

॥ अंतरी पठवु ज्ञानज्योत ॥



**NORTH MAHARASHTRA UNIVERSITY,  
JALGAON**

**Revised Syllabus for**

**DIPLOMA IN  
COMPUTER MANAGEMENT**

**(D.C.M.)**

**One Year Post - Graduate Course**

**(w.e.f. July, 2001)**

**NORTH MAHARASHTRA UNIVERSITY, JALGAON.**

**DIPLOMA IN COMPUTER MANAGEMENT**

(Revised from June, 2001)

- 1) Name of the course :- Diploma in Computer Management
- 2) Duration :- This is diploma course with one year duration
- 3) Objectives :- To acquire programming skills with proficiency in handling of Office Automation Tools and the additional skills required for secretarial job.
- 4) Eligibility :- Person who is graduate of any recognized University or has passed any diploma of a recognized technical board.
- 5) Structure :- There shall be six papers of 100 marks each as under:-

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Sr.No.	Course No.	Course Title
01.	DCM-I	Elements of Information Technology
02.	DCM-II	Office Automation Tools
03.	DCM-III	System Analysis & design
04.	DCM-IV	Java Programming
05.	DCM-V	Fox-pro 2.6 (for windows)
06.	DCM-VI	Lab (based on DCM-I, DCM-II, DCM-IV & DCM-V - practical)

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6) Medium of Instruction:- English.

7) Assessment:-

(a) These courses shall follow the ratio of 60:40 for external and internal examination. However, for the course DCM-VI there shall be external examination of 100 marks.

(b) Examination of papers DCM-I to DCM-V shall be of *three hours* duration with maximum 60 marks each.

(2)

- (c) Internal assessment shall be based on at least two tutorials and two practical assignments.
- (d) Practical examination for DCM-VI shall consist of two sections of 90 minutes each as under:-

SECTION-I :- Based on DCM-I and DCM-II for 50 marks and  
SECTION-II :- Based on DCM-IV and DCM-V for 50 marks.

- (e) For internal and external assessment, there shall be separate heads of passing.
- (f) Standard of passing:- 40% in each head of passing.

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Syllabus for **DIPLOMA IN COMPUTER MANAGEMENT**

(W.E.FROM-JUNE-2001)

**Paper 1.1 ELEMENTS OF INFORMATION TECHNOLOGY**

**Computer fundamentals** : Definition of computer, characteristics of computer, types of computer ( Analogue, Digital, Hybrid ), Block diagram of computer.

**History and generations of computer** : First, second, third, fourth.

**Peripheral devices** : **Input devices** - Key board, mouse, **Output devices** - Console, printers (dot matrix, line, ink-jet, laser ), **Secondary storage devices** - Magnetic tape, floppy disk, CD-ROM

**Data Representation** : Decimal number, binary number, octal numbers, hexadecimal numbers, conversion of decimal to binary number and vice-versa, EBCDIC code, ASCII code.

**Computer languages** : Machine language, assembly language, high level language, object oriented language, language processor.

**Operating system** : Definition of an operating system, functions of an operating system, types ( DOS, WINDOWS 98, UNIX/LINUX ).

**Programming fundamentals** : Algorithm, flowchart, concept of program.

**Data processing techniques** : Concepts of file, record, field, data, information.

**File organizations** - Sequential, index sequential, random, direct

**File handling functions** - sorting, merging, indexing, updating.

**Concepts of networking** : Introduction to computer network, essentials of computer network, type of network ( LAN, WAN, Internet ).

**Data communication** : Concepts of communication, means of communication, types of communication.

**References :**

1. Fundamental of computers : V. Rajaraman,
2. Information Technology (O Level) : V. K. Jain
3. Computer and Commonsense : Hunt, Shailey
4. Teach yourself - The Internet in 24 hours : Techmedia

**Paper 1.2 Office Automation Tools**

**WINDOWS - 98**

**WINDOWS BASICS**

Important features of windows, operating system, Differences between windows 3.x windows 98, difference between DOS and windows operating systems, differences between a window and a dialog box To start windows, To Exit windows.

**Meaning of the following terminologies :-** Desktop, active desktop, applet, cursor, driver, icon, windows, recycle bin, clicking, dragging, dialog box, dropping, Concept of file and folders, To create a new folder, To rename an existing folder, To delete a folder, To create a new file, To rename an existing file, To delete a file, To copy a file from one folder to another, To move a file from one folder to another, To display file names of a folder, To add, use and delete fonts.

**Word Processing with WORD :-** Word Basics Undo, Redo, Repeat, Inserting, replacing, formatting, copying and pasting text from one word document to another printing Autofomat

**Working With Headers, Footers And Footnote :-** Tabs, Tables and sorting, converting text to tables and vice versa sorting, working with graphics, importing graphic, sizing and cropping graphics with picture command, using words drawing features, drawing object, call outs, filing, wizards, sample documents, writers tools, typing symbol and special bulleted list commands, spellchecker, auto correct, auto text, grammar checker, word count, and other statistics, table of content, creating an index, macros, introduction to mail merge.

**EXCEL BASICS :** The usual spreadsheet features. Overview of excel features, creating a new selecting cell, rearranging worksheet, moving cell, deleting part of a worksheet, clearing parts of a worksheet, excel page setup, changing column, using border buttons and commands, changing colors and shading, inserting and removing page break, hiding rows and columns, working with multiple worksheet, viewing multiple windows, summarizing information from multiple worksheets.

**An introduction to functions :-** Parts of a function, functions requiring add-ins, the function wizard, examples of functions by category, error message from functions, excels chart features, chart part and terminology, instant chart with the chart wizard, creating, rotating, deleting chart, setting a default chart type, working with graphics with excel, creating and placing graphics object, resizing, posting graphics, drawing lines and shapes, examples of graphics in excel, source of graphics in excel, excel slide show, excel command micro, using worksheet as database, sorting excel database, cross tabulating database, automating what-if project.

**Power point Basics :-** terminology, power point template, creating power point presentation, auto content wizards, adding slides, working with text in power point, editing and moving text, working with out line view.

**Introduction to D.T.P. Tools:**

**Page Maker :**

Creating documents using Page Maker:

Invitation Cards, Certificates, Resumes, Greeting Cards etc.

Using fonts, size, color, Reverse Text, pictures and other available facilities offered by Page Maker.

Comparative Study of Facilities availed by MS-Word and Page Maker.

**Ref. Books :**

Office Automation for Windows - Taxali

Page Maker s/w help.

**Paper 1.3 Systems Analysis and Design**

1. Systems concepts, types of systems , Subsystems, system stress
2. Role of systems Analyst and others in system developmet
3. Structured systems analysis, SDLC
  - system project selection
  - Definition Phase
  - Prototyping
  - Requirement analysis, Input/Output Design, Code Designing
  - Feasibility study
  - Implementation, System Conversion, Evaluation and maintenance
  - Data capture techniques
4. Charting techniques.
  - Visual Table of Contents
  - Decision Table
  - System Flowchart
  - Grid Charts
  - ERD, DFD
  - Data Validation and control methods
5. Types of files, Master and Transaction Files
6. Data analysis, Data Models—Hierarchical ,Network and Relational Models, Normalization.

**Books**

- Systems analysis and Design
  - Awad Elias
- Systems analysis and Design
  - James Sen
- Data base Management System C. J. Date

**Paper 1.4 JAVA Programming**

1. **INTRODUCTION TO OBJECT ORIENTED PROGRAMMING**  
Introduction to OOPS, Concept of OOPS, Benefits and Application of OOPS
2. **The JAVA PHENOMENON**  
What is Java, History, Support Systems, Environment and Standard libraries, Programming features of Java, Java and HotJava
3. **OVERVIEW OF JAVA PROGRAMMING**  
Java program structure, comments, tokens(character set, keywords, identifiers, literals, operators and separators), Constants, Variables and datatypes including type casting, scope of variable, User defined data type, Java virtual machine, command line arguments.
4. **OPERATORS AND EXPRESSIONS**  
Introduction, arithmetic, relational, logical, assignment, increment, decrement, conditional, bitwise, compound assignment & special operators in Java.  
Arithmetic Expression, evaluation of expressions, operator precedence & math function.
5. **STATEMENT AND CONTROL STRUCTURES**  
Branching, Decision making statement (if ... else, nested if, switch, goto etc.)  
Looping(while, do loop, for loop), break and continue statement
6. **CLASS, OBJECT AND METHODS**  
Defining classes and adding methods, creating objects and accessing class members, constructor, inheritance, overloading, overriding methods.
7. **ARRAYS, STRINGS AND VECTORS.**  
Arrays, One dimensional arrays, creating an array, Two dimensional Arrays, Strings, String arrays, string methods, StringBuffer class, vectors, wrapper classes.
8. **INTERFACES: MULTIPLE INHERITANCE AND EXCEPTIONS HANDLING**  
The purpose of Java Interfaces and implementation, Error processing and exceptions, Exception handling statements(Throw, catch, try)
9. **Applet Programming**  
Introduction, Use of Applet tag, Life cycle, creating & execute applets, adding applet to HTML file, running applet, designing web page by using applet.

**BOOKS :** Programming with JAVA - E. Balagurusamy  
Java Reference - Patric & Norton

## **Paper 1.5 Foxpro 2.6 For Windows**

**Introduction :-** What is a database?, Relational database, system requirements for windows base foxpro, about data and fields, data types in foxpro, introduction to foxpro commands and conversions, windows: moving and sizing windows, changing windows, the command windows, the scroll bars, dialog boxes.

Creating a database structure.

Defining structures of a database file

Entering field names.

Saving database file.

Copying and modifying structures of database files.

Adding Editing and Viewing Data

Appending data

Changing or editing data

Resizing or changing the order of fields

Partitioning the Window

Deleting a record

Moving the record pointer.

**Understanding Indexes and Expressions**

Types of Indexes (Single, Compound, Structural Compound, Compact)

Overview of Index Dialog Box

Generating Reports

Designing the report form, Page Layout, Page Preview, Layout Tools, Title/summary

Data Grouping

**Brief Introduction to Structured Programming**

.Input/Output Variables.

**Control Statement**

a) Looping    b) Selection

Procedures and Parameters.

**Screen Builder**

**Menu Builder**

Compilation and Execution of Files

Creating Executable Files.

**Windows:** Defining, Activating, Deactivating, Hiding, Releasing, Showing

**Popup:** Defining, Activating, Deactivating, Hiding-Releasing, Showing

**Menus :** Defining, Activating, Deactivating, Hiding-Releasing, Showing

**SQL statements**

Usage of Rushmore Technology

Commands and Functions

**Arrays.**

Using Arrays as Memory tables.

**Macros**

(a) Macros Substitutions

**APPLICATION DEVELOPMENT**

Applications should be any one of the following:

Payroll System, Inventory Control System, Financial Accounting System

Books : R. K. Taxali



Paper 1.6 Practicals

LIST OF PRACTICALS FOR FOXRPRO

1. Create the structure of a database file (minimum 5 fields must be included), add the records in it and display the selected field (minimum 3 fields) for the records satisfying given conditions. Copy the file to another specified file, copy the selected records to another file.
2. Add the records in a database file whose structure is given. Sort the all the records in a specified order, sort the records satisfying given conditions.
3. Create the index files for a given database file, add the records from original and indexed database file.
4. Edit and delete the records satisfying the given conditions for a given database file
5. Create the report with suitable titles for a given database file. The report should display only the field values of database file without any condition and grouping.
6. Create the report for a given database file with suitable titles to display the records satisfying given conditions (without grouping)
7. Create the report for a given database file with data grouping.
8. Write a program to prepare and display a table with suitable titles, giving interest and amount on a given fixed principle, fixed time and varying rates of interest.
9. Write a program to add the records in a database file whose structure is given, using custom screen. The program should have the facility to add as many records as needed. At least 5 fields must be given.
10. Write a program to display the records of a given database file either on screen or printer depending upon the request of the user (use of report creating facility is not expected)
11. Write a program to edit and delete the records from a given database file. using custom screen.
12. Write a program to create a simple menu to (1) display all the records from a selected file, (2) copy all the records from one specified file to another specified file, (3) delete all the records of specified file.
13. Write a program to create a pull-down menu (1) to display the records satisfying given conditions (2) to copy the records satisfying given conditions.
14. Write a program to add the new records in one database file and at the same time update the corresponding records in another related database file.
15. Use of FoxGraph utility to draw business diagrams.

**PRACTICALS FOR OFFICE AUTOMATION TOOLS : COURSE**  
NO. 1-2

1. Study the various elements of Windows 98
2. Introduction to Ms-Office and study of its elements
3. Create a document to write a letter to your friend to give invitation of your birthday party using various options provided by MS-WORD.
4. Create a document to insert a table with proper data using various options provided by MS-WORD.
5. Insertion of a document into the another document.
6. Use of Mail-merge in a document.
7. Create and print worksheet of a given type.
8. Create a worksheet and study various built in functions.
9. Create and print worksheet using functions.
10. Create and print worksheet for the mark list.
11. Create and print a worksheet for electricity bill.
12. Creation of Macro.
13. Prepare a presentation using Power Point.
14. Creating Invitation Cards with various designs using Page Maker.
15. Create Greeting Cards using Page Maker.
16. Design of Resumes in different formats using Page Maker.
17. Design Participation Certificate in D.T.P. Workshop using Page Maker.

**List of Practicals for JAVA Programming. COURSE NO. 1-4**

1. Write program in Java to find maximum of three numbers.
2. Write a program in Java to print a multiplication table as below

0						
2						
0	3	6				
0	4	8	12			
0	4	10	15	20		
0	6	12	18	24	30	
0	7	14	21	28	35	42

3. Write a program to convert Fahrenheit temperature into Celsius
4. Write a program to accept a command line argument and print the same.
5. Write a program to find maximum and minimum of an array of integers.
6. Create an Applet to as parameter and display a message as " Are you --- years old ?"  
The age should be displayed in the blank space. The default age should be 60.
7. Write a program to create a class account which contains following data member:  
Account\_no  
Name  
Balance  
And provides following operations:  
To Create new account  
To Deposit amount  
To Withdraw an amount  
To Display balance
8. Write a program to extract a portion of a character string and print a portion of a character string and print the extracted string. Assume that m characters are extracted, starting with nth character.



।। अंतरी पेटवू झालज्योत ।।

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जा.क्र. उमवि/१२/डी.सी.एम./प्रौ.वि/३४६२/२००९

दिनांक-०७/११/२००९

श्रुति,

उमावेशी संलग्नित सर्व

मान्यताप्राप्त संस्थांचे मा.संचालक,

धांसी...

**विषय :- Diploma in Computer Management (D.C.M.) या पदविका अभ्यासक्रमात "Project Report and Viva" चा समावेश करणेबाबत...**

**संदर्भ :-** उमविचे पत्र क्र.उमवि/१२/ DCM/MCM/पुनर्रचना/१४२१/२००९,  
दिनांक-१९.०६.२००९

महोदय,

उपरोक्त विषयान्वये मान्यताप्राप्त संस्थांचे मा.संचालक यांना कळविण्यात येते की, **Diploma in Computer Management (D.C.M.)** या एकवर्षीय पदविका अभ्यासक्रम उपरोक्त संदर्भिय पत्रान्वये आणणास पाठविण्यात आलेला आहे. परंतु आणणास पाठविलेल्या **D.C.M.** या अभ्यासक्रमामध्ये "**1.7- Project Report and Viva-voce**" चा उल्लेख करावयाचा नव्हिलेला आहे. तरी **D.C.M.** या अभ्यासक्रमामध्ये खालील प्रमाणे समावेश करावा.

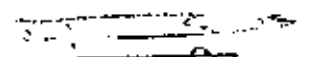
**" 1.7- PROJECT REPORT AND VIVA-VOCE "**

Internal Assessment Shall be carry 40 Marks and External Assessment Shall carry 60 Marks.

करिता, सर्व मान्यताप्राप्त संस्थांचे मा.संचालक यांना विनंतीपूर्वक कळविण्यात येते की, जुलै, २००९ पासून लागू करण्यात आलेल्या **D.C.M.** या एकवर्षीय पदविका अभ्यासक्रमात करीलप्रमाणे समावेश करण्यात यावा. याप्रश्नाचा आशय संबंधित प्राध्यापक व प्रवेशित विद्यार्थी यांच्या नजरेस आणावा ही विनंती

कळावे

आपला विश्वासू,

  
उपकुलसचिव  
(प्रवेश/पात्रता विभाग)

**प्रत माहिती व पुढील योग्यत्या कार्यवाहीसाठी सादर :-**

- १) मा. अधिष्ठाता, वाणिज्य व व्यवस्थापन शास्त्र विद्याशाखा, उ.म.वि., जळगाव
- २) मा. चेअरमन, कॉम्प्युटर मॅनेजमेंट तदर्थ अभ्यासमंडळ, उ.म.वि., जळगाव
- ३) मा. परीक्षा नियंत्रक, उ.म.वि., जळगाव
- ४) मा. उपकुलसचिव, परीक्षा पूर्वार्ध/उत्तरार्ध विभाग, उ.म.वि., जळगाव
- ५) मा. सिस्टिम ऑनॅलिस्ट, संगणक विभाग, उ.म.वि., जळगाव
- ६) मा. सहायक कुलसचिव, परीक्षा पूर्वार्ध/उत्तरार्ध विभाग, उ.म.वि., जळगाव