

மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்

MANONMANIAM SUNDARANAR UNIVERSITY

SYLLABUS FOR ADVANCED DIPLOMA IN IMAGE PROCESSING TECHNOLOGY PROGRAM OFFERED THROUGH DIRECTORATE OF VOCATIONAL EDUCATION (COMMUNITY COLLEGES AND VOCATIONAL SKILL DEVELOPMENT CENTRES) FROM 2019 - 2020



கல்விசார் நிலைக்குழுக் கூட்டம்

MEETING OF THE STANDING COMMITTEE ON ACADEMIC AFFAIRS HELD ON WEDNESDAY THE 22nd JANUARY 2020

Program Code: 5126

ADVANCED DIPLOMA IN IMAGE PROCESSING TECHNOLOGY

மேம்பட்ட பட செயலாக்க பட்டயம் SCHEME OF EXAMINATION

Subject code	Title of the Course	Credit	Hours	Passing Minimum
Semester I				
C19IP11/E19IP01	Fundamentals of Image Processing	6	90	40/100
C19IP12/E19IP02	Programming in C and Data structure	6	90	40/100
C19IP13/E19IP03	Office Automation	6	90	40/100
C19CE10/E19CE10	Communicative English	6	90	40/100
C19IPP1/E19IPP1	Practical I – Programming in C and Data Structures Lab	4	120	40/100
Semester II				
C19IP21/E19IP04	Data Communication and Networking	6	90	40/100
C19IP22/E19IP05	Adobe Photoshop	6	90	40/100
C19LS23/E19LS05	Life Skill	6	90	40/100
C19IP24/E19IP06	Computer Hardware and Maintenance	6	90	40/100
C19IPP2/E19IPP2	Practical II -Adobe Photoshop Lab	4	120	40/100
Semester III				
C19IP31/E19IP07	Fundamentals of Multimedia	6	90	40/100
C19IP32/E19IP08	E-Business and Accounting	6	90	40/100
C19IP33/E19IP09	Python Programming	6	90	40/100
C19IPP3/E19IPP3	Practical III - Python Programming Lab	4	120	40/100
C19IPIP/E19IPIP	Internship /Industrial visit	10	150	40/100
Semester IV				
C19IP41/E19IP10	Corel Draw	6	90	40/100
C19IP42/E19IP11	Web Applications Development	6	90	40/100
C19IP43/E19IP12	Multimedia Technology	6	90	40/100
C19IPP4/E19IPP4	Practical IV -CorelDraw Lab	4	120	40/100
C19IPPW/E19IPPW	Project work- Major Project and Viva-Voce	10	150	40/100

Eligibility for admission: Pass in 10th std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis of percentage marks of the total marks obtained in all the Courses and as given below:

40 % but less than 50 % - Third class 50 % but less than 60 % - Second class 60 % and above - First class

Theory Paper

Internal Marks-25 External Marks-75

SYLLABUS

Semester I

Course I - Fundamentals of Image Processing
Course II - Programming in C and Data structure

Course III - Office Automation

Course IV - Communicative English

Course V - Practical I - Programming in C and Data Structures Lab

Semester II

Course VI - Data Communication and Networking

Course VII - Adobe Photoshop

Course VIII - Life Skill

Course IX - Computer Hardware and Maintenance

Course X - Practical II - Adobe Photoshop Lab

Semester III

Course XI - Fundamentals of Multimedia Course XII - E-Business and Accounting

Course XIII - Python Programming

Course XIV - Practical III - Python Programming Lab

Course XV - Internship / Industrial visit

Semester IV

Course XVI - Corel Draw

Course XVII - Web Applications Development

Course XVIII- Multimedia Technology

Course XIX - Practical IV - Corel Draw Lab

Course XX - Project work- Major Project and Viva-Voce

*(Semester Pattern for Community College Only)

Program Objectives

• To create an awareness about multimedia technologies, Image processing concepts and programming platforms for processing images; To develop skills for editing images using various image processing tools which include Photoshop, CorelDraw;

Semester – I Course I (C19IP11/E19IP01)FUNDAMENTALS OF IMAGE PROCESSING

OBJECTIVE:

The student should be able to:

- Learn digital image fundamentals
- Be exposed to simple image processing techniques

UNIT I 18 Hrs

Introduction – Steps in Digital Image Processing – Components – Elements of Visual Perception – Image Sensing and Acquisition – Image Sampling and Quantization – Relationships between pixels – color models.

UNIT II 18 Hrs

Image Enhancement - Spatial Domain: Gray level transformations - Histogram processing - Basics of Spatial Filtering-Smoothing and Sharpening Spatial Filtering

UNIT III 18 Hrs

Image Enhancement - Frequency Domain: Introduction to Fourier Transform - Smoothing and Sharpening frequency domain filters - Ideal, Butterworth and Gaussian filters.

UNIT IV 18 Hrs

Image Compression: Types of redundancies – Compression methods: Lossy and Lossless - Huffman Coding - Run-length Coding - JPEG - Lossless predictive coding

UNIT V 18 Hrs

Image Segmentation: Region Extraction - Pixel-based Approach - Feature Thresholding - Optimum Threshold - Threshold Selection Methods - Multi-level Thresholding - Local Thresholding - Region-based Approach - Edge and Line Detection

- 1. Rafael C. Gonzalez and Richard E. Woods, "Digital Image Processing", Third Edition, Pearson Education, 2008.
- 2. Chanda B and Dutta Majumder Digital Image Processing and Analysis Prentice Hall of India Pvt Ltd (2001)
- 3. Adrian Low, Compuer vision and Image Processing, 1991, McGraw Hill.
- 4. Kenneth R. Castleman, Digital Image Processing, 1995, PHI

Course II

(C19IP12/E19IP02)PROGRAMMING IN C AND DATA STRUCTURE

OBJECTIVE:

The student should be able to:

1) Learn fundamentals of C programming.2) Learn the basics of Data Structures. 3) Applications of Data Structures

UNIT I 18 Hrs

Overview of C – Importance Of C – Basic Structure Of C Programs. Constants, Variables And Data Types. Operators and Expression Managing Input and Output Operations: Reading And Writing A Character – Formatted Input And Output. Decision Making And Branching: Simple IF, IF Else, Nesting Of IF-ELSE, ELSE-IF Ladder, Switch Statements - GOTO Statements. Decision Making And Looping: WHILE Statement- DO Statement FOR Statement

UNIT II 18 Hrs

Structure and unions – Arrays: Definition – One -Dimensional Arrays – Declaration Of One -Dimensional Arrays-Initialization Of One -Dimensional Arrays – Two- Dimensional Arrays – Initializing Two Dimensional Arrays – Multidimensional Arrays-Dynamic Arrays.

UNIT III 18 Hrs

Character Arrays And Strings: Introduction – Declaring And Initializing String Variables - Reading Strings From Terminal – Writing Strings To Screen – String Handling Functions – pointers – Files: opening/closing files – file input/output – error handling during I/O operations – Random access to files – command line arguments.

UNIT IV 18 Hrs

Data Structures: Definition – Categories of data structures - Arrays: Array operations –Merging of two arrays - Two dimensional arrays. Linked list: Definition - Operations on linked list - Stacks: Definition - Operations on stack -Representation of a stack using array - Representation of a stack using Linked list - Evaluation of expression: Infix to Prefix conversion – Infix to Postfix conversion. Queues: Definition - Operations on Queue - Representation of Queue using array - Representation of Queue using linked list

UNIT V 18 Hrs

Trees: Definition & Terminology - Binary trees - Traversal of a binary tree: In order, Pre order and Post order. Representation of a Binary trees in memory - Linked representation of binary trees - array representation of binary trees - Operations on a Binary search tree: Searching Operation - Insertion Operation and Deletion operation. Graphs: Definition & Terminology - Graph representations - Graph travels: Depth first search & Breadth first search. Shortest path algorithm (Using Dijikstra's Algorithm).

- 1) Programming in ANSI C, E.Balgurusamy, McGraw Hill Education, 2010, ISBN-10: 0070681821; ISBN-13: 978-0070681828
- 2) Data Structures through C, Yashavant Kanethar, 2009, BPB Publications, ISBN: 9788176567060

Course III (C19IP13/E19IP03)OFFICE AUTOMATION

OBJECTIVE:

The student should be able to:

- Learn the components of a Computer
- Understand the difference between System software and application software
- Learn basic tools for computing

UNIT I 18 Hrs

Introduction to Computer: Definition -History & Generation of Computer - Applications of Computer - Advantages of Computer - Characteristics of Computer - Types of Computer: On the Basis of Working, On the Basis of Size - Memory: Types - Primary memory: RAM, ROM, PROM, EPROM, EPROM, DDR Secondary memory: Hard disk, Floppy disk, CD, DVD, Blue ray Disc, Pen Drive Magnetic tape & Zip disk - CPU: Components of CPU - Mother board, Hard disk, RAM, ROM, Processor, SMPS & Connecting wire - Graphics Card, Sound Card, Network Card - Modem; Input, Output devices: Keyboard, Mouse, Scanner, Digital Camera, Joystick, Pen drive, Monitor, Printer, Plotter - Floppy Drive - Connecting port - Serial, parallel - USB port. Computer Networks: Data Communications -Types of Computer Networks - Local Area Networks & Wide Area Networks.

UNIT II 18 Hrs

Definition of Operating System - Functions of OS - Types of OS: Single user, Multi-User, multi-task, RTOS, Single-user, Multi-tasking - **Windows Desk top** - **GUI:** Definition, Standards, Cursors/Pointers, Icons, GUI Menus, GUI-Share Data - **Desktop icons and their functions:** My computer, My documents, Network neighbourhood, Recycle Bin, Quick launch tool bar, System tray, Start menu, Task bar - **Dialog Boxes:** List Box, Spin Control Box, Slide, Drop-down list, Radio button, Check box, Text box, **Task Bar** - System Tray - Quick launch tool bar - Start button - **Parts of Windows** - Title bar-Menu bar - Scroll bar- Status bar, Maximize, Minimize, close and Resize & Moving a Window - **Windows** - Start Menu -Help Menu- Preview Menu; **Logoff & Shutdown** - **Keyboard Accelerators:** Key board short keys or hotkeys - **Working with Notepad & Wordpad:** Opening & Saving files, Formatting, Printing, Inserting objects, Finding & replacing text, Creating & Editing Images with Microsoft paint, using the Calculator - Personalising Windows.

UNIT III 18 Hrs

MS Word and Open Office - Writer: MS Word - Working with Documents -Opening & Saving files, Editing text documents, Inserting, Deleting, Cut, Copy, Paste, Undo, Redo, Find, Search, Replace, Formatting page & setting Margins, Converting files to different formats, Importing & Exporting documents, Sending files to others, Using Tool bars, Ruler, Using Icons, using help, Formatting Documents - Setting Font styles, Font selection- style, size, colour etc, Type face - Bold, Italic, Underline, Case settings, Highlighting, Special symbols, Setting Paragraph style, Alignments, Indents, Line Space, Margins, Bullets & Numbering. Setting Page style - Formatting Page, Page tab, Margins, Layout settings, Course tray, Border & Shading, Columns, Header & footer, Setting Footnotes & end notes - Shortcut Keys; Inserting manual page break, Column break and line break, Creating sections & frames, Anchoring & Wrapping, Setting Document styles, Table of Contents, Index, Page Numbering, date & Time, Author etc., Creating Master Documents, Web page. Creating **Tables**- Table settings, Borders, Alignments, Insertion, deletion, Merging, Splitting, Sorting, and Formula, **Drawing -** Inserting ClipArts, Pictures/Files etc., Tools - Word Completion, Spell Checks, Mail merge, Templates, Creating contents for books, Creating Letter/Faxes, Creating Web pages, Using Wizards, Tracking Changes, Security, Digital Signature. Printing Documents - Shortcut keys.

UNIT IV 18 Hrs

MS Excel and Open Office - Calc: MS Excel: Spread Sheet & its Applications, Opening Spreadsheet, Menus - main menu, Formula Editing, Formatting, Toolbars, Using Icons, Using help, Shortcuts, Spreadsheet types. Working with Spreadsheets- opening, Saving files, setting Margins, Converting files to different formats (importing, exporting, sending files to others), Spread sheet addressing - Rows, Columns & Cells, Referring Cells & Selecting Cells -Shortcut Keys. Entering & Deleting Data- Entering data, Cut, Copy, Paste, Undo, Redo, Filling Continuous rows, columns, Highlighting values, Find, Search & replace, Inserting Data, Insert Cells, Column, rows & sheets, Symbols, Data from external files, Frames, Clipart, Pictures, Files etc, Inserting Functions, Manual breaks, Setting Formula - finding total in a column or row, Mathematical operations (Addition, Subtraction, Multiplication, Division, Exponentiation), Using other Formulae. Formatting Spreadsheets- Labelling & rows, Formatting- Cell, row, column & Sheet, Category columns Alignment, Font, Border & Shading, Hiding/Locking Cells, Anchoring objects, Formatting layout for Graphics, Clipart etc., Worksheet Row & Column Headers, Sheet Name, Row height & Column width, Visibility - Row, Column, Sheet, Security, Sheet Formatting & style, Sheet background, Colour etc. Borders & Shading - Shortcut keys. Working with sheets - Sorting, Filtering, Validation, Consolidation, and Subtotal. Creating Charts - Drawing. Printing. Using Tools - Error checking, Spell Checks, Formula Auditing, Creating & Using Templates, Pivot Tables, Tracking Changes, Security, Customization.

UNIT V

MS Power Point and Open Office-Impress: MS Power point: Introduction to

presentation – Opening new presentation, Different presentation templates, Setting backgrounds, Selecting presentation layouts. **Creating a presentation** – Setting Presentation style, Adding text to the Presentation. **Formatting a**

Presentation - Adding style, Colour, gradient fills, Arranging objects, Adding Header & Footer, Slide Background, Slide layout. Adding Graphics to the Presentation- Inserting pictures, movies, tables etc into presentation, Drawing Pictures using Draw. **Adding Effects to the Presentation**- Setting Animation & transition effect. **Printing Handouts,** Generating Standalone Presentation viewer.

Internet and Web Browsers: Definition & History of Internet - Uses of Internet - Definition of Web Addressing-URL-Different types of Internet Connections; Dial up connection, Broad band (ISDN, DSL, Cable), Wireless (Wi-Fi, WiMax, Satellite, Mobile) naming convention, browsers and its types, internet browsing, searching - Search Engines - Portals - Social Networking sites- Blogs - viewing a webpage, downloading and uploading the website; Creating an email-ID, e-mail reading, saving, printing, forwarding and deleting the mails, checking the mails, viewing and running file attachments, addressing with cc and bcc.

- 1. Fundamentals of computers V.Rajaraman Prentice- Hall of india
- 2. Microsoft Office 2007 Bible John Walkenbach, Herb Tyson, Faithe Wempen, cary N. Prague, Michael R. groh, Peter G. Aitken, and Lisa a. Bucki Wiley India pvt.ltd.
- 3. Computer Fundamentals P. K. Sinha Publisher: BPB Publications
- 4. Operating System Concepts by Abraham Silberschatz, Greg Gagne, and Peter Baer Galvin Publisher: Wiley; 8 edition (July 29, 2008)
- 7. Discovering the Internet: Complete Shelly Cashman 4th Edition Course Technology
- 8. Computer & Internet Basics Step-by-Step Etc-end the Clutter Infinity Publishing

Course IV (C19CE10/E19CE10) COMMUNICATIVE ENGLISH

1. **Basic Grammar**:

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2. **Bubbling Vocabulary**:

- a. Synonyms
- b. Antonyms
- c. One work Institution

3. Reading and Understanding English

- a. Comprehension passage
- b. Précis writing
- c. Developing a story from hints.

4. Writing English

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5. Speaking English

- a. Expressions used under different circumstances
- b. Phonetics

Reference:

- 1. V.H.Baskaran "English Made Easy
- 2. V.H.Baskaran "English Composition Made Easy" (Shakespeare Institute of English Studies, Chennai)
- 3. N.Krishnaswamy "Teaching English Grammar" (T.R.Publication, Chennai)
- 4. "Life Skill" P.Ravi, S.Prabakar and T.Tamzil Chelvam, M.S.University,
 Tirunelveli.

Course V

Practical I

(C19IPP1/E19IPP1) Programming in C and Data Structures Lab

- 1. Write a C program to display the multiplication table.
- 2. Write a C program to find the sum of individual digits of a positive integer.
- 3. Write a C program to print whether a given number is prime or not
- 4. Write a C program to sort the names in ascending order
- 5. Write a C program to solve a quadratic equation
- 6. Write a C++ program to perform matrix addition, subtraction
- 7. Write a program to create an array and also implement insertion and deletion of an array element
- 8. Write a program to create a stack and perform stack operations
- 9. Write a program to create a Queue and perform Queue operations
- 10. Write a program to create a binary search tree
- 11. Write a program to implement tree traversals

Semester II

Course VI

(C19IP21/E19IP04)DATA COMMUNICATION AND NETWORKING

OBJECTIVE:

The student should be able to:

- Learn fundamentals computer networks
- Understand the computer communication standards
- Understand the layers of computer networks

UNIT I 18 Hrs

Introduction: Data Communications, Networks, The Internet, Protocols and Standards, Network Models, Layered Tasks, The OSI Model, Layers in the OSI Model, TCP/IP Protocol Suite, Addressing, Physical Layer and Media, Data and Signals, Analog and Digital, Periodic Analog Signals, Digital Signals, Transmission impairment, Performance, Data Rate Limits, Transmission, Digital-to-Digital Conversion, Analog-to-Digital Conversion, Bandwidth utilization: Multiplexing and Spreading, Multiplexing, Spread Spectrum, Transmission Media, Guided Media, Unguided Media: Wireless, Switching, Circuit-Switched Networks, Datagram Networks, Virtual-Circuit Networks, Structure of a Switch, Using Telephone and Cable Networks for Data Transmission, Telephone Networks, Dial-up Modems, Digital Subscriber Line, Cable TV Networks, Cable TV for Data Transfer.

UNIT II 18 Hrs

Error Detection and Correction, Introduction, Block Coding, Liner Block Codes, Cyclic Codes, Checksum, Data Link Control, Framing, Flow and Error Control, Protocols, Noiseless Channels, HDLC, Point-to-Point Protocol, Multiple Access, Random Access, Aloha, Controlled Access, Channelization, IEEE Standards, Standard Ethernet, Changes in the Standard, Fast Ethernet, Gigabit Ethernet, IEEE 802.11, Bluetooth. Connecting LANs, Backbone Networks, and Virtual LANs, Connecting Devices, Backbone Networks, Virtual LANs, Cellular Telephony, Satellite Networks

UNIT III 18 Hrs

Network Layer: Logical Addressing, IPv4 Addresses, IPv6 Addresses, Network Layer: Internet Protocol, Internetworking, IPv4, IPv6, Transition from IPv4 to IPv6, Network Layer: Adress Mapping, Error Reporting and Multicasting, Address Mapping, ICMP, IGMP, ICMPv6, Network Layer: Delivery, Forwarding and Routing, Delivery, Forwarding, Unicast Routing Protocols, Multicast Routing Protocols

UNIT IV 18 Hrs

Transport Layer: Process-Process Delivery: UDP, TCP and SCTP, Process-to-Process Delivery, User Datagram Protocol (UDP), TCP, SCTP, Congestion Control and Quality of Service, Data Traffic, Congestion, Congestion Control, Two Examples, Quality Service, Techniques to improve QoS, Integrated Services, Differentiated Services, QoS in Switched Networks

UNIT V 18 Hrs

Application Layer: Domain Name System, Name Space, Domain Name Space, Distribution of Name Space, DNS in the Internet, Resolution, DNS Messages, Types of Records, Registrars, Dynamic Domain Name System (DDNS), Encapsulation, Rmote Logging, Electronic Mail and File Transfer, Remote Logging, Telnet, Electronic Mail, File Transfer

TEXT BOOKS:

- 1. Data Communications and Networking, Fourth Edition by Behrouza A. Forouzan, TMH.
- 2. Computer Networks, A.S. Tanenbaum, 4th edition, Pearson education.

- 1. Introduction to Data communications and Networking, W. Tomasi, Pearson education.
- 2. Data and Computer Communications, G.S. Hura and M. Singhal, CRC Press, Taylor and Francis Group.
- 3. An Engineering Approach to Computer Networks-S.Keshav,2nd Edition, Pearson Education.
- 4. Understanding communications and Networks,3rd Edition, W.A.Shay, Cengage Learning.

Course VII (C19IP22/E19IP05) ADOBE PHOTOSHOP

OBJECTIVE:

The student should be able to:

- Learn the features of Photoshop
- Applications of photo editing tools

UNIT I 18 Hrs

About Photoshop: Navigating Photoshop - Menus and panels - Opening new files - Opening existing files - Getting Started with Photoshop: Exploring the Toolbox - The New CS4 Applications Bar & the Options Bar - Exploring Panels & Menus - Creating & Viewing a New Document - Customizing the Interface - Setting Preferences - Working with Images: Zooming & Panning an Image - Working with Multiple Images, Rulers, Guides & Grids - Undoing Steps with History - Adjusting Color with the New Adjustments Panel - The New Masks Panel & Vibrance Color Correction Command - The New Note Tool & the Save for Web & Devices Interface - The New Auto-Blend & Auto-Align Layers Commands - The New 3D Commands.

UNIT II 18 Hrs

RESIZING & CROPPING IMAGES: Understanding Pixels & Resolution - The Image Size Command - Interpolation Options - Resizing for Print & Web - Cropping & Straightening an Image - Adjusting Canvas Size & Canvas Rotation - WORKING WITH BASIC SELECTIONS: Selecting with the Elliptical Marquee Tool - Using the Magic Wand & Free Transform Tool - Selecting with the Regular & Polygonal Lasso Tools - 4. Combining Selections - Using the Magnetic Lasso Tool - Using the Quick Selection Tool & Refine Edge - Modifying Selections

UNIT III 18 Hrs

GETTING STARTED WITH LAYERS: Understanding the Background Layer - Creating, Selecting, Linking & Deleting Layers - Locking & Merging Layers - Copying Layers, Using Perspective & Layer Styles - Filling & Grouping Layers - Introduction to Blending Modes - Blending Modes, Opacity & Fill - Creating & Modifying Text PAINTING IN PHOTOSHOP: Using the Brush Tool - Working with Colors & Swatches - Creating & Using Gradients - Creating & Working with Brushes - Using the Pencil & Eraser Tools - Painting with Selections.

UNIT IV 18 Hrs

PHOTO RETOUCHING: The Red Eye Tool - The Clone Stamp Tool - The Patch Tool & the Healing Brush Tool - The Spot Healing Brush Tool - The Color Replacement Tool - The Toning & Focus Tools - Painting with History - INTRODUCTION TO COLOR CORRECTION: Color Spaces & Color Modes - The Variations Command - The Auto Commands - Adjusting Levels - Adjust Curves, Non-Destructively, with Adjustment Layers -: USING QUICK MASK MODE - Quick Mask Options - Painting a Selection - Saving & Removing a Selection from the Background

UNIT V 18 Hrs

WORKING WITH THE PEN TOOL: Understanding Paths & the Pen Tool - Creating Straight & Curved Paths Creating Combo Paths - Creating a Clipping Path - CREATING SPECIAL EFFECTS: Getting Started with Photoshop Filters - Smart Filters - Creating Text Effects - Applying Gradients to Text - EXPORTING YOUR WORK: Saving with Different File Formats - Saving for Web & Devices - Printing Options.

- 1. http://photoshopcafe.com/csc/PhotoshopCAFE_CS6Superguide.pdf
- 2. http://nettkringkasting.no/~wictor/Tutorials/Photoshop/Photoshop ClassroomBook.pdf

Course VIII

(C19LS23/E19LS05) Life Skill

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- (a) Attitude
- (b) Self acceptance, self esteem and self actualization
- (c) Positive thinking

III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

V Internet

- (a) Introduction to internet
- (b) E mail
- (c) Browsing

References:

- 1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai 28
- 2) ஆளுமை பண்பு வளர்த்தல் மற்றும் தகவல் தொடர்பு by M.Selvaraj Community College, Palayamkottai
- 3) "Life Skill" –P.Ravi, S.Prabahar & T.Tamil Chelvam, M.S. University, Tirunelveli

Course IX (C19IP24/E19IP06)COMPUTER HARDWARE AND MAINTANANCE

OBJECTIVE:

The student should be able to:

- Understand about computer hardware
- Understand the method of troubleshooting
- Learn about virus and anti-virus software

UNIT I 18 Hrs

INSIDE THE PC - Introduction: Evolution of Computer - Block diagram of Pentium - Inside the Pentium - Parts - Mother board, chipset, expansion slots, memory, Power supply, drives and connectors - Systems: Desktop, Lap Top, Specification and features - Comparison table. Server - system - IBM server families, Sun Server, Intel processor etc - Workstation - Mother Board: Evolution - Different forms of mother boards - Riser - Architectures. Intel, AMD and VIA motherboards. Chipsets: Introduction - 945 chipset - Bus Standards: Introduction - ISA Bus - PCI Bus - PCI Express, USB, High speed Bus, - Pin details and Architecture. - Bios-setup: Standard CMOS setup, Advanced BIOS setup, Power management, Advanced chipset features, PC Bios communication - upgrading BIOS, Flash, BIOS -setup - Processors: Introduction - Pentium IV, Hyper threading, dual core technology, Core2Duo technology — AMD Series, Athlon 2000, Xeon processor. Comparison tables. Pentium Pin details, Itanium Processor - Pentium packaging styles.

UNIT II 18 Hrs

MEMORY AND DAUGHTER BOARDS - Memory: Introduction - Main memory - Evolution - DRAM - EDO RAM - SDRAM - DDR RAM versions - IT RAM -Direct RDRAM - Memory Chips (SIMM, DIMM, RIMM)- Extended - Expanded -Cache - Virtual MemoryCauses of false memory errors. Graphic Cards: Introduction - Definition and Layout of Components in Graphics card -Graphics Processor - Video memory - RAMDAC - Driver Software - 3D - Video capture card installation. Sound Cards:Introduction - Definition of Various Components - Connectivity - Standards - A3D - EAX - MIDI - General MIDI -PCI Audio - USB Sound - MP3 - SDMI. Displays: Introduction - CRT -Anatomy - Resolution - refresh rate - interlacing - Digital CRT's - Panel Displays - Introduction - LCD Principles - Plasma Displays - TFT displays. Introduction - VGA and SVGA cards, adapter: Demagnetizing and precautions. Keyboard, and Mouse and barcode scanner: Introduction - Keyboard, wireless Keyboard - Signals - operation troubleshooting - Mouse types, connectors, Serial mouse, PS/2 mouse and Optical mouse operation – Signals – Installation – barcode scanner – operation

UNIT III 18 Hrs

DISK DRIVES - Hard Disk: Introduction – Construction – Working Principle - Specification of IDE, EIDE, Ultra ATA, Serial ATA, SCSI, Disk Array controller, solid state drive. HDD Installation – Partition – Formatting. Troubleshooting hard disk drives; problem diagnosis, typical problems and troubleshooting; Hard disk drive, components, Head Actuator mechanism Head positioning of a voice coil base system. **CD/DVD ROM:** Introduction – Basics, Working principle – various formats – CD-R, CD-RW, DVD: Introduction – Formats – Technology – DVDROM, DVD Video, DVD Audio – Recordable formats – DVD-R, DVD-RW, DVD-RAM **Special type of drives:** Zip drive, Memory stick, USB-flash drive, IPod Dock version and installation. **I/O Ports:** Serial – Parallel – USB – Game Port – Blue tooth interface, IR connector, Signal specification problems with interfaces.

UNIT IV 18 Hrs

I/O DEVICES AND POWER SUPPLY - Printers: Introduction - Types of printers - Dot Matrix - Inkjet - Laser Operation - Construction - Features - Troubleshooting Dot matrix, Inkjet and laser printer problems. Modem and Router: Modem - Introduction - Operation - Types - Installation - Router - introduction. Scanners: Introduction - operation - Scan Resolution - Color Scanners - Scan modes - File formats - Simple problems and troubleshooting. Digital Camera: Introduction - Operation - Features. Web Camera, Biometric devices: Thump scanner, Iris scanner, speech synthesizer - operation and installation - Trouble shooting. SMPS: Principles of Operation - Block Diagram - AT & ATX Power Supply, connector specifications and protection.

UNIT V 18 Hrs

TROUBLE SHOOTING PC - Power supply: Location - Pollution - Airconditioning - Power Supply - Voltage Regulators - Servo Stabilizers - UPS, Surge suppressors and spike isolators. **Installation practice:** Routine checks - Preventive maintenance - problem causes, peripheral and general precautions. **Faults elimination process:** Dead system spurious problem - security failures heartbeats and multiple faults - Systematic trouble shooting - Symptoms observation - analysis - Fault diagnosis and fault rectification. **POST:** Definition - IPL hardware - POST Test sequence - beep codes and error messages. **Diagnostic Software and Viruses:** Computer Viruses - Precautions - Anti-virus Software - identify the signature of viruses - Firewalls and latest diagnostic softwares.

- 1. IBM PC and CLONES B.Govindrajalu Tata McGrawhill Publishers
- 2. Computer Installation and Servicing D.Balasubramanian
- 3. Computer Installation and Troubleshooting Tata McGraw Hill, 2005 M.Radhakrishnan ISTE- Learning Materials 2001
- 4. The complete PC upgrade and Maintenance Mark Minasi BPB Publication
- 5. Inside the PC Peter Norton Tech Media
- 6. Troubleshooting, Maintaining and Repairing PCs Stephen J Bigelow
- 7. Basic Refrigeration and AirConditioning Tata MCGraw Hill Pub 2001 Ananthanrayanan P.N Tata McGrawhill Publishers

Course X Practical II (C19IPP2/E19IPP2)ADOBE PHOTOSHOP Lab

- 1. Use Photoshop tools and draw different shapes of object
- 2. Increase Canvas Size & Add Borders
- 3. Rotate & Correct the Distorted Perspective for the image whose input and output images are given below:



4. Crop the desired object region with the Selection tools for the given image



5. Implement Trimming on images using Photoshop

TrimMe!

6. Change Shape, Increase Canvas Size & Add Borders





7. Rotate using the Crop Tool





7. Perform Slicing using slice tool





8. Use Patch tool to enhance the image as shown below:





- 9. Implement Layer merging using Photoshop
- 10. Apply different kinds of filters on images

Semester – III Course XI (C19IP31/E19IP07)FUNDAMENTALS OF MULTIMEDIA

OBJECTIVE:

The student should be able to:

- Understand the elements of multimedia
- know multimedia standards
- understand the cloud assisted computer communication

UNIT I 18 Hrs

INTRODUCTION TO MULTIMEDIA - Introduction: Definition of multimedia, Multimedia Basics, Where to use Multimedia, Multimedia Elements Multimedia Applications, Virtual Reality, Delivering Multimedia. Multimedia Systems Architecture: Multimedia Workstation Architecture, High resolution Graphic displays, Multimedia Architecture Based on interface bus, Network architecture for Multimedia systems. Evolving Technologies For Multimedia Systems: Hypermedia Documents, Hypertext, Hyper Speech, HDTV and UDTV, 3D Technologies and Holography, Defining Objects for Multimedia System:, Text, Images, Audio and Voice, FullMotion and Live Video, Multimedia Data Interface Standards, File formats for multimedia systems, Video processing standards. Multimedia Software: Overview of Multimedia Software Tools, Open Source Replacements, Multimedia OS, Multimedia Authoring, Some Useful Editing and Authoring Tools, VRML, OpenGL, Windows and Open Source API.

UNIT II 18 Hrs

DEFINING OBJECTS FOR MULTIMEDIA SYSTEMS - Text: About Fonts and Faces, Using Text in Multimedia, Hypermedia and Hypertext, Using Hypertext, Hypermedia Structures, Hypertext Tools. Images: Making Still Images, Bitmaps, 1 bit images, 8-bit gray level images, 8-bit color images, Dithering, 24 bit color images, Vector Drawing, 3-D Drawing and Rendering, Color, Understanding Natural Light and Color, Computerized Color, Color Palettes, Color Look-up table. Image Processing, Image acquisition, Image enhancement. Color image processing. Sound: The Power of Sound, Digital Audio, Making Digital Audio Files, MIDI Audio, MIDI vs. Digital Audio, Multimedia System Sounds, Adding Sound to Your Multimedia Project, Audio Recording, Keeping Track of Your Sounds, Audio CDs, Sound for Your Mobile, Sound for the Internet. Animation, the Power of Motion, Principles of Animation, Animation by Computer, Animation Techniques, animation using OpenGL Video: Using Video, How Video Works and Is Displayed, Analog Video, Digital Video, Displays, Digital Video Containers, Codec, Video Format Converters, Obtaining Video Clips, Shooting and Editing Video.

UNIT III 18 Hrs

MULTIMEDIA DATA AND STANDARDS - Data Compression: Need for Data compression, General Data compression Scheme, Compression standards, Non-lossy compression for images, Lossy compression for Photographs and video, Hardware Vs Software Compression. Compression Schemes and standards:(Only Concepts of) Binary image compression, Color, Gray Scale Still-video image compression, JPEG. video image compression. Standards for Video, Requirements for Full-motion Video Compression, MPEG, Audio compression, Fractal compression, advantages / disadvantages. Data and File Format Standards: Popular File Formats, RTF, RIFF, GIF, PNG, TIFF, MIDI, JPEG, JFIF, AVI, WAV, BMP, WMF, MIX, MPEG standards. TWAIN. Multimedia Databases, Storage and Retrieval, Database Management systems, Database Organization and Transaction management for multimedia systems. Multimedia Information Sharing and Retrieval - Social Media Sharing UserGenerated Media Content Sharing - Media Propagation in Online Social Networks. Content-Based Retrieval in Digital Libraries

UNIT IV 18 Hrs

MULTIMEDIA **DEVICES** AND MAKING MULTIMEDIA Multimedia Limitations input/output Technologies: of Traditional input Multimedia input output devices, PEN input, Working of Electronic Pen, Video and image display systems, Video display technology standards, CRT, display terminology, Flat panel display system. Print Output, image, audio and video Technologies: Comparison of printing technologies, Laser printing, Dye sublimation printer, Color printing technology issues. Image scanners, types, Digital voice and audio, Voice recognition systems, Digital Camera, video frame grabber, video and still image processing, video, camera, full-motion video controllers, video capture board. Making Multimedia: The Stages of a Multimedia Project, Creativity, Organization, Communication, Hardware, Software, Text Editing and Word Processing Tools, OCR Software, Painting and Drawing Tools, 3-D Modeling and Animation Tools, ImageEditing Tools, Sound-Editing Tools, Animation, Video, and Digital Movie Tools, Authoring Systems, Making Instant Multimedia, Types of Authoring Tools. Multimedia Skills: The Team, Project Manager, Multimedia Designer, Interface Designer, Writer, Video Specialist, Audio Specialist, Multimedia Programmer, Producer of Multimedia for the Web.

UNIT V 18 Hrs

MULTIMEDIA DESIGN, MULTIMEDIA FOR INTERNET - Designing and Producing, Designing, Designing the Structure, Designing the User Interface, Producing, Tracking, Copyrights, Virtual reality designing and modeling. The Internet and Multimedia: The Bandwidth Bottleneck, Internet Services, MIMETypes, Multimedia on the Web, Web Page Makers and Site Builders, Plugins and Delivery Vehicles. Designing for the World Wide Web: Developing for the Web, Small-Device Workspace, text and images for the Web, Clickable Buttons, Client-Side Image Maps, Sound for the Web, Animation for the Web, and Video for the Web, HTML5 Video - Plug-ins and Players. Multimedia Communication and applications, Study of Multimedia networking, Quality of data transmission, Media on demand, Multimedia Over Wireless and Mobile Networks - Media Entertainment, web-based applications, e-learning and education-Cloud Computing for Multimedia Services - Cloud-Assisted Media Sharing

Text Books:

- 1. Fundamental of Multimedia Ze- Nian Li and M. S. Drew. Pearson Education Second edition 2014
- 2. Multimedia: Making It Work. Tay Vaughan Tata-McGrawHill Eighth Edition
- 3. Multimedia systems Design. Prabhat k.Andleigh, Kiran Thakra PHI.
- 4. "Multimedia Computing, Communication and Applications",. Ralf Steinmetz and Klara Nahrstedt Pearson Education
- 5. Multimedia Communication Systems: Techniques, Standards, and Networks K.R. Rao TMH

- 1. Computer Graphics Multimedia and Animation, Malay K. Pakhira PHI second edition
- 2. Principles of Multimedia, RanjanParekh TMGH, New Delhi
- 3. Multimedia Systems John F. Koegel Buford Pearson Education
- 4. Multimedia Technology & Applications, David Hillman Galgotia Publications Pvt Ltd.

Course XII (C19IP32/E19IP08) E-BUSINESS AND ACCOUNTING

OBJECTIVE:

The student should be able to:

- Learn the basics of e-commerce
- Learn the TALLY software for business
- Use TALLY for generating various business related reports

UNIT I 18 Hrs

E-BUSINESS: Introduction, E-Commerce – Definition, History of E-commerce, Difference between E – Commerce and E - Business. Comparison of traditional commerce and e-commerce Advantages/ Disadvantages of e-commerce, E-Commerce business models – major B to B, B to C model, Consumer-to Consumer (C2C), Consumer-to-Business(C2B) model, Peer to-Peer (P2P) model – emerging trends. web auctions, virtual communities, portals, e-business revenue models.

UNIT II 18 Hrs

PAYMENT AND E-COMMERCE SECURITY: Electronic payment systems: Credit cards –Debit cards -online transactions. Security Threats in E-commerce: vulnerability in client side, server side and in communication medium-Technology and solutions: Encryption, SSL VPN, firewalls-server and client side protection. SET: Key Technologies in Secure Electronic Transactions.

UNIT III 18 Hrs

GETTING STARTED WITH TALLY: Meaning of Tally software – Features – Advantages - Required Hardware, Preparation for installation of tally software - installation. Items on Tally screen: Menu options, creating a New Company, Basic Currency information, Other information, Company features and Inventory features.

UNIT IV 18 Hrs

CONFIGURING TALLY: General Configuration, Numerical symbols, accts/inv info – master configuration -voucher entry configuration. **Working in Tally:** Groups, Ledgers, writing voucher, different types of voucher, voucher entry Problem on Voucher entry -Trail Balance, Accounts books, Cash Book, Bank Books, Ledger Accounts, Group Summary, Sales Register and Purchase Register, Journal Register, Statement of Accounts, & Balance Sheet.

UNIT V 18 Hrs

REPORTS using TALLY: Generating Basic Reports in Tally – Financial Statements – Accounting Books and Registers – Inventory Books and Registers – Exception reports – printing reports – Types of Printing - Configuration of Options – Printing Format.

- 1. Raydu E Commerce, HPH
- 2. Suman. M E Commerc & Accounting HPH
- 3. Kalakota Ravi and A. B. Whinston : Frontiers of Electronic Commerce, Addison Wesley
- 4. Watson R T : Electronic Commerce the strategic perspective. The Dryden press
- 5. Amrutha Gowry & Soundrajana, E Business & Accounting, SHBP.
- 6. C.S.V Murthy- E Commerce, HPH
- 7. Agarwala K. N. and Deeksha Ararwala: Business on the Net Bridge to the online store front, Macmillan, New Delhi.
- 8. Diwan / S. Sharma E Commerce
- 9. Srivatsava: E.R.P, I.K. International Publishers
- 10. Diwan, Prag and Sunil Sharma, Electronic Commerce A manager guide to E-business, Vanity Books International, Delhi

Course XIII

(C19IP33/E19IP09) Python Programming

Objective:

The students should be able to

- learn the basics of Python Programming language
- implement programs using python

UNIT - I Fundamentals

18 Hrs

Fundamentals: Python character set, Tokens, variables and assignments, input output statements – Data Handling: Data types, operators, expressions.

UNIT- II Conditional and Looping Statements

18 Hrs

Conditional and Iterative Statements: If statement , if-else, if-elif and nested if statement – Looping statement : for loop, while loop, loop else, break and continue statement , nested loops.

UNIT-III List and Tuples

18 Hrs

List Creation and Access – List operations: Joining list, Repeating or Replicating List, Slicing the List, List functions and methods. Tuples: Tuple Creation and Access – Tuple Operations: Joining and Slicing the Tuples.

UNIT-IV String and Dictionary

18 Hrs

String Manipulation: - String operators: Basic operators, Membership Operators, Comparison operators, String Slices, string functions and methods. Dictionary - Creating, Accessing elements, characteristics. Working with Dictionaries: Adding elements, updating, deleting elements, Checking for existence of a key, Printing a Dictionary, Counting frequency of elements.

UNIT -V Program Execution and Debugging

18 Hrs

Basic flow of compilation, Understanding Translation Process – Role of Operating System in running a program – Debugging Techniques– Using Debugger Tool: Working with Integrated Debugger tool of Spider IDE- Working with Python Debugger-pdb- Errors and Exceptions.

- 1. Computer Science with Python By Sumita Arora, Publisher LDHANPAT RAI & Co. Ltd., Educational and Technical Publisher, 2018.
- 2. Python Programming An Introduction to Computer Science, Second Edition, JOHN ZELLE

Course XIV

(C19IPP3/E19IPP3) Practical III - Python Programming Lab

- 1. Write a python program to swap two numbers without using third variable
- 2. Write a python program to read two numbers and find the sum of their cubes
- 3. Write a python program to read three numbers and if any two variables are equal, print that number
- 4. Write a python program to read three numbers and find the smallest among them
- 5. Write a python program to read radius of a circle and print the area
- 6. Write a Python program to find the sum of all numbers in a list
- 7. Write a Python program to find the sum of all numbers in a list
- 8. Write a Python program to find the common numbers from two lists
- 9. Write a Python program to print all even numbers and another list of odd numbers from a given list
- 10. Write a Python program to remove repeated elements from a given list without using built-in methods.
- 11. Write a Python program to find the longest word in a given sentence.
- 12. Write a Python program to find the number of occurrences of all vowels present in a string.
- 13. Write a Python program to sort a given list of numbers without using sort() function.
- 14. Write a Python program to check whether the given string is palindrome or not.
- 15. Write a Python program to read a date (dd-mm-yyyy) and print the month name according to month number.
- 16. Write a Python program to find the factorial of a number using recursive function call.

Course XV

(C19IPIP/E19IPIP) Internship / Industrial visit

Two weeks training from a software company with certification

Semester IV

Course XVI

(C19IP41/E19IP10)CorelDraw

OBJECTIVE:

The student should be able to:

- Understand the basics of CorelDraw
- Learn the method of editing the attributes of text, images and pages

UNIT I 18 Hrs

Basics of CorelDraw: Introduction-Getting Started-Creating A New File - Title Bar-Menu Bar-Work Area-Printable Page-Property Bar-Page Counter Bar-Colour Palette-Toolbox-Status Bar-Drawing Figures-Lines-Ellipse-Circles-Rectangle-Square-Polygon-Saving-Closing-Opening-Views-Normal View-Preview-Wire Frame View-Draft View-Zoom-View Manager-Creating a View.

UNIT II 18 Hrs

Drawing: Introduction - Toolbox-Selecting an Object-Resizing an Object-Moving an Object-Changing the Shape-Combining Two Objects-Skewing-Welding the Objects-Blending-Curve Lines-Straight Lines-Continuing a Line-View Mode-Changing-Media Tool-Rotating An Object-Grouping-Fill Tool Fly Out-Filling-Spray Mode.

UNIT III 18 Hrs

Text: Introduction-Text Tool-Entering Artistic Text-Entering Paragraph Text-Converting Text-Formatting Text-Changing the Font Size-Arranging Objects-Ordering The Objects-Changing the Font-Bullets-Decorating the Text-Webdings-Text Editor-Opening-Changing the Alignment-Type Style-Spell Checking-Grammer-Searching Synonyms-Find-Replace-Editing-Kerning-Formatting Characters.

UNIT IV 18 Hrs

Image: Bitmap Images-Vector Image-Resizing-Rotating-Skewing-Moving-Cropping-Importing Images-Adding Special Effects-Converting to Bitmap-Exporting Images.

UNIT V 18 Hrs

Page Layout : Changing the Page Size-Changing the Layout-Applying Styles-Applying Bitmaps to the - Background - Changing the Background-Adding a Page Frame-Moving Between Pages.

- 1 http://www.mr-dt.com/websiteprintablepdfs/howtousecoreldraw.pdf
- 2 <u>http://product.corel.com/help/CorelDRAW/540238885/Main/EN/User-</u>Guide/CorelDRAW-X8.pdf
- 3 <u>http://gtu.ge/Arch/Faculty/Multimedia/Resources/2_Corel/Languages</u>/EN/Help/CorelDRAW%20Graphics%20Suite%20X3.pdf

Course XVII

(C19IP42/E19IP11) WEB APPLICATIONS DEVELOPMENT

Objectives

The student should be able to:

- Understand the principles of web designing
- Learn the web design tools
- Learn the method of publishing content on the web

UNIT I 18 Hrs

Web Design Principles: Basic principles involved in developing a web site - Planning process - Five Golden rules of web designing - Designing navigation bar - Page design - Home Page Layout - Design Concept. Basics in Web Design: Brief History of Internet - What is World Wide Web - Why create a web site - Web Standards - Audience requirement.

UNIT II 18 Hrs

Introduction to HTML: What is HTML - HTML Documents - Basic structure of an HTML document - Creating an HTML document - Mark up Tags - Heading-Paragraphs - Line Breaks - HTML Tags.

Elements of HTML: Introduction to elements of HTML - Working with Text - Working with Lists, Tables and Frames - Working with Hyperlinks, Images and Multimedia - Working with Forms and controls.

UNIT III 18 Hrs

Introduction to Cascading Style Sheets: Concept of CSS - Creating Style Sheet - CSS Properties - CSS Styling(Background, Text Format, Controlling Fonts) - Working with block elements and objects - Working with Lists and Tables - CSS Id and Class - Box Model(Introduction, Border properties, Padding Properties, Margin properties) - CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute sector) - CSS Color - Creating page Layout and Site Designs.

UNIT IV 18 Hrs

Fundamentals of PHP Development - Various Data Types - Advanced PHP Functions - Classes - Objects - Advanced OOPS in PHP - Various Database concepts - Cookies and Session Management - How to work with forms and system file - Error Handling - Secure PHP Programming - Performance Optimization of PHP Applications - Cake PHP - Debugger - Model View Controller (MVC)

UNIT V 18 Hrs

Introduction to Web Publishing or Hosting: Creating the Web Site - Saving the site - Working on the web site - Creating web site structure - Creating Titles for web pages - Themes-Publishing web sites.

Text Books

- 1) Kogent Learning Solutions Inc. HTML 5 in simple steps Dream tech Press
- 2) A beginner's guide to HTML NCSA,14 May,2003
- 3) Murray, Tom/Lynchburg Creating a Web Page and Web Site College, 2002
- 4) Murray, Tom/Lynchburg Creating a Web Page and Web Site College,2002

- Web Designing & Architecture-Educational Technology Centre, University of Buffalo
- 2. Steven M. Schafer HTML, XHTML, and CSS Bible, Wiley India

 John Duckett Beginning HTML, XHTML, CSS, and JavaScript Wiley India

Course XVIII (C19IP43/E19IP12)Multimedia Technology

Objective:

The students should be able to understand the multimedia editing tools

UNIT I: 18 Hrs

Flash: Introduction, Layout of Flash Desktop, Flash Library, Movie Clips, Frame by frame animation, Shape tweening, Text masking, Sound editing, Adding sound to movie, Adding sounds and animations to buttons, Importing photoshop file into flash, Publishing flash content.

UNIT II: 18 Hrs

Dreamweaver: Introduction to Dreamweaver CS4, Working with Dreamweaver Websites - Working with Templates, Working with Flash Contents and HTML Forms.

UNIT III: 18 Hrs

Adobe Audition: Digital Audio Fundamentals, Workspace and setup, Connecting to audio hardware, Importing, Recording and Playing audio, Editing, repairing, and improving audio using Essential Sound panel.

UNIT IV:

Multimedia Presentation Tool:

Prezi: Getting started, canvas, creating a new prezi, managing, editing, resizing your prezi, starting presentation.

UNIT V:

PageMaker – Basic: Introduction – Floating Palettes – The Rulers. Working with Publications: New Publication – Inserting Pages – Removing Pages. Saving and Closing: Saving a document – closing a document. Drawing Tools: Lines – Boxes, ellipses, Polygon – Selecting, Deleting, moving, Resizing Elements – Grouping and Ungrouping – Using Fill and Line – Cut, copy, paste – The Rotation tool.

REFERENCES:

- 1. Adobe "Flash" and "Photoshop" Tutorials, Edited by: Anastasios Maragiannis, School of Architecture and Construction –Greenwich University.
- 2. Dreamweaver CS4 in Simple Steps, Kogent Learning Solutions Inc, Dreamtech Press
- 3. Adobe Audition CC Help (https://helpx.adobe.com)
- 4. Prezi A Quick Start Guide (www.myteacherpages.com)
- 5. PageMaker 7: The Complete Reference, Carolyn M. Connally, McGraw-Hill.

Course XIX

(C19IPP4/E19IPP4)Practical IV - CorelDraw Lab

- 1. Design a Business Card
- 2. Design a Logo
- 3. Create a Geometric Fashion Mannequin in Corel DRAW
- 4. Create Transparent 3D Box with Mesh-Fountain Fill
- 5. Create a pixel art
- 6. Creating a metallic effect on objects
- 7. Use Contours in Corel DRAW to create interesting 3D effects
- 8. Create a Party Invitation Card
- 9. Prepare a document for prepress
- 10. Create a Seasonal Greetings Card
- 11. Create 3D objects with volume
- 12. Create patterns in Corel DRAW
- 13. Use the overflow feature with paragraph text

Course XX

(C19IPPW/E19IPPW) PROJECT WORK-MAJOR PROJECT AND VIVA-VOCE

Design and Implement an application project; and prepare a project report.
