BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES AND COMMERCE
Sainikpuri, Secunderabad-500094
Autonomous College
Affiliated to Osmania University

TEACHING PLAN 2019-20

Name of the Faculty: K. Saraswathi Devi	Department:Computer Science	Year/Semester: I / I	No. of Classes per Week: (4 hrs/Theory)4 hrs Practicals

Learning Objective:
To learn basics of C,Constants, Variables, Data types,Operators and Expressions,Managing Input and Output Operations
To learn Control Flow statements
To learn Arrays, Strings, Function,Storage classes
To learn Structures, Unions, Pointers and Dynamic Memory Allocations

Program: B.C.A Subject: Programming in C

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 3rd Week	1	Types of Programming Languages, Algorithms, Flow charts, High Level Languages.	Types of Laanguages Macine,Assembly,High Level	Model Demonstration for Variable declaration. Initilization with swapping example.	
2	June 4th Week		Introduction, Basic Structure of C Program,Constants, Variables and Data types: Character Set,		Chalk and board and LCD presention with sample programmes in Lab Class.	Conducting quiz on these concepts making students involve in concepts
3	July 1st Week		C Tokens, Keywords and Identifiers, Constants, Variables,		Chalk and board and LCD presention with sample programmes in Lab Class.	Conducting quiz on these concepts making students involve in concepts

4	July 2nd Week		Data Types, Declaration of Variables(primary type declaration), Assigning Values to Variables,	Programing Implementation with realtime problems.	Chalk and board and LCD presention with sample programmes in Lab Class.	Making students(experts) explain about the concepts in brief
5	July 3rd Week	2	Defining Symbolic Constants.Operators and Expressions: Arithmetic ,Relational,Logical, Assignment , Increment and decrement , Bitwise ,	Diffrence between Mathematical and C Expression Framming methods.	Chalk and board and LCD presention with sample programmes in Lab Class.	Conducting quiz on these concepts making students involve in concepts
6	July 4th Week		Special ,Evaluation of expressions, Precedence of arithmetic operators.Managing Input and Output Operations: Formatted input statement and Formatted output statement .	Diffrence between Mathematical and C Expression Framming methods.	Chalk and board and LCD presention with sample programmes in Lab Class.	Conducting quiz on these concepts making students involve in concepts
7	July 5th Week		Simple if statement, if else statement, Nested-if statements,		Chalk and board and LCD presention with sample programmes in Lab Class.	Group Discussion for identifing Various types of errors and rectification methods.
8	Aug 1st Week		else if ladder, switch statement, conditional operator.	Programing Implementation with realtime problems.	Chalk and board and LCD presention with sample programmes in Lab Class.	**Group Discussion** for loops
9	Aug 2nd Week		while statement, do statement,		Chalk and board	
10	Aug 3rd Week		for statement, nesting of loops Jumping out of a loop (using break statement), Skipping a part of a loop(using continue	Programing Implementation with realtime problems.	Chalk and board and LCD presention with sample programmes in Lab Class.	more example programs

11	Aug 4th and 5th Week	3	Definition of an array, One-Dimensional Arrays: Declaration and initialization of One-Dimensional Arrays, Two-	Programing Implementation with realtime problems.	Chalk and board and LCD presention with sample programmes in Lab Class.	Making students(experts) explain about the concepts in brief
12	Sep 1st Week	3 & 4	Definition of a String, Declaring and Initializing String variables, String Handling functions[only built-in functions strlen(),strcpy(),strcat(),strcmp()]	Programing Implementation with realtime problems.	LCD presention with sample programmes in Lab Class.	Group Seminar on functions
13	Sep 2nd Week		Need for User-defined Functions, The form of C functions, Category of Functions: No arguments and no return	Programing Implementation with realtime problems.	LCD presention with sample programmes in Lab Class.	Making students(experts) explain about the concepts in brief
14	Sep 3rd Week		Storage Classes (auto, static, register, extern).Structure definition, Giving values to members, Structure initialization, Arrays of	Programing Implementation with realtime problems.	Chalk and board and LCD presention with sample programmes in Lab Class.	More example programs
15	Sep 4th Week	4	Declaring and Initializing pointers, Accessing a variable through its pointer.Different Memory allocation	Programing Implementation with realtime problems.	LCD presention with sample programmes .	Group Discussion for identifing Variables,pointers and uses of pointers

Learning Outcomes:

By the time students completes the course they can write their own basic c programs.

Implement different control statements.

Program the concepts of arrays, strings and functions.

Apply the concepts of structures, unions, pointers, preprocessor directives and files.

BHAVAN'S VIVEKANANDA COLLEGE

TEACHING PLAN 2019-20

PROGRAM: BCA	**PAPER TITLE: FUNDAMENTALS OF INFORMATION TECHNOLOGY**		
Name of the Faculty: CH N V MALLIKHARJUNA RAO	**Department: Computer Science**	**Year/Semester: I/I**	**No. of Classes per Week: 4 hrs/Theory**

Learning Objectives:

- To educate students with fundamental knowledge of operating system & database concepts.
- To introduce communication and network technologies.
- To impart knowledge in applications of IT

S.No		Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1		June 3rd Week	1	Computer Basics : Introduction , Characteristics of a computers ,applications of computers (Science , education ,medicine &health care entertainment ,banking)	Real time examples	Chalk and board and LCD presention	
2		June 4th Week	1	classification of computers (Micro ,Mini , Mainframe, Super Computers), the computer system , Components of a computer system –input unit ,output unit , central processing unit (CPU),Arithmetic /Logic unit(ALU) , registers ,Control unit(CU) ,main memory unit , cache memory, memory		Chalk and board and LCD presention	Group discussion on Components of Computer
3		July 1st Week	1	types of secondary storage devices, Instruction set , CISC &RISC(introduction, advantages and disadvantages only).		Chalk and board and LCD presention	
4		July 2nd week	2	Programming languages: Introduction, program development cycle		Chalk and board and LCD presention	
5		July 3rd week	2	characteristics of a good program, types of programming languages (Machine, Assembly, High-level languages), Generations of programming		Chalk and board and LCD presention	
6		July 4th week	2	operating system: types & functions of O.S ,popular O.S like Windows &UNIX ,languages translators (Compiler , interpreter ,assembler).Data base fundamentals:	Examples on different feasibilities	Chalk and board and LCD presention	Seminar on OS
7		July 5th week	2	Introduction ,data versus Information		Chalk and board and LCD presention	
8		August 1st week	2	base definition , File oriented approach Vs DBMS approach		Chalk and board and LCD presention	
9		Augus 2nd week	3	physical data concepts(Sequential ,Direct ,indexed sequential) ,Data ware housing &data mining.		Chalk and board and LCD presention	

10		August 3rd week	3	Data Communication and computer networks : Data communications ,components		Chalk and board and LCD presention	
11		August 4th week	3	, data transmission mode(Simplex ,half duplex ,full duplex modes)			
12		August 5th week	3	analog and digital data transmission , transmission media-guided media(twisted pair ,Coaxial cable ,optical fibre) & unguided media		Chalk and board	Seminar on Transmissions
13		September-1st week	3	Asynchronous and synchronous transmission , switching (circuit switching ,packet switching ,message switching) types of networks –LAN ,MAN, WAN .Network topologies(bus topology ,ring topology ,star topology ,tree topology, mesh topology) ,Network topologies and Introduction ,basic internet terms(website ,website ,home page ,browsers) ,URL ,domain names.		Chalk and board and LCD presention	Group Discussuion on Topologies
14		September-2nd week	3 & 4	, hyper text , getting connected to internet , types of internet connections (Dial-up ,ISDN ,cable modem ,leased line ,DSL, broad band) w.w.w , e-mail ,file transfer protocol(FTP) video conferencing , Computer Security: Definition ,Security threats ,malicious programs ,other destructive programs. Multimedia: introduction		Chalk and board and LCD presention	Seminar on Internet
15		September 4th week	4	building blocks of multimedia, desirable features of multimedia system, multimedia applications, virtual reality ,E-commerce, advantages and		Chalk and board and LCD presention	
		Learning Objectives :• Be familiarized with basic Operating System & Database concepts **• Get knowledge about networks &its Components.** **• Be familiarized about internet and its applications.**					

BHAVAN'S VIVEKANANDA COLLEGE

TEACHING PLAN 2019-20

Name of the Faculty: B.Divya Rekha	Department: Computer Science	Year/Semester: I/I	No. of Classes per Week: (4 hrs/Theory)4 hrs Practicals

Learning Objective:

1. To define the basic concepts of Information Systems and development of Information Systems
2. To describe the functional business areas
3. To understand decision making process in an organization
4. To explain the Information Security Risks,ethical Issues and Human Resource Mnagement

PROGRAM: BCA **SUBJECT: ISTA**

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 4th Week	1	Managerial View of IS – Functions of Management, Management role.	Real time examples taken	Chalk and board and LCD presention	Group Discussion
2	July 1st Week		Levels of Management, Frame work for IS, Sequence of development of IS. Systems – Concepts.		Chalk and board and LCD presention	conducting quiz in these concepts
3	July 2nd Week		Working of a system, Systems approach to problem solving, feedback,IT and Business process.Applications of Information Systems to functional business areas.	Real time examples taken	Chalk and board and LCD presention	Group Discussion
4	July 3rd Week	2	Operations and Transactions, The value and cost of information. Decision Levels,Data Capture, Data Quality, Role of Accounting ,Transaction, Processing systems		Chalk and board and LCD presention	conducting quiz in these concepts
5	July 4th Week		Operational Information systems – Financial Accounting, Marketing, Production, HRM	Real time examples taken	Chalk and board and LCD presention	conducting quiz in these concepts
6	Aug 1st Week		Models and decision support:Introduction to models-physical,process and business modeling		Chalk and board and LCD presention	Group Discussion

7	Aug 2nd Week	2	Types of Business Models,Group Decision Process, DSS and EIS (Expert Information System).	Real time examples taken	Chalk and board and LCD presention	conducting quiz in these concepts
8	Aug 3rd Week	3	Decision in Business Areas - Accounting, Finance, Marketing, Human resource Management.		Chalk and board and LCD presention	Group Discussion
9	Aug 4th Week		Production and Design.IS planning - Determination of Information requirements, Business	Real time examples taken	Chalk and board and LCD presention	Group Discussion
10	Sep 1st Week		systems planning, End /Means Analysis, Organizing the IS plan,Systems Analysis and Design		Chalk and board and LCD presention	Group Seminar
11	Sep 2nd Week		System Developmentlife cycle, proto typing, SSAD, project management cost benefit analysis, detailed design ,Implementation.	Real time examples taken	Chalk and board and LCD presention	Group Seminar
12	Sep 3rd Week	4	Management Control: Control theory. Control of systems development, control of operations.		Chalk and board and LCD presention	Group Seminar
13	Sep 4th Week		Responsibilities in distributed data processing	Real time examples taken	Chalk and board and LCD presention	Group Seminar
14	Sep 5th Week		IS Security risks, common controls.	Real time examples taken	Chalk and board and LCD presention	Group Seminar
15	Oct 1st Week		common threats, IS protection, Ethical issues Societal implications, Social responsibilities.	Real time examples taken	Chalk and board and LCD presention	Group Seminar

Learning Outcomes:

1. Interpret the basic concepts of Information System and plan to develop Information Systems.
2. Identify and analyze functional business areas
3. Plan the decision making in diffgerent business areas
4. Illustrate Information Security issues and Human Resource Mnagement

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TEACHING PLAN 2019-20

Name of the Faculty: K. Saraswathi Devi	Department: Computer Science	Year/Semester: I/II	No. of Classes per Week: (4 hrs/Theory)4 hrs Practicals

Learning Objective:
To learn basics of C++, Control Flow, Arrays, Strings.
To learn Functions, OOP's basics, Class and objects, Constructors, destructors
To learn Inheritance and Polymorphism
To learn Templates and Exception Handling.

Program: B.C.A Subject: Program in C++

S.No	Month	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	December	December 1st Week	1	C++ Structure I/O Tokens, Data types in C++, Variable-Declaration and initialization.	Added features in C++ compared to C language. Uses of scope resolution operator	Chalk and Board LCD presention with sample programmes in Lab Class.	Group discussion on differences between C and C++ .Conducting quiz on these concepts making students involve in concepts
2		December 2nd Week		Types of operators,Operator precedence,manipulators,typecasting, Expressions and types	Added features in C++ compared to C language. Uses of scope resolution operator	Chalk and Board LCD presention with sample programmes in Lab Class.	Group discussion on differences between C and C++ .Conducting quiz on these concepts making students involve in concepts
3		December 3rd Week		Branching statements,Looping statements, 1D,2D arrays, String- initilization, string Manipulations		Conducting quiz on these concepts making students involve in concepts	Conducting quiz on these concepts making students involve in concepts
4		December 4th Week		Introduction to Function components,Library functions,Parameter passing		Chalk and Board	Making students(experts) explain about the concepts in brief
5		December 5th Week		Call by value, Call by address, Call by reference, Recursive Functions.		Chalk and board	
6	Jan	January 1st Week	2	Introduction to OOP,Concepts,Benefits and Applications of OOP	Real time examples of objects	LCD(examples), chalk and board	Conducting quiz on these concepts making students involve in concepts
7		January 2nd Week		Introduction to Classes and Objects,Specifing a class,objects	Live examples of classes and objects	LCD presention witn sample programmes in Lab Class.	Seminar on classes and objects

8	u a r y	January 3rd Week		Accessing class members, Inline functions, nesting of member functions.		chalk and board	Assignments
9		January 4th Week		Introduction to Constructors and Destructors,Types of Constructors		chalk and board	
10		January 5th Week		Copy constructors, Destructors,Introduction to Inheritance, Single,Multilevel inheritance		chalk and board	
11	F e b r u a r y	February 1st Week	3	Multiple,Hierarchical inheritance, Function overloading, Introduction to Operator Overloading	Advantages of inheritance	LCD(examples), chalk and board	Seminar on different inheritances
12		February 2nd Week		Overloading with Unary operator, Pointers,Virtual functions		chalk and board	
13		February 3rd Week	4	Templates Introduction,Function Templates Class Templates,		chalk and board	Group Discussion for identifing Various types of errors and rectification methods.
14		February th Week	4	Basics of Exception Handling Class Templates, Basics of Exception Handling		chalk and board	Group Discussion for identifing Various types of errors and rectification methods.
15		February 5th Week	4	Multiple Catch Statements	Examples on exceptions	LCD(examples), chalk and board	**Assignments Seminar on exception handling with examples**

Learning Outcomes:

By the time students completes the course they can write their own basic c++ programs.
solve problems using Object Oriented Programming concepts.
Use the concepts of Inheritance and Polymorphism for real time implementation.
Create Templates and learn to write programs using Exception handling.

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TEACHING PLAN 2019-20

Name of the Faculty: G Mahesh Kumar	Department: Computer Science	Year/Semester: BCA I/II (Organizations and Functions)	No. of Classes per Week: (4 hrs/Theory)

Learning Objectives:
To explain the roles and responsibilities of management, and various forms of organizations.
To describe delegation, motivation and leadership.
To explain functions of marketing and sales promotions.
To describe financial planning and techniques of managerial control.

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	November 5th Week	1	Nature and Scope of Management – Meaning of Management, Characteristics of Management, Distinction between Management and Administration		Chalk and Black Board , Marker Board	**Discussion** on Management and
2	December 1st Week		Levels of Management, Skills of Management, Importance of Management.Functions and Principles of Management – Classifications of the Functions of Management, Managerial and Operative Functions	Management Skills	Chalk and Black Board , Marker Board	
3	December 2nd Week		Brief Description of Managerial Functions, Principles of Management, Fayol's Fourteen Principles of Management, Universality of Management.		Chalk and Black Board , Marker Board	
4	December 3rd Week		Line and Staff Organisation, Distinction between Line and Staff, Conflicts between Line and Staff, Committees, Project Organisation, Matrix Organisation.		Chalk and Black Board , Marker Board	
5	December 4th Week	2	Delegation and Decentralisation of Authority		Chalk and Black Board , Marker Board	
6	January 1st Week		Meaning of Decentralisation of Authority, Decentralisation and Delegation, Advantages (Need) of Decentralisation, Disadvantages of Decentralisation.		Chalk and Black Board , Marker Board	

G. Mahesh

7	January 2nd Week	2	Significance of Motivation, Features of a Sound Motivational System, Motivational Process: An Overview, Maslow's Need Hierarchy Theory, McGregor's Participation Theory, Herzberg's Motivation Hygiene		Chalk and Black Board , Marker Board	
8	January 3rd Week		Management vs Leadership, Formal and Informal Leaders, Significance of Leadership, Functions and Techniques of Leadership, Leadership Styles(Types of Leaders) , Qualities of a Good Leader.	Leadership Skills	Chalk and Black Board , Marker Board	**Group Discussion** on Leadership
9	January 4th Week	3	of the Marketing Concept, Features of the Marketing Concept, Distinction between Marketing and Selling, Marketing Mix – Concept, Elements and Determinants, Meaning of Marketing	Latest Marketing Communicati	Chalk and Black Board , Marker Board	
10	January 5th Week		Channel of Distribution, Types of Distribution Channels, Choice of a Channel Distribution, Choice of Middlemen, Types of Middlemen, Functions and Services of a Wholesaler, Retailer, Types of Retail		Chalk and Black Board , Marker Board	
11	February 1st Week	3	Consumer Cooperative Stores, Super Market, Hire-Purchase and Instalment Shops, Elimination of Middlemen. Advertising, Salesmanship and Sales Promotion – Meaning and Nature of Advertising, Objectives		Chalk and Black Board , Marker Board	**Group Discussion** on latest
12	February 2nd Week		Scientific Advertising, Advertising Copy, Themes of Advertisement, Forms of Advertising Media, Choice of Advertising Media, Personal Selling and Salesmanship, Sales Promotions, Techniques of Sales	Latest Advertising Techniques	Chalk and Black Board , Marker Board	
13	February 3rd Week	4	Objectives of Business Finance, Scope of Financial Management, Financial Planning, Factors Influencing Financial Planning, Requirements of a Sound Financial Plan, Estimating the Capital Needs.		Chalk and Black Board , Marker Board	
14	February 4th Week		Fixed Capital, Working Capital.Special Financial Institutions – Objectives and Significance of Special Financial Institutions, Industrial Finance Corporation of India(IFCI), State Financial Corporations (SFCs).		Chalk and Black Board , Marker Board	
15	March 1st Week		Industrial Development Bank of India (IDBI Ltd.), Industrial Investment Bank of India (IIBI), Small Industries Development Bank of India (SIDBI), Role of Special Financial Institutions.Techniques of Managerial Control		Chalk and Black Board , Marker Board	
	Learning Outcomes: Analyze concepts and demonstrate skills that are fundamental to organizational development. Identify and practice the best process of delegation, motivation and leadership qualities. Inculcate marketing and sales capabilities. Analyze the best financial institutions.					

BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES AND COMMERCE

Sainikpuri, Secunderabad-500094 Department of Computer Science

TEACHING PLAN 2019-20

Name of the Faculty: **K.Srinivasa Rao**	Department: Computer Science	Year/Semester: I/II	**No. of Classes per Week:** **4 Hrs Theory & 4 Hrs Practicals**

Learning Objective: • To know fundamentals of computer, hardware, software and bus structure.
• To identify the different mother board components connected to a computer.
• To introduce processors, power supply and power protection systems with backup.
• To learn how to assemble a system and install various drivers andoperating systems.
• To learn how to troubleshoot and the basics of boot sequences, methods and startup utilities

Programme: B.C.A -II Semester Subject: I.T Hardware

S.No		Month & Week	Units	Syllabus	Additional Input/ Value Addition	Teaching Method	Student/ Learning activity
1	Novembe r	November 5th Week	1	Unit-I: Overview of computer systems - features and components , Mother board: parts on motherboard	Analog versus Digital Computers	Chalk and Board	Computer Baisc Parts & Types
2	D e c e m b e r	December 1st Week		Mother board - Form factors , interface connections Bus:Introduction, types–processor bus, memory bus		Chalk and Board	Practically PCB's Demonstration
3		December 2nd Week		Bus- address bus, I/O Buses(PCI, PCI Express, AGP)	Adoptor, Interface Buses	Chalk and Board	BUS shown in Practical Session
4		December 3rd Week		Bus - Fire wire, USB , Microprocessor-Introduction , Processor specification	64 Bit & Plug n Play Buses	Chalk and Board	Microprocessors Sockets & Slots
5		December 4th Week		Microprocessor – Intel processors basics (8088, 486,P4& i3). Chipsets , Unit-II: Memory –Introduction to System logical memory layout	86X familiy (8086, 80286, 80386)	LCD PPT	PGA & SPGA grid Arrays
6		January 1st Week	2	Unit-II: Memory –Introduction to physical memory –Types ROM & RAM , Power Supply -Functions and operation Power Supply - Power protection systems (surge suppressors, line conditioners,	Difference between A.C & D.C voltages	Chalk and Board and LCD PPT	Logical memories, Preacautions due to Power Failures of PC

7.	January	January 2nd Week		backup power-UPS/SPS), Input Devices - Keyboard, keyboard types,Keyboard switch design Input Devices - keyboard interface connectors	Keyboard & Mouse Basics	LCD PPT	Circuit layers & Kyeboard Controller
8		January 3rd Week	2	Mouse, mouse types and interfaces, Output devices – Touch screen/ Touch pad Output devices – Video Display – Monitors and types, Video card types		LCD PPT	Display Card comparisions
9		January 4th Week	3	Unit-III: Communications - Serial ports, parallel ports, components of LAN- LAN cables, network topologies.	Cable Data Transfer Rate	Chalk and Board	Data Transfer Serial & Parallel
10		January 5th Week		Sound card - Applications, installation. Hard Disk Drives - components,operations, interfaces (IDE,SATA, SCSI)	Connectors by Colors	Chalk and Board	Plottres, Sectirs, Tracks of HDD
11	February	February 1st Week		CD-ROM drives -CD technology, specification, storage capacities, and Drive formats.	Compare Optical & Magnetic media	LCD PPT	Plottres, Sectirs, Tracks of Optical Media
12		February 2nd Week		DVD-Introduction, working principle,storagecapacities BD-Blu ray Disc-Introduction, basics of USB	compare CD, DVD & BD	Chalk and Board	CD, DVD & BD Capacities of Data Storage
13		February 3rd Week	4	Unit-IV: Building a system - Tools for maintenance, Disassembly and reassembly procedures, Preventive maintenance, Active preventive maintenance,	Review of System Components	LCD PPT & LAB WORK	General Tools for PC
14		February 4th Week		Preventive maintenance, passive preventive maintenance, Diagnostic tools -POST, IBM Diagnostics	PC- Tools open source or licenced	LCD ppt	Precautions to work on PC
15		March 1st Week		Diagnostic tools - general purpose diagnostic programs, Disk Diagnostics, Operating systems software,boot process-dos/windows, Anti-virus and troubleshooting	Boot from CD OR HDD	Chalk and Board LCD PPT	Bootstrab Loader System File Names
		Learning Outcomes: • Be familiar with computer, hardware, software and bus structure. • Be able to identify the different mother board components connected to a computer. • Be familiar with processors, power supply and power protection systems with backup. • Be able to assemble a system and install various drivers andoperating systems. • Be able to troubleshoot and understand the basics of boot sequences, methods and startup utilities.					

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TEACHING PLAN 2019-20

Name of the Faculty:	Department:	Year/Semester:	No. of Classes per Week:
M.Amitha	Computer Science	I/II	4 hrs/Theory

Learning Objective:
To impart knowledge of layers in networking.
To familiarize with physical layer and media.
To have knowledge about data link layer and operations. To have knowledge about the functionalities of network layer.

PROGRAM: BCA					COURSE: DATA COMMUNICATION AND NETWORKING		
SNo	**Month**	**Month & Week**	**Units**	**Syllabus**	**Additional Input/Value Addition**	**Teaching Method**	**Student/ Learning activity**
1	Nov	Nov 4thWeek	1	Datacommunication, networks, protocols and standards.Layered tasks,OSI model		Chalk and board , LCD presentation	
2	December	Dec 1st Week	1	TCP/IP protocol suite,Addressing. Analog and Digital,periodic Analog signals,Digital signals	Differences between OSI and TCP/IP	Chalk and board , LCD presentation	seminar conducted
3		Dec 2nd Week	1 & 2	Tansmission impairments.Digital to Digital-line coding(unipolar,polar,bipolar),block codinganalog to digital conversion(PCM,DM) Analog transmission:digital to analog:ASK,PSK,PSK,QAM	Software to demonstrate analog waves	Chalk and board , LCD presentation	
4		Dec 3rd Week	2	Analog to Analog (AM,FM,PM). Multiplexing:frequency-division, Wavelength-Division Multiplexing,Time -division multiplexing. Transmission media:Guided Media,unguided Media. Switching:Circuit switched networks	Animated video to understand differences between FDM and TDM	Chalk and board , LCD presentation	

5		Dec 4th Week	2 & 3	Datagram networks,virtual circuit networks Error detection and correction:introduction,block coding(error detection ,correction,hamming distance)	Animated video to understand differences between Virtual Circuit and Datagram	Chalk and board , LCD presentation	practice examples (line coding)
6	January	Jan 1st Week	3	Cyclic codes(CRC),checksum		Chalk and board , LCD presentation	
7		Jan 2nd Week	3	Datalink control: Framing(fixed,variable size),flow and error control,protocols,noiseless channels,noisy channels(stop and wait automatic repeat req,go-back-N	Differences between protocols	Chalk and board , LCD presentation	practical knowledge about media
8		Jan 3rd Week	3	Wired LANs-Ethernet:IEEE standards(data link,physical layer)Standard Ethernet(MAC Sublayer,physical layer)		Chalk and board , LCD presentation	
9		Jan 4th Week		Internal Exam(CIA-1)			
10		Jan 5th Week	3	Fast ethernet (MAC Sublayer,physical layer) Connecting LANs- connecting devices- Hubs,repeaters,bridges,switches,routers,gateway	components to demonstrate about HUB,ROUTER,	Chalk and board , LCD presentation	practical knowledge about CONNECTING DEVICES
11	February	Feb 1st Week	4	Logical Addressing:IPV4 Address-Address Space,notation,classful and classless Addressing	differences between IPV4 and IPV6	Chalk and board , LCD presentation	
12		Feb 2nd Week	4	Internet protocol:IPV4,Address Mapping (ARP,RARP,BOOTP,DHCP)ICMP	importance of protocols	Chalk and board , LCD presentation	seminar conducted
13		Feb 3rd Week	4	Direct and indirect Delivery ,Forwarding techniques,forwarding process,Routing table		Chalk and board , LCD presentation	
14		Feb 4th Week	4	Distance routing ,link state Algorithm	importance of shortest path	Chalk and board , LCD presentation	
15	March	March	4	link state Algorithm		Chalk and board , LCD presentation	

Learning Outcomes:

- **Be familiarized with fundamental concepts and terminologies in networking, seven layers of OSI model and digital transmission.**
- **Be familiarized with analog transmission, transmission media and know about FDM, TDM. (Multiplexing techniques) and switching networks.**
- **Acquire a sound knowledge about data link layer functionalities such as error detection, DLL protocols, LANs and connecting LANs.**
- **Have a thorough understanding in functionalities of network layer such as addressing, internet protocols, mapping, forwarding, delivering and routing.**

BHAVAN'S VIVEKANANDA COLLEGE

TEACHING PLAN 2019-20 (BCA - Operating Systems)

Name of the Faculty: N BHASKAR	Department: Computer Science	Year/Semester: II/III	No. of Classes per Week: (4 hrs/Theory)4 hrs Practicals

Learning Objective:

- To impart knowledge of operating system services before learning how these services are implemented.
- To understand a process and how it is synchronized and scheduled.
- To understand different approaches of memory management.
- To understand the structure and organization of file system.

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 2nd week	1	Operating Systems – Functions, Virtual Computer.	Other Operating System Types and their benefits	Chalk and board.	
2	June 3rd week		Operating System Interface - System Calls, Examples of System Call Interface. Process Concept: Processes - Creation, States, Process Switching, Process Tables and Process Descriptors.	Examples related to System calls	Chalk and board.	
3	June 4th week		CPU Scheduling Algorithms. IPC Patterns - Mutual Exclusion, Signaling Producer-Consumer, Client-Server, Database Access and Update.		Chalk and board.	Student class exercise.
4	July 1st week	2	Deadlock - Conditions for Deadlock, Dealing with Deadlocks, Two-Phase Locking. Synchronization, Semaphores, Monitors.	Different systesm go into deadlock, without proper monitoring	Chalk and board.	Case Study in group discussion.
5	July 2nd week		Thread - Concept, System Calls, Advantages and Uses.		Chalk and board.	
6	July 3rd week		Memory Management - Linking and Loading a Process, Dynamic Linking, Memory Management System Calls.		Chalk and board.	
7	July 4th week		Virtual Memory - Virtual Memory(definition only) ,Dealing With Fragmentation, Segmentation, Paging, Page Replacement Algorithms,		Chalk and board.	
8	July 5th week		Trashing (definition only) and Load Control(definition only).		Chalk and board.	
9	Aug 1st week		I/O Devices - Devices and Controllers, Disk Drives, Disk Controllers.		Chalk and board.	

N. Bhaskar

10	Aug 2nd week	3	Disk Device Driver Access Strategies, Unification of Files and Devices, Generalized Disk Device Drivers.		Chalk and board.	
11	Aug 3rd week		File System - Need for Files, File Naming, File System Objects and Operations.	Explantion on different file systems of IOS, LINUX.	Chalk and board.	
12	Sep 2nd Week		File System Organization - File Descriptors, Locating File Blocks on Disk, File System Reliability.		Chalk and board.	
13	Aug 5th week	4	Resource Management – Resources in OS, Types of Resources, Protection of Resources, User Authentication,	Live examples related to real usage environment in network systems	Chalk and board.	
14	Sep 1st week		Mechanisms for Hardware Protection, Mechanisms for Software Protection, Examples of Protection Attacks.		Chalk and board.	
15	Oct 1st Week		Client-Server Model - System Processes, Micro-Kernel OS (definition only), Development towards a Distributed		Chalk and board.	Group discussion on CASE study.
	Learning Outcomes: • Be familiarized with the basic Structure of Operating Systems. • Be equipped with knowledge about process, synchronization and scheduling. • Be familiarized with the basic functions of Operating Systems such as Process Management and Synchronization, Deadlocks, Memory Management. • Enhance their knowledge to use Virtual Memory and the structure of most common file systems. • Be equipped with knowledge about proper allocation of resources by operating system.					

BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES AND COMMERCE ,Sainikpuri, Sec-Bad.

TEACHING PLAN 2019-20

Name of the Faculty: D Ramakrishna	Department: Computer Science	Year/Semester: II / III	No. of Classes per Week: 4 hrs Theory

Learning Objective:

- To learn Multiplexing and Modulation Techniques.

To learn Medium Access Control and IEEE Standard 802.11.
To learn the functionalities of Mobile Network Layer and Mobile Transport Layer.
To learn the functionalities of WAP Architecture and Wireless Markup Language Scripting.

Program : B.C.A Subject: Mobile Computing

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 2nd Week	1	Applications, A short history of Wireless Communication,A simplified reference model		Chalk and Black Board	
2	June 3rd Week		**Wireless transmission** - Frequencies for Radio Transmission, Regulations, Signals, Antennas, Signal propagation, Multiplexing,	SDM, FDM, TDM,CDM	Chalk and Black Board	
3	June 4th Week		Modulation, Spread spectrum, cellular systems	ASK, FSK, PSK, AFSK, APSK	Chalk and Black Board	
4	July 1st Week		**Medium Access Layer** - Motivation for a Specified, Hidden and Exposed Terminals, Near and Far Terminals, SDMA, FDMA, TDMA, CDMA		Chalk and Black Board	
5	July 2nd Week		Wireless LAN - Infrared vs. radio transmission, infrastructure and Ad-hoc Network,		Chalk and Black Board	

D. Ramakrishna

6	July 3rd Week	2	IEEE 802.11 -System Architecture,		Chalk and Black Board	
7	July 4th Week		Protocol Architecuture, Physical Layer, MAC		Chalk and Black Board	
8	August 1st Week		MAC Management, HIPERLAN, Blue tooth		Chalk and Black Board	
9	August 2nd Week	3	Mobile IP - Goals, assumptions, requirements, Entities and Terminology, IP packet delivery		Chalk and Black Board	
10	August 3rd Week		Agent advertisement and discovery, Registration, Tunneling and Encapsulation, Optimizations, reverse tunneling, DHCP, Mobile Adhoc networks, Routing - DSDV - DSR		Chalk and Black Board	
11	August 4th Week		**Mobile transport Layer** - Traditional TCP, Indirect TCP, Snooping TCP, Mobile TCP		Chalk and Black Board	
12	Sept 1st Week		Fast transmit / Fast recovery, Transmission! timeout freezing, transaction oriented TCP		Chalk and Black Board	
13	Sept 2nd Week	4	**Wireless Application Protocol** - System Architecuture, WAP architecture, Wireless Datagram Protocol, Wireless Transport Layer	WWW, HTTP, HTML	Chalk and Black Board	
14	Sept 3rd Week		Wireless Transaction Protocol, Wireless Session Protocol, Wireless Application Environment,		Chalk and Black Board	
15	Sept 4th Week		Wireless Markup Lanuguage , WML Scripts, Wireless Telephony Application,Push Archictecture, Push / Pull Services , i-Mode		Chalk and Black Board	

D. Ramakrishna

	Outcomes: Student Will Acquire knowledge on Multiplexing and Modulation Techniques. Acquire knowledge on Medium Access Control and IEEE Standard 802.11. Be familiar with functionalities of Mobile Network Layer and Mobile Transport Layer. Be familiar with functionalities of WAP and Wireless Markup Language Scripting.

D. Ramakrishna

BHAVAN'S VIVEKANANDA COLLEGE

TEACHING PLAN 2019-20

PROGRAM: BCA			**PAPER TITLE: SYSTEM ANALYSIS AND LOGICAL DESIGN**
Name of the Faculty: CH N V MALLIKHARJUNA RAO	**Department: Computer Science**	**Year/Semester: II/III**	**No. of Classes per Week: 4 hrs/Theory**

Learning Objectives:

To understand System Analysis and Design

To understand identifying and selecting System Development Projects

To understand determining system requirements

To understand structuring System Requirements and Designing of Interfaces and Dialogues

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 2nd Week	1	The Systems Development Environment:Information Systems Analysis and Design-Application Software-		Chalk and board	
2	June 3rd Week	1	Key Differences between Process Oriented and Data Oriented Approach- Database Application Independence, Characteristics of Successful Teams,	Real time examples	Chalk and board and LCD presention	Seminar on types of Information Sytems
3	June 4th Week	1	Approaches to Improving Developing: Prototyping, Joint Application Design, Succeeding as a System Analyst: Analytical Skills for a System Analyst, Definition of a System and its parts		Chalk and board and LCD presention	Group discussion on System analyst responsibilities
4	July 1st Week	1 & 2	Importance of System Concepts(Decomposition, Modularity, Coupling, Cohesion), Decomposition		Chalk and board and LCD presention	
5	July 2nd week	2	E-Commerce application, Identifying and Selecting System Development Projects: Internet, E-Commerce,		Chalk and board and LCD presention	Seminar on E-Commerce
6	July 3rd week	2	Initiating and Planning System Development Projects: The Process of Initiating and Planning, IS Development		Chalk and board and LCD presention	
7	July 4th week	2	SOW ,Accessing Project Feasibility: Economic, Technical, Operational, Schedule, Legal, Contractual and Political, Guidelines for better Cost Estimating.	Examples on different feasibilities	Chalk and board and LCD presention	Seminar On Feasibility Study

CHNVMK

8	July 5th week	2	Time Value Money, Accessing Technical Feasibility		Chalk and board and LCD presention	
9	August 1st week	2	Project Risk Assessment Factors		Chalk and board and LCD presention	
10	August 2nd week	3	Determining System requirements: Performing Requirement		Chalk and board and LCD presention	
11	August 3rd week	3	Requirements : Interviewing and Listening , Guidelines for Effective Interviewing ,		Chalk and board and LCD presention	Group Discussion Interview Guidelines
12	August 4th week	3	Choosing Interview Questions , Interview Guidelines ,Administering Questionnaires . Designing Questionnaires , Interviewing groups . Modern methods for Determining System Requirements: Joint Application Design JAD),Scribe (definition),			
					Chalk and board	Seminar on JAD
13	September-1st week	3	Radical methods for System requirements ,Structing System Requirements :Process Modeling Data Flow	Examples on DFD	Chalk and board and LCD presention	Seminar on DFD
		3	Context Diagrams(Definition), Simple Examples of DFD's		Chalk and board and LCD presention	
14	September-2nd week	3 & 4	Incorrect ways and Correct ways to draw Data Flow Diagrams, Four Different types of DFD's Structuring System Requirements: Logic Modeling, Deliverables for		Chalk and board and LCD presention	Group Discussion on Reports &Forms
15	September 3rd week	4	Designing Interfaces: System Development Life Cycle with highlighting the Design phase (Diagram), Deliverables and Outcomes, Interface (Definition) ,Interaction Methods & Devices ,Command Language		Chalk and board and LCD presention	
	Learning Outcomes: Be able to anlyze differents types of skills that are required for a System Analyst Be able to identify and select System Development Projects Be able to determine System Requirements and draw Data Flow Diagrams Be able to draw Decision Trees and Tables and also able to acquire knowledge on designing Interfaces and Dialogues					

BHAVAN'S VIVEKANANDA COLLEGE			
TEACHING PLAN 2019-20			
Name of the Faculty: K.Muralidhar	**Department:** Computer	**Year/Semester:II/III**	**No. of Classes per Week:** (4 hrs/Theory)4 hrs Practicals

Learning Objective:

- **To learn java fundamentals.**
- **To learn Decision Making and Branching,Looping,Fundamentals of Object Oriented Programming,Class, Objects and Methods**
- **To learn Arrays,Strings,Vectors,Packages and Interfaces.**
- **To learn Multi-threaded programs and Exception handling.**

Learning Objective:

Program: BCA **Subject: OOP WITH JAVA**

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning
1	June 2nd week	I	**Java Evolution:** Java Features – How Java differs from C – Java and Internet – Java and World Wide Web – Web Browsers – Hardware and Software Requirements.		Chalk and board and LCD presention with sample programmes in Lab Class.	
2	June 3rd week		**Overview of Java Language:** Simple Java Program – Java Program Structure – Java Statements – Implementing a Java Program – Java Virtual Machine – Command Line Arguments		Chalk and board and LCD presention with sample programmes in Lab Class.	
3	June 4th week		**Java Tokens-** keywords, Constants , Variables – Data types – Declaration of Variables-Giving Values to Variables- Scope of Variables-Symbolic Constants-Type Casting-Operators-Arithmetic Operators – Relational Operators- Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators – Bitwise Operators – Special Operators		Chalk and board and LCD presention with sample programmes in Lab Class.	

4	July 1st week	II	**Decision Making and Branching:** Decision Making with if Statement – Simple if Statement-if else Statement-Nesting if else Statement- the else if Ladder-The Switch Statement – The ?: operator.		Chalk and board and LCD presention with sample programmes in Lab Class.	
5	July 2nd week		**Looping:** The while statement – The do statement – The for statement – Jumps in Loops.		Chalk and board and LCD presention with sample programmes	
6	July 3rd week		**Fundamentals of Object Oriented Programming:** Object Oriented Paradigm – Basic Concepts of Object Oriented Programming – Benefits of OOP – Applications of OOP.		Chalk and board and LCD presention with sample programmes in Lab Class.	
7	July 4th week		**Class, Objects and Methods:** Defining a Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing Class	Programming with real time applications	Chalk and board and LCD presention with sample programmes in Lab Class.	
8	Aug 1st week	III	Members – Constructors – Method Overloading – Static Members – Nesting of Methods – Inheritance – Overriding Methods – Final Variables and Methods – Final Classes – Abstract Methods and Classes – Visibility Control.Arrays – Strings Vectors – Wrapper Classes – Enumerated Types		Chalk and board and LCD presention with sample programmes in Lab Class.	
9	Aug 2nd week		Interfaces: Multiple Inheritance: Defining Interfaces – Extending Interfaces – Implementing Interfaces – Accessing Interface Variables.		Chalk and board and LCD presention with sample programmes in Lab Class.	
10	Aug 3rd week		Java API Packages – Using system Packages – Naming Conventions – Creating Packages – Accessing a Package		Chalk and board and LCD presention with sample programmes	Seminar on Packages
11	Aug 4th week		Using a Package – Adding a Class to a Package – Hiding Classes – Static Import	Programming with real time applications	Chalk and board and LCD presention with sample programmes in Lab Class.	
12	Sep 1st week		Creating Threads – Extending the Thread Class – Stopping and Blocking a Thread		Chalk and board and LCD presention with sample programmes in Lab Class.	

13	Sep 2nd week	IV	Life Cycle of a Thread – Using Thread Methods – Thread ExceptionThread Priority – Synchronization		Chalk and board and LCD presention with sample programmes	**Group discussion on Life cycle of a**
14	Sep 3rd week		Errors and Exceptions: Types of Errors – Exceptions – Syntax of Exception Handling Code		Chalk and board and LCD presention with sample programmes in Lab Class.	
15	Sep 4th week		Multiple Catch Statements – Using Finally Statement – Throwing our own Exceptions – Using Exceptions for debugging.		Chalk and board and LCD presention with sample programmes in Lab Class.	

Learning Outcomes:

- **Be familiarized with java fundamentals.**
- **Develop java programs relating to control statements,**
- **Develop java programs relating to Arrays, Strings,Vectors,Packages and Interfaces.**
- **Develop java programs relating to Multi-threaded programs and Exception handling.**

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TEACHING PLAN 2019-20

PROGRAM: BCA | **PAPER TITLE: ARTIFICIAL INTELLIGGENCE**

Name of the Faculty: CH N V MALLIKHARJUNA RAO	Department: Computer Science	Year/Semester: II/IV	No. of Classes per Week: 4 hrs/Theory

Learning Objectives:

- To educate students with fundamental knowledge of operating system & database concepts.
- To introduce communication and network technologies.
- To impart knowledge in applications of IT

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	December 1st week	1	Introduction to Artificial Intelligence –Overview of Artificial Intelligence What is AI ? The Importance of AI, AI		Chalk and board and LCD presention	
2	December 2nd week	1	Knowledge Based Systems, Representation of Knowledge, Knowledge Organization,		Chalk and board and LCD presention	
3	December 3rd week	1&2	Knowledge Manipulation, Acquisition of knowledge.LISP and Other AI Programming Languages – Introduction to		Chalk and board and LCD presention	
4	December 4th week	2	Defining functions, Predicates and conditionals, Input, Output and Local Variables.		Chalk and board and LCD presention	
5	January 1st week	2	Knowledge Acquisition: General Concepts in Knowledge Acquisition		Chalk and board and LCD presention	
6	January 2nd week	2	Introduction, Definitions, Types of Learning, General Learning Model, Performance Measures-generality,		Chalk and board and LCD presention	
7	January 3rd week	3	Knowledge Organization and Manipulation: Search and Control Strategies – Introduction, Preliminary Concepts –		Chalk and board and LCD presention	
8	January 4th week	3	Examples of Search Problems –The Eight Puzzle , Travelling Salesman Problem , Means-End Analysis(Algorithm only) ,		Chalk and board and LCD presention	
9	January 5th week	3	, Informed Search - Heuristic Information –Hill Climbing Methods- Best First Search only .		Chalk and board and LCD presention	

10	February 1st week	4	Natural Language Processing –Introduction			
11	February 2nd week	4	Overview of Linguistics , Level of Knowledge used in Language Understanding (only), natural language systems		Chalk and board	
12	February 3rd week	4	The LUNAR System , The LIFER System, The SHRDLU System.		Chalk and board and LCD presention	
13	February 4th week	4	Expert System Architectures – Introduction , Characteristic Features of Expert Systems , Applications , Importance of		Chalk and board and LCD presention	
14	February 5th week	4	System Architectures , Knowledge Acquisition and Validation		Chalk and board and LCD presention	
15	March 1st week	4	Introduction to knowledge system building tools,Knowledge System Building Tools, KEE(Knowledge Engineering Environment).		Chalk and board and LCD presention	
	Learning Objectives : • **Be familiarized with basic Operating System & Database concepts** • **Get knowledge about networks &its Components.** • **Be familiarized about internet and its applications.**					

BHAVAN'S VIVEKANANDA COLLEGE
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TEACHING PLAN 2019-20

Name of the Faculty:	Department:	Year/Semester:	No. of Classes per Week:
G Mahesh Kumar	Computer Science	BCA II/IV (GUI Programming and Data Structures)	(4 hrs/Theory)4 hrs Practicals

Learning Objectives:

To learn Collection of classes.
To learn legacy classes, utility classes and graphics.
To learn applets , event handling mechanisms and layout manager.
To learn swing components.

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	November 5th Week	1	GUI Programming –Applet class-Two Types of Applets, Applet Basics, Applet Architecture, an Applet Skeleton, Simple Applet Display Methods, Requesting, Repainting, A Simple Banner Applet, using Status Window,<applet> Tag, Passing Parameters to Applets, Improving Banner Applet, getDocumentBase() and getCodeBase()		Chalk and Black Board , Marker Board, LCD Projector	
2	December 1st Week		Event Handling-Two Event handling Mechanisms-Delegation Event Model -Event Classes-KeyEvent Class- Event Listener Interface ActionListener, ItemListener, KeyListener, MouseListener, MouseMotionListener, TextListener, FocusListener,WindowsFocusListerner, WindowListener	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
3	December 2nd Week	1	Handling Mouse Events, Handling Keyboard Events-Adapter Classes. AWT Controls: Labels, Buttons, CheckBox	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts

G. Mahesh

4	December 3rd Week	1	CheckboxGroup, TextField, TextArea-Understanding Layout Managers-FlowLayout, BorderLayout, GridLayout.	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
5	December 4th Week	2	Introducing GUI Programming with Swing-The Origin of Swing,		Chalk and Black Board , Marker Board, LCD Projector	
6	January 1st Week		Swing is built on AWT, Two Key Swing Features, MVC Connection, Components and Containers, Swing Packages, A Simple Swing Application.	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
7	January 2nd Week		Event Handling, Create a Swing Applet, Painting in Swing, Exploring Swing - JLabel and ImageIcon, JTextField, Swing Buttons - JScrollPane, JButton, JToggleButton, JCheckBox		Chalk and Black Board , Marker Board	Developing own applications based on concepts
8	January 3rd Week		JRadioButton, JTabbedPane, JList, JComboBox, JTable	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	
9	January 4th Week		Data Structures Creation and Manipulation in Java –Introduction to Java Collections, Overview of Java Collection Framework - Commonly used Collection of Interfaces- Collection Interface		Chalk and Black Board , Marker Board	

10	January 5th Week	3	List Interface, Set Interface, SortedSet Interface, Queue Interface, Deque Interface	Development of customized applications	Chalk and Black Board , Marker Board	Developing own applications based on concepts
11	February 1st Week		Commonly used Collection Classes – ArrayList, LinkedList, HashSet		Chalk and Black Board , Marker Board	
12	February 2nd Week		LinkedHashSet, TreeSet, PriorityQueue, ArrayDeque, EnumSet		Chalk and Black Board , Marker Board, LCD Projector	
13	February 3rd Week	4	Accessing a Collection via an Iterator -Iteration over Collections – Iterator Interface, List Iterator Interface-Legacy classes and Interfaces –Vector, Stack, Enumeration Interface.		Chalk and Black Board , Marker Board	
14	February 4th Week	4	Other Utility classes: StringTokenizer, Random, Formatter-Constructors, Methods, Formatting Strings and Characters, Formatting Numbers, Formatting Time and Date, Specifiers, Specifying a Minimum Field Width, Specifying Precision		Chalk and Black Board , Marker Board	
15	March 1st Week		Using Format Flags, Justifying Output, Space, +,0, and (flags, comma flag,# flag, Uppercase Option, Closing a Formatter, Scanner-Constructor, Scanning Basics, Some Scanner Examples, Setting Delimiters-Introducing Graphics		Chalk and Black Board , Marker Board	
	Learning Outcomes: Develop programs using applets, event handling mechanisms and layout managers. Develop programs using swing components. Develop programs using Collection of classes. Develop programs using legacy classes, utility classes and graphics.					

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TEACHING PLAN 2019-20

PROGRAM: BCA		**PAPER TITLE: DATABASE MANAGEMENT SYSTEMS**
Name of the Faculty: N Sharon Rosy	**Computer Science**	**Year/Semester: II/IV**	**No. of Classes per Week: (4 hrs/Theory)4 hrs Practicals**

Learning Objective:
To impart knowledge of database concepts
To get equipped with information about database administration
To learn basic SQL commands(in lab)

S.No	Month	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	Nov	November 4th Week	1	Database Environment- Basic Concpets and Definitions, Traditional File Processing Systems, Database Approach, Range of Database Applications, Advantages of Database Approach, Costs and Risks,	Diffrence between File Processing Systems and Database Approach	Chalk and Board/ LCD Presentations	
2	December'19	December 1st Week		Components of Database Environment, 3-schema Architecture for Database Development,3-Tier Database location Architecture, E-R Model- Sample E-R Model, E-R Notation, Entities-Types of Entities, Attributes- Types of Attributes,	E-R Diagram representation along with relevant examples	Chalk and Board/ LCD Presentations	
3		December 2nd Week	2	Relationships- Degree of Relationship, Cardinality Constraints, Enhanced E-R Model- Representing Super Type, Sub Type, Representing Specialization and Generalization, Specifying Completeness Constraints, Specifying Disjointness Constraints,	Differences between E-R Model and EER Model	Chalk and Board/ LCD Presentations	Individual Activity on examples
4		December 3rd Week		Specifying Subtype Discriminators, Defining Super type/Sub type Hierarchies, Relational Model- Definitions, Integrity Constraints, Transforming EER Diagrams into Relations		Chalk and Board/ LCD Presentations	
5		December 4th Week		Normalization: Basic Normal Forms(1NF, 2NF, 3NF), Merging Relations, Denormalization,	How to convert E-R Diagram to its corresponding Relational Model	Chalk and Board/ LCD Presentations	

6	January '20	January 1st Week	3	Backing Up Databases and Concurrency control Access- Basic Recovery Facilities- Backup Facilities, Journalizing Facilities, Checkpoint Facility		Chalk and Board/ LCD Presentations	Individual Activity on examples
7		January 2nd Week		Recovery Manager, Recovery and Restart Procedures, Switch, Restore/Return, Transaction Integrity. Backward Recovery and Forward Recovery		Chalk and Board/ LCD Presentations usage of ICT tool(College website)	Individual Activity on examples
8		January 3rd Week		Types of Database Failures, Aborted Transactions, Incorrect Data, System Failure, Database Destruction,	Practical examples	Chalk and Board/ LCD Presentations	
9		January 4th Week		The Problem of Lost Updates, Serializability, Locking Mechanisms- Locking Levels, Types of Locks		Chalk and Board/ LCD Presentations	
10		January 5th Week	4	Client-Server and Middleware- Client/Server Architectures. 3Tier Architecture-Partitioning, Middleware		Chalk and Board/ LCD Presentations	
11	February '20	February 1st Week		Establishing Client/Server Security, Client/Server Issues- Distributed Databases- Introduction- Data Replication- Snapshot Replication, Near-Real-Time Replication, Pull Replication, Database Integrity with Replication,	Comparison study between Distributed DBMS and Client-Server System		
12		February 2nd Week		When to use Replication, Horizontal Partitioning, Vertical Partitioning, Combination of operations, Distributed DBMS: Location Transparency, Replication Transparency, Failure Transparency, Commit Protocol, Concurrency, Transparency		Chalk and Board/ LCD Presentations	
13		February 3rd Week		Database Administration- Role of data and database administrators: Traditional data administration, Evolving approaches to data and database administration, Evolving apporaches to data administration		Chalk and Board/ LCD Presentations	
14		February 4th Week		Database Administration- Role of data and database administrators: Traditional data administration, Evolving approaches to data and database administration,	Differences between DA and DBA	Chalk and Board/ LCD Presentations	
15	March' 20	March 1st Week		Evolving apporaches to data administration		Chalk and Board/ LCD Presentations	

Bhavan's Vivekanada college

TEACHING PLAN 2019-20

Name of the Faculty: SRINIVASA P	Department: Computer Science		No. of Classes per Week: (4hr/Theory)

Learning Objectives: • To impart knowledge of IP address

Program:BCA **II/IV** **Subject: IP**

SNo	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 3rd Week	UNIT 1	Protocols and Standards: Protocols, Standards, TCP/IP- Protocol Suite, Addressing.	Practical uses of Data Structures	Chalk and Board	
2	June 4th Week		IP Addressing - Decimal Notation, Classes, Special Addresses, Unicast-Multicast and Broadcast Addresses.Sub Netting	Real time examples	Chalk and Board	
3	June 5th Week		and Super Netting – Sub Netting, Masking, Super Netting.Delivery and Routing of IP Packets - Connection Oriented Versus Connectionless Services,Direct		LCD Presentations	Assignment
4	July 1st Week	UNIT 2	Versus Indirect Delivery, Routing Methods, Static Versus Dynamic RoutingInternet Protocol -	Real time examples	Chalk and Board	
5	July 2nd Week		unit 2:Datagram	Practical Applications	Chalk and Board	Quiz using ICT tools
6	July 3rd Week		Fragmentation, Options, Checksum. ARP and RARP –ARP, Packet Format, Encapsulation, Operation, Proxy ARP, RARP Packet Format		Chalk and Board	class room discussion
7	July 4th Week		.Internet Control Message Protocol (ICMP) -	Practical Applications	Chalk and Board	
8	July 5th Week		BGP-Path Vector Routing-Path Vector Messages. Client-Server Model - Concurrency, BOOTP, DHCP.		Chalk and Board	Class Test
9	August 1st Week	UNIT	Types of Messages, Message Format, Error Reporting, Query.Transmission Control Protocol (TCP) - Process To Process Communication, Services,	Real time examples	Chalk and Board	
10	August 2nd Week		Segment, Options, Checksum, Flow Control, Error Control, Timers, Connection.		LCD Presentations	Assignment

11	August 4th Week	3	UNIT 3:Routing Protocols: Interior and Exterior routing,RIP-Distance Vector Routing,OSPF- Areas, Metric, Link State Routing, Types of Links.		LCD Presentations	Quiz using ICT tools
12	September 1st Week	UNIT 4	Domain Name System (DNS) - Name Space, Domain Name Space, Distribution, DNS in Internet.	Real time examples	Chalk and Board	class room discussion
13	September 2nd Week		Telnet- Concepts, NVT, Options, Escape Character, Mode of Operation, User Interface, Rlogin. File Transfer Protocol (FTP)-	Application Areas	LCD Presentations	Quiz using ICT tools
14	September 3rd Week		Connections, Communication, Command Processing, File Transfer.Simple Mail Transfer Protocol (SMTP) - User Agent, Addresses, Delayed Delivery, Aliases, MTA, Commands and Responses,		Chalk and Board	Quiz using ICT tools
15	September 4th Week		Mail Transfer Phases, Mime, Pop.Next Generation Ipv6:Ipv6, Addresses, Packet Format, Comparison between Ipv4 and Ipv6 Headers	Real time examples	Chalk and Board	Class Test

Learning Outcomes: • **Be familiarized with fundamental concepts of IP addressing, Subnetting and various routing methods.**

• **Be familiarized with Fragmentation, ARP, SMTP.**

• **Acquire the knowledge about TCP operations.**

• **Acquire knowledge on Domain Name System.**

BHAVAN'S VIVEKANANDA COLLEGE

TEACHING PLAN 2019-20

Name of the Faculty: N Bhaskar	Department: Computer Science	Year/Semester: III/V	No. of Classes per Week: (4 hrs/Theory)4 hrs Practicals

Learning Objective:

1.To understand the UML features to develop Object-Oriented application development.

2. To learn different diagrams available in UML with its features.

3. To learn object relationships, attributes and methods.

4. To learn quality assurance and security to applications.

PROGRAM: BCA SUBJECT : OBJECT ORIENTED SYSTEM DEVELOPMENT

SL. NO.	Month	MONTH & WEEK	UNITS	SYLLABUS	ADDITIONAL INPUT/VALUE ADDITION	TEACHING METHOD	STUDENT/ LEARNING ACTIVITY
1	June	June week 2	I	Introduction, Overview of the Unified Approach. Object-Oriented System Life Cycle - Analysis, Design, Prototyping, Implementation		Chalk & Black Board	
2		June week 3		Component Based Testing. OMT, Booch Methodology, Jacobson Methodology, Patterns.	About UML CASE tool and its features	LCD projector	
3		June week 4	II	UML Diagrams - Class Diagrams, Use case Diagram		Chalk & Black Board	
4	July	July Week 1		Interaction Diagram, Sequence Diagram, Collaboration Diagram, State Chart Diagram, Activity Diagram, Component Diagram, Deployment Diagram, Packages.		Chalk & Black Board	
5		July Week 2		**UML Extensibility** - Model Constraints, Note, Stereotype, UML Meta Model.	UML tool for diagrams drawing	Chalk & Black Board	
6		July Week 3		Object Oriented Analysis: Introduction, Business Object Analysis, Use case Modeling. Developing Effective Documentation.		LCD projector	CASE study
7		July Week 4		**Object Analysis**: Classifications Theory, Common Class Patterns Approach, Use case Driven Approach, Classes, Responsibilities and Collaborators, Naming Classes.		Chalk & Black Board	

N. Bhaskar

8	August	August Week 1	III	**Object Relationships, Attributes And Methods** - Associations, Super and Sub Class Relationships, A-Part-of Relationship, Class Responsibilities, Defining Attributes.	CASE study on draing use-case diagram	Chalk & Black Board	Test in Unit-1 and Unit-2
9		August Week 2		**Object Oriented Design-** Process and Design Axioms - Corollaries.		Chalk & Black Board	Open book system
10		August Week 3		**Designing classes** - Introduction, Philosophy, Class Visibility.		Chalk & Black Board	Open book system
11		August Week 4		**Access Layer** - Object Store and Persistence, DBMS, Logical & Physical Database Organizations		LCD projector	Open book system
12	September	September Week 1	IV	Access Control, Client-Server Computing. Distributed Objects Computing		Chalk & Black Board	Open book system
13		September Week 2		Object-Relational Systems, Multi Database Systems. View Layer - User Interface Design, Designing View Layer Classes		LCD projector	
14		September Week 3		**View Layer** - User Interface Design, Designing View Layer Classes. Macro Level Process, Micro-Level Process.	application in which the UI role is important	Chalk & Black Board	
15		September Week 4		UI Design Rules, View Layer Interface, Prototyping, Software Quality Assurance – Quality Assurance Tests. Testing Strategies, Test Cases, Test Plan.	LCD projector	Chalk & Black Board	Test in Unit-3 and Unit-4

BCA V Semester

OOSD Subject Outcomes

* Students acquire knowledge on UML features.
* Students are able to draw various UML diagrams for different applications.
* Students will be familiar with objects relationships, attributes and methods.
* Student are familar with application quality and security related issues.

Bhavan's Vivekanada college						
TEACHING PLAN 2019-20						
Name of the Faculty: SRINIVASA P	**Department: Computer Science**			**No. of Classes per Week: (4hr/Theory)**		
Learning Objectives: • To impart knowledge of IP address						
Program:BCA				**III/V**		
SNo	**Month & Week**	**Units**	**Syllabus**	**Additional Input/Value Addition**	**Teaching Method**	**Student/ Learning activity**
1	June 3rd Week	UNIT 1	Protocols and Standards: Protocols, Standards, TCP/IP- Protocol Suite, Addressing.	Practical uses of Data Structures	Chalk and Board	
2	June 4th Week		IP Addressing - Decimal Notation, Classes, Special Addresses, Unicast- Multicast and Broadcast Addresses.Sub Netting	Real time examples	Chalk and Board	
3	June 5th Week		and Super Netting – Sub Netting, Masking, Super Netting.Delivery and Routing of IP Packets - Connection Oriented Versus Connectionless Services,Direct		LCD Presentations	Assignment
4	July 1st Week	UNIT 2	Versus Indirect Delivery, Routing Methods, Static Versus Dynamic RoutingInternet Protocol -	Real time examples	Chalk and Board	
5	July 2nd Week		unit 2:Datagram	Practical Applications	Chalk and Board	Quiz using ICT tools
6	July 3rd Week		Fragmentation, Options, Checksum. ARP and RARP –ARP, Packet Format, Encapsulation, Operation, Proxy ARP, RARP Packet Format		Chalk and Board	class room discussion
7	July 4th Week		.Internet Control Message Protocol (ICMP) -	Practical Applications	Chalk and Board	
8	July 5th Week		BGP-Path Vector Routing-Path Vector Messages. Client-Server Model - Concurrency, BOOTP, DHCP.		Chalk and Board	Class Test

9	August 1st Week	UNIT 3	Types of Messages, Message Format, Error Reporting, Query.Transmission Control Protocol (TCP) - Process To Process Communication, Services,	Real time examples	Chalk and Board	
10	August 2nd Week		Segment, Options, Checksum, Flow Control, Error Control, Timers, Connection.		LCD Presentations	Assignment
11	August 4th Week		UNIT 3:Routing Protocols: Interior and Exterior routing,RIP-Distance Vector Routing,OSPF- Areas, Metric, Link State Routing, Types of Links.		LCD Presentations	Quiz using ICT tools
12	September 1st Week	UNIT 4	Domain Name System (DNS) - Name Space, Domain Name Space, Distribution, DNS in Internet.	Real time examples	Chalk and Board	class room discussion
13	September 2nd Week		Telnet- Concepts, NVT, Options, Escape Character, Mode of Operation, User Interface, Rlogin. File Transfer Protocol (FTP)-	Application Areas	LCD Presentations	Quiz using ICT tools
14	September 3rd Week		Connections, Communication, Command Processing, File Transfer.Simple Mail Transfer Protocol (SMTP) - User Agent, Addresses, Delayed Delivery, Aliases, MTA, Commands and Responses,		Chalk and Board	Quiz using ICT tools
15	September 4th Week		Mail Transfer Phases, Mime, Pop.Next Generation Ipv6:Ipv6, Addresses, Packet Format, Comparison between Ipv4 and Ipv6 Headers	Real time examples	Chalk and Board	Class Test

Learning Outcomes: • Be familiarized with fundamental concepts of IP addressing, Subnetting and various routing methods.

• Be familiarized with Fragmentation, ARP, SMTP.

• Acquire the knowledge about TCP operations.

• Acquire knowledge on Domain Name System.

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TEACHING PLAN 2019-20

Name of the Faculty: D.Rama Krishna	**Department:** Computer Science	**Year/Semester:** III / V	**No. of Classes per Week:** 4 hrs Theory & 4 hrs Practicals

Objective:
To learn design of static web pages.
To learn client-side scripting.
To learn DHTML.
To learn XML DTD and Schema.

Programme:B.C.A 543a Subject:Web Technologies

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity	Review	Sign
1	June 2nd Week	1	UNIT-I: Introduction, Structure of HTML Page, Formatting Tags.	Internet, Web Browser and Web Server	Chalk and board			
2	June 3rd Week		Font tag, Heading tags, Presenting and Arranging text tags	Formatting overall and Scrolling Text	Chalk and board			
3	June 4th Week		Image tag, Hyperlinks, List tags	Llinking of web pages, Images	Chalk and board			
4	July 1st Week		Table tags, Frame tags, MIME, Multimedia tags	Tables and Nested frames	Chalk and board			
5	July 2nd Week	2	HTML –Forms, **UNIT-II:** CSS Style Sheets: Introduction and types of style sheets	Form controls	Chalk and board			
6	July 3rd Week		CSS (Box, Text, Font) properties and values. Java script Programming: Variables	Data types, Printing statements in java script	Chalk and board			
7	August 1st Week		Operators, Branching StatementsLooping Statements, Dialog Boxes.	Conditional and loop statements	Chalk and board			

D. Ramakrishna

8	August 2nd Week	3	**UNIT-III:** Arrays, Functions (Built-in)		Chalk and board			
9	August 3rd Week		**Java script Objects**: String, Math, Date functions		Chalk and board			
10	August 4th Week		Document, Window, Location, History (each object Properties and Methods,)		Chalk and board			
11	Sept 1st Week		**DHTML (Dynamic Hyper Text Markup Language)**: Events, Event Handling Concept (Mouseover Effects).	Event Handling, compare Static HTML& DHTML	Chalk and board			
12	Sept 2nd Week	4	**UNIT-IV: XML:** Introduction, Limitations, Advantages, Valid and Well-formed XML		Chalk and board			
13	Sept 3rd Week		XML Elements, XML Control Elements. XML DTD (Document Type Definitions)		Chalk and board			
14	Sept 4th Week		XML Namespaces, XML Schema		Chalk and board			
15	Oct 1st week		Document Object Model, XML with CSS		Chalk and board			

Outcomes:

Students will -

Be able to design static webpages.

Be able to develop client-side scripting using Javascript.

Develop applications using DHTML.

Develop XML applications with styles.

D. Ramakrishna

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TEACHING PLAN 2019-20

Name of the Faculty:	Department:	Year/Semester:	No. of Classes per Week:
G Mahesh Kumar	Computer Science	BCA III/V (Advanced Java Programming)	(4 hrs/Theory)4 hrs Practicals

Learning Objectives:

To provide knowledge for connecting database through java programming.
To provide knowledge to develop web applications using java servlets.
To provide knowledge to develop web applications using java server pages.
To provide knowledge on usage of JSTL tags and JSF tags.

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	June 2nd Week	1	Getting Started with JDBC: Introducing JDBC- Describing Components of JDBC, Features of JDBC.		Chalk and Black Board , Marker Board, LCD Projector	
2	June 3rd Week		JDBC Architecture - Types of Drivers, Advantages and Disadvantages of Drivers, Use of Drivers.		Chalk and Black Board , Marker Board, LCD Projector	
3	June 4th Week		Implementing JDBC Statements and Methods: Statement Interface, PreparedStatement Interface.	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
4	July 1st Week		CallableStatement Interface, Working with ResultSet Interface.	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
5	July 2nd Week		Understanding Java Servlet: Introducing CGI, Introducing Java Servlet, Advantages of Servlet over CGI , Features of Servlet. Introducing Servlet API - Javax.servlet package, Javax.servlet.http package		Chalk and Black Board , Marker Board, LCD Projector	

G Mahesh

6	July 3rd Week	2	Servlet Lifecycle, Working with GenericServlet class methods. Understanding Request Processing and HTTP: Understanding Request Dispatching	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
7	July 4th Week		Dispatching the Request, Working with HttpServletRequest, Working with HttpServletResponse, Describing HttpServlet – The HttpServlet Lifecycle.		Chalk and Black Board , Marker Board	
8	July 5th Week		Handling Sessions in Servlet: Introducing Session Tracking, Describing Cookies, HttpSession.	Development of customized applications	Chalk and Black Board , Marker Board, LCD Projector	Developing own applications based on concepts
9	August 1st Week	3	Introduction to JSP : - Advantages of JSP over Servlet , JSP architecture ,		Chalk and Black Board , Marker Board	
10	August 2nd Week		JSP Life Cycle. Working with JSP Tags and Implicit Objects: Exploring Scripting Tags	Development of customized applications	Chalk and Black Board , Marker Board	Developing own applications based on concepts
11	August 3rd Week		Exploring Implicit Objects in JSP,Exploring Directive Tags.		Chalk and Black Board , Marker Board	
12	September 1st Week	4	Working with JSTL: JSTL Core Tags - General-Purpose Tags, Conditional and Looping Tags		Chalk and Black Board , Marker Board	
13	September 2nd Week		Networking Tags, JSTL SQL Tags.		Chalk and Black Board , Marker Board	
14	September 3rd Week		Working with JSF: Features of JSF, JSF Architecture, Describing JSF Elements		Chalk and Black Board , Marker Board	
15	September 4th Week		JSF Request Processing Life cycle, JSF Tag Libraries-JSF HTML Tags.JSF HTML Tags.		Chalk and Black Board , Marker Board, LCD Projector	

	Learning Outcomes: Develop programs using JDBC. Develop programs using Java Servlets. Develop programs using Java Server Pages. Develop programs using JSTL and JSF Tags.

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TEACHING PLAN 2019-20

Name of the Faculty: B.Divya Rekha	Department: Computer Science	Year/Semester: IIIYr/ VI	No. of Classes per Week: (3 hrs/Theory) 2 hrs Practicals

Learning Objective:

To learn different cycles of testing and to analyze the bugs

To learn how to build software testing methodology and establish.

To learn different phases of testing

To learn the configuration of software management

Program:BCA Subject :Software Testing 3rd year 6th sem

S.No		Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	November	November 3rd Week	Unit 1	Example test series - first cycle, second cycle, subsequent cycles		Individual student activities based on concept	
2		November 4thWeek		Objectives and limits of testing Testing in software development process ,black box testing reporting and analyzing bugs.	Case studies		Conducting seminars on topics
3	December	December 1st Week		problem reports contents and characteristics ,analysis of reproducible bug,tactics for analyzing a reproducible bug,making a bug reproducible	Case studies	Chalk and Board/ LCD Presentations	Case studies given basing on concept
4		December 2nd Week	Unit	Problem tracking systems - objectives, tasks, overview		Individual student activities based on concept	
5		December 3rd Week		users, mechanics, further thoughts on problem reporting	Case studies	LCD Presentations	Case studies given basing on concept

6		December 4th Week	t 2	visible state transitions, race conditions, load testing, error guessing			
7	January	January 1st Week		function equivalence testing, regression testing, executing the tests.	Case studies	Chalk and Board/ LCD Presentations	Individual Activity on examples
8		January 2nd Week	U n i t 3	Building a software testing strategy , determining software testing techniques	Case studies	Chalk and Board/ LCD Presentations	
9		January 3rd Week		Determining software testing techniques ,eleven steps of software testing process			Individual Activity on examples
10		January 4th Week		Overview, Assess project management ,develop test plan,requirement phase testing	Case studies	Chalk and Board/ LCD Presentations	Individual Activity on examples
11		January 5th Week		Design phase testing, program phase testing,test execution,acceptance testing		Chalk and Board/ LCD Presentations	
12	February	February 1stWeek	U n i t 4	Test software changes Software maintenance definition,maintenance characteristics	Case studies		Individual Activity on examples
13		February 2nd Week		maintainability, maintenance tasks, sideeffects, reverse engineering, reengineering	Case studies	Chalk and Board/ LCD Presentations	Conducting seminars on topics
14		February 3rd Week		Software configuration management ,configuration items.		Chalk and Board/ LCD Presentations	Conducting seminars
15		February 4th Week		Software configuration management process,version control,change control, configuration audit, status reporting.	Case studies	Chalk and Board/ LCD Presentations	Conducting seminars

Learning Outcomes:

1.Be able to learn different cycles of testing and to analyze the bugs.

2.Be able to learn different cycles of testing and to analyze the bugs.

3.Be able to do different phases of testing

4.Be able to implement configuration of software management

BHAVAN'S VIVEKANANDA COLLEGE			
TEACHING PLAN 2019-20			
Name of the Faculty: CH N V MALLIKHARJUNA RAO	**Department:** Computer Science	**Subject : E-commerce** Year/Semester:III/VI BCA VI Sem (EVEN SEMESTER)	**No. of Classes per Week:** 4 hrs/Theory

Learning Objectives:

1.To understand impact of E-commerce on Business Model.
2.To understand EDI and Risks of Insecure Systems .
3.To understand Risk Management &Internet standards .
4.To understand Firewalls & E-payment systems.

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	December - 1st Week	1	E-Commerce: Introduction - E-Business , Potential Benefits of E-commerce,The internet and WWW		Chalk and Board	
2	December -2nd Week		Overall business and e-commerce goal congruence ,the impact of e-commerce on the		Chalk and Board	
3	December - 3rd Week		The waves of E-commerce,Impact of Ecommerce on traditional assurance function ,Security of data		LCD presentation	
4	December - 4th Week		Transaction Processing Integrity , privacy of data,Web seal options.		Chalk and Board	**Seminars**
5	January - 1st Week		EDI-Introduction,Traditional EDI System ,The origin of EDI,Non-EDI systems,VAN.		Chalk and Board	
6	January- 2nd Week	2	Partially integrated EDI system,Fully integrated EDI system,Benefits of EDI.		LCD presentation	Seminars
7	January - 3rd Week		Data transfer standards,Financial EDI,EDI systems and the internet. Risks of		Chalk and board and LCD presention	
8	January - 4th Week		Internet associated risks,sabotage by former employees,Threts from current		Chalk and Board	Seminars and assignments
9	January - 5th Week		Risk Management-Risk management paradigm,Disaster recovery plans & objectives..		Chalk and board and LCD presention	Seminars

10	February 1st Week	3	Internet standards-Introduction,standrd setting issues and committies-ANSI,UN/EDIFACT,Major		Chalk and board and LCD presention	
11	February 2nd Week		Internet and www specific committies,security committies and organizations security protocols		Chalk and Board	seminars and assignments
12	February 3rd Week		Firewalls- Introduction,Definition,TCP/IP,		Chalk and board and LCD presention	
13	February 4th Week	4	packet filtering,Network address translation,Application level proxies,Real time		Chalk and Board	Seminars
14	February 5th Week		Network topology,Demilitarized zone,factors to consider in Firewall.,E-commerce payment Mechanisms-			
15	March 1st week		introduction,the SET protocol. Magnetic strip cards,E-checks,E-cash,FSTC & BIPS.		Chalk and board and LCD presention	Seminars
	Learning Outcomes: 1.Students will be able to analyse the role of E-commerce on Independent Third parties & Impact of E-commerce on Business models 2.Students will be able to analyze about EDI & Risks of Insecure systems. 3.Students will be able to analyze about Risk management & Internet standards. 4.Students will be able to work with Firewalls & Online payment Systems.					

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Department of Computer Science

TEACHING PLAN 2019-20

Name of the Faculty: **D Ramakrishna**	**Department:** **Computer Science**	**Subject: System and Network Administration Year/Semester:** **III / II (VI SEM)**	**No. of Classes per Week:** **3 Hrs Theory**

Learning Objective:
To learn UNIX Essential Administrative Tools and Techniques, Startup and Shutdown process.
To learn User and Groups Account Management and Managing System Resources.
To learn the Maintaince of File System, Secondary Storage Devices and Backup Techniques.
To learn the functionalities of TCP/IP and E-Mail.

Programme:B.C.A Subject: System and Network Administration

S.No	Month & Week	Units	Syllabus	Additional Input /Value Addition	Teaching Method	Student/ Learning activity
1	November 5th Week	1	Introduction to System Administration: Thinking about System Administration, Becoming Superuser. Communicating with Users.	su command	Chalk and Black Board	
2	December 1st Week		The UNIX Way: Files – File Ownership – File Protection – Mapping Files to Disk, Interactive Processes – Batch Processes – Daemons	File Types	Chalk and Black Board	Group Discussion on File Protection
3	December 2nd Week		Process Attributes, Devices, The Root Directory. Essential Administrative Tools and Techniques: Getting the most from Common Commands Piping into grep and awk - Finding Files - Repeating	find command	Chalk and Black Board	
4	December 3rd Week		Essential Administrative Techniques – Periodic Program Execution: The cron Facility – System Messages, Administrative Log Files. Startup and Shutdown: About the UNIX Boot Process, From Power on to Loading the kernel, Booting to Multiuser Mode - Booting to Single-User Mode		Chalk and Black Board	Discussion on Cron Facility
5	December 4th Week	2	Initialization Files and Boot Scripts, Shutting Down a UNIX System, Troubleshooting: Handling Crashes and Boot Failures. **Managing Users and Groups**: UNIX Users and Groups – The Password File – The Shadow Password File		Chalk and Black Board	Seminar on Users and Groups

6	December 5th Week	2	The Group File – Dynamic Group Memberships – User Account Database File Protections, Managing User Accounts – Adding a New User Account – Defining a New User Account – Assigning a Shell, Creating a Home Directory – User Environment Initialization Files – Setting File Ownership		Chalk and Black Board	
7	January 1st Week		Disabling and Removing User Accounts, Administering User Passwords – Selecting Effective Passwords. Managing System Resources: Thinking about System Performance, Monitoring and Controlling Processes – The ps command – Other Process Listing Utilities – The /proc File System – Kernel Idle Processes		Chalk and Black Board	
8	January 2nd Week		– Process Resource Limits, Managing CPU Recourses – Nice Numbers and Process Priorities – Monitoring CPU Usage, Managing Memory, Disk I/O Performance Issues – Monitoring Disk I/O Performance – Getting the Most from the Disk Subsystem, Monitoring and Managing Disk Space Usage.	vmstat command	Chalk and Black Board	
9	January 3rd Week	3	File System and Disks: Filesystem Types, Managing Filesystems – Mounting and Dismounting Filesystems – Disk Special File Naming Conventions – The Mount and Unmount Commands – Figuring out who's using a File		Chalk and Black Board	Group Discussion on File System
10	January 4th Week		The Filesystem Configuring File – Automatic Filesystem Mounting – Using fsck to validate a Filesystem, From Disks to Filesystems – Defining Disk Partions – Adding Disks- Logical Volume Managers.		Chalk and Black Board	
11	January 5th Week		Backup and Restore: Planning for Disasters and Everyday Needs – Backup Capacity Planning – Backup Strategies – Backup Media – Comparing Backup Media, Backing Up Files and Filesystem		Chalk and Black Board	Seminar on Backup Media
12	February 1st Week		Backing Up Individual Filesystems with Dump, Restoring Files from Backups – Restores from tar and cpio Archives, Restoring from Dump Archives – Moving Data Between Systems.		Chalk and Black Board	
13	February 2nd Week	4	TCP / IP Networking:Administrative Commands, Adding a New Network Host.	Networking Address Class A,B,C and D	Chalk and Black Board	Quiz on TCP/IP Networking
14	February 3rd Week		Configuring the Network Interface with Ifconfig. Managing Network Serivices: Managing DNS Servers	Domain Name Types	Chalk and Black Board	
15	February 4th Week		Name Server Types, about Bind, Configuring User Mail Programs, Electronic Mail: About Electronic Mall – Mail Addressing and Delivery,Electronic Mail Policies, Configuring User Mail Programs.		Chalk and Black Board	Group Discussion on Electronic Mail Polices

	Learning Outcomes: Students will - Acquire knowledge on UNIX Essential Administrative Tools and Techniques, Startup and Shutdown process. Acquire knowledge on User and Groups Account Management and Managing System Resources. Acquire knowledge on Maintaince of File System, Secondary Storage Devices and Backup Techniques. Be familiar with functionalities of TCP/IP and E-Mail.

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TEACHING PLAN 2019-20

Name of the Faculty: S Ramana	Department: Computer Science	Year/Semester: BCA III/VI (Information Security)	No. of Classes per Week: (4 hrs/Theory)

Learning Objectives:
To learn the need of security for an Information System.
To learn various laws and ethics in Information Security and its risk management factors.
To provide knowledge to plan for security by implementing security technology.
To provide knowledge on various Cryptographic Algorithms and Tools.

S.No	Month & Week	Units	Syllabus	Additional Input/Value Addition	Teaching Method	Student/ Learning activity
1	November 3rd Week	1	Introduction to Information Security: History, What is Security?, CNSS Security Model, Components of an Information System		Chalk and Black Board , Marker Board	
2	November 4th Week		Balancing Information Security and Access, The SDLC, The security SDLC.	SDLC Models	Chalk and Black Board , Marker Board, LCD Projector	**Discussion** on various SDLC Models.
3	November 5th Week		The Need for Security: Introduction, Business Needs First, Threats		Chalk and Black Board , Marker Board	
4	December 1st Week		Attacks- Secure Software Development.		Chalk and Black Board , Marker Board	

5	December 2nd Week	2	Legal, Ethical and professional Issues in Information Security: Introduction, Law and Ethics in Information Security, Relevant U.S Laws		Chalk and Black Board , Marker Board, LCD Projector	
6	December 3rd Week		International Laws and Legal Bodies, Ethics and Information Security.		Chalk and Black Board , Marker Board, LCD Projector	
7	December 4th Week		Risk Management: Introduction, An Overview of Risk Management, Risk Identification, Risk Assessment, Risk Control Strategies		Chalk and Black Board , Marker Board	
8	January 1st Week		Selecting a Risk Control Strategy, Quantitative versus Qualitative Risk Control Practices, Risk Management Discussion Points, Recommended Risk Control Practices.		Chalk and Black Board , Marker Board	
9	January 2nd Week	3	Planning for Security: Information Security Policy, Standards and Practices		Chalk and Black Board , Marker Board	
10	January 3rd Week		The Information Security Blueprint, Security Education, Training and Awareness Program, Continuity Strategies		Chalk and Black Board , Marker Board	
11	January 4th Week		Security Technology-Firewalls and VPNs: Introduction, Access Control,Firewalls, Protecting Remote Connections.		Chalk and Black Board , Marker Board	
12	February 1st Week	4	Security Technology-Intrusion Detection, Access Control and Other Security Tools: Introduction, Intrusion Detection and Prevention Systems		Chalk and Black Board , Marker Board	
13	February 2nd Week		Honeypots, Honeynets, and Padded Cell Systems, Scanning and Analysis Tools, Biometric Access Controls.		Chalk and Black Board , Marker Board, LCD Projector	
14	February 3rd Week		Cryptography: Introduction, Foundations of Cryptology, Cipher Methods	Latest Cipher Mechanisms	Chalk and Black Board , Marker Board	

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15	February 4th Week		Cryptographic Algorithms, Cryptographic Tools, Protocols for Secure Communications, Attacks on Cryptosystems.		Chalk and Black Board , Marker Board	
	Learning Outcomes: Be familiar with the priority given to Security in Information System. Acquire knowledge on various Security related laws and risk management in Information System. Acquire knowledge to plan for security by implementing security technology. Be familiar with various Cryptographic Algorithms and Tools.					

Ramana