

Maharishi Mahesh Yogi Vedic Vishwavidyalaya

DIRECTORATE OF DISTANCE EDUCATION

Syllabus

**Diploma in Multimedia and Animation
(DMA)**

w. e. f. July 2012

DMA SEMESTER – I

S. No.	Paper Code	Paper No.	Paper Name	Marks
1.	1DDMA1	I	Fundamentals of Maharishi Vedic Science (Maharishi Vedic Science – I)	100
2.	1 DDMA 2	II	Fundamentals of Computer and Information Technology	100
3.	1 DDMA 3	III	Principles of Multimedia and Animation	100
4.	1 DDMA 4	IV	Basic Art	100
5.	1 DDMA 5	V	Desk Top Publishing(DTP)	100
6.	1 DDMA 6	VI	Practical – 1DDMA2, 1DDMA4 and 1DDMA5	100

DMA SEMESTER – II

S. No.	Paper Code	Paper No.	Paper Name	Marks
1.	2 DDMA 1	I	Advanced Concept of Maharishi Vedic Science (Maharishi Vedic Science – II)	100
2.	2 DDMA 2	II	2D Animation	100
3.	2 DDMA 3	III	Audio Video and Sound Forge	100
4.	2 DDMA 4	IV	3D Introduction & Advanced (Modeling & Animation)	100
5.	2 DDMA 5	V	Print & Advertising Graphics	100
6.	2 DDMA 6	VI	Practical – 2DDMA2, 2DDMA3 and 2DDMA5	100
7.	2 DDMA 7	VII	Project	100

FUNDAMENTALS OF MAHARISHI VEDIC SCIENCE

(MAHARISHI VEDIC SCIENCE – I)

UNIT-1

Meaning & importance of Guru Pujan.

Meaning of meditation, Mann, Intelligence, Chita, Ego, Thought .

UNIT-II

Name of forty areas of Vedic Science and their expression in Human Physiology and characteristics of consciousness.

Consciousness, types of consciousness, characteristics of higher stages of consciousness.

UNIT-III

Maharishi's Yoga, Transcendental Meditation- a general Introduction, Types of Speech, TM Sidhi Programme, Principle of Yoga Asanas and their Concept.

UNIT-IV

Introduction: Maharishi Vedic Management.

Fundamental elements of Vedic Management –Totality

Management of Science and Art .

UNIT-V

Vedic Management and Leadership.

The Idea Leadership is based upon the Totality of Employee's Style

Suggested Readings:

- Chetna –His Holiness Maharishi Mahesh Yogijee
- Maharishi Sandesh -1 and 2 , II-His Holiness Maharishi Mahesh Yogijee
- Scientific Yoga Ashanas –Dr.Satpal.
- Dhyani Shailly by Brahmchari Dr. Girish Ji

FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY

UNIT-1

Introduction to computer and information technology : History of development of computers, computer system concept , characteristics, capabilities and limitation , types of computer – analog, digital, hybrid, general, special purpose, micro, mainframe, super, generation of computer, personal computer (PCs) –IBM PCs, characteristics, PC/PCXT/PCAT-configurations, Pentium and Newer PCs specification and main characteristics, types of PCs-Desktop, Laptop, Notebook, Palmtop, Workstation etc , their characteristics.

Computer Organizations and Working: Basic component of a computer system –control unit, ALU, INPUT /Output function and characteristics, memory –RAM, ROM, EPROM, PROM and other types of memory.

UNIT-II

Input Devices: Keyboard, Mouse, Trackball, Joysticks, Digitizing tablet, Scanner, Digital Camera, MICR, OCR, OMR, BAR-CODE Reader, Voice Recognition, Light Pen, and Touch Screen.

Output Devices: Monitor –characteristics and types of monitor –digital, analog size, resolution, refresh rate, Interlaced /Non Interlaced, Dot Pitch, Video Standard –VGA,SVGA,XGA etc, Printer –Daisy wheel, Dot Matrix, Inkjet, Laser, line printer , plotter, sound card and speakers.

UNIT-III

Storage Devices: Storage Fundamental –Primary VS Secondary, Data Storage and Retrieval method –Sequential, Direct and Index Sequential, Various Storage Devices –Magnetic Tape ,Magnetic disks, Cartridge Tape, data drives, hard disk drives, floppy (Winchester disks), Disks, Optical Disks, CD,VCD,CD-R,CD-RW, ZIP Drive.

Computer Software: Need, types of software –system software, application software, system software-operating system, utility program, programming Language, assemblers, compiler and interpreter.

UNIT-IV

Operating System: Function, types –Batch, Single, Multiprogramming, Multiprocessing. Programming languages- Machine, Assembly, High Level and 4GL. Merit and Demerits of Programming Languages.

Disk Operating System (DOS) Introduction History & version of DOS basic –physics structure of disk drive name , Fat ,File & directory structure and naming rules , booting process , DOS system files. DOS command: Internal –DIR , MD , CD,RD,COPY,DEL, REN , VOL,DATE,TIME,CLS,PATH, TYPE etc. External – CHKDSK, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, TREE,MOVE, LABEL, APPEND, FORMAT, SORT, FDISK, BACKUP, EDIT, MODE, ATTRIB , HELP, SYS ,etc Executable V/s Non executable file in Dos.

Number System: Data representation in computer, number system of computer –Binary, Octal, Hexa-Representation & their conversion, coding system –ASCII, BCD, EBCDIC etc.

UNIT-V

Data Communication and Networks: communication channels –twister, coaxial, fiber, optic. Types of Networks –LAN, WAN, MAN etc, Topologies of LAN –Ring, BUS, STAR, MESH and TREE topologies , components of LAN-media , NIC,NOS, Bridges, HUB, Routers Repeater and Gateway .

Computer virus: Virus working principles, types of viruses, virus detection and prevention, viruses on networks. Use of communication and IT in daily life.

An Introduction : Modern Science and Vedic Science, Unified Field based Computer Science.

Text & Reference Books:-

1. Learning Window 98 step by step by Rajeev Mathur , BPB Publication.
2. Learning Word 97 for Window by Rajeev Mathur , BPB Publication,
3. Learning Excel 97 for Window by Rajeev Mathur , BPB Publication.
4. A First Course in Computer by Sanjay Saxena , Vikas Publishing House New Delhi.
5. Microsoft Office 2000 by A. Mansoor by Pragya Publications.
6. Office 97 Interactive Course by Greg Perry, Tec media.
7. Microsoft Office 2000 by A. Mansoor by Pragya Publications.

PRINCIPLES OF MULTIMEDIA AND ANIMATION

Unit-I:

Multimedia: - Definition of Multimedia Categorization of Multimedia, Major characteristic of Multimedia. Terminology : History of the term , word usage and context , The Modality Principle , the redundancy Principle , Spatial contiguity Principle , temporal contiguity , coherence Principle , individual difference Principle , challenge to the application of Principle .

Unit-II:

Usage: Creative industries , commercial , Entertainment and fine arts, Education , Journalism , Engineering Industry , Mathematical and scientific research , Medicine , Document imaging ,Disabilities , Miscellaneous.

Unit-III:

Animation: Its Definition, early examples of animation, Principle: Timing, Ease In and Out (or Slow In and Out), Arcs, Anticipation , Exaggeration , Squash and stretch, Secondary Action, Follow Through and Overlapping Action . Straight Ahead and Pose –To –Pose Action, Staging, Appeal, Personality.

History of Animation: Stop motion photo Animation, Zeotrope, Thaumatrope, Cel and Paper Animation, early Disney’s Animatios Process

Unit-IV:

Types of Animation: Cel Animation, Stop motion Animation, Computer Animation, 2D Animation. 3D animation.

Skills for an Animation Artist :- Visual and creative development of an Artist , important of observation with minute detail, efficiency to draw gestures , facial expressions , good listener , hard work and patience , creative and innovative.

Unit-V:

Basic Principle of Animation: Illusion of life , straight and pose to pose timing , Exaggeration , drama and psychological effect, fade in and fade out squash and stretch, Anticipation , Staging , Follow through and overlapping action , Arcs , Solid Drawing , Appeal , Slow out ,Secondary Action . Animation Drawing / Cells , Rough Drawing , Clean ups , color reference drawing , layout , Model sheet , key Drawing and in Betweens , Master Background , Concept Piece, Character drawing , Story board.

Text Books:-

1. **The complete animation course by Chris Patmore Pub- Baron’s Educational Series ,(New York)**
2. **Vaughan , Tray, 1993, Multimedia : Making it Work (First edition , ISBN 0-07-8818699 , Osborne / McGraw –Hill , Berkeley.**

Reference books:

1. **Animation Unleashed by Ellen Bessen , Michael Weise Productions , 2008 (U.S.A)**
2. **The Animation’s Survival Kit By Richard William, Arrar Straus & Giroux Pub. (U.S.A)**

BASIC ART

Unit-I:- Art: Definition Scope , Classification , use in various field . Qualities of good artist, communication Skills for an artists, Visual and creative development of an Artist. Demonstration and lectures on required skills for an artist, difference between seeing and observing.

Unit-II: Drawing and Sketching: - Concept of drawing, free hand drawing exercises from nature to study proportion, volume and visual perspective, rapid sketching technique, rapid sketching from live models, sketching from memory, live action.

Unit-III: Various mediums :- Pencil Colors, Charcoal , Pen and ink, Water colors , Poster color , Oil pastel colors , other waste material such as sand , stones, grass , hardboard , colors paper & clay etc.

Unit-IV: Still Life: - Study from any kind of from (basket , artificial fruits books , containers , bottles , round objects , drapery etc.) still life with line as well light and shade . Rhythmic relationship between line, mass, value and texture; emphasis on visual experiences.

Anatomy Study:- Simple free – hand drawing from human figure to study proportion , centre of gravity , inclination of main masses based on anatomical structure.

Unit-V: Memory Drawing and outdoor Sketching:-

Exercise in Drawing from memory to develop the sense of observation and the capacity to retain and recall image and their co-ordination. Introduction to Various aspects and Technique of drawing and Sketching Both Indoors and Outdoors.

Textbooks:-

1. **Basic Drawing Techniques by Richard Box Pub: Winsor & Newton,(U.S.A)**

Reference Book:-

1. **Still life by sanjay Sheller , jyotsana Prakashan (India). Pub.**
2. **Drawing and Anatomy by victor Petard , Kingsport Press Pub(U.K.)**

DESK TOP PUBLISHING (DTP)

Unit-I: Basic Designing Software :- Window Paint , basic concept making and Implement on computer , colors knowledge , Generating Ideas, Basic About various Software's in Industry for Still image manipulating knowledge about pixels , measuring units in diff image manipulating software's.

Unit-II: Vector graphic (Designing Color theory , Vector Designing & Editing , Text formatting) : Interface :working with menus , toolbars , Dockers Document Setup setting page size& Orientation , document navigator ruler & Guidelines : Status bar Text : formatting , Text layout , Skewing and rotating , creating drop shadow apart , transforming & shaping , Cutting object apart , trim , weld & Intersection of object lines & Curves : Using freehand & Bezier tools . line properties , Arrowhead Eraser & artist media tool node& path color & fills : solid color , color palettes, Eyedropper & paint bucket , fountain , Fills , pattern , Texture fills Interactive Mesh Fill Special Effect : Envelopes , Blend , perspective , Shadow object , power clip command , transparency , distortion , contour , lens Dockers complex shapes : polygon & star , spirals printing Menu.

Unit-III: Raster Graphics (Designing , color theory , raster Designing & Editing , text Formatting):- Getting to know the work Area, starting to work in Adobe Photoshop , color modes , color using the tools , Selection and using a tool from the toolbars . Using the tool option bar and other palettes , customizing the workspace , using Photoshop help, using Adobe Bridge , Viewing and editing files in adobe Bridge , Embedding information for easy identification , automating routine task . Resolution and image size , Straightening and cropping an image , making automatic adjustment , Manually adjusting the tonal range , replacing color in An image , adjustment Lightness with the Dodge Tools , Adjusting saturation with the sponge tool. Retouching And repairing , Repairing area with the clone stamp tool, using the spot healing Brush tools , Using the healing Brush and Patch tools , Retouching on a separate layer.

Unit-IV: Working With Selection , about selection and selection tools , selection with the magic wand tools, Using the magic wand with other selection tools ,Working with oval and circular selection , selection with the lasso tools , Rotating a selection with the magnetic Lasso tools. Cropping an image and erasing within a selection , layer Basic , using the layer palette ,

rearranging layer ,Applying a layer style , Flattening and saving files, ,masks and Channel , Creating a quick mask , Editing a quick mask , saving a selection as a mask , Correction and enhancing digital Photoshop , about camera raw , Processing camera raw files, correction digital Photograph .Editing images with a vanishing –point perspective , Corrective image distortion , creating a PDF portfolio, Typographic Design, Advanced layer Techniques , Advanced Composting , and Creating Links within an Image , Creating Rollover web Visual Animation GIF Image for the Web, Producing and Printing consistent Color, Using the filters.

Unit-V: **Page making:** Document Setup Option page type , page Style , page Numbering , page Measurement standard tool Bar Option Create New Document With Setting , open & Store option , Preferences Import & Export Object Option , Scanning , Document Setup , Columns Guide Setting etc. Formatting Tool bar Option Copy paste option , Cross pasting , Multiple Pasting , insert object etc. Text Setting option fonts setting , control palette , paragraph setting , text warping , master files , Text setting option Alignment Setting , Text Color . Rulers & Guide Lines , Print Out Bar Import Object , Polygon setting , Draw& Filing Object , Alignment Setting of the Image etc.

Books Reference:-

- **Adobe page maker 7.0 class room in a books, by (adobe publisher).**
- **Adobe photo shop 7.0 Class room in books, by (adobe publisher).**
- **Computer fundamental author (PK Sinha) by (BPB Publisher).**

MAHARISHI VEDIC SCIENCE - II

UNIT – I

Classical and Scientific introduction about forty areas of Vedic Science.

UNIT – II

Third Law of Thermodynamics.

Miessener's effect.

Maharish's Effect-Society, Environment, Behavior and effect on moral value.

UNIT – III

Pradhavansabhav, Atantabhav, Annyonabhav, Pragbhav.

Meaning of "Yogastha Kuru Karmani"

Meaning of "Gyanam Chetanayam Nihitam"

UNIT – IV

Theory of Karma-Prarabadha, Kriyamana, Sanchieta.

Theory of Invincibility .

Introduction to Maharishi absolute theory of Government.

UNIT – V

Theory of Ayurved.

Theory of Dincharya & Ritucharya.

Text and Reference Books :-

Maharishi Sandesh Part – I, II

Chetna Vigyan- His Holiness Maharishi Mahesh Yogi Ji.

Dhyan Shailly by Brahmchari Dr. Girish Ji

2D ANIMATION

Unit-I: Flash workflow & workspace: - Introduction to flash , workspace overview , customize the workshop , using the stage and tools panel, about the timeline , using flash panel , property inspector , Library panel, Movie Explore , History panel , color panel.

Unit-II: Working with Flash document :

- 1) About flash files.
- 2) Create or open a document and set its properties ,
- 3) View a document when multiple document are open
- 4) Working with project ‘
- 5) Importing artwork into Flash

(Working with Photoshop PSD files, (PSD file import preferences)

Adding media to the library

Work with libraries & its items

Working with timeline

Working with scenes

Find and replace command

About templates.

Unit-III:

Drawing basis

- 1) About vector and bitmap graphics
- 2) Flash drawing mode
- 3) About overlapping shape
- 4) Using flash drawing and painting tools
 - Draw with the pencil tolls
 - Draw Straight Lines
- 5) Reshaping line and shape outline
- 6) Snapping (object snapping , pixel snapping , snap alignment)
- 7) Working with color , strokes and fills

Unit-IV:- Working with graphic object.

- 1) Selection object.
- 2) Moving, copying and deleting object.
- 3) Arranging objects.
- 4) Transforming object.

Using Symbols, instance and library assists.

- 1) Symbol overview
- 2) Types of symbols
- 3) Create symbol
- 4) Convert animation on the stage into a movie clip
- 5) Duplicate symbols
- 6) Edit symbol
- 7) Working with symbol instances

Unit-V:

Creating animation

- 1) Animation basic : Creating motion, Creating key frames, Representation of Animation in the timeline, Frame rate, Frame –by –frame animation , Onion skinning, Extend Still images, Mask Layer
- 2) Using Timeline Effect
- 3) Twinned animation
- 4) Special effect
 - Filter
 - Animation Filter
 - Create preset filter Libraries
- 5) Blend modes in flash.
- 6) Working with text
- 7) Working with sound
- 8) Working with video.

AUDIO, VIDEO AND SOUND FORGE

Unit-I: - Creating Digital Video :- Adding all raw shorted short and clips all together , and add few finishing touch , even a small technique make an good effect , using some nice software for video editing , making fade in –outs , mixing the sound to video file, using diff angles of short for different emotion , happy or sorrow , trimming the video clip as per the audio or story , giving some second of blank space at the end of the video , make in concentration that text should not cover the video , light , Illuminator , silver / gold reflector , shotgun microphone , wireless microphone . Always use 5 second pre roll and post roll of blank space.

Unit-II:- Camera types & movements

Sony PD 150 cameras , miller fluid –head tripods , DV stead cam, handy cams, web cam, beta cam, setting the temp grid on the floor , perspective view of cameras , panning the camera movement , zoom in the camera , dolly camera , and camera using the crane shots, camera shocking for making earthquake effect.

Unit-III:- Camera & Lenses

Attaching camera on the tripod for the removal of shaking in the clips , giving the proper lightning effect , setting the light and proper reflection , correct expose, framing , focus, hand held short , slow berating wile video shooting pan , hip Pan .

Wide angle lens, fish eye lens, colored lens, blur lens, sharpness lens.

Unit-IV:- Storytelling through visual means. :- Making the story board , just using the action , emotion and happy moment ‘s scene to making the story , can make a comedy video , short film etc to practice on it ; can take the reference from some short film; comedy show.

Unit-V:- Sound Forge :- Work space , the toolbars , editing your sound , playing part of sound , basic Editing operation effect & Processing , the Effect Menu , Applying effect , the process menu , applying a process.

VCD& Books Reff:-

- Digital Multimedia by (Wiley Dramatic).

3D INTRODUCTION & ADVANCED (MODELING & ANIMATION)

Unit-I: - Getting in Control of 3D space:- Menu command , file menu , edit menu, tool menu, group menu, view main toolbar , Working with view port and files : Controlling the View port : Zooming a view , panning a view , rotating a view , maximizing the active view port , max Scene files . Saving files, opening files , merging and replacing object . Importing and exporting files.

Solid Modeling and the tools of the Trade:- Create menu , Modifiers menu, Command panel : Create , modify , Hierarchy , motion , display , utilities.

Unit-II: Color, Texture and surface styles. :-

The Material Editor, color and pattern in material , multiple material on single object , lofting the material , bump mapping , luminance value , maps , mapping coordinates , material , multi /sub-object material , Procedural maps. Material Editor : sample window , sample sphere , material types , material name , get material , assign , material to selection , material and mapping , importing maps & texture from Photoshop .

Unit-III:- Tips and tricks for good lighting :- Standard sunlight system , faking bounced light , daylight system , angle of incidence , attenuation , Exposure control, photometric light , grandiosity, standard light with scan line rendering , photometric light with grandiosity render , skylight with light tracer rendering , sunlight system , day light system , skylight . Target sport , free spot , target direct , and free direct , Omni. Day light with exterior scenes.

Unit-IV:- Virtual camera movement :- Camera types, Creating and adjusting camera , camera composition , Camera movement , focal length , field of view , cut edit , fade or dissolve edit , Camera basic , target camera , free camera , adjusting the field of view , doling and Zooming , crabbing and panning , basic scene editing , take the time to watch film and television with a more critical eye toward the technique employed by director to involve you , the viewer , in the world created by the camera.

Unit-V:- Still image , architecture design or product design to develop to develop a feel for how the focal length and the composition of camera can affect your perception of the scene.

Dummy Properties:- Dummy , animation the Rotation of the Dummy Object , fundamental Key Frame animation . Repeating animation overtimes, Hierarchical Linking.

Books Riff:- New Rider 3Ds max Fundamental .3DsMax 7 Fundamental Tech Media

PRINT & ADVERTISING GRAPHICS

Unit-I: Introduction:- Introduction , letter press printing , photocopiers, lithography, screen printing , imposition , finishers, special effect (die cutting , embossing , hot stamping , thermograph), color printing , color theory pantone color , color separation , designing with color, document binding , perfect binding (case binding , slide binder , comb , wire or spiral binding , ring binder , plastic wallet).

Unit-II: The creative brief Fundamentals :- Understanding Design Principle : Concept Formation , Format , Design , Layout , Graphics.

Designing of Office Stationary :- Visiting Cards , Identify Card , letter Head Calendars Receipt Books , account Books , General Books , Ruled Register , Files , ledger Register ,Account register , Inward & Outward Register , Journal Register , letter pad , Dispatch Register .

Unit-III: Advertising : Meaning , Nature , Function , Benefits , History ,Nature (art ,science , and professions), Ethics in Advertisement , Social and Economic aspect in Advertising .

Types of Advertising : Classified advertisement , Display advertisement , hard sell advertisement , soft sell advertisement , Reminder advertisement , Prestige advertisement , Humorous advertisement ,professional advertisement , National advertisement , local advertisement , Global advertisement , Product advertisement , Service Advertising , Retail advertising , Industrial advertising , Educational advertising , Financial advertising , Travel and Entertainment Advertising , Co-operative Advertising , By Government and public Bodies.

Unit-IV: - Advertisement relationship with the product life cycle, Advertisement as a communication tools. Marketing communication process. Advertisement as a marketing , Marketing Mix, Advertisement and Products (Positioning and Package), Place , price, promotion . AIDA Models.

Print Media Types: Trademark / Logo, Newspaper / Magazine Advertising , Direct Mail Advertising , Poster / Display Advertising , Billboard Advertising ,Kiosks.

Newspaper / Magazine Advertising: Full page Ads , Double Split Ads , Teaser ads , Product / Brand Launching Ads .

Unit-V:-

Poster Designing :- Essential of Poster Designing , Qualities of Poster Designing , Poster as a strong medium of Advertising , Study of Classic poster, Innovation Design for Animation Films , Poster Designing for Films, Slogans.

Brochure / pamphlet / Leaflet Designing:- Designing Brochures/ Pamphlet / Leaflet for an Advertising agency, Educational Instruction , Animation company, software company , travelling agency, Consultancy , Hospitals , film agency , property , Finance , Automobiles etc.

Practicals/ Submissions (Software to be used Photoshop, Adobe Illustrator, Corel Draw)

- a) **Office Stationary:** - Visiting Card, Letter Head , Calendar for an Animation Studio / Office .
- b) **Magazine Advertisement:** - Full Page AD, Teaser AD for an Animation Movie.
- c) **Poster Design:** - Poster for an Animation Movie.
- d) **Brochure:** - 3-Panel Brochure for Animation Institution / Studio.

Reference Books:-

Advertising By Design : Creating Visual Communication with Graphic Impact By Robin Landa, Publisher – Wiley .

Creative Advertising by Mario Pickens, Publisher –Thames and Hudson.