CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

DIPLOMA PROGRAMME IN INFORMATION TECHNOLOGY

Semester – V
COURSE OF STUDY AND SCHEME OF EXAMINATION

S. No	Board of Study	Subject Code	Subject	Periods/Week (In Hours)			Scheme of Examination						Credit L+ (T+P)/2
				L	T	P	Theory			Practical		Total Marks	
							ESE	CT	TA	ESE	TA		
1.	Electronics & Telcomm Engg.	233511 (28)	Electronic Communication	3	1	-	100	10	20	-	-	130	4
2.	Computer Science Engg	222513 (22)	Java Programming	3	1	-	100	10	20	-	-	130	4
3.	Info. Tech.	233512 (33)	Network Management	4	1	-	100	10	20	-	-	130	5
4.	Info. Tech.	233513 (33)	Internet & Web Page Design	4	1	-	100	10	20	-	-	130	5
5.	Computer Science Engg	233514 (33)	Database Management System	4	1	-	100	10	20	-	-	130	5
6.	Electronics & Telcomm Engg.	233521 (28)	Electronic Communication lab	-	-	4	-	-	-	70	30	100	2
7.	Computer Science Engg	222523 (22)	Java Programming lab	-	-	4	-	-	-	50	20	70	2
8.	Info. Tech.	233522 (35)	Internet & Web Page Design Lab	-	-	4	-	-	-	70	40	110	2
9.	Info. Tech.	233523 (33)	Industrial Training*	-	-	1	-	-	-	50	20	70	1
TOTAL				**18**	**5**	**13**	**500**	**50**	**100**	**240**	**110**	**1000**	**30**

* One month Industrial training will be organised after 4th semester, evaluation will be done in 5th semester.

L : Lecture hours : T : Tutorial hours, P : Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment ;

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

A) SEMESTER : V
B) COURSE : ELECTRONIC COMMUNICATION
C) CODE : 233511 (28)
D) BRANCH/DISCIPLINE : INFORMATION TECHNOLOGY
E) RATIONALE

As a Core Technology subject, this will clear the concepts & principles used in electronic telecommunications. Concepts such as modulation, side band transmission, radiation and propagation, reception and demodulation that are widely used in the field of analog & digital communication are dealt in this subject. The students will understand complete telecommunication system.

F) TEACHING AND EXAMINATION SCHEME

Course Code	Periods/Week (In Hours) (Teaching Scheme)			Scheme of Examination						Credit L+(T+P)/2
	L	T	P	Theory			Practical		Total Marks	
				ESE	CT	TA	ESE	TA		
233511 (28)	3	1	-	100	10	20	-	-	130	4
233521 (28)	-	-	4	-	-	-	70	30	100	2

L : Lecture hours ; T : Tutorial hours; P : Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment

G) DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Chapter Name	Hours	Marks
1.	Amplitude Modulation	6	15
2.	Phase Modulation	10	15
3.	Transmission line	10	15
4.	Radiation & Propagation of waves	8	12
5.	Antennas	10	16
6.	AM Radio Receivers	10	15
7.	FM Radio Receiver	10	12
Total		**64**	**100**

H) DETAILED CONTENT

CHAPTER–1 AMPLITUDE MODULATION

- Concept & Need of Modulation.
- Types of RF signal Modulation techniques.
- Definition, Representation, Modulation Index, Frequency Spectrum and mathematical expression of Amplitude Modulated wave.
- Power relation in Amplitude Modulation.
- Generation of Amplitude Modulation.
- High level and Low level Modulation.
- Transistorised Amplitude Modulation circuit (Collector Modulated class C amplifier only)
- Block diagram of Amplitude Modulation transmitter.
- Methods of SSB generation.

CHAPTER–2 PHASE MODULATION

- Definition, waveform, mathematical representation of frequency modulation.
- Frequency spectrum of Frequency Modulation wave.
- Effect of noise on carrier.
- Pre-emphasis De-emphasis – concept, need, circuit.
- Methods of FM generation: Direct Method - Basic Reactance Modulator,
- Varactor diode modulator; Indirect Method - Block diagram of Frequency Modulation Transmitter.
- Definition and mathematical Expression of Phase modulation
- Comparison between AM, FM & PM

CHAPTER–3 TRANSMISSION LINE

- Types of Transmission line.
- Losses in Transmission line.
- Concept of Standing Wave; VSWR.
- Half and Quarter wavelength lines.
- Reactance properties of Transmission line.

CHAPTER–4 RADIATION & PROPAGATION OF WAVES

- Electromagnetic radiation; Wave-guides.
- Effect of environment wave-guide terminators.
- Propagation of waves - Ground waves, Sky waves, Space waves.
- Troposphere & Ionosphere propagation.

CHAPTER–5 ANTENNAS

- Basic considerations of Antenna.
- Radiation mechanism.
- Elementary doublet.
- Wire radiator’s in space.
- Resonant and Non resonant Antennas.
- Antenna gain & directivity.

- Antenna resistance.
- Bandwidth, Beam width and Polarization.
- Effect of ground on Antennas.
- Effect of Antenna Heights.
- Antennas required for radio reception.
- Loop Antenna.

CHAPTER–6 AM RADIO RECEIVERS

- Tuned radio frequency (TRF) receiver. Block diagram.
- Block diagram and circuit of AM Super heterodyne radio receiver.
- Transistor RF amplifier circuit diagram.
- Parameters of AM radio receiver.
- Image frequency and its rejection, double spotting.
- Self excited and separately excited converter.
- Super heterodyne tracing and tuning I.F. and choice of I. F.
- Two stage IF amplifier.
- Adjacent channel selectivity.
- Diode detector circuit.
- The IF filter
- AGC and various AGC methods
- Volume control

CHAPTER–7 FM Radio Receiver

- Block diagram of FM receiver.
- RF amplifier, converter and IF amplifier.
- Amplitude limiter circuit.
- FM demodulators.
- The AFC.

I) SUGGESTED IMPLEMENTATION STRATEGIES

As per the course contents the concepts and principles of electronics communication through various modes would be explain to the students and appropriate practical as discussed below will be carried out .

J) SUGGESTED LEARNING RESOURCES

a) Reference Books

S. No.	Title	Author, Publisher & Address, Edition,Year of Publication,
1.	Electronic communication systems.	George Kenedy/ McGraw-Hill, Book Co. Ltd. Singapore, 3rd, 1984
2.	Electronic communication	Dennis Roddy & Jhon Coolen/ Prentice Hall of India Pvt. Ltd. New Delhi, 4th, 1995
3.	Communication Systems	D. D. Ahirrao & N. S. Jadhav/ EVEREST Publication Pune, 1st, 1998
4.	Principles of Communication Systems	Taub and Schilling/ McGraw-Hill International, New York,3rd, 1986

S. No.	Title	Author, Publisher & Address, Edition,Year of Publication,
5.	Principles of Communication	Biswas, N.M./ Media Promoters,1st , 1984
6.	Telecommunication Principles Circuit & Systems.	Bhaskar, C., & Rama, S./ Khanna Publication, New Delhi, 3rd , 1986
7.	Digital Communication.	Haykin, Simon/ Mc-Graw Hill International, New-York, 2nd , 1984
8.	Telecommunications Principles circuits and systems	S.Rambhadran/ Khanna Publishers New Delhi, 5th, 1986

Course: Electronic Communication, Lab

Code: 233521 (28)
Hours: 64

K) LIST OF PRACTICALS/ DEMONSTRATIONS

Analyzing

- Performance of Transistorized AM modulator
- Performance of Balanced modulator.
- Performance of Frequency Modulation circuit
- Performance of AM receiver
- Performance of FM receiver

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CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY BHILAI

A) SEMESTER : V
B) SUBJEC TITLE : JAVA PROGRAMMING
C) CODE : 222513 (22)
D) BRANCH/DISCIPLINE : INFORMATION TECHNOLOGY
E) RATIONALE :

Java is a technology that makes it easy to develop programs for distributed applications that can be executed on multiple computers across a network. Internet and Intranet based applications for web site development and development of on line educational environment can be developed by Java.

In this subject the basic concept of Java, Multithread programming and development of Java applets are covered.

F) TEACHING AND EXAMINATION SCHEME

Course Code	Periods/Week (In Hours) (Teaching Scheme)			Scheme of Examination						Credit L+(T+P)/2
	L	T	P	Theory			Practical		Total Marks	
				ESE	CT	TA	ESE	TA		
222513(22)	3	1	-	100	10	20	-	-	130	4
222523(22)	-	-	4	-	-	-	50	20	70	2

L : Lecture hours ; T : Tutorial hours; P : Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment

G) DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Chapter Name	Hours	Marks
1	Introducing JAVA	2	6
2	JAVA Language features	4	11
3	Introducing classes & Objects	8	15
4	Wrapper classes of JAVA	6	11
5	Inheritance	10	15
6	Exception handling	10	14
7	Multithreaded programming	12	14
8	JAVA Applets	12	14
Total:		**64**	**100**

H) DETAILED COURSE CONTENT

CHAPTER - 1 **INTRODUCING JAVA**

- A brief History of Java.
- Why Java is popular for Internet.
- Java Applets and Applications
- Security
- Portability
- Java components
- The byte code
  - Java Development kit (JDK)
- **Java Virtual Machine (JVM)**

CHAPTER – 2 **JAVA LANGUAGE FEATURES**

- Java program structure :
- Character set, Constants, Variables, Data types, Operators (Arithmetic, Relational, Logical, Conditional, Bit-wise, Special) Expressions (Arithmetic, Logical)
- Branching statements
  - Simple if statement
  - If-else statement
  - Switch – case statement
  - Break, continue
- Looping
  - While loop
  - Do – while loop
  - For loop
  - Break & continue

CHAPTER – 3 **INTRODUCING CLASSES & OBJECT**

- Class fundamentals
  - The general form of a class
  - A simple class
- Declaring objects
- Introducing Methods
  - Adding a method that takes parameters
  - Returning a value
- Constructors
  - Parameterized constructors
- The this keyword
  - Instance variable Hiding.
- Garbage collectors.
- The finalize( ) method.
- Overloading Methods, constructors

- Using objects as parameters.
- Concept of Nested and Inner classes
- Access control parameters such as public, protected and private.

CHAPTER – 4 WRAPER CLASSES OF JAVA

- Type casting wrapper classes
  - Boolean, Character, Double, Float, Integer and Long
- Study of string classes and methods
  - Type conversion (toUppercase, toLowercase), Replace( ), EqualsLength( ), CharAt( ) and CompareTo( )
- Vector Class and Method
  - AddElement( ), ElementAt( ), Size( ), RemoveElementAt( ), CopyInto(Array) and InsertElementAt( )
- Array one Dim, Two Dimensional

CHAPTER – 5 INHERITANCE

- Inheritance Basics
- Member Access and Inheritance
- A superclass variable can reference a subclass object.
- Using this and super for member and constructor references .
- Creating a multilevel hierarchy.
- Method overloading
- Using final with Inheritance.
- Multiple Inheritance using Interfaces.
  - Using Java Interfaces.
  - Defining an Interfaces.
  - Implementing Interfaces.
  - Applying Interfaces.
  - Variable in Interfaces.
  - Interface to implement call back functions.
- Packages – Creating Packages, Accessing package, wiring package

CHAPTER – 6 EXCEPTION HANDLING

- Fundamentals.
- Types.
- Why use exception handling.
- Hierarchy
- Exception handling constructs
- Try-Cache-Finally
- Throw statements
- Throw clause
- Creating your own exception class.

CHAPTER – 7 MULTITHREADED PROGRAMMING

- What are thread.
- Why use thread.
- Creating and running thread.
- Implementing Runnable.
- Extending thread.

- Synchronization.
- Synchronization Methods and statements.
- Creating multiple Threads
  - Thread synchronization.
  - Inter thread communication
  - Priorities and scheduling.
  - Thread local variables

CHAPTER – 8 JAVA APPLETES.

- Applet Basics
  - The Applet class
  - Applet architecture.
- An Applet skeleton
  - Applet Initialization and termination
- Simple Applet Display Methods.
  - Requesting repainting
  - Using the status window
  - HTML APPLET tag
  - Passing parameters to Applet
  - get DocumnetBase() and get CodeBase() , show Document ()

I) SUGGESTED IMPENTATION STRATEGIES

To implement Java programming is a good idea that the student first learn C,C++ although it is not a prerequisite . While implementing this one should give the programming assignments just after the completion of theoretical part of the concerned topic. One can also give more assignments based on the topics as per the availability of time. For effective teaching/learning it is expected that the programming assignments should cover the real time problems. The programming assignment should help a student in developing object oriented programming logic.

Concepts such as inheritance, overloading, polymorphism, Abstract classes of object oriented programming helps in reusability and enhancement. So it is expected that using the oop's principles one should reuse the available utilities of Java.

Java is well known for internet programming can be used for client side as well as server side programming. Keeping client side programming in mind this curriculum is been designed so it is expected that one should design web pages using Applets.

L) SUGGESTED LEARNING RESOURCES

a) Reference Books

S.No.	Title	Year of Publication, Author, Publisher & Address, Edition
1.	The Complete Reference - Java 2	Herbet Schildt, Tata McGraw Hills Publishing Co.l Ltd. N. Delhi, 3rd edition
2.	Mastering Java-2	John Zukonshi , BPB Publications ,B-14, CONNAUGHT PLACE, New Delhi-110001, Latest Edn
3.	Using Java-2 platform	Joseph L Weber, PHI (Eastern Economy Edition)

Course: Java Programming, Lab

Code: 222523 (22)
Hours: 64

J) LIST OF EXPERIMENTS

- Program based on Basics. (At least 5)
- Program using if, Nested if, Switch, loops & breaking loop statements.
- Program that define classes, create objects, add methods.
- Develop a program for each
  - Type caste
  - Wrapper
  - String
  - Vector class.
- Programs to design and inherent and interface.
- Program to handle an exception by using by Try-Catch-Finally
- Program to generate own exception class
- Programs by using multi-threading concept (At least 2)
- Program using Applet tag in HTML file.
- Writing simple programs on Applet.

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CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

A) SEMESTER : V
B) SUBJEC TITLE : NETWORK MANAGEMENT
C) CODE : 233512 (33)
D) BRANCH/DISCIPLINE : INFORMATION TECHNOLOGY
E) RATIONALE :

The objectives of this subject are to inculcate practical skills in the students relating to network installation, administration and management. The focus is on the practical aspects of networking of windows NT and Internet information server operating systems. This subject will give hands-on-training on the use of network devices, cables, connectors, hubs etc. The student would also troubleshoot the network related problems.

F) TEACHING AND EXAMINATION SCHEME

Course Code	Periods/Week (In Hours) (Teaching Scheme)			Scheme of Examination						Credit L+(T+P)/2
	L	T	P	Theory			Practical		Total Marks	
				ESE	CT	TA	ESE	TA		
233512(33)	4	1	-	100	10	20	-	-	130	5

L : Lecture hours ; T : Tutorial hours; P : Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment

G) DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Chapter Name	Hours	Marks
1	Introduction To -Windows 2003 Server	8	14
2	Installation And Storage Strategies Of Windows 2003 Server	16	18
3	Crating A Secure User Environment	12	14
4	Managing Printer And The Performance	12	14
5	Web Server- Internet Information Server	16	20
6	Network Troubleshooting.	16	20
	TOTAL	**80**	**100**

H) DETAILED CONTENT

CHAPTER – 1 INTRODUCTION TO -WINDOWS 2003 SERVER

- Introduction to windows 2003 server
  - What is windows NT server
  - Windows NT its Composition with MS-Dos, windows 1.0, windows 95, windows 98 Operating System.

- Windows 2003 features and capabilities
  - Operating system kernel features
  - File system and disk subsystem feature
  - Networking services features.

- Windows 2003 server poles
  - Primary domain controller
  - Backing domain controller
  - Member servers
  - Special purpose servers
  - Application server
  - Internet servers
- Windows 2003 security models
  - Workgroup model
  - Domain model

CHAPTER –2 II) INSTALLATION AND STORAGE STRATEGIES OF WINDOWS NT SERVER

- Installation requirements
  - Hardware requirement and preparation
  - Server specification, Disk partitioning and file systems
  - FAT, NTFS.
  - Installation media
  - Installation Poles – primary domain controller, backup domain controller, member server, stand-alone server
  - Server and domain names
  - Installation process
- Network Connectivity
  - Cable connection
  - Network Interface adapter installation,
  - Device driver installation
  - Protocol configuration
  - Domain/workgroup member
  - Network logon
  - Share access.
- Planning storage strategie

- Choosing file system
- Partitions and volumes
- Fault tolerance and fault recovery
- Working with disk administrator

CHAPTER– 3 CREATING A SECURE USER ENVIRONMENT

- Planning
  - Concept of user account, groups and security
  - Planning groups
  - Naming conversions
  - Security planning-share permission and file system permission
  - Policy planning – Account policies, user rights, audit policy, system policy
  - Share planning folder sharing
- Managing groups
  - Global version local groups
  - Special built in accounts
- Managing User Accounts
  - Networked and local users
  - Special built in Accounts
  - Creating user accounts
  - Copy of user accounts
  - Disabling and deleting user accounts
  - Renaming user accounts
  - Editing user environment profiles.
- Disaster Recover
- Techniques – backup, uninterrupted power supply, implementing a fault – tolerant design using RAID 0,1,2

CHAPTER – 4 MANAGING PRINTER AND THE PERFORMANCE

- Printing devices, drivers
- Printing and Network
  - Local printing – creating a local printer, local printer configuration, managing print job
  - Remark printers – connecting to a remote printer, remote printer configuration and management.
- Network performance
  - Finding and eliminating bottlenecks
- Improving network performance
  - Windows NT self tuning mechanism
  - Multiprocessing, memory optimization, caching
  - Processor and disk performance
  - Network monitor installation, use and security

CHAPTER – 5 WEB SERVER- INTERNET INFORMATION SERVER

- Introduction to web server

- Windows 2003 server and IIS server
- Internet and intranet
- IIS and its application
- Domain name system (DNS)
- Technologies and their purpose – www, FTP, Microsoft transaction server, Microsoft index server, Microsoft management console

- Installing IIS
  - Custom windows 2003 set-up – IIS options setting – certificate server, FrontPage server extension, IIS, MS data access components.
- Configuration – IIS server, WWW, FTP, Support service, server side scripting.

CHAPTER – 6 NETWORK TROUBLESHOOTING

- Hardware Based Monitoring Tools
  - Logical troubles shooting methodology
  - Electronic tools function and its selection - Digital Volt meter, Time Domain reflectometer, cable testers, Oscilloscope.
- Common Troubleshooting Areas-
  - Cable plant and Network Hardware problems (H/W such as connector, cable, hub/switch, modems), isolating problems to node or Network, Peer Network performance, Power problems, upgrading (O.S. protocol conflicts)
- Methods for Isolating the problem
  - Same line, different computer
  - Same computer, different line
  - Swapping components
- Isolating segment of network with terminator

I) SUGGESTED IMPENTATION STRATEGIES

Teachers are expected to develop practical skills related to network installation, administration and management. The students should be able to set-up an Intranet and trouble shoot network devices in the case of breakdown.

J) LEARNING RESOURCES SUGGESTED TO BE USED

(a) Reference Books

LIST OF TUTORIALS/DEMONSTRATION

S. No.	Title	Author, Publisher & Address, Edition,Year of Publication,
1.	MS-Internet Information Server (MCSE) ESTPREP)	Emmett Dulaney MCSE Prentice Hall India, New Delhi, Latest edition
2.	Windows 2003 Unleashed	Jason Garms, et.al SAMS Publications, Latest edition
3.	Networking Essential – Training Guide	Joe Casad & Dan Newland, (MCSE, MCT)Techmedia, New Delhi, Latest edition
4.	Network Essentials Study Guide	Becky Kirsininkas Tata McGraw Hills, N. Delhi, 1998
5.	MCSE 2003 server 4 study guide	Mattew Strebe,Charles Perkins, BPB Publications, N. Delhi, Latest edition

1. Demonstration of Installation and storage strategies of Window NT Server
2. Demonstration of Network Connectivity
   - i) Cable Connection
   - ii) NIC Installation
   - iii) Device Driver Installation
   - iv) Protocol Configuration
3. Demonstration of policies of user and group account
4. Demonstration of resources share ring
5. Demonstration of installation of IIS

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CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

A) SEMESTER : V
B) SUBJEC TITLE : INTERNET & WEB PAGE DESIGN
C) CODE : 233513 (33)
D) BRANCH/DISCIPLINE : Information Technology
E) RATIONALE :

Catering to fast developments in Internet and Web technology, it is essential that the information technology student is well aware of various tools used in Web page designing and hosting of web pages. This syllabus strives to inculcate the skills necessary for a student to effectively use these tools & techniques as per the industry requirements.

F) TEACHING AND EXAMINATION SCHEME

Course Code	Periods/Week (In Hours) (Teaching Scheme)			Scheme of Examination						Credit L+(T+P)/2
	L	T	P	Theory			Practical		Total Marks	
				ESE	CT	TA	ESE	TA		
233513(33)	4	1	-	100	10	20	-	-	130	5
233522(35)	-	-	4	-	-	-	70	40	110	2

L : Lecture hours ; T : Tutorial hours; P : Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment

G) DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Chapter Name	Hours	Marks
1	Introduction to web designing	10	12
2	Site types and their studies	10	15
3	Development of a web page	15	15
4	Linking of HTML documents and images	15	20
5	Tables	15	18
6	Lists and Frames	15	20
	TOTAL	**80**	**100**

H) DETAILED CONTENT

CHAPTER - 1 INTRODUCTION TO WEB DESIGNING

- Web page Web site
- Web publishing
- Web contents
- Static Web contents
- Dynamic Web contents.

CHAPTER– 2 III) SITE TYPES AND THEIR STUDIES

- Site types
  - Static sites
  - Dynamic sites
- Different types of web application sites
  - Commercial sites
  - Informational sites
  - Entertainment sites
  - Navigational sites
  - Community sites
  - Artistic sites
  - Personal sites

CHAPTER – 3 DEVELOPMENT OF A WEB PAGE

- Introduction to HTML
  - Components of HTML
  - Tags (closed and open), Elements, Attributes
- Structure of HTML code
  - Head
  - Body
- Structure Tags
  - Standard HTML, Tab HTML, Header, Title and body
- Block level tags
  - Block Formatting, Heading, Paragraph, Comments, Breaks, Centre, Text
  - Alignment and font size
- Text Level Tag
  - Bold Italic, Moonscape, Underlined, strike through, superscript, subscript
- Horizontal Rules
- Colours in WEB page
  - Background colour, Text colour, Link colour
- Lists
  - Ordered lists
  - Unordered lists
  - Definition list
  - Nesting List

- The Metatag

CHAPTER – 4 LINKING OF HTML DOCUMENTS AND IMAGES

- Concepts of URL
- Linking HTML Documents
  - Anchor Tag
  - Linking to a Document in the same folder
  - Linking to a Document in a different folder
  - Linking to a Document on the web
  - Linking to specific locations within the Document
  - Inserting Email links
- Adding Images
  - Types of images
  - GIF
  - JPEG
  - PNG
- Effect of physical size and file size of image on downloading.
  - IMG tag
  - Image formatting
  - Alignment
  - Resizing
  - Vertical and Horizontal spacing
  - Wrapping text
- Image as a link
- Image Maps
  - Server side Image map
  - Client side Image map

CHAPTER – 5 IV) TABLES

- Table Tags
  - <TABLE >, <TR>, <TH>, <TD> Tags
- Spanning Rows and Coloumns
  - < ROWSPAN>, < COLSPAN> Tag
- Formatting tables using attributes.
  - BORDER, BORDERCOLOR, NOBORDER, BGCOLOR, BACKGROUND, ALLIGN, WIDTH,NOWRAP,CELLSPACING, CELL PADDING
- Caption tag
  - tag

CHAPTER – 6 V) LISTS & FRAMES

VARIOUS TYPES OF LISTS, ORDERED LIST, UNORDERED LIST

- Tags – OL, UL, LI, DIR, menu, DL, DD, DT

CREATING FRAMES AND LAYERS.

- Introduction to frames
- Advantages and disadvantages of using frames.
- The <FRAMESET>, <FRAME> and <NOFRAME> tags.
- Formatting frames using attributes.
- FRAMEBORDER,BORDER,NORESIZE, SCROLLING, ALLIGNMENT, MARGIN WIDTH BORDERCOLOR.
- Frame targeting.
- Creation of layer , switching to different layers.

I) SUGGESTED IMPLEMENTATION STRATEGIES

Teachers are expected to develop practical skills related to network installation, administration and management. The students should be able to set-up an Intranet and trouble shoot network devices in the case of breakdown.

J) LEARNING RESOURCES SUGGESTED TO BE USED

S. No.	Title	Author, Publisher & Address, Edition,Year of Publication,
1	HTML : The complete Reference	Thomas A. Powell, Tata McGraw Hills Publishing Co.l Ltd. N. Delhi, Latest
2	Mastering HTML	D.S.Ray and E.J.Ray , BPB Publications N. Delhi
3	Java Script in 21 days	Techmedia Publication, Latest
4	HTML in 21 days	Techmedia Publication, Latest
5	HTML Part-I	Sanjay Agrawal NITTTR, Bhopal, Video Programme
6	HTML Part-II	Sanjay Agrawal NITTTR, Bhopal, Video Programme

a) Reference Books

Course: Internet & Web Page Design, Lab

Code: 233522 (35)
Hours: 64

K) LIST OF PRACTICALS

- Create Web page and apply some block level tags, text level tags.
- Create Web page and apply background colour, text colour, horizontal rules. And special characters.
- Create Web Page and include ordered list, unordered list, definite list and nested list.
- Create Web page and include links to
- local page in same folder
- page in different folder
- page on the Web
- specific location within document

- Include images in the web page with different alignments and wrapped text.
- Include images as links in the Web page.
    - Create tables and format tables using basic table tags and different attributes..
    - Create a frameset that divides browse window into horizontal and vertical framesets
- Creating layer based Web Page.
- Case Study – Develop Web page for an organisation or Institute.

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CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

A) SEMESTER : V
B) SUBJEC TITLE : DATABASE MANAGEMENT SYSTEM
C) CODE : 233514 (33)
D) BRANCH/DISCIPLINE : INFORMATION TECHNOLOGY
E) RATIONALE :

The aim of this subject is to get broad understanding of the basic concepts of database system and relational database system in particular. The students will have theoretical foundation required for working with relational database products, such as SQL.

The student will develop the skills required to design database system taking into consideration functional dependencies, normalization, and entity-relationship and database security aspects.

F) TEACHING AND EXAMINATION SCHEME

Course Code	Periods/Week (In Hours) (Teaching Scheme)			Scheme of Examination						Credit L+(T+P)/2
	L	T	P	Theory			Practical		Total Marks	
				ESE	CT	TA	ESE	TA		
233514(33)	4	1	-	100	10	20	-	-	130	5

L : Lecture hours ; T : Tutorial hours; P : Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment

G) DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Chapter Name	Hours	Marks
1.	An Overview Of Database Management.	6	8
2.	An Architecture For A Database System.	6	10
3.	The Entity /Relationship Model.	8	8
4.	Relational Data Objects	10	8
5.	Relational Data Integrity	10	10

6.	The SQL Language.	12	12
7.	Functional Dependencies	10	10
8.	Normalization.	10	12
9.	Database Security	8	12
	TOTAL	**80**	**100**

H) DETAILED COURSE CONTENT

CHAPTER - 1 AN OVERVIEW OF DATABASE MANAGEMENT.

- **Database and Database system, Need of Database**
- **Advantages and Disadvantages,**
- **Data independence**
- **Data models**
  - **Relational**
  - **Network**
  - **Hierarchical schema and subschema**
- Data base users

CHAPTER – 2 AN ARCHITECTURE FOR A DATABASE SYSTEM

- The three level architecture, mapping,
- The Database Administrator (DBA), Duties & Responsibilities
- The database management system, the data communications manager
- Client/server Architecture Utilities, distributed processing.

CHAPTER – 3 THE ENTITY /RELATIONSHIP MODEL.

- Introduction, the overall approach, an overview of the E/R model, E/R diagrams, database design with the E/R model.

CHAPTER – 4 RELATIONAL DATA OBJECTS & RELATIONAL ALGEBRA

- Domains and relations: Domain, relations, and kinds of relations, relations and predicates, relational database.
- Various operations of Relational Algebra (Set operation, Cartesian product, join, logic)

CHAPTER – 5 RELATIONAL DATA INTEGRITY & RELATIONAL ALGEBRA

- Candidate key and related matters: candidate keys, primary keys and alternate keys, foreign keys and rules.

CHAPTER – 6 THE QUERY LANGUAGE.

- Introduction to SQL, data definition, data-manipulation, retrieval operation, data manipulation-update operation, table expressions, conditional expressions, scalar expressions, Integrated SQL (ISQL), Embedded SQL (ESQL), Base tables & View Tables.

CHAPTER-7 FUNCTIONAL DEPENDENCIES

- **Introduction, basic definition, trivial and nontrivial dependencies, closure of a set of dependencies, closure of a set attributes, irreducible set of dependencies. Base tables & views**

CHAPTER-8 NORMALIZATION.

- 1nf, 2nf, 3nf, bcnf: introduction, non loss decomposition and functional dependencies, first, second and third forms, dependency preservation, boyce / codd normal form.

CHAPTER-9 DATABASE SECURITY.

- **Introduction, authentication, authorization, and access control, enforcement**
- Object/user privileges

I) IMPLEMENTATION STRATEGIES

Concepts of DBMS will be implemented by using the popular relational DBMS package oracle.

J) LEARNING RESOURCES SUGGESTED TO BE USED (if available)

1. Lab manuals
2. CAI packages
3. OHP transparencies
4. Existing software systems

K) REFERENCE BOOKS

S.No.	Title	Author, Publisher & Address, Edition, Year of Pubication
1.	An Introduction to Data Base System	C. J Date Addision-wesley Publication, Sixth Year of Publication
2.	Introduction to Database Management System	Navin Prakash Tata Mcgraw Hill, Latest
3.	Concepts of Database Management	Philip J.Pratt & Joseph J. Adamski, Vikas Publishing House, 3rd Edition
4.	Using Oracle 8.	William Page Jr. And Nathen Hughes

		Abraham silberschaty Practice Hall of India, Latest
5.	Database system concepts	Herry,Korth Tata Mcgraw Hill, Latest

L) LIST OF TUTORIALS

- Study of various Data Models
- Design of E-R Diagram
- Creation tables with integrity constraints
- Creation of tables with primary key, foreign key, normal, unique
- Solve problem using query (DML)
- Creation of users & grating
- About object privileges
- Design & implementation of database for an organization

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CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI

A) SEMESTER : V
B) COURSE TITLE : INDUSTRIAL TRAINING
C) CODE : 233523 (33)
D) BRANCH/DISCIPLINE : INFORMATION TECHNOLOGY
E) RATIONALE :

The purpose of industrial training is to offer wide range of practical exposures to latest practices, equipments and techniques used in the field. This training programme will help the student in acquiring hands on experiences of various practices and events required to perform in different job situations.

Through the industrial training the students are given an opportunity to develop psychomotor skills and problem solving ability. The students will have to go for industrial training in the areas related to:

1. Computer Programming
2. Computer Networking
3. Database Management
4. Web Designing

The duration of industrial training will be of four weeks and organized after the end of V semester examination. The industrial Training has basically the following three components: -

1. Orientation Programme
2. Industrial Training in the Industry
3. Report Writing and Evaluation
4. Seminar

NOTE

During the orientation programme complete guidelines will be provided to the students regarding planning, implementation and evaluation of industrial training.

During the training student will have to maintain a daily dairy to record his observations and experiences at field and on the basis of daily dairy student has to prepare and submit Industrial Training Report.

For evaluation each student has to prepare and present a seminar paper related to experience gained during the industrial training. Each student will be evaluated on the basis of daily diary, training report, seminar presentation and viva voce.

F) TEACHING AND EXMINATION SCHEME:

Course Code	Periods/Week (In Hours)			Scheme of Examination						Credit L+(T+P)/2
	L	T	P	Theory			Practical		Total Marks	
	-	-	1	ESE	CT	TA	ESE	TA		
233523(33)				-	-	-	50	20	70	1

L: Lecture hours: T: Tutorial hours, P: Practical hours
ESE – End of Semester Exam.; CT – Class Test; TA- Teacher's Assessment ;

Note: ***Industrial training will be organized after 4th semester, evaluation will be done in 5th semester.***

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