

**MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION,  
MUMBAI - 51**

1	Name of Course	Certificate Course In Multi Media & Web Page Designing (101145)																																								
2	Max.Nos. of Student	25 Students																																								
3	Duration	6 Month																																								
4	Type	Full Time																																								
5	Nos Of Days / Week	6 Days																																								
6	Nos Of Hours /Days	7 Hrs																																								
7	Space Required	Laboratory = 1000 Sq feet Class Room = 200 Sq feet TOTAL = 1200 Sq feet																																								
8	Entry Qualification	S.S.C. + ANY COURSE PASS FROM COMPUTER GROUP of MSBVEE OR ITI /COE / HSC Vocational / Diploma / Degree / Post Graduation / in Computer Group																																								
9	Objective Of Syllabus/ introduction	1. Awareness of Safety precautions. 2. Repair & Maintenance Computer Hardware & Networking 3. Application of Various Software used in Multimedia. 4. Awareness of various web designing software. 5. Testing of Multi media & web page Designing.																																								
10	Employment Opportunity	The trainee will either to be able to take up jobs with agencies which Develop, maintain and repair such Software Application or with working experience will be in a position to start his own independent Business.																																								
11	Teacher's Qualification	Diploma in Computer Engineering. With 3 year Teaching experience in Computer Field.																																								
12	Training System	<div>Training System Per Week</div> <table><tr><td>Theory</td><td>Practical</td><td>Total</td></tr><tr><td>12 Hours</td><td>30 Hours</td><td>42 Hours</td></tr></table>						Theory	Practical	Total	12 Hours	30 Hours	42 Hours																													
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13	Exam. System	<table><tr><th>Sr. No.</th><th>Paper Code</th><th>Name of Subject</th><th>TH/PR</th><th>Hours</th><th>Max. Marks</th><th>Min. Marks</th></tr><tr><td>1</td><td>10114511</td><td>Multi Media &amp; Web Page Designing</td><td>TH-I</td><td>3 hrs</td><td>100</td><td>35</td></tr><tr><td>2</td><td>10114521</td><td>Basic Internet, Multimedia &amp; Database Processing</td><td>PR-I</td><td>3 hrs</td><td>100</td><td>50</td></tr><tr><td>3</td><td>10114522</td><td>Multi Media &amp; Web Page Designing</td><td>PR-II</td><td>6 hrs</td><td>200</td><td>100</td></tr><tr><td></td><td></td><td>TOTAL</td><td></td><td></td><td>400</td><td>185</td></tr></table>						Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Min. Marks	1	10114511	Multi Media & Web Page Designing	TH-I	3 hrs	100	35	2	10114521	Basic Internet, Multimedia & Database Processing	PR-I	3 hrs	100	50	3	10114522	Multi Media & Web Page Designing	PR-II	6 hrs	200	100			TOTAL			400	185
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**SYLLABUS**  
**Multi Media & Web Page Designing**

<b>Practical – II</b>	<b>Theory - I</b>
<p>Inter connection of I/O Devices to PC Hands on with Windows Operating System. Checking Hardware configuration of PC.</p>	<p>Introduction to computers, peripherals and operating systems. Advantages of computers. Relationship between computer hardware and software. Memory storage, input and output devices.</p>
<p>Introduction to colors – Primary and Secondary in both RGB &amp; CMYK schemes/modes. Importance of each primary and secondary color. Proper Application of colors. Analyze colors applied in different print media. Visualize look and feel of a print or a web to apply colors.</p>	<p>Different composition of colors. The colors of the visual spectrum. Evidence of color theory implementation from existing graphics found in print media. Color use and implementation on the web.</p>
<p>Know the difference between Vector Graphics and Raster Graphics. Know the difference between Screen Graphics and Pixel Graphics. Understand the following formats :- .ai., .pdf, .eps, .svg, .svgz, .psd, .bmp, .gif, .jpg, .pcx, .pct, .png, .raw, .sct, .tga, .tiff, .vst.</p>	<p>Introduction to some of the most common graphics and image file formats, and its restrictions to particular hardware/operating system platforms. Platform independent formats. Image formats and incorporation of compression technique for large storage size of Image files.</p>
<p>Setting up the work area. Using the tools. Using palettes. Drawing &amp; editing with the pencil tools. Smoothing the path with smooth tool. Drawing with the Paint tool. Drawing curve segments. Using the reshape tool. Drawing &amp; editing brushed paths. Managing brushes. Creating brushes. Creating a pattern brush. Using the brush libraries. Using rulers, guides &amp; grids. Using the selection tools. Moving, copying and deleting objects. Grouping &amp; ungrouping objects. Transforming selected objects. Distorting with free transform tool. Pinking &amp; Bloating. Creating blends. Using the pathfinder palette. Working with clipping masks. Changing vector Graphics into Bitmap images. Linking objects to URLs for Internet packages.</p>	<p>Creating Vector Graphics. Using tools for publishing artwork on the Web &amp; in print.</p>

<p>Working with Images in Photoshop.</p> <p>Working with Palettes, i.e., layers palette, navigator palette, info palette, color palette, Swatches palette, Styles palette, History palette, Actions Palette, Tool preset palette, Channels Palette and Path Palette.</p> <p>Working with Layers. Photo editing.</p> <p>Image adjustment options – Labels, Auto labels, Auto contrasts, Curves, Color balance, Brightness / Contrast, Posterize , Variations.</p> <p>Preparing the file and work area.</p> <p>Creating different shapes.</p> <p>Creating three Dimensional effects using Layers.</p> <p>Working with the magic wand tool and lasso tool.</p> <p>Creating images using Symbol Sprayer Tool.</p> <p>Edit the images using options of Warp Tool.</p> <p>Using Dodge tool, Burn tool, Sponge Tool and Clone Stamp Tool.</p> <p>Editing Selections.</p> <p>Creating images and giving special effects using Filters.</p> <p>Using Layer Styles.</p> <p>Produce an image by mixing two or more different images using Layer Masking &amp; Vector Masking.</p>	<p>In depth Image editing.</p> <p>Exploring new creative options and producing high quality images for print &amp; web.</p> <p>Creating exceptional imagery with easier access to file.</p> <p>streamlined web design.</p> <p>Photo re-touching, colorful image collages, artistic backgrounds.</p> <p>Creation of the optimized images with roll over effects and image mapping.</p> <p>Special effects on images using Layer masking and Vector masking.</p>
<p>Planning your site &amp; site structure.</p> <p>Site navigation, using Template and Library.</p> <p>Exploring Dream Weaver, Working with different tools &amp; panels.</p> <p>Launcher and Additional Panel Groups.</p> <p>Creating and editing HTML documents. Setting Page properties.</p> <p>Adding Text and formatting, changing the color of texts, aligning Text and elements.</p> <p>Creating list, working with images, resizing images.</p> <p>Working with Tables, setting Table properties, resizing tables and cells, nesting tables.</p> <p>Linking and navigation.</p> <p>Creating an e-mail link. Associating remote server with a local site. Putting files on a remote server.</p> <p>Getting files from a remote server.</p>	<p>Creating professional websites.</p> <p>Working in a single environment to quickly create, build and manage websites.</p> <p>Learn to use usual layout tools with enhanced functionality and the visual design approach.</p> <p>Experience the rapid web application development process.</p> <p>Utilize extensive code editing support.</p> <p>Implementing Database connectivity using different ODBC Drivers.</p>
<p>About Flash and General overview – Stage and Work area of Flash, using guides, grid &amp; rulers.</p> <p>Using frames and key frames, Working with time line.</p> <p>Using layers – to create a layer, to create a layer folder, to show or hide a layer or folder, to view the contents of the layer as outlines, to change the layer height in the timeline, to change the order of the</p>	<p>Creating internet content and applications.</p> <p>Video, multimedia and application development features.</p> <p>Creating user interfaces, online advertising, e-learning solutions and enterprise application front ends.</p> <p>Creating 2D animated cartoons and interactive presentations.</p>

<p>layers or folders.</p> <p>Using Guide layers.</p> <p>Drawing in Flash – to raw with a pencil tool, to paint with a brush tool, to draw with pen tool.</p> <p>Using colors in Flash, to use a gradient fill.</p> <p>Importing Artwork, Video and Audio.</p> <p>Different file formats in Video &amp; Audio. Flash Compatible Audio &amp; Video file formats</p>	<p>Add sound clips and embed video into applications and websites.</p>
<p>Editing Websites and animations on websites.</p> <p>Interaction with graphics</p>	<p>Create media rich web sites, include audio, video, animations on web site, extensive format and standards support, seamless integration.</p> <p>Create, optimize, and export interactive graphics in a single, web-centric environment</p>
<p>Sound Recording in different channels – Mono-stereo.</p> <p>Sound editing and giving special effects.</p> <p>Using various formats of sound files.</p> <p>Conversion of analog audio to digital audio.</p> <p>Frequency management.</p> <p>Distorting recorded audio using Effects.</p>	<p>Sound recording basics, various formats of sound files, converting analog audio to digital audio.</p> <p>Digital audio editors that include powerful audio processing tools, effects for recording and manipulating audio.</p> <p>Edit files nondestructively down to the sample level with extreme speed and accuracy.</p>
<p>Interface with 3DS max 5/6. Getting acquainted with the arrangement of different Tool Bars, Panels, Tools and View Ports.</p> <p>Visualizing and drawing simple objects in terms of Top View, Front View and Side View.</p> <p>Create simple objects.</p> <p>Moving, Rotating and Scaling objects.</p> <p>Change dimensions of objects using modifiers.</p> <p>Importance of the View Port Controller in creating, editing and viewing the object.</p> <p>Creating different objects using Standard Primitives and Extended Primitives.</p> <p>Making shapes renderable and creating splines.</p> <p>Manipulate the shape of the model using Compound Objects.</p> <p>Application of Lathe Option for creating symmetrical objects.</p> <p>Apply animation to the models created so far.</p> <p>Modeling of real world objects through LPM using Editable Mesh and Editable Poly.</p> <p>Convert a model to an editable mesh and working with Extrude and Bevel options.</p>	<p>Introduction to the concept of 3D.</p> <p>Orthographic and Perspective views.</p> <p>Creating basic objects in 3D.</p> <p>Introduction to command panel.</p> <p>Working with “Properties” of 3D objects.</p> <p>Editing 3D objects using modifiers.</p> <p>Elements of View Port controller.</p> <p>Creating objects with Standard Primitives and Extended Primitives.</p> <p>Creating objects using “Shapes” panel.</p> <p>Re-shaping of objects using Compound Objects like Boolean, Terrain and Loft.</p> <p>Creating symmetrical objects using Lathe option.</p> <p>Simple Animation of basic objects.</p> <p>Introduction to Particle Systems.</p> <p>Low Polygon Modeling.</p> <p>Creating complex objects using NURBS (Non-Uniform Rational B-Splines)</p> <p>Introduction to Dynamic Objects</p>

<p>Create complex objects using NURBS.</p> <p>Create objects using Damper and Springs.</p> <p>Applying lights to the objects – Omni Light, Target Light and Free Light.</p> <p>Create a scene by placing a camera to the object.</p> <p>Create simple movies using Motion Command and movie controller.</p> <p>Create scenes using Atmospheric Apparatus.</p> <p>Create animated scenes using the elements of Space Warps.</p> <p>Turn on the material editor and see the options available.</p> <p>Selecting the material from the editor and assigning to the object.</p> <p>Create user defined materials using slots.</p> <p>Create a movie i.e. avi file by rendering the scene.</p> <p>Work with environment maps and applying sounds to the movies.</p> <p>Create scenes(non-renderable) using bones.</p> <p>Work with utilities.</p>	<p>i.e. Damper and Springs.</p> <p>Working with Lights and Camera.</p> <p>Path animation using Motion Command.</p> <p>Uses of Atmospheric Apparatus.</p> <p>Introduction to the Space Warps and different elements of it.</p> <p>Materials and different categories.</p> <p>Assigning Materials to the objects.</p> <p>Customizing Materials.</p> <p>Rendering scenes and creating .avi files.</p> <p>Applying Environment Maps and sounds to the scenes and rendered movies.</p> <p>Introduction to Inverse Kinematics, working with bones.</p> <p>Importance of Utilities</p>
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## Basic Internet, Multimedia & Database Processing

Practical – I
<p>Accessories</p> <p>Practice on paint, entertainment &amp; games Internet</p> <p>Open web pages using URL and domain name. Save web pages. Store web pages as favorites.</p> <p>Use search engines to find sites offering free Email services. Create Email account. Send Email.</p> <p>Copy received Email. Copy/Print received mail. Send Email with attachment. Open/Download attachments. Set-up for Chat. Practice chatting.</p> <p>Practice chatting with Video. Join News group.</p> <p>Getting connected using FTP. Down loading software's.</p> <p>Upgrading Browser versions.</p> <p>Using Telnet to get connected to remote computer.</p> <p>MS Outlook Express</p> <p>Using features of OUTLOOK Express for sending and receiving Emails. Setting multiple accounts in outlook express to send/receive mails. Maintaining Address book.</p> <p>Connecting to Internet</p> <p>Installing modem in computer. Installing Web Browsers. Setup internet connection using ISP.</p> <p>Setup browser settings.</p>
<p>HTML</p> <p>Working with HTML tags. Working with Fonts, colors, Working with Hyper text Links. Develop Unordered Lists, Develop Ordered Lists. Develop Definition Lists , Write different types of Marquee effects. Develop HTML Pages using Tables. Develop User registration forms. Develop Web pages using Forms (2 pages, 3 pages, Multi pages). Open pages in parent windows. Use Embed tag to insert Media. Insert flash file safe mode. Auto play Videos and Audio files. Play Audio and Video files from specific time. Hide controls on web page. Set different colors to different Headings. Change paragraph font size and color using styles.</p> <p>Print "Hello World" on web page using Jscript. Validate Password given by the user. Validate User input date. Validate E Mail Address. Register free website and upload pages Setting up the work area.</p>
<p>Adobe Photoshop</p> <p>Practice use of Photoshop tools. Practice use of palettes. Draw &amp; edit with the pencil tools. Smoothen the path with smooth tool. Draw with the Paint tool.</p> <p>Draw curve segments. Use reshape tool. Draw &amp; edit brushed paths. Practice managing brushes. Create brushes. Create a pattern brush. Practice using the brush libraries. Use rulers, guides &amp; grids.</p> <p>Practice use of selection tools. Practice moving, copying and deleting objects. Practice grouping &amp; ungrouping objects. Practice transforming selected objects. Practice distorting with free transform tool. Practice Punking &amp; Bloating. Create blends. Practice using the pathfinder palette. Practice working with clipping masks. Practice changing vector Graphics into Bitmap images. Practice linking objects to URLs for Internet packages.</p>
<p>MULTIMEDIA –Audio</p> <p>Practice sound Recording in different channels – Mono-stereo. Practice sound editing and giving special effects. Use various formats of sound files. Carryout conversion of analog audio to digital audio. Practice Frequency management. Practice distorting recorded audio using Effects.</p> <p>Multimedia –Video</p> <p>Get acquainted with the arrangement of different Tool Bars, Panels, Tools and View Ports. Draw</p>

<p>and visualize simple objects in terms of Top View, Front View and Side View. Create simple objects. Practice Moving, Rotating and Scaling objects. Practice changing dimensions of objects using modifiers, Create different objects using Standard Primitives and Extended Primitives. Make shapes renderable and create splines, Practice manipulation of the shape of the model using Compound Objects. Practice application of Lathe Option for creating symmetrical objects. Apply animation to the models created so far. Practice modeling of real world objects through LPM using Editable Mesh and Editable Poly. Convert a model to an editable mesh and working with Extrude and bevel options.</p>
<p>Identify the external I/O and memory devices connected to the PC.  Identify the controls of each of these devices including the system (CPU) unit.  DOS – Internal and external commands  DOS- creating simple batch file  Practice on formatting of floppy disk with various switch options  Creating directory and sub-directories  Practice windows operating system.</p>
<p>Opening an existing and Creating a new database with MS-ACCESS. Identifying the objects supported MS-ACCESS  Creating table in Data sheet and design view.  Enter data and edit data.  Data validation and verification in Access  Develop customized form for data entry.  Develop Queries and generate report for required output.  Generate customized Reports.  Setting relationship between tables  Setting relation ship between tables and queries or both</p>
<p>Practice use of Visual basic with MS Access as front end.  Create a simple application using Access and VB for a given specification.  Database back up and retrieval in Access</p>

**List of Tools, Machinery, Equipments etc.**

Sr. No.	Equipment	Qty.
1	Pentium system (Latest con) with mm kits with TV tuner/capture cards.	15 No.
2	Operating system	For each computer.
4	Inkjet printer 132 col	1 No.
5	Laser printer	2 No.
6	Antivirus software	As required
7	Maintenance Tool kit	1 No.
8	Consumable	As required
9	Computer tables	15 No.
10	Lab stools/chair	20
11	Student locker	For 20 students
12	Teacher table	one
13	Teacher chair	one
14	Office Almirah	Two Nos.
15	Book case	one
16	Vacuum cleaner	one
17	Air blower	one
18	Cables connectors etc	As required
19	Internet connectivity(Broadband Cable/ISDN)	one
20	Digital still camera	2 No.
21	Digital Video camera	2 No.
22	Analogue Video camera	1 No.
23	C compiler	As required
24	C++ Compiler	As required
25	Front page	do
26	Multimedia software--	
27	Adobe MM suite	As required
28	Maromedia Dreamweaver	“
29	Macromedia Ultradev	“
30	Macromedia flash	“
31	Macromedia firework	“
32	Soundforge	“
33	3D max	“
34	Consumable memory media	As required
35	DVD player	2 Nos.
36	Microphones	2 Nos.
37	Multimedia Projector	1 No.
38	UPS 5 KVA	2 No



### List of Tools, Machinery, Equipments Etc.

Sr. No.	Name of Item	Quantity (Nos.)
<b>Hardware</b>		
1	Intel Pentium IV @ 2.0 GHz or higher, 512 MB RAM, Intel Motherboard, 40 GB Hard Disk, 17" Monitor, Keyboard, Mouse, 52-X CD ROM Drive, 1.44 MB FDD, Multimedia kit, Network Interface Card or latest configuration	10
2	Inkjet printer	01
3	Laser printer (B & W)	02
4	Scanner	01
5	8/16 port Hub	02
6	ISDN Line (For Internet)/ cable broadband connection	01
7	UPS 500 VA for each Computer	10
8	Vacuum cleaner	01
9	Computer Tool kit	02
<b>Software</b>		
10	Microsoft Window	As required
11	Adobe Photoshop	As required
12	3D STUDIO Max	As required
13	Anti virus latest version	As required

<b>Hardware</b>		
1	Intel Pentium IV @ 2.0 GHz or higher, 512 MB RAM, Intel Motherboard, 40 GB Hard Disk, 17" Monitor, Keyboard, Mouse, 52-X CD ROM Drive, 1.44 MB FDD, Multimedia kit, Network Interface Card or latest configuration	10
2	Dot Matrix Printer	01
3	Inkjet printer	01
4	Laser printer (B&W)	01
5	Scanner	01
6	8/16 port Hub	02
7	ISDN Line (For Internet)/Cable broadband connection	01
8	UPS 500 VA for each Computer	10
9	Vacuum cleaner	01
10	Computer tool kit	01
11	Network testing utility software	As required
<b>Software</b>		
12	Microsoft Window	As required
13	Linux operating system	As required
14	MS Office Suite	As required
15	Visual Basic	As required
16	Antivirus latest version	As required

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