

Kavayitri Bahinabai Chaudhari
North Maharashtra University, Jalgaon
Maharashtra, India
'A' Grade NAAC Re-Accredited (3rd Cycle)

Faculty of Commerce and Management

Structure and Syllabus of
Diploma in Computer Management (D.C.M.)

W.E.F. Academic Year 2019-20

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

Maharashtra, India

'A' Grade NAAC Re-Accredited (3rd Cycle)

Faculty of Commerce and Management

Course Structure - Diploma in Computer Management (D.C.M.)

W.E.F. Academic Year 2019-20

Course Name: Diploma in Computer Management

Short Title: DCM

Faculty to which assigned: Commerce and Management

Duration: 1 Year Part Time

Eligibility: Passed Higher Secondary Examination in Any Stream

OR

Diploma recognized by Board of Technical Education with minimum duration of 3 years

This course can also be parallelly completed with graduation by KBCNMU students.

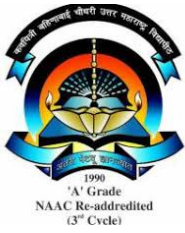
Pattern: Annual

Examination Pattern: 60 (External) + 40 (Internal)

No of Papers: 4 Theory + 3 Practical

Medium of Instruction: English

Sr. No.	Subject Code	Subject	Maximum Marks
1	1.1	Fundamentals of Computer	100
2	1.2	Web Designing using HTML and CSS	100
3	1.3	Introduction to C Programming	100
4	1.4	Relational Database Management System	100
5	1.5	Practical on HTML and CSS	100
6	1.6	Practical on C Programming	100
7	1.7	Practical on RDBMS using Oracle	100



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Faculty of Commerce and Management

Diploma in Computer Management (D.C.M.)

Subject - 1.1 Fundamentals of Computer

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To get students conversant with fundamental aspects of Computers

1. Introduction:

History & generation of computer, Block diagram of computer system, Types of computers
Definition- Software, Hardware, Compiler, Interpreter, Characteristics & applications of
Computer, Data Representation: Number system: decimal, binary, octal and hexadecimal,
Character representation: ASCII, Unicode

2. Memory Concepts and Input Output Devices:

Concepts of Memory cell, Types of memory, Primary- RAM, ROM, PROM, EPROM
Secondary - Magnetic disk, hard disk, CD , Input devices - keyboard, mouse, scanner, web
camera Output device - printers, plotters, LCD projector

3. Algorithm & flowcharts:

Definition - Algorithm, flowchart, Flowchart symbols, Examples for constructing algorithm
and flowchart for simple programs (Minimum 5)

4. Operating System Concepts:

Definition need and function of an operating system, Types of operating system,

5. Introduction to Network:

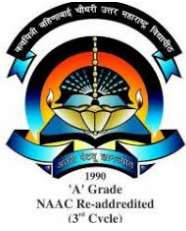
What is Computer Network? Types of Networks: LAN, MAN, WAN, Wireless Networks,
Transmission Path: Twisted Pair, Coaxial Cable, Fiber Optics Working of Internet, Use of
Internet, Applications of Internet, Study of Web Browsers, Search Engines, Creating an E-mail
Account, Sending & Receiving E-mail (with attachment)

6. Topologies:

Topologies: Star, Tree, Bus, Ring, Mesh, Fully Connected.

Reference Books –

- 1) Fundamentals of computer - V. Raja Raman (PHI Publication) ISBN 10: 8120340116
- 2) Computer and commonsense - Roger Hunt and John Shelley (PHI Publication) ISBN 10: 0131646737
- 3) Andrew S.Tanenbaum Computer Networks – Fourth Edition. ISBN number 0130661023



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Subject - 1.2 Web Designing using HTML and CSS

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To get students prepared for website development using HTML and CSS

1. HTML Fundamentals

Hypertext Basics, Basic Components of HTML, HTML Tags, Head, and Title Tags, Body Tags, Creating HTML Code using different editor (notepad, EditPlus, TextPad etc.), Viewing in a Browser.

2. Formatting Text

Importance of Formatting, Paragraphs and Alignment, Bold Text, Italic Text, Underline, HTML Headings, Ordered List Tags and Attributes, Unordered List Tags and Attributes Nested Lists, Font Tags, Font Attributes, Marquee Tag and Attributes, Heading Tag.

3. Working with Images

Different Image Formats, Image Tags and Attributes, Background Images and Color

4. Links & Tables

How Hyperlinks Work, Anchor Tag and HREF. Attributes, Absolute vs. Relative Links, Table Tags & Table Attributes, Row Attributes, Cell Attributes, Merging Rows & Columns.

5. HTML Forms

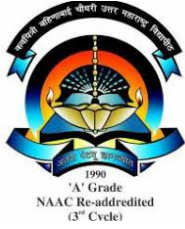
Anatomy of A Form, Form Tag And Attributes, Text Boxes, Check Boxes, Radio Buttons, Text Areas, List Box, Submit and Reset Buttons

6. Cascading Style Sheets (CSS)

Advantages of Style Sheets, Role of CSS in Web Designing, Rules of CSS, CSS Structure and Syntax, Selectors, Internal style sheets, External style sheets, Changing Fonts, texts, headings using CSS, applying CSS to hyperlinks, tables.

Reference Books –

1. The Complete Reference – Web Design, Thomas A. Powell, TMH, ISBN 0-07-041186.
2. How to become webmaster in 14 days, James L Mohler, Techmedia ISBN 1575211696
3. Textbook of Web Designing By Joel Sklar, Cengage Learning Publication 2009
4. Web designing in Nut Shell (Desktop Quick Reference) by Jennifer Niederstublication – O'Reilly publication
5. Designing web navigation by James Kalbach Publication – O'Reilly publication



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Subject - 1.3 Introduction to C Programming

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To make students able to write computer programs using C Programming Language

1. Basics of C Language

Overview of C: History of C, Importance of C, Structure of a C Program.

Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Input/output: Unformatted & formatted I/O function in C, Input functions viz. scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putchar(), puts().

2. Control Flow and Logical Expressions

Operators & Expression: Arithmetic, relational, logical, bitwise, unary, assignment, conditional operators and special operators, Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement. Loops control structure: while loop, for loop, do-while loop, nested loop, break, continue, switch, go to, exit statement

3. Functions

Functions: Definition, prototype, passing parameters, scope of variable, storage class, recursion. Function Overloading .

4. Arrays and String

Array, array initialization, and Manipulation, Multidimensional array, Strings, Standard library string function strlen(), strcpy(), strcat(), strcmp() etc.

5. Pointers

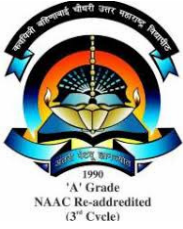
Definition and declaration, Uses, Initialization, address operator, pointer arithmetic, arrays and pointers

6. Structure and Union

Structure: use of structure, declaration of structure, accessing structure elements, how structure elements are stored, array of structure, Union, Difference between structure and union.

Reference Books –

- 1) Programming with problem solving through 'C'. (ELSEVIER)
- 2) Programming in C", E. Balaguruswamy Tata McGraw Hill
- 3) "C The Complete Reference", H. Schildt, Tata McGraw Hill



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Subject - 1.4 Relational Database Management System

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To prepare students for using relational database management systems

1. Introduction

Introduction of File Processing System, Introduction of DBMS & RDBMS. Difference between File processing system & DBMS, Difference between DBMS & RDBMS, Applications of RDBMS

2. Data Models

Relational Model, Network Model, Hierarchical Model, Entity Relationship Model.

3. Integrity Constraints

Keys: Super, Candidate, Primary, Foreign Key, Entity Integrity, Referential Integrity, Integrity Constraints.

4. Relational Database Design

Introduction, Normalization, Normal Form: 1 NF, 2 NF, 3 NF.

5. Introduction to Structured Query Language (SQL) using Oracle

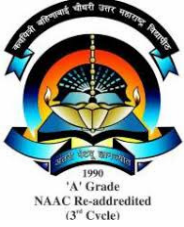
Introduction to SQL & Oracle, Data types in oracle, Operators in oracle, Working with tables, Introduction to DML, TCL, DDL, DCL, Integrity constraints, Functions in Oracle, Numeric Function, Character Function, Date Function, Conversion Function, Group Functions.

6. Sub Queries & Joins

Sub Queries, view, Sequence, Set Operators, Joins, Inner joins, Equi, Non Equi, Self-join & Outer Joins.

Reference Books –

- 1) Oracle PL/SQL by Example, Rosenweig, Pearson Education ISBN 10: 0133796787
- 2) Database System Concepts: - Abraham Silberschatz, Henry F. Korth & S. Sudarshan, McGraw-Hill ISBN 978-0-07-352332-3
- 3) Oracle- D2K by Ivan Bayros ISBN : 8176567426
- 4) Introduction to Database Management Systems, by – Atul Kahate (Pearson Education) ISBN 9788131700785



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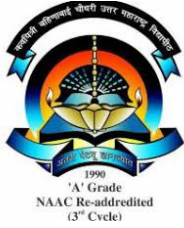
Subject - 1.5 Practical on HTML and CSS

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To prepare students in practically developing various web development aspects

1. Create a web page using basic HTML tags
2. Create a web page using Heading tags
3. Create a web page using Marquee Tag
4. Create a web page using Different Formatting tag.
5. Create a web page using different List tag.
6. Create a web page using Anchor Tag
7. Create a web page to design time table of your college using Table tag.
8. Create a Web page with different images.
9. Design a simple Webpage for Login window.
10. Design a simple Webpage for Enquiry Form.
11. Create web page to set background color using CSS.
12. Create web page using CSS to set different font style to each paragraph.
13. Design a web page using Inline and Internal CSS
14. Demonstrate the use of External CSS
15. Demonstrate the use of CSS with tables in HTML.



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Subject - 1.6 Practical on C Programming

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To prepare students in practically developing various computer programs using C

1. Write a program in C to print “Hello Class” 10 number of times.
2. Write a program in C to demonstrate Arithmetic operators.
3. Write a program in C to demonstrate Relational operators.
4. Write a program in C to check given number is Positive or Negative
5. Write a program in C to check given number is Odd or Even.
6. Write a program in C to check given number is Prime or not
7. Write a program in C to check the number is palindrome or not.
8. Write a program in C to check the number is Armstrong or not.
9. Write a program in C for Fibonacci series up to given term.
10. Write a program in C to find factorial of given number.
11. Write a program in C for Function Overloading.
12. Write a program in C for swapping two integer numbers.
13. Write a program in C which demonstrates the string function.
14. Write a program in C to demonstrate pointer variable.
15. Write a program in C to demonstrate structure.



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Subject - 1.7 Practical on RDBMS using Oracle

[External Marks 60 + Internal Marks 40 = Maximum Total Marks 100]

W.E.F. Academic Year 2019-20

Objective: To prepare students in practically using RDBMS software for database management.

1. Create table, Insert Records and perform simple SQL
2. Demonstrate to INSERT, UPDATE, and DELETE Records in Table.
3. Demonstrate to Alter Table.
4. Create table with various constraints - PRIMARY KEY, REFERENCES KEY, and CHECK & NOT NULL Constraints
5. Write down SQL by using
 - a. GROUP BY
 - b. HAVING CLAUSE
6. Write down SQL by using
 - a. Aggregate functions
 - b. Date functions
 - c. String functions
7. Demonstrate the use of view
8. Demonstrate the use of sequence