

NEHRU MEMORIAL COLLEGE (AUTONOMOUS)
PUTHANAMPATTI -621 007
DEPARTMENT OF COMPUTER SCIENCE

**CERTIFICATE/DIPLOMA/ADVANCED DIPLOMA IN COMPUTER
APPLICATIONS**
(For the candidates admitted from 2015-2016 onwards)

S.No.	Semester	Course	Exam.Hrs	Max.Marks	Credits
1	II	Paper -I Office Automation	3	100	4
2	II	Practical - I Office Automation Lab	3	100	8
3	II	On the Job Training/project	--	100	4
4	III	Paper -II Fundamentals of Computer Science	3	100	4
		Total			20
5	III	Paper -III Principles of Internet and Web design	3	100	4
6	IV	Paper -IV Principles of Web Technology	3	100	4
7	IV	Practical - II Web Design Lab	3	100	8
8	IV	On the Job Training/Project	--	100	4
		Total			20
9	V	Paper -V Image Authoring and Animation	3	100	4
10	V	Paper -VI Multimedia	3	100	4
11	VI	Practical - III Multimedia Lab	3	100	8
12	VI	On the Job Training/Project	--	100	4
		Total		1200	20

Course	I	Title	Semester	II
Course Code		Office Automation	Hours	60
			Credits	4

Objectives :

To learn in the basic techniques of text editing, text manipulation, data entry using spread sheet, data manipulation and presentation methodologies used for front office management.

Unit I

Introduction to MS-Word, Creating Editing and formatting Document - Working with Drawing objects - Text Manipulation - Word art, Clipart - Inserting symbols, Diagram - Applying effects to Auto shapes - Bullets & Numbering.

Unit II

Creating Columns - Plotting, editing and filling drawing objects - Bookmark- Header & Footer - Hyperlink - Applying backgrounds & Borders, Shading - Auto format-Working with tables - Sorting -Applying formula. Checking spelling and Grammar - Creating labels - Envelopes - Mail merge - Letter wizard.

Unit III

Introduction to Excel Features - Data Entry - Formatting cells & columns - plotting graphs - Workbook features - fill series Functions - Applying formula to applications & Data sorting - Auto format Data Validation - Conditional formatting - Data consolidation - Sub totals Filters - Auto Filter - Pivot table & chart - Checking & correcting formula - Protecting workbook

Unit IV

MS-Power Point - Creating Templates - Font & Color Editing - Adding Multi media effects - Consolidating Presentation using Ms-Power Point.

Unit V

Introduction to Internet - Email - World Wide Web - Search Engines - File Transfer - Applications of Internet

Books for Study:

MS-Office & Internet By Alexis Leon , 2002

Course	VI	Title	Semester	IV
Course Code		Web Design Lab	Hours	60
			Credits	4

Objectives:

To learn practically the various techniques involved Web design.

- 1) "Welcome" text using various tag.
- 2) Paragraph creation
- 3) Create a picture gallery.
- 4) Prepare your class time table using table tag use rowspan colspan
- 5) Create a list of items using ordered and unordered lists
- 6) Create a website for a product advertisement
- 7) Create style sheet and use appropriate website.
- 8) Create website for tourist places.
- 9) Create your biodata using forms
- 10) Create your college profile using frame
- 11) Create a user interface screen and get user name password using PHP
- 12) Design a visitor book using PHP
- 13) Design online bookshop using PHP

Course	II	Title	Semester	II
Course Code		Office Automation Lab	Hours	120
			Credits	8

Objectives :

To provide a hands on experience in the office automation packages.

WORD PROCESSOR:

1. Text manipulation
2. Usage of numbering, Bullets, Footer and Headers
3. Tables and manipulations
4. Picture insertion and alignment.
5. Creation of documents using templates
6. Mail merge concepts
7. Copying text and pictures form Spread sheet
8. Using macro for different colors and font sizes.

SPREAD SHEET:

- i. Usage of Formulae and Built - in - Functions
- ii. Describe the types of functions
- iii. File manipulations
- iv. Data sorting - Ascending and Descending (both numbers and alphabets)
- v. Mark list preparation for a student
- vi. Individual pay bill preparation
- vii. Inventory Report preparation
- viii. Drawing Graphs

PRESENTATION PACKAGE:

Preparation of Slides by inserting , Picture, Charts, Tables, With animation

Practical training in using Internet and its applications

Course	IX	Title	Semester	VI
Course Code		Multimedia Lab	Hours	60
			Credits	4

Objectives:

To give hands on training on animation including text, image, audio and video editing,

1. Exercises involving image editing, cropping and manipulation using Photoshop
2. Exercise involving basic animation techniques using flash
3. Practical training on audio and video editing using Sound Forge and Adobe Premiere.

(Appropriate hands on exercises may be designed to implement above said concepts).

Course	VII	Title	Semester	V
Course Code		Image Authoring & Animation	Hours	60
			Credits	4

Objectives:

To learn picture manipulation techniques, color management, picture types. Various tools available for the image editing are discussed.

Unit I :

Bit map and Vectors - Pixels and Resolution - RGB and CMYK color models - Color management - Working environment of photoshop - Tool Box -Palettes - Opening and saving files - TIFF format - JPEG format.

Unit II:

Image manipulation Techniques - Rotation - resizing - resampling - cropping & images - color management - painting tools.

Unit III:

Editing Tools - Selection Tools - Layers

Unit IV :

Working with type paths - channels and masks - color correction techniques - histogram palette - filters.

Unit V:

Web and multimedia images - work with image ready - Animation and rollover.

Book for Study:

1. Robert Shufflebotham, Photoshop CS (V.8) in easy steps, Dreamtech,2005
2. Deke Mcclelland, Willey Publishing. Inc., Photoshop 7 Bible, 2005

Course	VIII	Title	Semester	V
Course Code		Animation Techniques	Hours	60
			Credits	4

Objectives:

To introduce animation concepts using Flash software. Techniques for inserting text, image, audio and video components and integration of all these components into a single presentation are discussed in detail

Unit I:

Introduction to Vector animation, Tools, File and Page Proprieties, Key frame animation, Inserting Copying Pasting, Reverse key frames. Property Palette, tweening, Onion skinning, Masking, Use of layers, Guide layers.

Unit II:

Inserting Sound, Importing videos, Basic action scripts, Scenes, Movie control. Create Text blocks, Scrolling, Text effects - creation of 2D Animated Presentation. Buttons Animations with Sound, Assign actions to movie clips and buttons, use shape hints - Publish a flash movie.

Unit III:

Getting started with CG and Maya2011-Working with objects in Maya-Polygon-NURBS-Light camera-Transforming objects in Maya-Duplicating an object-Polygonal Modeling in Maya.

Unit IV:

NURBS Modeling in Maya- Exploring the components of a NURBS Curve-Drawing a NURBS curve-editing-Exploring the components of a NURBS surface-creating, editing a NURBS surface-Animating objects in Maya- Key frame, path, Non-Linear, Driven Key, Motion Capture, Layered, Dynamic Animations-Exploring animation controls-working with key frame animation-Working with animation layers

Unit V:

Shading, Texting, Lighting in Maya- Exploring the shaders and shader attributes- describe the types of light-applying light effects-understanding textures in Maya-Rendering in Maya - exploring the types of rendering methods working with render layer, render Nodes, cameras

Books for Study:

1. Phillip Kerman, Sams Teach Yourself Flash 8 in 24 Hours, USA, 2006
2. Robert Reinhardt, Flash 8 Bible, Snow dowl, Wiley India, 2006
3. Nick Vandome, Flash MX Easy steps, Dreamtech Press, 2009
4. Sound Forge 9.0 in Simple Steps (dreamtech Press)
5. Adobe Premiere Pro CS3 – Adele Droblás, Seth Greenberg (Bible)
6. Maya 2011 in simple steps Dreamtech press 2011

Course	III	Title	Semester	III
Course Code		Fundamentals of Computer Science	Hours	60
			Credits	4

Objectives

To present the fundamental aspects of Information Technology. The curriculum is designed in such a way that learner is able to grasp the basic principles of computer organization, data structures, operating system and computer network .

Unit I:

Brief history of Computers:

Generation of Computer -Types of Computers -PC Characteristics and its Specifications - Types of PC 's -Computer Organization -Block Diagram -Component of Computer-Memory (ROM&RAM)- Input Devices -Output Devices - Storage devices.

Unit - II: Computer

Software:

Types of Software -System Software and Application Software -Operating System -Utility Program [Editors]- Assemblers - Compilers - Interpreters - Loaders - Linkers - Programming Language -Machine Assembly - High Level: 4GL Language -Structured Programming language -Object Oriented Programming Language -Application Software - Package -Distributed Software -Property Software -Open Source Software.

Unit - III:

Data Communication:

Protocols and Standards -Line Configuration -Topology, Transmission Modes - Category of Network -Internet Work -OSI Model and its Functionalities - Transmission Media -Cable - Satellite -Wireless -Network Devices - Repeaters -Bridges - Hubs - Routers -Gateways - TCP and UDP Protocols and its Usage -IP address and its classification.

Unit - IV:

Internet-Electronic mail -Resource Sharing - Gopher - WWW --Use net - telnet --Bulletin Board Service - WAIS - FTP - Broad Band Connectivity - ISDN -Leased Line -Wirless Internet Connectivity - ISP -DNS -IP Address - URL.Browser:Internet Explorer -Mozilla fire fox. Search Engines:Google,yahoo,Lycos.

UNIT_V:

Basic Terminology :Logical Organization - Logical and Physical Data Independence - Conceptual Model of Data - Database Administrator - Characteristics of Data Base Systems - Entities and Attributes - Primary Keys - Secondary Keys - Data model - Schema - Subschema - Data Description - Association between data - Languages.

Books for Reference:

1. Alexis Leon, Mathews Leon, "Fundamentals of Information Technology ", Vikas Publishing House,1999 .
2. Suresh K Basandra, "Computers Today ",Golgatia Publications Pvt Ltd, 2001,
3. IITL Education Solutions Limited,"Introduction to Information Technology ", Pearson Education Ltd,2006.

Course	IV	Title	Semester	III
Course Code		Principles of Internet and Web Design	Hours	60
			Credits	4

Objectives :

To learn the basic concepts of web design. The course gives a basic idea of designing a web page using HTML. At the end of the programme the students will be able to design some static web pages.

Unit-I:

Introduction to Internet History - Electronic mail - File Transfer - Remote Login - World Wide Web - Search Engine - Browsers - Functionalities of browsers - Introduction to static , dynamic and active web pages.

Unit-II:

Introduction to HTML: Designing a Home page-History of HTML-HTML Generations-HTML Documents-Anchor Tag-Hyper links-Sample HTML documents. **Head and Body Sections** : Header Section-Title-Prologue-Links-Colorful Web page- Comments Lines. **Designing the Body Section:** Heading - Printing-Aligning the Headings-Horizontal Rule-Paragraph-Tab Settings

Unit-III:

Images and Pictures-Embedding PNG Format Images -**Ordered and Un Ordered Lists:**Lists-UnOrdered Lists-Headings in a List-Ordered Lists-Nested Lists.

Unit-IV:

Table Handling:Tables-Tables creation in HTML-width of the Table and Cells-Cells Spanning Multiple Rows/Columns-Coloring Cells-Column Specification - **DHTML and Style Sheets:** Defining Styles-Elements of Styles- Linking a Style Sheet to an HTML Documents-In line Styles-Internal and External Style Sheets-Multiple Styles

Unit-V:

Frames:Frameset Definition-Frame Definition-Nested Framesets - **Forms:**Action Attribute-Method Attribute-Enctype Attribute-Drop down list-Check Boxes-Radio Buttons-Text Field-Text area-Password and Hidden Fields-Submit and Reset Buttons-Designing Sample Forms

Book for Study:

C XAVIER, World Wide Web design with HTML- Tata McGraw Hill Publishing 2001