

(A) **COURSE TITLE AND CODE : MARKETING MANAGEMENT, G – 304**

(E) **TEACHING AND EXAMINATION SCHEME:**

Sl. No.	Course Code	Name of Course	Teaching Scheme					Examination Scheme				Total Marks
			Pre-requisite	L	T	P	C	Theory		Practical		
								ET	PA	ET	PA	
1.	G- 304	Marketing Management		3	2	-	5	75	25	--	--	100

(F) **DETAILED COURSE CONTENTS**

CHAPTER 1.0 Understanding Marketing Management

- Definition of marketing
- Definition of marketing management
- P's of marketing
- Marketing environment
- Consumer behaviour
- Marketing in a changing world
- Market segmentation

CHAPTER – 2.0 MARKETING INFORMATION AND RESEARCH

- Need of marketing information system
- Marketing research and market research
- Functions of marketing research
- Process of marketing research
- Sampling
- Data sources and collection
- Data analysis

CHAPTER – 3.0 PRODUCT POLICY

- Definition of product
- Product mix
- Brand
- Product positioning
- Pricing (Pricing considerations and Approaches)

CHAPTER - 4.0 MANAGING DISTRIBUTION

- Definition of channels
- Channels of distribution

- Factors considered in selection of channels

CHAPTER – 5.0 PROMOTION

- Advertising - Media selection
- Personal selling
- Sales promotion
- Publicity
- Promotion budget - i. Affordable Method, ii. Competitive- parity method, iii. Percentage of sales method, iv. Objective – task method

CHAPTER- 6.0 Marketing: Product Approach

- Marketing of industrial products
- Marketing of consumer products
- Marketing of services.

(G) SPECIFICATION TABLE SHOWING DISTRIBUTION OF MARKS AND HOURS

Sl. No.	Chapter No.	Chapter Title	Hours	Marks			
				K	C	A	Total Mark
1.	1.0	UNDERSTANDING MARKETING MANAGEMENT	12	2	6	2	10
2.	2.0	MARKETING INFORMATION AND RESEARCH	12	6	6	3	15
3.	3.0	PRODUCT POLICY	12	2	6	2	10
4.	4.0	MANAGING DISTRIBUTION	12	4	3	3	10
5.	5.0	PROMOTION	16	2	6	7	15
6.	6.0	MARKETING: PRODUCT APPROACH	16	4	6	5	15
Total			80				75

Abbreviations: K=Knowledge level, C= Comprehension Level, A=Application level

(H) SUGGESTED IMPLEMENTATION STRATEGIES:

This course will be taught in an application-oriented fashion. Various marketing management concepts and principles will be taught through brief lectures, case analyses, class exercises, and using marketing simulation games.

(I) SUGGESTED LEARNING RESOURCES :

(a) Reference Books:

S. No.	Title	Author, Publisher, Edition & Year
1.	Marketing Management – Hall	Kotler, Philip 8 th Edition, 1994
2.	Marketing Management	Dickson, Peter R.

		Dryden Press, 2 nd Edition, 1997
3.	Principles of Marketing; Prenetice – Hall	Kotler and Amstrong 9 th Edition, 2001
4.	Marketing Management Implementation and Control; The Indian Context	V.S. Ramaswamy and S. Nama Kumar Mac Millan Publication
5.	Marketing Services	Bidhi Chand Rawat Publications
6.	Marketing Management – A strategic Approach	Boyd, Harper W and Orville C. Walker Richard D. Irwin, 1990
7.	Marketing Management	S.A. Sherlekar Himalaya Publishing House, New Delhi, 4 th Edition
8.	Marketing	N. Rajan Nair Sultan Chand & Sons Publishers, New Delhi, 6 th Edition

HOURS: -- MARKS: --

(J) SUGGESTED LIST OF PRACTICALS:

Not Applicable

(K) SUGGESTED LIST OF TUTORIALS:

- Discuss Modern concept of marketing.
- “Advertising is wasteful” do you agree?
- Consumerism
- Steps in New product development
- “There are no fundamental differences between the marketing of industrial and consumer goods”
- Social marketing

- (A) **COURSE TITLE AND CODE** : **COMPUTER ARCHITECTURE (CPE 404)**
 (B) **LEVEL** : **FOUR**
 (C) **BRANCH/DISCIPLINE** : **COMPUTER ENGINEERING**
 (D) **RATIONALE** :

The students after studying this subject will be able to understand the architecture and maintenance of computer system. They will understand hardware developmental, processor and control design of computer systems. This will develop the basic insight in student about the change in the hardware technology, technology design and thereby develop better knowledge for the maintenance and repairing of the computer system. They will also be able to learn how to plan for establishing a computer set-up for any given requirement.

(A) **TEACHING AND EXAMINATION SCHEME :**

Code	Name of Course	Teaching Scheme					Examination Scheme				Total Marks
		Pre-req.	L	T	P	C	Theory		Practical		
							T	PA	ET	PA	
CSE-404	Computer Architecture	G-202	3	1	2	6	100	25	50	-	175

(F) DETAILED COURSE CONTENT

CHAPTER – 1.0 LOGIC GATES

- Basic Logic Gates: Logic symbols and truth table of all gates: AND, OR, NOT, NAND, NOR, EX-OR, EX-NOR.
- Realization of all other gates using universal gate.

CHAPTER – 2.0 BOOLEAN ALGEBRA

- Rules and laws of Boolean algebra, Demorgan's theorem.
- Evaluation of logic expression, algebraic reduction of Boolean expressions

CHAPTER – 3.0 COMBINATIONAL LOGIC DESIGN

- Introduction to logic design
- Karnaugh map representation of logical functions, Simplification of logical function using K-map, (2, 3, 4 variable) Sum of products (SOP) Product of Sum (POS) .
- Don't care conditions.
- Design example: half adder, full adder, Half subtractor, full subtractor, BCD to seven-segment decoder (using K-map)
- Gray to binary code converter (using K-map)

CHAPTER – 4 MICROPROCESSOR ARCHITECTURE

- Introduction-
 - Evolution of microprocessors
 - Organization of microcomputer
 - Applications of microprocessor.

The 8085 Microprocessor architecture

- The 8085 microprocessor architecture
 - Buses, Registers, Flags, Pin Configuration, Function of all pins.
- SSI and MSI devices
 - Tri-state devices, buffers, tractates buffers (74LS244), Bi-directional buffer (74LS245), Decoders (74LS138), Latches (74LS373), Use of these devices in microprocessor based systems for memory addressing and I/O decoding.

CHAPTER – 5.0 INSTRUCTION SET

Theory

- Instruction format
- Instruction types
 - single byte, two byte, three byte
- Classification of instructions
 - - Data transfer, Arithmetic group, Logical group, Branch control group, I/O and Machine control group instructions.
- Addressing modes.

CHAPTER – 6.0 INSTRUCTION CYCLE**Theory**

- Microprocessor operations
 - Fetch, Decode and Execute operation.
- Timing diagrams
 - Instruction cycle, Machine cycle, T-state. OPcode-Fetch cycle, Memory and I/O Read cycle, Memory and I/O Write cycle, Wait state. Interrupt acknowledge machine cycle.

CHAPTER – 7 ARCHITECTURE

- **Motherboard Logic**
- **RAM details design consideration**
- **Motherboard Hardware**
- **Clock generation**
- **Bus controls and I/O stat details**
- **Various types of motherboards :**
 - 80286
 - 80186
 - SXIDX
 - 486 Motherboards
 - Pentium family
- **Different types of IC modules , SIP package,**
DIP Package, SMD package, SIM MODULES, speaker interface to motherboard

(G) SPECIFICATION TABLE SHOWING DISTRIBUTION OF MARKS AND HOURS

S. No.	Chapter No.	Name of Chapter	Hours	Marks			
				K	C	A	Total Mark
1.	1.0	Logic gates	6	2	4	4	10
2.	2.0	Boolean algebra	10	2	6	6	14
3.	3.0	Combinational logic design	10	4	4	8	16
4.	4.0	Microprocessor architecture	10	4	6	6	16
5.	5.0	Instruction set	8	4	6	4	14
6.	6.0	Instruction cycle	8	4	6	4	14
7.	7.0	Architecture	12	4	8	4	16
Total			64	24	40	36	100

Abbreviations: K=Knowledge level, C= Comprehension Level, A=Application level

(H) SUGGESTED IMPLEMENTATION STRATEGIES

According to the theory and practical schedules the subject teacher will complete the session. The student themselves would be able to plan and submit a proposal for establishing a computer setup for industry.

(I) LEARNING RESOURCES SUGGESTED TO BE USED

1. Lab manuals if available
2. CAI packages
3. OHP transparencies

(J) SUGGESTED LIST OF PRACTICALS: HOURS: 32 MARKS: 50

- Lab. Experiments
 - Study and Verify the truth table of logic gates (74xx series).
 - Realization of AND, OR, NOT and Ex-OR logic gates using NAND and NOR gate.
- Lab. Experiments
 - Verification of Demorgan's theorem.
- Lab. Experiments
 - Implementation of full adder, subtractor using gates
 - Study of gray to binary code convertor using gates
 - To more contents of flag register to any general purpose register
 - To design a counter using time delay subroutine.
- Basic assembly language Programming in 8085

(K) REFERENCE BOOKS/ MANUALS:

S.No.	Title	Edition Year of Publication	Author Publisher & Address
1.	Computer Architecture and Organization	Latest	J.P.Hayes Tata McGraw Hills Publishing Co.l Ltd. N. Delhi
2.	IBM PC and Clones	Latest	B.Govindrajulu Tata McGraw Hill Publications New Delhi
3.	Inside IBM PC	IV th - Edition 1999	Peter Norton Prentice Hall of India Pvt.Ltd , N.Delhi

4.	Structured computer Organization	III rd- Edition 1997	Andrews Tanenbaum Prentice Hall of India Pvt.Ltd, N.Delhi
5.	Electronic fault diagnosis	Third	G.C.Loveday Longman Scientifi & Technical
6.	Upgrading and repairing PCs	Latest	Scott Mueller QUE Publication

- (A) **COURSE TITLE AND CODE : DATABASE MANAGEMENT SYSTEM (CPE 408)**
- (B) **LEVEL : FOUR**
- (C) **BRANCH/DISCIPLINE : COMPUTER ENGINEERING**
- (D) **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.

(E) TEACHING AND EXAMINATION SCHEME

Code	Name of Course	Teaching Scheme					Examination Scheme				Total Marks
		Pre-req.	L	T	P	C	Theory		Practical		
							T	PA	ET	PA	
CSE-408	Database Management System	G-202	4	1	2	7	100	25	25	25	175

(F) DETAILED COURSE CONTENT

CHAPTER – 1.0 AN OVERVIEW OF DATABASE MANAGEMENT SYSTEM

- **What is a database system? What is database? Why database (advantages and disadvantages), data independence, Data models: Relational, Network & Hierarchical schema and subschema**

CHAPTER – 2.0 AN ARCHITECTURE FOR A DATABASE SYSTEM

- The three level architecture, mapping, the database administrator, the database management system, the data communications manager, client/server architecture utilities, distributed processing.

CHAPTER – 3.0 AN INTRODUCTION TO RELATIONAL DATABASES

- Relational system, the relational model, optimization, base tables and views, the SQL language.

CHAPTER – 4.0 RELATIONAL DATA OBJECTS

- Domains and relations: domains, relations, and kinds of relations, relations and predicates, relational database.

CHAPTER – 5.0 RELATIONAL DATA INTEGRITY

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

CHAPTER – 6.0 RELATIONAL OPERATORS (1)

Theory part:

- Relational algebra: closure, a syntax for the relational algebra, traditional set operations, special relational operations, what is algebra for, extend and summarize, update operations, relational comparisons.

CHAPTER – 7.0 RELATIONAL OPERATORS (2)

Theory part :

- Relational calculus: introduction, type-oriented relational calculus, relational calculus versus relational algebra, computational capabilities, domain-oriented relational calculus.

CHAPTER – 8.0 THE SQL LANGUAGE

- Introduction, data definition, data-manipulation, retrieval operation, data manipulation-update operation, table expressions, conditional expressions, scalar expressions, embedded SQL.

CHAPTER-9.0 FUNCTIONAL DEPENDENCIES

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

CHAPTER-10 NORMALIZATION

- 1nf, 2nf, 3nf, 4nf: introduction, non loss decomposition and functional dependencies, first, second and third forms, dependency preservation, boyce/codd normal form.

CHAPTER- 11 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-12 DATABASE SECURITY.

- **Introduction, authentication, authorization, and access control, enforcement.**

(G) SPECIFICATION TABLE SHOWING DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Name of Chapter	Hours	Marks			
			K	C	A	Total Mark
8.0	An Overview Of Database Management System	4	2	2	2	6
9.0	An Architecture For A Database System.	6	2	2	2	6
10.0	An Introduction For a Relational Databases	6	2	2	2	6
11.0	Relational Data Objects	6	2	2	2	6
12.0	Relational Data Integrity	6	2	3	3	8
13.0	Relational Operators (1)	6	2	4	2	8
14.0	Relational Operators (2)	6	2	4	2	8
15.0	The SQL Language	10	2	8	4	14
16.0	Functional Dependencies	8	4	4	2	10
17.0	Normalization	8	2	4	4	10
18.0	The Entity /Relationship Model	8	2	4	2	8
19.0	Database Security	6	2	6	2	10
	Total	80	26	45	29	100

Abbreviations: K=Knowledge level, C= Comprehension Level, A=Application level

(H) IMPLEMENTATION STRATEGIES

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

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

4. Lab manuals
5. CAI packages
6. OHP transparencies
7. Existing software systems

(J) SUGGESTED LIST OF PRACTICALS: Hours:32**Marks :25**

- List of Practical
 - **Assignments and Practice in the development of programs using SQL.**
 - **Tutorial on selected topic may also be given.**
 - **Demonstrate CAI packages if available**

(K) REFERENCE BOOKS

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

- (A) **COURSE TITLE AND CODE** : **LINUX OPERATING SYSTEM (CPE 502)**
 (B) **LEVEL** : **FIVE**
 (C) **BRANCH/DISCIPLINE** : **COMPUTER ENGINEERING**
 (D) **RATIONALE** :

The subject on 'Linux Operating System' intends to teach the students various services of an Linux operating system, its installation, file system, shell programming, networking. It will enable the student to understand the concept of multi-user operating system, Process management and file security in a network Operating system. These basic concepts will help the students to properly understand single user and multi-user operating systems.

The students will also familiarize themselves with LINUX O.S., its design architecture, commands structures and utilities.

(B) TEACHING AND EXAMINATION SCHEME:

Course Code	Name of Course	Teaching Scheme				Examination Scheme				Total Marks	
		Pre-requisite	L	T	P	C	Theory		Practical		
							ET	PA	ET		PA
CSE-502	LINUX O.S.	CSE-405	3	-	2	5	100	-	50	25	175

(F) DETAILED COURSE CONTENT

CHAPTER – 1.0 LINUX – OPERATING SYSTEM

- History and development of LINUX O.S.
 - Features, Structures of LINUX O.S.
 - Kernel, Shell, Applications Utilities.
 - Installation requirements
- LINUX User Interface
 - Classes of user
 - Operational users, Programmers, End users
 - Types of Interface
 - General
 - Command language, Command structure, Shell
 - Windows, Icons , slide bars, title bars

CHAPTER – 2.0 ESSENTIAL LINUX COMMANDS

- Startup & shutdown Process
 - Booting Procedure with different stages, Login process, Password concept, who, who am i , tty, date and cal commands, System shutdown
- File concept
 - File types in LINUX, Hierarchical directory structure, File system structure
- File creating, displaying, concatenating and copying
- Creating and changing directories, removing files and directories
 - **Cd, cp, md, rm, mkdir, rmdir, cat**
- Various users and access rights
- File attributes and permissions
 - **Setting permissions, Changing permissions, Changing group & group ownership of a file chmod, chown, chgrp**
- File processing commands
 - wc, head, tail, cut, paste join, split, sort, grep, egrep, tr, comm, cmp, diff, more, less commands
- File formatting and printing commands
 - pr with all options, lp commands

CHAPTER – 3.0 LINUX PROCESSES AND OTHER UTILITIES

- On line help facilities in LINUX
 - Man and help command
- Mathematical commands
 - bc, expr, factor, units
- Linking files and directories
 - Removing files and directories
- Inter-process communication
 - Pipes and filters
 - tee command
- Other process facilities
 - Background processing, Listing all active and background processes, ps command with all options, Terminating processes, Kill command, Process scheduling, Nice command, Wait command, Sleep command
- Communication commands
 - user to user communication using write, Mailing using mail, **Broadcasting messages using wall**

CHAPTER – 4.0 vi AND OTHER EDITORS

- vi editor
 - Features of vi, modes of vi, creating, editing & saving text, cursor movement commands, text scrolling commands
 - text deletion commands, find and replace
 - copying and yanking text, cut and paste in vi , set commands, abbreviations and map commands, saving files & quitting vi
- joe and vim editors

CHAPTER – 5.0 SHELL PROGRAMMING AND AWK

- Various LINUX shells
 - bash, csh, ksh
 - Shell scripts
 - writing and executing, Parameter substitution, Shell variables, Standard shell variables
 - User define variables
- Command substitution, Expressions, arithmetic operators, logical, Operators, test expressions, read statement, test command, control structures – for, while and until statements, if structure, nested if structure, if.. then.. elif statement, case structure
- Awk programming

CHAPTER – 6.0 INSTALLATION AND SYSTEM ADMINISTRATION

- Installation
 - Requirement
 - Linux file system

Boot block, super block, inode table, data blocks

Partitioning the hard disk for LINUX, Ininstalling the LINUX system
- System administration
 - Common administrative tasks, Role of system administrator
 - Managing user accounts – adding and deleting users, changing permissions and ownerships
 - Creating and managing groups
 - Creating and mounting files system
 - Backup and restoring files
 - Linuxconf utility
- X-configuration , changing X settings
- KDE and Gnome graphical interfaces

(G) SPECIFICATION TABLE SHOWING DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Name of Chapter	Hours	Marks			
			K	C	A	Total Mark
20.0	Linux – operating system	4	4	6	4	14
21.0	Essential Linux Commands	9	6	6	6	18
22.0	Linux processes and other utilities	9	6	6	4	16
23.0	vi and Other Editors	8	4	8	4	16
24.0	Shell programming	10	6	8	6	20
25.0	Installation and system administration	8	6	4	6	16
Total:		48				100

Abbreviations: K=Knowledge level, C= Comprehension Level, A=Application level

(H) IMPLEMENTATION STRATEGIES

The subject operating systems starts with the basic features of LINUX operating system and their subsequent developments. It includes the various types of users in LINUX OS.

The chapters 2 to 5 take up LINUX OS commands and Programming. They also deal with various LINUX Processes and editors and utilities. Most of the commands can be covered during practical hours. Students are expected to write the shell scripts specified during practical sessions and if possible develop own utility routines.

Chapter 6 deals with Installation of LINUX and System Administrations. Demonstration of installation and X-configuration is required here.

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

8. Lab manuals if available
9. CAI packages
10. OHP transparencies

(J) SUGGESTED LIST OF PRACTICALS/ DEMONSTRATIONS

Hours:32 Marks:50

- **List of Practical**

- Practice on stty command
- Study of password command
- Study of who, who am i, tty,date and cal commands

- Executing commands in background
 - Study of ps , kill commands
 - Listing the files in a directory using all options to ls.
 - Creating sub-directories.
 - Changing the mode of a file/directory.
 - Changing the owner of a file/directory.
 - Study of file processing commands
 - Commands using pipes and I/O redirectors
 - Display date using various formats
- **User to user communication using communication commands.**
 - Study of vi editor
 - Modes of vi
 - Creating and saving files using vi
 - Cursor movement commands
 - Cut and paste commands
 - Find and replace commands
 - Ex mode commands
- Write a shell script for the following
- The shell script should check whether every argument supplied is a file or a directory and list it accordingly.
 - The shell script should check every argument and carry out the following
 - . if the argument is a directory, then display the number of files or directories present in that directory.
 - . If the argument is a file, then display the size of the file
 - . If the argument does not exist , then create the directory.
 - The shell script should accept the username as argument and find out at how many terminals has this user logged on.
 - The shell script must display a list of all files in the current directory to which you have read, write and execute permissions.
 - The shell script should delete all lines containing the word “ UNIX ‘ in the files supplied as arguments to this shell script.
- Awk Programming examples with queries for report writing
 - Demonstration of Installation of LINUX OS
 - Mounting of filesystem – using floppy and CDROM
 - Configuring X-environment
 - Switching between KDE and Gnome
 - Adding Group and Users logins

(K) REFERENCE BOOKS

S. No.	Title	Edition, Year of Publication	Author, Publisher & Address
1.	Red hat Linux unleashed	Latest	Techmedia (BPB publication)
2.	UNIX concept and Applications	Latest	Sumitabha Das Tata McGraw Hill Publication, N.Delhi
3.	Redhat LINUX 7.x Bible	Latest	Cristopher negus, IDG books India
4.	Using LINUX	Latest	Jack Tackett, David Gunter, PIII, EEE Edition
5.	Linux Installation and Administration	Latest	Nicholas Wells, Course technology, (Vikas Publishing, New Delhi)
6.	Unix Operating System	Latest	Peter Nortorn BPP Publications

- (A) **COURSE TITLE AND CODE** : **MULTIMEDIA TECHNOLOGY & APPLICATION (CPE 507)**
- (B) **LEVEL** : **FIVE**
- (C) **BRANCH/DISCIPLINE** : **COMPUTER ENGINEERING**
- (D) **RATIONALE** :

With the advent of personal computers, multimedia technology has become a powerful technology for instruction and communications. Today multimedia technology is used to develop computer-based presentation, training packages and various Applications for entertainment purpose. This subject therefore aims to provide the required knowledge and skill in students that are required to develop this form of digital media.

(E) **TEACHING AND EXAMINATION SCHEME:**

Course Code	Name of Course	Teaching Scheme				Examination Scheme				Total Marks	
		Pre-requisite	L	T	P	C	Theory		Practical		
							ET	PA	ET		PA
CSE-507	Multimedia Technology	G-202	3	-	3	6	75	25	50	25	175

(F) **DETAILED COURSE CONTENT**

CHAPTER – 1.0 OVERVIEW OF MULTIMEDIA TECHNOLOGY AND ITS APPLICATIONS

- **Computer Technology and application of multimedia technology, Multimedia Technology and its different forms, Hardware and Software required.**
- Multimedia communications: quality of service (QOS) requirements for multimedia communications, modelling of multimedia traffic, loss concealment, transport protocol support for multimedia communications, multimedia on Internet, multimedia streaming
- Multimedia Application development process, testing and dissemination

CHAPTER – 2.0 TEXT AND IMAGE PROCESSING TOOLS

- **Text Processing**
 - Plain text and formatted text, conversion of text formats, object linking and embedding concept and Text preparation tools.
- **Images Processing**
 - Types of Graphics- Vector and Raster
 - Attributes of Images - Resolutions, Images sizes, Pixel Depth, Colour, Compression of images and its affect to quality and storage size.
 - Image File Format, file formats conversions, Importance of compression techniques
 - Processing Tools - Techniques of capturing images and converting images, Software tools for processing Images - such as ACAD, Paint Short Pro, Adobe PhotoShop.
 - Using Adobe Photoshop to Create, Process and Print Graphics

CHAPTER – 3.0 DIGITAL SOUND AND ANIMATION

- **Digital Sound**
 - Digital sound and its Attributes - Sampling of Sound, Frequency, Sound Depth, Channels in sound and their effects on quality and storage size estimation of space of a sound file.
 - Format of Sound: Midi and MP3 files
 - Method to Capture and edit sound – Capture sound using microphone, and process using Wave for Windows or Wave Studio.
- **Animation**
 - Use of Animation, Software for Animations, Effect of resolution, pixel depth, image size on quality and storage size, Types of Animations.
 - Basic Features of Animation Tools - Flash, 3-D studio/Max.

CHAPTER – 4.0 DIGITAL VIDEO AND VIDEO MAKING TOOLS

- Basic of Video - Analog and Digital Video, Importance of Video Compressions, Compression techniques
- Image and video storage system, storage media: CD, CD-ROM, and DVD
- Basic features of video editing and movie making tools - Video for window/Adobe premier

CHAPTER – 5.0 AUTHORIZING USING MACROMADIA FLASH

- Multimedia Authoring, navigation for interactive multimedia, using Macromedia flash for authoring.
- Introduction to Flash MX , The Flash Interface , The Flash Timeline, Shape Twinning , Text Effects , Symbols and Libraries, Labels & Navigation , Movie Clips & Scripting Instances , Masking, Onion-Skinning, Sound , Optimization & Publication

(G) SPECIFICATION TABLE SHOWING DISTRIBUTION OF MARKS AND HOURS

Chapter No.	Name of Chapter	Hours	Marks			
			K	C	A	Total Mark
26.0	Overview of Multimedia Technology and its Applications	4	2	4	1	7
27.0	Text and Image Processing Tools	10	2	4	4	10
28.0	Digital Sound and Animation	12	4	10	4	20
29.0	Digital Video And Video Making Tools	8	4	6	4	18
30.0	Authoring Using Macromadia Flash	14	4	7	2	20
	Total	48				75

Abbreviations: K=Knowledge level, C= Comprehension Level, A=Application level

(H) IMPLEMENTATION STRATEGIES

Teacher should explain multimedia technology and its application in IT industry. They should make the student work with some of the media processing tools in particular extensive practice may be given to create and process graphics, sound, video using Appropriate tools.

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

11. Lab manuals
12. CAI packages
13. OHP transparencies
14. Tutorials available on Internet

(J) SUGGESTED LIST OF EXPERIMENTS/ DEMONSTRATIONS/ TUTORIALS:**Hours:48****Marks: 50**

- **Lab. Experiments**

- Work with Text Processing Tools like note-pad, MS-Word, MS-FrontPage
- Create, Process and Print Graphics using adobe Photoshop s/w.
- Capture and edit sound using microphone, and process using Wave for Windows or Wave Studio.
- Study basic features of animation tools like Flash, 3-D studio/Max.
- Study basic features of video editing and movie making tools like Video for window/Adobe premier
- Using Flash for Multimedia Authoring to develop Application

(K) REFERENCE BOOKS

S.No.	Title	Edition, Year of Publication	Author, Publisher & Address
1.	Multimedia- Making It Work	Latest	Tay Vaughan, Tata McaGraw-Hill
2.	Multimedia An Introduction	Latest	Villam Casanova and Molina, Prentice Hall of India, NewDelhi
3.	Photo-shop for Windows Bible	Latest	Deke Maclelland, IDG Books India Pvt. Ltd., New Delhi
4.	Multimedia Technology and Application	Latest	Hillman, Galgotia Publications, New Delhi
5.	Flash 5 Bible	Latest	Rein Hardit, IDG Books India Pvt. Ltd.
6.	Flash 5 in easy steps	Latest	Vandome, IDG Books India Pvt. Ltd.
7.	Introduction to Networking and Data Communications		Andrew S. Tanenbaum
8.	Computer Networks		Andrew S, Tanenbaum, Prentice Hall of India, New Delhi.

- (A) **COURSE TITLE AND CODE** : **PROGRAMMING IN VISUAL BASIC
(CPE 508)**
- (B) **LEVEL** : **FIVE**
- (C) **BRANCH/DISCIPLINE** : **COMPUTER ENGINEERING**
- (D) **RATIONALE** :

This subject helps to understanding of the principles and techniques involved in developing applications with Visual Basic. The course content is designed to understand & implement the Event Driven Architecture of Visual Programming. The student would be able to identify and use of different categories of controls, learn working with forms and different data access techniques, establish a data base connection and identify the categories of ActiveX controls and creating them.

It is expected that, students will be able to develop Graphical User Interface Applications (GUI) by using Visual Basic.

(E). TEACHING AND EXAMINATION SCHEME:

Course Code	Name of Course	Teaching Scheme				Examination Scheme				Total Marks	
		Pre-requisite	L	T	P	Theory		Practical			
						ET	PA	ET	PA		
CSE-504	Programming in Visual Basic	-	3	1	2	6	75	25	50	25	175

(F). DETAILED COURSE CONTENT

CHAPTER - 1 INTRODUCTION TO VISUAL ENVIRONMENT

- Concepts of visual programming, object, features
- Environment of VB – Menu bar, toolbar, project explorer, toolbox, properties window, form designer, form layout, immediate window. Concept of project, elements of projects, form etc.

CHAPTER – 2 INTRODUCTION TO VISUAL BASIC

- Data types, variables, constants, arrays, collections, procedures, Arguments, function return values, control flow statements, loop statements, Nested control structures, The exit statement, math operators & formulas, logical operators, string functions, special functions available in VB like Input Box (), Message Box (), Format ().

CHAPTER – 3 CONTROLS AND EVENTS.

- Text box, listBox, ComboBox, ScrollBar and slider
- Control.
- Container – picturebox, frame.
- Option button, checkbox, command button, images.
- OLE controls,
- File controls.
- Designing a form using controls, concepts of event & properties, changing properties (runtime & design time) Important events of each control & creating applications using controls.
- Timer.

CHAPTER – 4 ADVANCE CONTROLS & EVENTS

- Common Dialog Box controls, The Tree view and List
- View controls, the rich textbox controls.
- Windows common controls – status Bar, Tab control, image list control, ms chart control.
- Important properties, changing properties at design or run time event handling.

CHAPTER – 5 MODULE, CLASS MODULE MDI, MENU EDITOR AND GRAPHICS

- Concept of module, class module, MDI, how to use them.
- Creating own menu using menu editor, popup menu.
- Graphics :-
- Basic controls – Line & shape control , line method, circle method, Pset method, RGB () Functions, Paint picture () method, Load picture () function.

CHAPTER – 6 DATABASE AND REPORT GENERATION

- Concept of database, Record, Record set, Data control & its important properties, structure of BIBLIO database, validating data, entering data, visual data manager, data bound grid control, DB List, DB combo.
- Programming with ADO (Active data objects) ADO Objects, connection, command, record set , parameter, Creating & closing a connection; executing a command, Object, executing a stored procedure from a command
- Object, creating record sets objects, cursor Location, Cursor types, lock types.

CHAPTER – 7 INTRODUCTION TO ACTIVE X CONTROLS

- The user control object – initialise Event, Terminate Event, Init properties Event, Read properties Event, Write Properties Event, Paint/Raise Event, Observing the events In the Date controls,
- Exploring the properties of ActiveX controls – Debugging the properties, extend properties, Ambient Properties, creating design time only properties, creating Clock control, events in ActiveX controls,
- Using the ActiveX control Interface wizard-Adding the Wizard to visual Basic.
- Property pages – using the property page Wizard, creating property pages without the wizard.
- Creating a simple ActiveX control

(G). SPECIFICATION TABLE SHOWING DISTRIBUTION OF MARKS AND HOURS

S. No.	Chapt er No.	Name of Chapter	Hours	Marks			
				K	C	A	Total Mark
8.	31.0	Introduction to visual environment	6	2	2	2	6
9.	32.0	Introduction to visual basic	6	2	3	2	7
10.	33.0	Controls and events	8	2	2	4	8
11.	34.0	Advance controls & events	10	2	3	5	10
12.	35.0	Module, class module MDI, menu editor and graphics	12	4	4	8	16
13.	36.0	Database and report generation	10	3	3	6	12
14.	37.0	Introduction to ACTIVE - X controls	12	3	3	6	16
Total			64				75

Abbreviations: K=Knowledge level, C= Comprehension Level, A=Application level

(H). IMPLEMENTATION STRATEGIES

The students should be given maximum hands on practice to develop skills in Visual Basic programming by using various Basic Controls and Advance Controls statements. Also the students will set new active X controls and property of the pages through assignments.

The concept of database & active data objects will help the students to use Visual Basic as a front-end tool and database software as backend to develop software systems.

A mini project can be done by the end of term.

(I). LEARNING RESOURCES SUGGESTED TO BE USED

15. Lab manuals if available
16. CAI packages
17. OHP transparencies
18. Internet based Tutorials

(J). SUGGESTED LIST OF PRACTICALS/ DEMONSTRATIONS

Hours:32

Marks :50

- Design a form for arithmetic operations using textbox, label, command button.
- Design a form for speed control program using scroll bars.
- Design a form to display a picture using image box/picture box selected from a file in file list box directory list box, drive list box.
- Design a form using shape control to display signal and change it timely using timer control.
- Design form to create a font dialog box using combo/ list, text, option buttons, and check box control.
- Design a simple application using OLE control.
- Design a form using Tab control, image list, status bar, tool bar which facilitates different arithmetic operations.
- Design a form using menu editor, MDI, common dialog box which has standard format like Notepad. (eg. File , Edit , format) open copy, font, save and cut.
- Design a simple database application which covers all database concepts.(Data control, DAO ,RDO,ADO, DB-list , DB combo), Create property pages without using the property page wizard.

(K). REFERENCE BOOKS

S.No.	Title	Edition Year of Publication	Author Publisher & Address
1.	Visual Basic 6	2006	Sanjeev Sharma, Nandan Tripathi Image Publication, Indore
2.	Mastering VB6	1 st Indian edition 1998	Evangelos Petront Sos. BPB publications, B-14 connaught place New Delhi
3.	Visual Basic	5 th Reprint Edition 2000	Nel Jerka Tata Mcgraw Hill publishing company Ltd., New Delhi