

Upgradation of ITIs into Centres of Excellence-
Broad guidelines for implementation of Advanced Module of Sector
“Information Technology ”.

These Centres will be providing multiskill training to meet the skill requirement of particular sector of industry with their active involvement in all aspects of training. The training will be provided in three parts as given below:

- ◆ Training in Basic skill areas for a period of one year.
- ◆ Training in Advanced modules of six months duration after Broad based basic Training(BBBT)
- ◆ Testing & Certification both for the Broad Based Basic Training & Advanced Module Training during subsequent six months will be conducted under the aegis of NCVT .
- ◆ Training in specialized modules mainly by the industry (The course curricula, duration etc will be designed in consultations with the IMC/local industry). The trade testing & certification for specialized module will be done jointly by the State Government & Industry. Said certificate will have recognition from NCVT
- ◆ **As per the recommendations of the EFC, Training in the shop floor should constitute atleast 25-40% of the curriculum.**

The training programme will have multi-entry and multi-exit provisions as given below:

- trainee can opt to go to the labour market after completing broad based basic training of one year duration or after completing advanced module/s.
- multi-entry and multi-exit provisions would enable a trainee to take admission for advanced/ additional advanced /specialized module as per his/her need .

Guidelines for Training in Advanced modules

- › A minimum of three modules would be essentially needed , so as to ensure that all the 96 trainees are accommodated in the three modules may be selected in consultation with IMC for which in two shifts .
- › If it is felt that available modules for which the course curricula has been developed at National Level are not sufficient to cater to the needs of local industry in a particular state, States are free to select module as per need in consultation with industry . They may develop suitable module(s) accordingly in consultations with the industry clearly indicating tool & equipment list , instructor qualifications , space norms etc. & forward the same to DGE&T for seeking approval of NCVT.
- › A trainee at a time can opt only for one Advanced Module .
- › Admission Criteria, Space requirement, Qualification of instructor of the various modules of “Information Technology Isector are attached herewith.

Admission to Advanced Module for the graduates of ITI in related trades:

There is a provision for lateral entry for graduates of ITIs (NTC /NAC passed outs from conventional system) of the related trades subject to availability of seats in Advanced Module. Trades of conventional system mentioned against each advanced module in the enclosed statement, could be offered admission in Advanced Module .

MODULE NO.	NAME OF THE MODULE	Admission criteria	Min Space requirement	Durati on In Week s	Qualification/ Status Of Instructor
ITAT-01	Repair & Maintenance of Hardware of Computer & Peripherals	Completed BBBT in Sector IT OR NTC/NAC in IT&ESM / Network Technician or any other related trade OR Diploma in IT.	70 sq m	24 weeks	Degree in IT with minimum two years teaching/industrial experience in the relevant field OR Diploma in IT with min four years teaching/industrial experience in the relevant field OR HNTC in Related area with min five years teaching/industrial experience in the relevant field .
ITAT-02	Computer Networking	Completed BBBT in Sector IT OR NTC/NAC in IT&ESM / Mechanic Computer Hardware or any other related trade OR Diploma in IT.			
ITAT-03	Multi Media & Web page Designing	Completed BBBT in Sector IT OR NTC/NAC in IT&ESM , COPA or any other related trade OR Diploma in IT ..			

MODULE NO.	NAME OF THE MODULE	Admission criteria	Min Space requirement	Duration In Weeks	Qualification/ Status Of Instructor
ITAT-04	E- Accountancy & Office Management,	Completed BBBT in Sector IT OR NTC/NAC in IT&ESM or any other related trade OR Diploma in IT /computers.	70 sq m	24 weeks	Degree in IT with minimum two years teaching/industrial experience in the relevant field
ITAT-05	Multi Media & Creative Designing	Completed BBBT in Sector IT OR NTC/NAC in IT&ESM / Network Technician/COPA or any other related trade OR Diploma in IT/Computers			OR
ITAT-06	Information System Management	Completed BBBT in Sector IT OR NTC/NAC in IT&ESM / Mechanic Computer Hardware or any other related trade OR Diploma in IT.			Diploma in IT with min four years teaching/industrial experience in the relevant field
					OR
					HNTC in Related area with min five years teaching/industrial experience in the relevant field .

ITAT-07	Digital Video Graphy	Completed BBT in Sector IT OR NTC/NAC in IT&ESM / Mechanic Computer Hardware or any other related trade OR Diploma in IT.			
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Advanced Module on

Repair & Maintenance of Hardware of Computer & Peripherals

Duration - 24 weeks

WEEK	Subject	Topic	Practical	Special Tools/Equipment/Software
1	Introduction to Digital Electronics. Special Digital Circuits	Digital and Analog signal. Number system. Digital Gates. Basic gate structures - TTL, ECL, MOS, CMOS Comparators. A to D converters D to A converters Multiplexers/ Demultiplexers	Identifying Digital IC's and Pins. Designing Logic circuits and verifying. Design, construct and test shift registers. Designing and constructing counters. Designing and constructing Adders and Subtractors Construct and test Comparators Construct and test Multiplexes/Demultiplexers..	IC remover/pullers. Soldering Irons (10W), De soldering Pumps (Handheld). Digital Voltmeters. Digital IC LAB Boards. Logic Probes. Logic Pulsar. CRO, (Digital IC's, Solder, Hookup wires – as required) (Digital IC's, Solder, Hookup wires – as required)
2	Series and parallel data communication and standards.	Serial and Parallel Data communication. RS 232C, RS 449, X.25, IEEE 802 and other current standards. Packet and message switching techniques.	Testing Serial and parallel cables. Making serial cables. Making parallel cables. Crimping using crimping tools(RJ11 and RJ45)	Crimping tools for Different types/Crimping tool Coaxial cable strippers (Cables and Connectors as required.)
3	Microprocessors	Evolution of Microprocessors. Architecture of 8bit,16bit Microprocessors. Microcontrollers. Introduction to CISC and RISC processors.	Identifying Processor chips and handling procedure. Identifying I/O and memory chips on Microprocessor kit. Reading and loading memory locations. Assembly language programming. Interfacing to microprocessors.	8085 Microprocessor kit with at least two interfacing kit 8086 Microprocessor kit with at least two interfacing kit (Spare Processor, I/O and memory chips) Microcontroller kit and Interface kits.

		<p>CISC processor, Hardware design principles of basic microcomputer systems, Memory and I/O interfacing.</p> <p>Recent processors, examples of typical RISC processors.</p>	Microcontroller, architecture, types and applications.	
4	Introduction to PC.	<p>Introduction to the PC. Key Functions of a PC. Standard Input and Output devices of a PC. The System Case/Cabinet.. The Motherboard CPU/MCP Clock Memory I/O Expansion Bus Commercially available PC and Types. Popular PC Manufacturers and assemblers.</p>	<p>Identifying standard input/output devices of a PC. Physical handling I/O devices and ergonomics. Care to be taken while shifting PCs. Power-On and shut-down procedures. Using Dos commands.</p>	At least four PC's of latest generation with all standard I/O and memory devices.
5	Standard Ports on a PC and its specification. Device IRQ and DMA	<p>PS2 Ports • Parallel Ports • Serial Ports • USB Ports • SCSI • Network Ports • Audio Ports • IrDA Ports • Wireless Ports • Joystick/MIDI Ports • Concept of Interface hardware. Device drivers. Interrupt Request. Direct Memory Access.</p>	<p>Identifying ports of a PC. Connecting and Disconnecting procedures of I/O devices to PC. Checking system configuration and specifications. Checking connectivity of devices. Identifying IRQ and DMA settings. Modifying IRQ settings. Identifying device drivers and location. Disabling/Uninstalling and enabling/installing devices.</p>	Spare ports of all standard types.
6	Keyboards, Keyboard Interface, device driver, and	<p>Types of Keyboards. Keyboard construction and circuitry.</p>	<p>Install Keyboard. Set keyboard features. Cleaning keyboard. Identifying defect in keyboards.</p>	Different types of Keyboards including wireless keyboards.

	<p>setup.</p> <p>Mouse, Mouse Interface, device driver and setup.</p>	<p>Cleaning and maintenance of KB.</p> <p>Repairing keyboards.</p> <p>Installing and setting keyboard properties.</p> <p>Types of Mouse.</p> <p>Mouse construction and circuitry.</p> <p>Cleaning and maintenance of Mouse.</p> <p>Repairing Mouse.</p> <p>Installing and setting Mouse properties</p>	<p>Replacing parts of keyboards.</p> <p>Trouble shooting defects.</p> <p>Installation of Mouse.</p> <p>Set properties of mouse. Clean Mouse.</p> <p>Identify defective Mouse.</p> <p>Replacing Parts of mouse.</p> <p>Trouble shooting defects.</p>	<p>Different types of Mice including wireless mouse.</p>
7-8	<p>Video monitors, Interface, device driver and setup.</p>	<p>Types of Video Monitors.</p> <p>PCI and Integrated Display Interfaces.</p> <p>AGP Slot and Cards.</p> <p>Installing Video Monitor drivers.</p> <p>Setting Properties of Monitors.</p> <p>Colour management and Monitor Utilities.</p> <p>Radiation effect on user.</p> <p>Methods for reducing radiation.</p>	<p>Install Monitor. Use external controls for adjusting features.</p> <p>Set properties of Monitor.</p> <p>Set colour features of Monitor.</p> <p>Identify installation defects.</p> <p>Display cable connector repair/replacement.</p> <p>Maintenance of monitor.</p> <p>Measurement of radiation from monitor.</p>	<p>Different types of Monitors including Flat and Plasma Monitors.</p> <p>PCI and AGP display cards of different makes and VRAM capacity.</p> <p>Spare Monitor cables and connectors.</p> <p>Radiation measuring meter.</p>
9-10	<p>Printers, Printer drivers, adding printers and maintenance.</p>	<p>Types of Printers.</p> <p>Printer Interface.</p> <p>Installing Pinter driver.</p> <p>Setting Properties of Printers.</p> <p>Printer Trouble shooting utilities and security settings.</p>	<p>Install Printer.</p> <p>Setting printer properties.</p> <p>Repairing printer cable.</p> <p>Removing and replacing ribbon/toner cartridge.</p> <p>Running Printer tools/utility.</p> <p>Maintenance of printers.</p> <p>Refilling tape/toner.</p>	<p>Dot matrix printer 80 and 132 column.</p> <p>Inkjet printers of at least four different makes and</p> <p>Inkjet printers of at least four different makes and</p> <p>Laser Printers of at least two different types and r</p> <p>Heavy duty Line printer.</p> <p>Tape refill kit.</p> <p>Toner refill kit.</p> <p>Spare printer cables and connectors.</p>

11	<p>Multimedia card speakers, Microphones, Audio drivers and setup.</p> <p>Modems, Interface, device drivers and setup.</p>	<p>Types of Multimedia cards. PCI and Integrated Multimedia Interfaces. Installing Multimedia driver. Setting Properties of Multimedia devices. Sounds and Hardware settings. Game port and Game devices.</p> <p>Types of modems. Modem Interface. Installing modems. Setting Properties of Modems. Trouble shooting Modem connectivity.</p>	<p>Install Multimedia card/feature. Setting Sounds and multimedia properties. Setting properties of multimedia hardware. Setting advanced playback and recording properties. Testing playback and recording features. Using third party play and record software. Trouble shooting of Ampli-speakers, Microphone and connecting cables. Installing and using gaming devices at Game port. Identification of types of modem and ports. Installation of external/Internal Modems. Installation of cable modem. Installation of ISDN, ADSL modems. Setting properties of modem and communication. Installation and setting up wireless modems. Connecting to the internet and setting options. Repairing modem cables and crimping. Maintenance and troubleshooting of modems.</p>	<p>Sound cards of at least four different makes and Ampli-speakers of at least four different makes and Microphones of at least four different makes and Game devices of at least four different makes and Spare cables and connectors.</p> <p>Internal PCI modems at least four different makes External modems of at least four different makes ISDN Modem with ISDN connection. Cable modem. Wireless modem. Spares Cables and connectors.</p>
12	Other externally connected devices, drivers and setup.	<p>CD writers and Installation. DVD writer. Combo -drives ZIP drives and Installation. DAT Drives and Installation.</p>	<p>Installing CD Players and CD writers. Burning different types of CD using Writer. Installing DVD players and DVD writers. Installing Combo drive and using. Fault finding and Repairing CD and DVD. Installing ZIP drives and using. Installing DAT drives and Using.</p>	<p>CD/DVD drives at least four different makes and CD writers at least four different makes and types DVD players at least four different makes and type COMBO drives at least four different makes and ZIP drives at least four different makes and types DAT drives at least four different makes and type Spare cables and connectors. Third party software utilities.</p>

13	Internal parts of a PC, specifications and precautions for disassembly.	Cabinet types and specifications. Layout of items inside a PC. Front panel to Mother board and SMPS connections. Disassembling of components inside PC and precautions. Cleaning the components and Cabinet.	Identifying parts of a cabinet, dismantling and reassembling cabinet parts. Assembling Server and industrial chassis. Assembling front panel. Adding additional Bays for drives. Disassembling components from PC and servers. Cleaning cabinet and components.	Different types of PC and Server cabinets at least four different makes and types. Different types of Industrial computer cabinets at least two types. Spare 3.5 and 5.5 mounting bays. Mini Vacuum cleaner with attachments. Special tool kit used for PC disassembly – at least
14	SMPS, types, rating and testing.	Specifications of SMPS. AT/ATX/Athelon/ Dual Xeon power supplies/1U,2U,3U power supplies/Redundant power supplies/Book PC power supplies. Power Supply converters / Connectors/extenders/splitters. Testing SMPS. SMPS Circuit and Testing. Troubleshooting SMPS. Surge Arrestors. Power Conditioners.	Identify connectors and colour code. Measure voltage and check current rating. Identifying specifications and comparison of different manufacturers. Identifying components inside SMPS. Replacing Fan, connectors. Identifying faulty components, testing and replacing in each type of computer power supplies. Testing and repairing Surge arrestors/Power conditioners.	Four different types, wattage power supplies suitable for Processor/server power supplies/1U,2U,3U power supplies/Redundant power supplies/Book PC power supplies. Power Supply converters / Connectors/extenders/splitters. Surge Arrestors. Power Conditioners. Spare cables and connectors.
15	Components on the motherboard and identification. Motherboard specifications.	Form Factor. BIOS CMOS and Battery. Memory slots. CHIPSET ISA,PCI, AGP, Raisers. Processor, types, form factor, specifications. Jumpers and connectors on motherboard.	Identifying different types of motherboard form factors and specifications. Identifying components on a motherboard. Identifying different types of buses and raisers. Identifying Processor, form factor and specifications. Identifying jumpers on the motherboard and functions. Identifying RAM slot, type, size,	Four computers of different makes and processors based for dismantling, demonstration and Reassembly. Mother board manuals and technical manuals for Spare Lithium batteries.

			expandability. Identify CMOS capacity. Lithium battery.	
16	BIOS and CMOS. RAM, Types and specifications.	Function of CMOS setup. Altering and setting parameters of CMOS settings. RAM technology and evolution. Form Factor. Manufacturers. Specifications. Removing and replacing & Expanding RAM.	Identifying CMOS, size, features. Carrying out CMOS setup. Identify type of BIOS, manufacturer, version and features. Upgrading Bios features. Identify RAM form factor. Identify type of RAM and capacity. Test RAM. Identify Replacement options/equivalents. Upgrade RAM.	Mother board manuals for the PCs available in the RAM modules of different form factor, capacity, speed and technology suitable for PC's available.
17	Floppy Drive, installation, maintenance and minor repair. Hard Disk drives, types, specification, interface, installation, partitioning and formatting.	FDD types and media. Maintenance and repair of FDD. HDD technology and types. Types of Interface. Installation, Partitioning, Partitioning tools, formatting. Care and maintenance of HDD. Thumb/Pen drives and installation.	Install FDD. Repair of FDD cable and connector. Fault finding and repair of FDD. Identifying the type of HDD. Identifying specification of HDD. Maintenance of HDD. Partitioning IDE/ATA Drives, SCSI drives. Formatting IDE/ATA drives, SCSI drives. Jumper settings. Repairing HDD cables. Installing and testing Pen drives/Thumb drives.	Different makes of FDD at least four different types Floppy diskettes. Tool kit for repair and maintenance. Different types, makes and capacities of HDD in IDE/ATA and SCSI. External Hard disk drives. Third party software utilities. Flash/Thumb/Pen drives of different makes and capacities.
18	Loading Operating system and multiple operating systems. Application packages.	Operating system and functions. Types and comparison. Installing operating systems. Multiple operating systems. Repairing OS installations. Upgrading OS. Minimum hardware requirement for loading	Loading windows OS. Repairing OS. Upgrading OS. Loading Multiple OS. Loading patches. Working with systems files. Loading Windows office suit. Loading Linux OS. Repairing Linux.	Windows 98, 2000 and XP operating systems- full legal versions. Windows MS office package. Linux OS. Linux application packages.

		application packages. Popular window based application packages - installation. Popular Linux based application packages – installation.	Loading Linux application packages.	
19	CD ROM Drives, DVD drives, Combo drives, installation and minor repairs. Maintenance and repair of ZIP drives, DAT drives, JAZ drives, Optical drives.	Principle and types. Media. Installation. Maintenance and minor repairs. Other back-up medias and devices. Working principle and capacity. Installation. Maintenance and repairs.	Repair and maintenance of CD Drives. Repair and maintenance of DVD Drives. Repair and maintenance of Combo Drives. Repair and maintenance of ZIP Drives. Repair and maintenance of DAT Drives. Repair and maintenance of external JAZ Drives. Repair and maintenance of MODs.	Micro screw driver set. Motorized screw driver. Allen key set. Lens assembly with light. Spares as required. Two different types of Magneto optical disk drive
20	Fault finding and repair of Monitors.	Opening a monitor and identifying defect. Circuit tracing and fault finding. Trouble shooting techniques.	Repair and Maintenance of different makes and types of monitors.	Four different types, makes and sizes of monitors for dismantling, demonstration and reassembly. Spares as required.
21	Fault finding and repair of Printers	Trouble shooting Dot matrix/impact printers. Trouble shooting Inkjet/DeskJet printers. Trouble shooting LaserJet Printers. Trouble shooting Heavy duty line printers. Toner and refilling techniques.	Repair and Maintenance of different types of printers.	One DMP for dismantling, demonstration and re Four Inkjet/Desk jet for dismantling, demonstration Four LaserJet for dismantling, demonstration and One Line printer.
22	Fault finding and	Working and parts of a	Repair and maintenance of scanners.	Four different types and makes of Scanners for

	repair of Scanners, Web camera, digitizers, Joysticks, etc,	scanner. Trouble shooting Scanners. Working, parts and trouble shooting Web cameras. Working, parts and trouble shooting Digitizers/Trackballs. Working, parts and trouble shooting Joysticks.	Repair and maintenance of Web Camera. Repair and maintenance of Digitizers. Repair and maintenance of Joysticks.	dismantling, demonstration, reassembly and trouble shooting practice. Four different types and makes of WEB Camera dismantling, demonstration, reassembly and trouble shooting practice. Digitizers and Trackballs.
23	Laptop and Notebook computers. Palm top computers.	Difference between desktop and laptop architectures. Computer. Chipset. Internal layout of components. Special cards and accessories. Upgrading and Minor repairs.	Hands on with Laptop/notebook computers. Disassembling and reassembling procedures. Replacing processor. Replacing memory. Replacing add-in cards. Fault finding and repairing/replacing battery/mains adaptor.	Two different types of Note Book computers of different type and make along with technical manual. Spare memory, Processor, cables, connectors, power pack, battery.
24	Introduction to Networking.	LAN, MAN, WAN, Intranet, terms used. Network topology. Network protocols. Peer – to – peer and Client – server. Computers Virus and Antivirus	Identification of network cable, connectors and wall outlets. Identification of straight and cross cables, testing and making. Installing NIC card and setting. Loading protocols. Establishing a peer-to-peer connection using cross/straight cables and switch. Loading anti virus packages and terms used. Scanning for virus, removing/recovering virus infected files. Internet update of anti virus softwares.	UTP 5/5e/6 cable. RJ45 connectors and Crimping tool. At least four different types of NIC cards.

Equipment list for Repair & Maintenance of Hardware of Computer & Peripherals

Sl no	Equipment	Qty
1	Pentium system with multimedia and Combo drives, Zip drives and DAT drives. (Latest con)	15 no
2	Operating system	For each computer
3	Dot matrix printer	4 no
4	Inkjet printer	3 no
5	Laser printer	3 no
6	Antivirus software	As required
8	Tool kit	5 no
9	Spare cards and components	Five spare sets
10	Consumable	As required
11	System maintenance software	As required
12	DMM	5 no
13	Soldering iron	2 no
14	Desoldering gun	2 no
15	Temperature controlled soldering/ desoldering station	2 no
16	Computer maintenance table	15 no
17	Lab stools/chair	20
18	Student locker	4
19	Teacher table	one
20	Teacher chair	one
21	Office Almirah	Two nos
22	Book case	one
23	Vacuum cleaner	one
24	Air blower	one
25	Cables connectors etc	As required
26	Crimping tools	2 nos
27	CD Writers	5 nos.
28	DVD writer	5 Nos.
29	External HDD	5 Nos.
30	Microprocessor Trainer kit	5 Nos.
31	Micro controller Trainer kit	5 Nos.
32	Digital Circuit Experiment board	5 Nos.
33	Multimedia Projector	1 No.
34	UPS 5 KVA	2 Nos.

Advanced Module on Computer Networking (24 weeks)

WEEK	SUBJECT	Topics	Practical
1	Personal Computer Architecture - Review	Architecture of Digital computer. Architecture of PC. PC family. Specifications of a PC. Connecting PC peripherals. Start-up procedure. Operating system features.	Identify of Controls and ports of a PC. Connect external devices to a PC. Identify system configuration and connectivity. Using operating system features. Running application packages.
2	Input/Output devices and Driver installation	Device interface and Drivers. IRQ and DMA. Device interfaces and Drivers. Installing Device drivers and setting. Configuring devices and testing.	Working with Device manager. Installing, uninstalling and setting I/O devices such as Keyboard, Mouse, Display, Printer, Multimedia, Modem, NIC and others.
3	Memory devices, Types and Interface	Types of Memory devices. Primary Memory types and specifications. Hard Disk and specifications. Partitioning and Formatting of hard disks. Working principle of CD, DAT, ZIP and Thumb drives.	Identifying Mother board memories – Replacing/upgrading RAM. Hard disk – Partitioning and formatting. Installing CD drives, DAT drives, ZIP drives, Thumb drives.

4	Loading of Operating system and Applications/Utilities	Operating systems. Features of Operating systems. Loading of Operating systems. Manipulating operating system setup. Applications and Utilities loading and implications on system performance.	Installing Windows Operating system(s). Installing Linux operating system. Installing Application Packages. Installing additional Utilities.
5	Networking Concepts	Network features. Network Topologies. Network Protocols. Network Models. Network types. Network Components.	Identify Physical Topology of a Network. Identify the members of the network. Identify the protocols installed. Identify and check resource sharing. Identify the cables and components in the network.
6	Servers and Configurations	Difference between PC and Server. Usage of Server. Hardware of Server. Types of Servers – functional. Types of servers – commercial. Database management and Data base servers.	Identifying Controls and Ports on servers. Identifying the Hardware of servers. Identifying the configuration of servers. Identifying the NOS and its features. Starting and shutting down servers.
7	Network Operating systems and features	Difference between OS and NOS. Essential features of NOS. Types of NOS.	Identifying the Configuration. Identifying and using basic features. Using Win 2000 /2003/Linux/UNIX/Novell NOS features.

8	Network Cables and Cabling Techniques	Networking medias. Media specifications and standards. Types of cables used. Cable preparing procedures and precautions.	Making UTP cross cables and testing. Making straight cables and testing. Making Cable layout drawing. Installing Information outlet points.
9 and 10	Structures cabling and standards (UTP cabling/Backbone cabling/Fiber optic cabling)	Cabling evolution. Design process. Structured cabling systems and concepts. Designing work area. Patch panels, Wall mounts and Rack mounts. Testing and Administration. Preparation of Loose tube cable. Preparation of Base and Cover assembly. Installing optical fiber connectors on loose tube cable. Cable cleaving	Prepare cable terminations. Assemble modular outlets. Install Cross-connect system. Cable identification and cross-connect wire installation. Routing multi-pair cables. Terminating connectors. Preparing optical fiber loose tubes. Cable cleaving.
11	Common Network protocols	Function of a Protocol and protocol family. NetBEUI UDP/FTP/TFTP TCP/IP TCP/IP Suit	Install different common protocols one by one and test communication and features.
12	TCP/IP services	Dynamic Host configuration Protocol. DNS name resolution NetBIOS support /SNMP TCP/IP Utilities Upper Layer services FTP	Install and check TCP/IP utilities and services.

13	Other Network Protocols	Alternate Network Protocols Introduction to IPX/SPX AppleTalk Introduction to Apple Open Transport Introduction to IPv6	Install and check working of different network protocols.
14	Principle Functions & uses of Network Components. (Hubs/Switches/Bridges/Routers/Gateways)	Used of Different network components. Hubs. Bridges. Switches. Routers. Gateways. Protocols.	Identify physical connection of different networking components. Check working of Network components.
15	Power Requirement Network	Type of power requirement in a Network. Type of power points. Power cabling plan for UPS and Non UPS supplies. Wiring diagram. Calculating power requirement of a network.	Identify power supply of network. Calculate power requirement. Plan segment and switching arrangement. Make wiring diagram. Identify rating and number of Ups required. Plan power point positions and layout
16	Planning a simple LAN	Need analysis. Building wiring plan. Cabling plan. Choosing a Server specification. Choosing Topology. Choosing protocols.	Carryout need analysis and identify model. Decide on topology. Prepare network cabling plan. Prepare layout diagram Choose server hardware and NOS.

17	Configuring Windows. Administering Windows Server (basics)	Methods, procedure and precautions for Installing windows 2000/2003 server and client software. User accounts. Working with groups. Working with shares. Backup types, media and methods.Data/Disaster Recovery	Install windows 2000/2003 server and configure clients. Add/modify/delete user accounts. Create groups/group memberships. Create shares. Map drives. Set-up network printer. Carryout Daily / weekly Backup and recovery.
18	Windows server services	DHCP DNS RAS and RRAS IIS Cluster services Terminal Services	Configuring and testing windows server services.
19	Wireless Networking. Network Security.	Concept. Types. Components. Access points types (HAP,SAP) Advantages of Wireless networking. Setting up Wireless networks. LAN to LAN Wireless. Roaming Need of Network Security. Methods of securing network.	Installing Wireless LAN cards. Setting up and configuring Access point. Setting up LAN to LAN wireless network. Testing Communication. Setting up network security.
20	Linux OS	Comparison of Windows and Linux. Linux Operating system. Installing Linux client.	Working with Linux OS

21	Installing Linux Server and Testing	Installing Linux server. Creating users and rights. Resource sharing.	Installing Linux NOS. Configuring. Creating users and shares.
22	Configuring Novell Server (basics) and Testing	Installing Novell Netware server. Configuring server. Creating users and rights. Resource sharing. Using Novell utilities.	Installing Novell Netware. Configuring. Creating users and shares. Using utilities.
23	Upgrading Server Components	Upgrading RAM. Adding Hard disk Adding Back-up Drives. Installing utilities. Installing applications.	Add SCSI HDD. Add RAM Add DAT, ZIP drives. Install third party utilities. Monitor system performance.
24	Network WAN Infrastructure	Introduction to WAN. WAN environment and features. WAN Transmission Technologies. WAN connectivity devices. Voice over data service.	Set up a simulated WAN. Test Features. Check routing features. VISIT to an established WAN setup.

Advanced Module on Computer Networking

Sl no	Equipment list for Computer networking	Qty
1	Pentium system (Latest conf)	15 no
2	Client Operating system	Windows for each system.
3	Dot matrix printer	2 no
4	Inkjet printer	2 no
5	Laser printer	2 no
6	Antivirus software	As required
8	Tool kit	5 no
9	Spare cards and components	Two spare sets
10	Consumable	As required
11	System maintenance software	As required
12	DMM	5 no
13	Soldering iron	2 no
14	Desoldering gun	2 no
15	Temperature controlled soldering/ desoldering station	2 no
16	Lab table	7 no
17	Lab stools/chair	20
18	Student locker	4
19	Teacher table	one
20	Teacher chair	one
21	Office Almirah	Two nos
22	Book case	one
23	Vacuum cleaner	one
24	Air blower	one
25	Cables connectors etc	As required
28	Servers	3 nos
29	Networking os	Windows/linux/netware
30	*Switch	4
31	*Router	2
32	Modem	2
33	Rack	2
34	Patch cards	As required
35	Scanner	1 no
36	Multimedia kits spare	3 no
37	Internet connectivity (Cable/ISDN)	1 no
38	Crimping tools for network cable	2 nos
39	Consumable cables, connectors and wall mounts	As required.
40	Multimedia Projector	1 No.
41	UPS 5 KVA	2 Nos.
42	Software * Necessary Training may be given in Industry	As required

Advanced Module on “Multi Media & Web page Designing” Duration - 24 WEEKS

WEEK	TOPIC	THEORY	PRACTICAL	SOFTWARE
1	1. Introduction to Computers.	<p>Introduction to computers, peripherals and operating systems.</p> <p>Advantages of computers.</p> <p>Relationship between computer hardware and software.</p> <p>Memory storage, input and output devices.</p>	<p>Inter connection of I/O Devices to PC</p> <p>Hands on with Windows Operating System.</p> <p>Checking Hardware configuration of PC.</p>	
	2. Color Management	<p>Different composition of colors.</p> <p>The colors of the visual spectrum.</p> <p>Evidence of color theory implementation from existing graphics found in print media.</p> <p>Color use and implementation on the web.</p>	<p>Introduction to colors –</p> <p style="padding-left: 40px;">Primary and Secondary in both RGB & CMYK schemes/modes.</p> <p>Importance of each primary and secondary color.</p> <p>Proper Application of colors.</p> <p>Analyze colors applied in different print media.</p> <p>Visualize look and feel of a print or a web to apply colors.</p>	
	3. Graphics/Image Data Structures	<p>Introduction to some of the most common graphics and image file formats, and its restrictions to particular hardware/operating system platforms.</p> <p>Platform independent formats.</p> <p>Image formats and incorporation of compression technique for large storage size of Image files.</p>	<p>Know the difference between Vector Graphics and Raster Graphics.</p> <p>Know the difference between Screen Graphics and Pixel Graphics.</p> <p>Understand the following formats :-</p> <p>.ai, .pdf, .eps, .svg, .svgz, .psd, .bmp, .gif, .jpg, .pcx, .pct, .png, .raw, .sct, .tga, .tiff, .vst.</p>	

2 & 3	Vector Graphic Illustrations	<p>Creating Vector Graphics.</p> <p>Using tools for publishing artwork on the Web & in print.</p>	<p>Setting up the work area.</p> <p>Using the tools. Using palettes.</p> <p>Drawing & editing with the pencil tools.</p> <p>Smoothing the path with smooth tool.</p> <p>Drawing with the Paint tool.</p> <p>Drawing curve segments.</p> <p>Using the reshape tool.</p> <p>Drawing & editing brushed paths.</p> <p>Managing brushes.</p> <p>Creating brushes.</p> <p>Creating a pattern brush.</p> <p>Using the brush libraries.</p> <p>Using rulers, guides & grids.</p> <p>Using the selection tools.</p> <p>Moving, copying and deleting objects.</p> <p>Grouping & ungrouping objects.</p> <p>Transforming selected objects.</p> <p>Distorting with free transform tool.</p> <p>Pinking & Bloating. Creating blends.</p> <p>Using the pathfinder palette.</p> <p>Working with clipping masks.</p> <p>Changing vector Graphics into Bitmap images.</p> <p>Linking objects to URLs for Internet packages.</p>	Adobe Illustrator
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<p>4, 5 & 6</p>	<p>Professional Image Editing</p>	<p>In depth Image editing.</p> <p>Exploring new creative options and producing high quality images for print & 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>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.</p> <p>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 & Vector Masking.</p>	<p>Adobe Photoshop</p>
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9&11	Creating & Managing Websites.	<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>Planning your site & site structure.</p> <p>Site navigation, using Template and Library.</p> <p>Exploring Dream Weaver, Working with different tools & panels. 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>Macromedia Dream Weaver & Macromedia Ultradev.</p>
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12to15	Developing Animated Web Content & Applications.	<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>Add sound clips and embed video into applications and websites.</p>	<p>About Flash and General overview – Stage and Work area of Flash, using guides, grid & 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 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 & Audio. Flash Compatible Audio & Video file formats</p>	<p>Macromedia Flash 5</p> <p>or</p> <p>Macromedia Flash MX</p> <p>Or</p> <p>Macromedia Flash 2004 Professional</p>
15	Media Rich Website Development.	<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>Editing Websites and animations on websites.</p> <p>Interaction with graphics</p>	<p>Macromedia Fireworks</p>
16	Professional Digital Audio Editing	<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>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 Forge</p>

17 to 24	3D modeling and animation.	<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>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>3DS max 5</p> <p>or</p> <p>3DS max 6</p>
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		<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>	<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>	
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Equipment list for Advanced Module on “Multi Media & Web page Designing”

Sl 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 Dreamveaver	“
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 Nos.

ADVANCE MODULE - 04

E-ACCOUNTANCY & OFFICE MANAGEMENT

COURSE CONTENT

1. E-Office Environment: (6 Weeks)

i MS-WORD: Advance features of MS-Word, Data entry in Tables

ii Power Point:

Adding sound effects,
Adding animation effects,
Transition effects in presentations,
How to make an effective presentation along with demo.

iii Excel:

Applying Formulas,
Adding/deleting and finding of records,
Sorting & filtering of records,
Transferring data in multiple sheets,
Handling of various types of Charts & Graphs.

iv Data entry practice in MS-Word & Excel using typing tutor.

2. E-Accountancy: (2 Weeks)

i Introduction to E-Accountancy

ii Fundamentals of Accounts

iii Recording of transactions

- iv Trial Balance & rectification of errors
- v Bank reconciliation statement
- vi Depreciation provisions and reserves
- vii Final accounts
- viii Bill of exchange

3. Accounting Business Environment: (1 Week)

Value added Tax (VAT), central sales tax (CST), Tax deducted at source (TCS), Service Tax, Fringe Benefit Tax (FBT), and Excise duty.

4. Tally Financial Accounting Programme: (6 Weeks)

i Accounting : Bill wise detail, cost centre and cost category, interest calculations, budgets, scenario management, optional, Reverse Journal and Memorandum Vouchers, Multiple Currency, Bank Reconciliations, Account Book, Sale Register, Purchase Register, Journal Register, Check Printing. Invoice printing, Cash and Bank book, Backup and restore, Import and Export, Split company data, create a group of company, Security control, Auditing of ledger and vouchers.

ii Inventory: Stock items, Stock Group, Stock Category, Units of measurement, Maintain Multiple Go-downs, Track Batch wise details, Actual and billed quantities, Track Additional cost of purchase, Multiple price level, Purchase order processing, sales order processing, Tacking number, Rejection notes, Inventory Book, Stock Summary.

iii Taxation: VAT, CST, TDS, TCS, Service Tax, FBT, Exercise Duty.

5. Payroll: (4 Weeks)

Generating Monthly salary, Recording the basic salary, Dearness allowances, House Rent allowance, Traveling allowance, Attendance register, Pay sheet, Pay slip, Loan and Advance salary for employee, Employee and Employer contribution to PF and ESI, salary distribution, Salary payment through Bank and Cash, Loan recovered from employee in installments, Employee group, Employee details.

6. Page Maker: (6 Weeks)

- i Efficiently Laying Out Pages
- ii Applying Master Pages
- iii Creating Guides
- iv Manipulating Graphics
- v Duplicating Graphics
- vi Masking and Automating Tasks with Scripts
- vii Advanced Type Techniques
- viii Using Paragraph Rules
- ix Creating Running Headers and Footers
- x Creating Continuation Lines
- xi Working with Imported Graphics
- xii Altering Imported Graphics
- xiii Trappin
- xiv Trapping a Document
- xv Managing Long Documents
- xvi Creating a Table of Contents
- xvii Creating an Index
- xviii Building a Book
- xix Importing and Exporting HTML
- xx Importing HTML
- xxi Exporting Stories to HTML
- xxii Exporting **Page** Layouts to HTML

**LIST OF TOOLS, MACHINERY & EQUIPMENT FOR A BATCH OF
20 TRAINEES**

SR. NO.	NAME OF ITEM	QUANTITY (NOS.)
1.	Intel Pentium 4.0 @ 1.86 GHz Core 2 Duo,DDR2 2 GB RAM , Intel Motherboard (965 with LAN), Hard Disk 300 GB, SATA II, Monitor 17” TFT, Keyboard, Mouse, DVD Writer 18 X, 4.1 Speakers or Latest Configuration with preloaded Operating System minimum WINDOW XP Professional or WINDOW VISTA Premium	20
2.	Lap Top- Core 2 Duo 2 GHz Processor, Hard Disk SATA 160 GB, RAM 2 GB DDR2, LCD Screen 17”, DVD Writer, Battery 8 cells, Preloaded Operating System minimum WINDOW XP Professional or WINDOW VISTA Premium, Carry Case	01
3.	Inkjet Printer (132 cols.)	02
4.	Laser Printer (B & W)	02
5.	24 port switch	01
6.	ISDN Line for Broadband connection (unlimited download capacity),	01
7	UPS 500 VAfor each Computer	20
8	Vacuum Cleaner	01
9	Scanner	01
10	Web Camera of latest configuration	01
11	Computer Tool Kit	02
12	Consumables	As required
	Software	
1	Ms Office (latest version)	As Required
2	Tally(latest Version)	As Required
3	Page Maker (Latest Version)	As Required
4	Pay roll Package	As Required
5	Anti Virus (Latest Version)	As Required
6	Typing Tutor	As Required
	Workshop Furniture	

1.	Instructor Table and Chair	01 each
2.	Computer Table	20
3.	Revolving Chairs	20
4.	Table for Printer/ Scanner	05
5.	White Board	01
6.	Metal Rack	01
7.	Locker with 8 Drawer (Standard Size)	03
8.	Storage Almirah	02
9.	Book Shelf (Glass Panel)	01
10.	Shoe Rack	01
11.	Fire Fighting Equipment	As Required
12.	Air Blower	01

AM- - 04

ADVANCE MODULE - 05

MULTIMEDIA & CREATIVE DESIGNING

COURSE CONTENTS:

1. PHOTOSHOP (4 weeks)

- i Working with Images in Photoshop
- ii Working with palettes i.e. layers palette, navigator palette, info palette, color palette, swatches palette, styles palette, history palette, actions Palette, tool preset palette, channel palette, path palette
- iii Working with layers
- iv Photo editing
- v Image adjustment options
- vi Preparing the file & work area
- vii Creating different shapes
- viii Creating three dimensional effects using layers
- ix Working with magic wand and lasso, burn, dodge, sponge, clone stamp tools
- x Options of wrap tool
- xi Editing selections
- xii Using layer styles
- xiii Produce an image by mixing two or more different images using layer masking & vector masking.

2. PAGEMAKER (4 weeks)

- i Efficiently Laying Out Pages
- ii Applying Master Pages
- iii Creating Guides
- iv Manipulating Graphics
- v Duplicating Graphics
- vi Masking and Automating Tasks with Scripts

- vii Advanced Type Techniques
- viii Using Paragraph Rules
- ix Creating Running Headers and Footers
- x Creating Continuation Lines
- xi Working with Imported Graphics
- xii Altering Imported Graphics
- xiii Trapping
- xiv Trapping a Document
- xv Managing Long Documents
- xvi Creating a Table of Contents
- xvii Creating an Index
- xviii Building a Book
- xix Importing and Exporting HTML
- xx Importing HTML
- xxi Exporting Stories to HTML
- xxii Exporting **Page** Layouts to HTML

3. CORELDRAW (2 weeks)

- i Customizing CorelDraw 10
- ii Introduction
- iii Customizing Options
- iv Using Text and Color
- v Working With Color
- vi Working With Paragraph Text
- vii Special Text Effects
- viii Layouts and Layers
- ix Special Page Layouts
- x Arranging Objects
- xi Using Layers
- xii Styles and Templates
- xiii Custom Creation Tools

xiv Working With Bitmaps

4. FLASH (4 weeks)

- i Flash Editor,
- ii Panels,
- iii Timeline,
- iv Tools,
- v Saving & Uploading Files
- vi More Tools, Utilities,
- vii Grouping, Arranging
- viii Graphic Symbols,
- ix Alignment,
- x Libraries,
- xi Layers
- xii Key frames,
- xiii Frame by Frame Animation, Onion Skins, Frame Rate
- xiv Motion Tweening, Stop Action, Rotate & Spin,
- xv Info Panel,
- xvi Movie Explorer, Shape Tweening
- xvii Button Symbols, getURL Action, Adding Sound to Buttons,
- xviii Publishing and Exporting

5. DREAMWEAVER (4 weeks)

Planning your site & site structure

Site navigation

Using templates & Library

Exploring Dream weaver, working with different tools & panel

Launcher and additional panel group

Creating & editing html documents, setting page properties

Adding text and formatting, changing the color of texts, aligning text and elements.

Creating lists, working with images, resizing images

Working with tables, setting table properties, resizing tables and cells, nesting tables

Linking and navigation

Creating an E-mail link, Associating remote server with a local site. Putting files on a remote server.

Getting files from a remote server.

6. HTML (4 weeks)

Source codes of Web Pages, meaning of HTML, its features and advantages

Programming with HTML

Using scripts for active web pages

Picture formats, animated files and its usage in Web pages.

Web Page design using Front page. Procedure for hosting of Web Sites.

7. WEB SITE HOSTING (2 weeks)

LIST OF TOOLS, MACHINERY & EQUIPMENT FOR A BATCH OF 20 TRAINEES

SR. NO.	NAME OF ITEM	QUANTITY (NOS.)
1.	Intel Pentium 4.0 @ 1.86 GHz Core 2 Duo, DDR2 2 GB RAM , Intel Motherboard (965 with LAN), Hard Disk 300 GB, SATA II, Monitor 17" TFT, Keyboard, Mouse, DVD Writer 18 X, 4.1 Speakers or Latest Configuration with preloaded Operating System minimum WINDOW XP Professional or WINDOW VISTA Premium	20
2.	Lap Top- Core 2 Duo 2 GHz Processor, Hard Disk SATA 160 GB, RAM 2 GB DDR2, LCD Screen 17", DVD Writer, Battery 8 cells, Preloaded Operating System minimum WINDOW XP Professional or WINDOW VISTA Premium, Carry Case	01

3.	Inkjet Printer (132 cols.)	02
4.	Laser Printer (B & W)	02
5.	24 port switch	01
6.	ISDN Line for Broadband connection (unlimited download capacity),	01
7	UPS 500 VA for each Computer	20
8	Vacuum Cleaner	01
9	Scanner	01
10	Web Camera of latest configuration	01
11	Computer Tool Kit	02
12	Consumables	As required
13	Digital Camera	02
14	Digital Video Camera	02
15	Analogue Video Camera	01
16	Cable Connectors	As Required
17	DVD Player	01
18	Multimedia Projector	01
	Software	
1	Ms Office (latest version)	As Required
2	Adobe MM Suite	As Required
3	Page Maker (Latest Version)	As Required
4	Corel Draw (Latest Version)	As Required
5	Anti Virus (Latest Version)	As Required
6	Macromedia Flash	As Required
7	Macro Media Dream weaver	As Required
8	Sound Forge	As Required
	Workshop Furniture	
1.	Instructor Table and Chair	01 each
2.	Computer Table	20
3.	Revolving Chairs	20
4.	Table for Printer/ Scanner	05
5.	White Board	01

6.	Metal Rack	01
7.	Locker with 8 Drawer (Standard Size)	03
8.	Storage Almirah	02
9.	Book Shelf (Glass Panel)	01
10.	Shoe Rack	01
11.	Fire Fighting Equipment	As Required
12.	Air Blower	01

ADVANCE MODULE - 06

INFORMATION SYSTEM MANAGEMENT

COURSE CONTENTS:

1. INFORMATION SYSTEM AND COMMON BUSINESS PROCESSES (5 Weeks)

Need for information systems and common systems like Pay Roll systems, Finance systems etc.

2. BUILDING ANALYTIC APPLICATIONS USING MS-EXCEL (4 Weeks)

Pivot tables, Statistical/ Mathematical/ Financial functions, Macro programming using Visual Basic for Applications

3. FINANCIAL ACCOUNTING (6 Weeks)

i Accounting :

Bill wise detail, cost centre and cost category, interest calculations, budgets, scenario management, optional, Reverse Journal and Memorandum Vouchers, Multiple Currency, Bank Reconciliations, Account Book, Sale Register, Purchase Register, Journal Register, Check Printing. Invoice printing, Cash and Bank book, Backup and restore, Import and Export, Split company data, create a group of company, Security control, Auditing of ledger and vouchers.

ii Inventory:

Stock items, Stock Group, Stock Category, Units of measurement, Maintain Multiple Go-downs, Track Batch wise details, Actual and billed quantities, Track Additional cost of purchase, Multiple price level, Purchase order processing, sales order processing, Tacking number, Rejection notes, Inventory Book, Stock Summary.

iii Taxation:

VAT, CST, TDS, TCS, Service Tax, FBT, Exercise Duty.

4. MS-ACCESS (5 Weeks)

Creating Queries,
Enhancing Queries,
Implementing Forms,
Altering Forms,
Creating Reports,
Customizing Reports,
Integrating data,
backup and retrieval

5. VISUAL BASIC (4 Weeks)

Concept of Front end for database,
Software used as Front end.
Use of VB as front end with Access.

**LIST OF TOOLS, MACHINERY & EQUIPMENT FOR A BATCH OF
20 TRAINEES**

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2.	Lap Top- Core 2 Duo 2 GHz Processor, Hard Disk SATA 160 GB, RAM 2 GB DDR2, LCD Screen 17”, DVD Writer, Battery 8 cells, Preloaded Operating System minimum WINDOW XP Professional or WINDOW VISTA Premium, Carry Case	01
3.	Inkjet Printer (132 cols.)	02
4.	Laser Printer (B & W)	02
5.	24 port switch	01
6.	ISDN Line for Broadband connection (unlimited download capacity),	01
7.	UPS 500 VAfor each Computer	20
8.	Vacuum Cleaner	01
9.	Scanner	01
10.	Web Camera of latest configuration	01
11.	Computer Tool Kit	02
12.	Consumables	As required
	Software	
1	Ms Office (latest version)	As Required
2	Tally(latest Version)	As Required
3	MS Office Suite	As Required
4	Pay roll Package	As Required
5	Anti Virus (Latest Version)	As Required
6	Visual Basic	As Required
	Workshop Furniture	
1.	Instructor Table and Chair	01 each

2.	Computer Table	20
3.	Revolving Chairs	20
4.	Table for Printer/ Scanner	05
5.	White Board	01
6.	Metal Rack	01
7.	Locker with 8 Drawer (Standard Size)	03
8.	Storage Almirah	02
9.	Book Shelf (Glass Panel)	01
10.	Shoe Rack	01
11.	Fire Fighting Equipment	As Required
12.	Air Blower	01

ADVANCE MODULE ON DIGITAL VIDEOGRAPHY-07
DURATION 24 WEEKS

WEEK	TOPIC	THEORY	PRACTICAL
1-2	Radio basics	Audio Fundamentals : Sound wave characteristics, room, acoutics, decibel, B.H. Curve, A.C., D.C. Bias, P.A. Syatem, Amplifiers, various microphones, speakers and their selection. Radio Fundamentals: Modulation, Demodulation, Introduction to AM, FM,& PM SSBSC & DSBSC FM Generation & Detection: Different method FM	Plot frequency vs output characteristics of various types of Microphones and speakers, woofer/ tweeter, baffles, audio recording
2-3	Digital Camera	Sensors used in cameras Image processing in cameras Image storage in cameras and storage medias Camera controls and set up Printing &	White Balance Exposture mode TV review Transferring images from camera to computer Raw format conversion
3-4	Analog Video Camera	Analog video camera types Lens models & types	Identify different types of lenses and their uses.

		<p>Manipulating Zoom and wide angle lenses Working with diaphragms and f numbers Working with shutters speed Working with lights and shades</p>	<p>White balancing in analog cameras Work with zoom, wide and tele lenses Work using different shutters speed Manage light using f number and diaphragm Use filters</p>
6-9	Digital Video Camera	<p>Difference between analog camera & digital camera Digital lenses and its properties Difference between optical zoom and digital zoom White balancing Single CCD and three CCD digital cameras Managing pixel information and media</p>	<p>Identify difference between single CCD and three CCD cams Work with different types of digital media Digital camcorders, DV cams differences White balancing in digital cams Identify change between digital zoom & Optical Zoom</p>
10-15	Adobe Photoshop 8.0	<p>Creating new images Using layer options Modifying the old images to color photographs Creating Web Page Images</p>	<p>Working with different types of tools Working with Palettes Working with color options Working with filters Developing rollover effects Creating web based images</p>
15-20	Adobe Illustrator	<p>Creating vector graphics Using tools for publishing artwork on the web and in print</p>	<p>Setting up the work area Using the tools & Palettes, Drawing & Editing with Pencil tools Moving, copying and deleting objects Grouping & ungrouping objects Working with clipping masks Changing vector graphics into Bitmap Images</p>
20-24	Pinnacle Studio 8.0	<p>Capturing videos Editing & Mixing videos Adding special effects Burning the movie into CD</p>	<p>Downloading the photographs from digital & analog cameras Modifying the images Capturing the videos into computer Editing the clips Adding sound effects Adding Background music</p>

			Applying the titles Resterzing the movie Making the movie and burning into CD- ROM
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HARDWARE REQUIRED:

1. Analog Video Camera, Analog SLR camera, Digital Camera, DV camera with memory stick support, both single CCD and three CCD
2. Different types of filters available for both digital & analog cameras
3. Two umbrellas light sources for still photography and indoor photography.
4. One PC's with latest configuration including capture device and video cards.
5. Two or three types of tripods.

SOFTWARE REQUIRED:

1. Adobe Publisher suite comprising of Adobe Photoshop, Image Ready, Illustrator
2. Pinnacle Studio