

CIRCULAR :-

The Head, University Department of Computer Science, Principals of the affiliated colleges in Arts, Science and Commerce and Professor-Cum Director, Institute of Distance Education are hereby informed that the recommendation made by the Ad-hoc Board of Studies in Computer Science at its meeting held on 12th April, 2006 has been accepted by the Academic Council at its meeting held on 7th June, 2006 vide item No.4.11 and that in accordance therewith the Certificate, Diploma and Advanced Diploma in Computer Applications as an Add-on Course is instituted by the University as per Appendix and the same has been brought into force with effect from the academic year 2005-2006,

MUMBAI-400 032

25th July, 2006

Ch. S. Pathak
for REGISTRAR

To,

The Head, University Department of Computer Science, Principals of the affiliated colleges in Arts, Science and Commerce and Professor-Cum Director, Institute of Distance Education

A.C/4.11/07.06.2006

No.UG/ 277-A of 2006 MUMBAI-400 032 25th July, 2006

Copy forwarded with compliments for information to :-

- 1) The Dean, Faculty of Arts,
- 2) The Dean, Faculty of Science,
- 3) The Dean, Faculty of Commerce,
- 4) The Chairman, Ad-hoc Board of Studies in Computer Science.

Ch. S. Pathak
for REGISTRAR

Copy to :-

The Director, Board of College and University Development, the Deputy Registrar (Eligibility and Migration Section), the Director of Students Welfare, the Personal Assistants to the Vice-Chancellor, the Pro-Vice-Chancellor, the Registrar and the Assistant Registrar, Administrative sub-center, Ratnagiri for information.

The Offg. Controller of Examinations (10 copies), the Finance and Accounts Officer (2 copies), Record Section (5 copies), Publications Section (5 copies), the Deputy Registrar, Enrolment, Eligibility and Migration Section (3 copies), the Deputy Registrar, Statistical Unit (2 copies), the Deputy Registrar (Accounts Section), Vidyanagari (2 copies), the Deputy Registrar, Affiliation Section (2 copies), the Director, Institute of Distance Education, (10 copies) the Director University Computer Center (IDE Building), Vidyanagari, (2 copies) the Deputy Registrar (Special Cell), the Deputy Registrar, (PRO), the Assistant Registrar, Academic Authorities Unit (2 copies) and the Assistant Registrar, Executive Authorities Unit (2 copies). They are requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to in the above Circular and that no separate Action Taken Report will be sent in this connection. the Assistant Registrar Constituent Colleges Unit (2 copies), BUCT (1 copy), the Deputy Account, Unit V (1 copy), the In-charge Director, Centralize Computing Facility (1 copy), the Receptionist (1 copy), the Telephone Operator (1 copy), the Secretary MUASA (1 copy), the Superintendent, Post-Graduate Section (2 copies), the Superintendent, Thesis Section (2 copies)

7/6/06

UNIVERSITY OF MUMBAI



Syllabus

for

Certificate, Diploma and Advanced Diploma Course in Computer Applications

(With effect from the Academic Year 2005-2006)

UNIVERSITY OF MUMBAI

Syllabus for the Certificate Course in 'Computer Application (Data Care Management)' (Introduced with effect from academic year 2005-06)

Introduction :

Mahatma Phule A.S.C. College, Panvel believes in preparing the graduates for the knowledge-based economy, champion cause of long learning and stimulates the creation of world-class resource through information technology. The goal is to develop a new paradigm of education appropriate for future that would.

- Enhance creativity.
- Develop new skill and competencies.
- Create relevance and develop orientation.
- Nature new value systems appropriate to Indian culture and Scenario.
- Achieve economy and excellence in education.

Computers have become an integral part of our everyday lives: for just work, research, communications, planning and record keeping, creative endeavors or just keeping in touch with family and friends. So learn how to do what you need to do better, faster and more easy.

There is series of three programmes to equip students with the concepts technical knowledge and practical skill that they need to work in an I.T. environment.

Programmes are :

1. Certificate in Computer Applications.
2. Diploma in Computer Applications.
3. Advanced Diploma in Computer Applications.

The full series of course is :

Award Level	Exit Profile
Certificate in Computer Application	Data recovery Operator, Technical Support, Effective Use of Computer at home or on the job, etc.
Diploma in Computer Application	Junior programmer, database administrator, programmer trainee, network specialist etc.
Advanced diploma in Computer Application	System security administrator, Multimedia System Designer, etc.

First Year

Course Name	:	Certificate in Computer Application.
Duration	:	One Year.
Study hours total	:	450
	:	Theory - 200
	:	Practical - 250
Eligibility	:	MS-CIT or IT students or 12 th Pass students or equivalent.
Examination Pattern	:	Theory : 100 marks
	:	Practical : 100 marks
Syllabi	:	

Sr.No.	Topic(s) Covered	Suggested Practical Topics	Suggested Practical List
	Computer Basics : 1. What are the Parts of Computer 2. Power on Self Test 3. Boot Sequence of Operating System 4. Handling a Brand New Hard Dist (Installation) 4.1 FDISK Command 4.2 FORMAT Command 4.3 OS Installation 5. Basic OS (DOS+Windows) Commands 6. Creating Different type of Files (DOC, XLS, TXT, BMP, etc.) 7. MS Office Basics 8. Basic USB Details		(a) Basic System Operations and commands (b) Partitioning and Formatting of Disk (c) Operating System Installation (d) Ports Description
1.	Physical Concepts of Storage Media like Hard Disk, Floppy Disk, CD, Flash Drive, Zip, Pen Drive etc.	I. Showing The Hard Disk & its Internal Components II. How to Connect and Remove Various Storage Devices with the system including, HDD, FDD, CD, Flash Drive, Zip, Pen Drive etc. Primary - Secondary Master- slave Concepts with Active partition and Drive Letter Concepts etc.	(a) Components (b) Reading the label on HDD (c) Connecting HDD (d) Detecting the HDD (e) Primary-Secondary Slave Master Jumper Setting concepts (f) Boot Sequence (g) Creating a Bootable Disks (File Components Details) (h) Other Storage Media (i) Precautions while Handling any Storage Media (j) HDD Serial Number ID info (k) HDD Temperature (l) SMART Technology

2.	File System and Operating System Internals	Display and Description of OS and File System Internals using Unistal's (or Other) Disk Editing Tools, Display Includes. I. Boot and File System Structure. Like Boot Sequence and MBR, DBR, FAT1, FAT2, RD and DA in case of FAT File System. II. File Creation and Deletion Concepts for file systems. III. Accession of Data Area of any File with the Disk Editing Tool. IV. Accessing Fragments of Files	a) DOS Commands b) Creating Partitions (with Primary Extended Partition Concepts) using FDISK and other tools with Limits of HDD and Volumes c) FORMAT (Difference between Quick and Standard Format) d) Bad Sectors and its management e) File System internals for FAT file system e.g. MBR, DBR, FAT, Root Dir etc. f) How a File is Created and Read Under FAT g) How a File is Deleted under FAT h) Display of Data area and Fragments of A file Under NTFS i) File system internals for NTFS j) How a File is Created and Read Under NTFS k) How a File is Deleted under NTFS l) Display of Data Area and Fragments of A file Under NTFS m) File system internals for Novell n) How a File is Created and Read Under Novell o) How a File is Deleted under Novell p) Display of Data Area and Fragments of A file Under Novell q) Files System internals for LINUX r) How a File is Created and Read under LINUX s) How a File is deleted under LINUX t) Display of Data area and Fragments of a file Under LINUX u) File system internals for HPFS + MAC etc.
			v) How a File is Created and Read Under HPFS + MAC w) How a File is deleted under HPFS and MAC etc.

			x) Display of Data Area and Fragments of a file Under HPFS and MAC etc.
3.	Data Recovery Concepts	Recovering the Data from various Data Recovery Cases e.g. Deleted File, Formatted Disk, Partition Problem, Virus Corruption, and Hidden Partition etc. by defining the following Concepts before the Procedure. I. DR Objective(s) II. Defining Preferences III. Requirements IV. Time estimation V. Precautions VI. Accuracy VII. Remarkable Scope	a) Different Modes of Recovery b) How Data Recovery Software work c) Different Types of Data Loss d) Logical Data Loss e) Physical Data Loss f) Partition Problems e.g. Deleted, Hidden or Lost Partition g) Accidental Formatting h) Accidental Deletion i) OS Corruption / Crash j) Lost Folder k) Limitations of Logical Data Recovery with Post Crash Software e.g. for Fragmented files, Over-written files and physical bad sectors on Data Area l) How to handle a Data Recovery case m) Do's and Don'ts and Best Practices of Handling disks and Recovering Data n) Additional Practice Sessions.
4.	Data Loss Prevention + OS Application Restoration	Proceeding with the demonstration of Traditional Backup Techniques and understanding the Advanced backup and Restore Concepts like Unistal's Crash Proof and Restore. The steps should be followed as : I. making Back up of MBR, DBR, Etc. Telling when to backup What? And importance of Backup made including the Precautions and Points to remember. II. Sector to Sector Disk Image concepts.	a) Installing Data loss Prevention Software b) Setting of Data loss Prevention software c) Concepts of Data loss Prevention Software d) Practical cases e.g. Deleting Partition, Deleting File, Formatting a Partition. e) OS and application restoration e.g. Installing Software, Concepts of OS Restoration, Restoration Methods, Practical Cases
		III. Working of crash Proof and description of Benefits of it restoration techniques over	

		Traditional Methods of Backup IV. working of Unistal's OS Restore Software and its benefits and internals.	
5.	Antivirus and Internet Security + Firewall and related Concepts	Description of Few Viruses and showing Practically to find out the presence of Virus in a system with the help of its Characteristics. The Practical also contains : I. Manually Checking the Presence of Virus by its characteristics. II. Checking the Auto Protect Mode of Antivirus with Test String III. Testing the Virus Samples. IV. Recovering Data from Virus Attack	a) Concepts of Antivirus b) Functions of each Component e.g. Installation steps, Scanning, Curing, Real-time Protection, Live Updates etc. c) Practical Cases d) Auto-Mode Protection checking e) Data Wipe Concepts f) Data Protect concepts.
6.	Disaster Recovery and Business Continuity Solutions		a) Installation and Settings of Backup solution b) Components of Backup Solutions e.g. Selecting Folder, Scheduling, Restoration c) Baking up Data on CDs d) Restoration of Data from CDs
7.	Domains and Principles of Information Security		
8.	Managerial Concepts		
9.	Data Care Standards and Data Care Policies		
10.	Case Studies and Examples	Includes some Major Data Recovery Cases and Doing Recovery. Using Unistal's Data Recovery Software Products	

Second Year

Course Name	:	Diploma in Computer Application.
Duration	:	One Year.
Study hours total	:	450
	:	Theory - 200
	:	Practical - 250
Study level	:	Diploma
Eligibility	:	Certificate in Computer Application.
Syllabi	:	
Paper I	:	Programming, Programming in C,
	:	Introduction C++, JAVA and Visual Basic.
Paper II	:	JAVA Script, Object Oriented analysis and
	:	Design, HTML and Data Base Management
	:	Internet Search and Analysis skills.
Examination Pattern	:	
	:	Theory : Paper-I 100 marks
	:	: Paper-II 100 marks
	:	Practical : Paper-I 100 marks
	:	: Paper-II 100 marks
	:	Assignment : (I & II) 50 marks

Third Year

Course Name	:	Advanced Diploma in Computer Application.		
Duration	:	One Year.		
Study hours total	:	Theory	-	200
	:	Practical	-	250
Study level	:	Advanced Diploma		
Eligibility	:	Diploma in Computer Application.		
Syllabi	:			
Paper I	:	Visual Basic, Net, Software Development Life cycle, Software Quality Assurance.		
Paper II	:	Networking and Data Communication, Internet search and analysis skills.		
Optional	:	1.	Web Design	
		2.	Enterprise Computing in Banking\	
		3.	Enterprise Computing in Credit Societies	
		4.	Financial Accounting.	
Examination Pattern	:	Theory	:	Paper-I 100 marks
			:	Paper-II 100 marks
	:	Practical	:	Paper-I 100 marks
			:	Paper-II 100 marks
		Project	:	100 marks
