SQL Functions	5	
Oct(4)	III	Procedure SQL	4	4
		Transaction Management in DBMS Environment		
	IV	Transaction Management and Concurrency Control: What is transaction, Concurrency control, Concurrency control with locking Methods, Concurrency control with time stamping methods, concurrency control with optimistic methods, database recovery management.	6	

Nov(14)	IV	Distributed Database Management Systems: The evolution of Distributed Database Management Systems, DDBMS advantages and Disadvantages, Distribution Processing and Distribution Databases, Characteristics of Distributed database management systems, DDBMS Components, Levels of Data and Process distribution.	6	14
	III	Procedure SQL	2	
Dec(10)	IV	Distributed database Transparency Features, Distributed Transparency, Transaction Transparency, Performance Transparency and Query Optimization, Distributed Database Design, Client Server VS DDBMS	5	10
	III	Procedure SQL	5	
Jan(12)	V	**Data Warehouse Concepts and Database Administration**		12
		The Data Warehouse: The need for data analysis, Decision support systems, The data warehouse, Online analytical processing, Star schemas, Data mining, SQL extension for OLAP.	6	
		Database Administration: Data as a Corporate asset, The need for and role of databases in an organization, The evolution of the database administration function, The database environment's Human Component, Database administration Tools, The DBA at work.	6	
		TOTAL		90

Department of Computer Science Academic Organizer for 2015-2016
B.Sc(Computer Science) III Year: Web Technologies
Year - Wise Lesson Plan

Month	Unit	Topic	Periods per Subunit	Total Periods
June(18)	I	**HTML Basics**		18
		Introduction: HTML, XML, and the World Wide Web.	2	
		HTML: Basic HTML, The Document body, Text, Hyperlinks, Adding more formatting, Lists, Tables, Using colors and images, Images.	3	
		More HTML: Multimedia objects, Frames	12	
July (12)	I	**More HTML**: Frames, Forms-towards interactivity, The HTML document Head in detail, XHTML- An evolutionary markup.	3	12
	II	**Introduction to the Style Sheets and Java Scripts.**		
		Cascading Style Sheets: Introduction, Using styles: Simple examples, Defining your own styles, Properties and values in styles, Style sheets- A worked example, Formatting blocks of information, Layers.	6	
		An introduction to Java Script: What is dynamic html, Java Script, Javascript—The basics, Variables	3	
Aug(12)	II	Javascript—String manipulation, Mathematical functions, Statements, Operators, Arrays	12	12
Sept(9)	II	Javascript—Functions.	1	9
	III	**Objects in Java Script and DHTML.**		
		Objects in Java Script: Data and objects in java script, Regular expressions, Exception Handling, Built in objects, Events.	6	
		Dynamic HTML with Java Script: Data validation, Opening a new window	2	
Oct(4)	III	Dynamic HTML with Java Script: Messages and Confirmations	4	4
Nov(14)	III	The status bar, Writing to a different feames, Rollover buttons, Moving images, Multiple pages in a single download, A text-only menu system, Floating logos.	7	14
	IV	**ASP and XML.**		
		Active Server Pages and Java: Active Server Pages, Java. **XML**: Defining Data for Web applications: Basic XML	7	
Dec(10)	IV	Document type definition, XML schema, Document Object Model, Presenting XML. **Good Design**: Structure, Tables versus Frames, Accessibility, Internationalization, Exercises.	7	10
	V	**Web Based Softwares and Protocols.** **Useful Software**: Web browsers, Perl, Web servers, mod_perl, Databases, Accessing your ISP, Exercises **Protocols**: Protocols, IP	3	
Jan(11)	V	Protocols: Protocols, IP and TCP, Hyper Text Transfer Protocol, Common Gateway Interface, The Document Object Model, introducing the Document Object Model, Exercises. **Case Study**: The plan, The data	11	11
TOTAL				90