

FATIMA COLLEGE (AUTONOMOUS)



**Re-Accredited with “A” Grade by NAAC (3rd Cycle)
74th Rank in India Ranking 2020 (NIRF) by MHRD
Maryland, Madurai- 625 018, Tamil Nadu, India**

NAME OF THE DEPARTMENT: PGDCA

NAME OF THE PROGRAMME : PGDCA

PROGRAMME CODE : PGD

ACADEMIC YEAR : 2020-2021

PGDCA
SEMESTER –I
For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WE E K	CREDIT S
PGD	19PGD101	Computer Fundamentals & OS	PG Core	3HRS	3

COURSE DESCRIPTION

Basics of Computer Fundamentals course begins with basic concepts and builds quickly to intermediate skills and techniques.

COURSE OBJECTIVES

To impart knowledge about the latest developments in the rapidly changing world of Information Technology

UNIT-I: (6 Hrs)

INTRODUCTION TO COMPUTER –Types of computers-Characteristics of Computers- Classification of Digital Computer Systems-Anatomy of a Digital Computer-Application of IT(Computers Entertainment, Science and Medicine)

UNIT II: (6Hrs)

NUMBER SYSTEM & NETWORK -Number Conversion-Binary, Decimal & Complement-Operating System- Programming Languages. Computer Networks:-overview of a n/w- Types of networks- N/W topologies-Network protocols

UNIT III: . (6 Hrs)

COMPUTER LANGUAGES i. Machine language ii. Assembly language iii. High level language Program Language Translators i. Assembler ii. Compiler iii. Interpreter.

UNIT IV:**(6 Hrs)**

INTRODUCTION TO OPERATING SYSTEM: Introduction, What Is An Operating Systems, Operating System Components And Goals, Operating System Architecture. Process Concepts: Introduction, Process States, Process Management, Interrupts, Interprocess Communication

UNIT V:**(6 Hrs)**

MEMORY MANAGEMENT:Memory organisation and management, storage allocation. Disk Components-Disk scheduling- Files- File concepts –File attributes –File Operations –File Types- Directories.

Text Books:

1. Alexis Leon, Mathews Leon, “Fundamentals of Information Technology”, Leon Press, 1999.

Chapters : 1-5

2 Andrew S. Tanenbaum, –Modern Operating Systems, Second Edition, Pearson Education, 2004.

Chapters : 4-7

Reference Books:

1Computer Fundamentals by Anita Goel Publisher: Pearson India Release Date: April 2010

2. An Introduction to Operating Systems Concepts and PracticeByPrمود Chandra P.BhattPHI 2nd Edition-2008

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAM ME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WEE K	CREDIT S
PGD	19PGD10 2	Problem Solving Using C	PG Core	3HRS	3

COURSE DESCRIPTION:

To develop programs using **C programming** language, in order to solve simple to moderate problems.

COURSE OBJECTIVE:

- To introduce and form a firm foundation in programming.
- To stress the importance of clarity, simplicity the efficiency in writing

UNIT I: (6Hrs)

INTRODUCTION TO ‘C’ - Overview of C-Constants, Variables and Datatypes – Operators and Expression – Managing Input and output Operators.

UNIT II: (6Hrs)

DECISION MAKING, BRANCHING AND LOOPING - Simple If Statement - The if else Statement - Nesting of if...else statement - The Else if Ladder - The Switch Statement - The Conditional Operator – The GOTO Statements – The while Statements – The DO Statements – The For Statements – Jump in Loops.

UNIT III: (6 Hrs)

ARRAYS, STRINGS &FUNCTIONS - One Dimensional Arrays - Two Dimensional Arrays - Initializing Two Dimensional Arrays - Multi - Dimensional Arrays. Declaring and Initializing and String Variables – Reading and Writing of Strings – Comparison of Two Strings.

UNIT IV:

(6 Hrs)

FUNCTION DEFINITION - Elements of User-defined Functions – Definition of Functions – Function Calls – Function Declaration – Category of Function – Recursion

UNIT V:

(6 Hrs)

STRUCTURES AND POINTERS-Definition - Giving Values to Members – Structure Initialization -Comparison of Structure Variables - Array of Structures - Declaring and Initializing Pointers - Accessing a Variable through Pointers – Pointer Expression.

TEXT BOOK: Programming in ANSI C - E.Balagurusamy, Tata McGraw-Hill Publications. Edition:- 5th Edition.

Chapters:1-12. (Except – 10.9, 10.10, 10.11)

REFERENCE BOOK: Programming with C - Byron S.Gottfried, Tata McGraw - Hill Publications.

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAM ME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WEE K	CREDIT S
PGD	19PGD10 3	WEB DESIGNING	PG Core	3HRS	3

COURSE DESCRIPTION:

To provide the student with foundational programming knowledge and skills for application development on the Internet.

COURSE OBJECTIVE:

- To teach the basic concept of designing a webpage.

UNIT I:

(6Hrs)

INTRODUCTION TO HTML: Information Files Creation-Web Server-Web Client/Browser-Internet & Intranet-HTML-Commonly Used HTML Commands-Structure of an HTML Program, Titles and Footers, Text Formatting, Emphasizing Material in a Webpage, Text Styles and Other Text Effects.

UNIT II:

(6Hrs)

GRAPHICS AND FRAMES: Types of Lists, Adding Graphics to HTML Documents, Tables, Linking Documents, Frames.

UNIT III:

(6Hrs)

INTRODUCING TO JAVASCRIPT: Advantages – Writing JavaScript – Basic Programming Techniques – Type Casting, Creating Variables, Operators and Expressions, Conditional Checking, Super Controlled – Functions – User-defined Functions – Dialogue Boxes.

UNIT IV:

(6Hrs)

JAVASCRIPT DOCUMENT OBJECT MODEL: Introduction-Assisted Style Sheets DOM[JSSS DOM]- Understanding Objects in HTML- Browser

Objects-Object Hierarchy-Handling Events. Forms used by a Website: Form Object-Other Built-in Objects in JavaScript-User Defined Objects.

UNIT V:

(6Hrs)

DYNAMIC HTML: Cascading Style Sheets: Font, Color& Background, Text, Border, Margin Related and Text Attributes – Use of Class.

Text Books :

1. “Web enabled commercial Application development using HTML, JAVA Script, DHTML

and PHP” Ivan Bayross, 4th Edition, BPB Publications.

2. Alexis Leon, Mathews Leon, “Fundamentals of Information Technology”, Leon Press, 1999

Chapters:

Book 1 : 2– 10 & 12.

Book 2 : 21(21.1-21.17) , 23(23.1-23.4)

Reference Book:

“Web Designing with HTML, JAVA Script, VB Script &Int-to Ecommerce Networking Internet”, Lokesh Vats, Cyber Tech Publication New Delhi 2003.

PGDCA

SEMESTER -I

For those who joined in 2019 onwards

PROGRAM ME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS/WEE K	CREDIT S
PGD	19PGD10 4	LAB-I PROGRAMMI NG IN C	PG Core	3HRS	2

COURSE DESCRIPTION:

To develop programs using **C programming** language, in order to solve simple to moderate problems.

COURSE OBJECTIVE:

- To develop programming skills in C.

To develop simple C programs using the following concepts

- Conditional Statements
- Looping Statements
- Arrays
- Strings
- Functions
- Structures
- Pointers

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEEK	CREDITS
PGD	19PGD105	LAB-II Web Programming and Photo Editing Techniques	PG Core	3HRS	2

COURSE DESCRIPTION:

- To provide the student with foundational programming knowledge and skills for application development on the Internet.
- To create and design digital images and illustrations for print and Web publication.

COURSE OBJECTIVE:

- To teach the basic concept of designing a webpage.
- To develop their skills in editing and altering photographs for through a basic understanding of the tool bar, layers, and the adjustments panel.

HTML & CSS

- Write a simple HTML document with the title as HOME PAGE with all basic tags.
- Write a program to have a text and an image as links to another document.
- Create a table with different formats for each column.

- Create a simple Application form.
- Create a Frameset with two frames. In the frames, links should be displayed and in the right the target file of the link should be displayed.
- Create an External Style Sheet, Table Style.
- Built -in Objects.
- User Defined Functions.
- Dialog Boxes.
- Login Form

PHOTO SHOP

- Open an image and modify it using smudge tool.
- Change a Black and White photograph into Color.
- Create an image using gradient fills.
- Import an image and remove the portion from the plain background and fix it in another background.
- Type a text and create plastic effect.
- Create a Web photo gallery.

PGDCA

SEMESTER –II

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
PGD	19PGD106	Tally with spreadsheet	PG Core	3HRS	3

COURSE DESCRIPTION:

To give an opportunity to the undergraduate student to get acquainted with Tally Accounting Software.

COURSE OBJECTIVE:

- To Create Financial Statements & to identify spreadsheet terminology and concepts;

COURSE OUTCOMES: The learner will be able..

CO 1: To maintain a record of all monetary transactions

CO 2: To create balance sheet, voucher and ledgers.

CO 3: To Preview and print worksheets.

CO 4: Indicate the names and functions of the Excel interface components.

CO 5: Construct formulas, including the use of built-in functions, and relative and absolute references.

TALLY

- Create the following ledgers in the masters and select/enter the fields as given in the table

- Given below, are transactions from 3-05-09. Create ProC Advertising Agency and pass the following transactions
- Creating a group with advanced usage
- Creating a new company
- Creating 'Stock Groups'
- Making entries in tally –Purchase Voucher
- Making entries in tally –Sales Voucher
- Making entries in tally – Receipt Voucher

EXCEL

- How to create a basic spreadsheet by entering text, numbers, and formulas?
- Introduces formatting of cells and columns.
- Demonstrates the ease of creating charts.
- How to sort data and print portions of a worksheet?
- How to consolidate several worksheets into one and to link several worksheets to a master worksheet.

PGDCA

SEMESTER -I

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEEK	CREDITS
PGD	19PGD107	MINI PROJECT	PG Core	-	4

PGDCA

SEMESTER -II

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEEK	CREDITS
PGD	19PGD201	DATABASE MANAGEMENT SYSTEM	PG Core	3HRS	3

COURSE DESCRIPTION:

To inculcate knowledge on RDBMS concepts and Programming with SQL.

COURSE OBJECTIVE:

- To encapsulate the implementation of Database System Concepts in SQL.

UNIT I: (6Hrs)

INTRODUCTION TO DATABASE MANAGEMENT SYSTEM – Characteristics of Data Base –Services Provided by DBMS-Types of DBMS.

UNIT II: (6Hrs)

INTRODUCTION TO RDBMS-The Relational Data Structure - Data Integrity-Domain Constraints-Entity integrity - Referential Integrity - Operational Constraints-Relational Data Manipulation- Entities and Attributes - ER model- Relationship- ER Diagram.

UNIT III: (6Hrs)

DATA NORMALIZATION-Three Normal form analyses: FIRST NORMAL FORM, SECOND NORMAL FORM, THIRD NORMAL FORM – BCNF-Denormalization.

UNIT IV: (6Hrs)

INTRODUCTION TO SQL AND DDL, DML - SQL data types and literals – Types of SQL commands- SQL Operators-Logical Operators-Set Operators-

Operators Precedence- Creating, Dropping and Altering tables and views:
Creating a table – Dropping tables – Altering tables – Creating a view –
Creating a table from a table. Changing Date: insert-rollback, commit and
auto commit-delete-update.

UNIT V:

(6Hrs)

QUERIES AND SUB QUERIES-Selecting columns- AND, OR, NOT-Aggregate
Function-General rules-COUNT, SUM, AVG –Insert, Update, Delete
Statements.

Text Book:

Alexis Leon, Mathews Leon, “DATABASE MANAGEMENT SYSTEM”, Leon
Press.

Chapters:

5, 7,9,11, 14, 15,17,18,19.

Reference Book:

DataBase System Concepts – Henry F. Korth, Abraham Silberchatz – Tata
McGraw – Hill Publications.

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
PGD	19PGD20 2	VISUAL BASIC	PG Core	3HRS	3

COURSE DESCRIPTION:

Analyze program requirements. Design/develop programs with GUI interfaces.

COURSE OBJECTIVE:

- To Learn to design and develop Windows-Based Business Application using VB program that meet commercial program standards

UNIT I: (6Hrs)

INTRODUCTION TO VB-Starting and Exiting Visual Basic – Using Project Explorer – Working with forms – using properties window – using toolbox – working with projects — Building and running applications – Adding code and using events: Using code window – using name conventions – using variables – using scope – using subroutines and functions.

UNIT II: (6Hrs)

CONTROLS -Using controls: Label – textbox – command button – Frame – Check box – option button – list box – Combo box – Drive list box – Directory list box – file list box – using formatting controls – using control arrays – using tab order.

UNIT III: (6Hrs)

STRINGS & NUMBERS-Using strings – Converting strings – Concatenating strings – Formatting strings – Manipulating strings - Comparing strings. Numbers: Using numeric values – Numeric operators – Random numbers. Control Statements: If and Else If – Select Case – Do – For – Exit.

UNIT IV:

(6Hrs)

DIALOG BOX AND CONTROL STATEMENTS-Using MsgBox and Inputboxfunction – Using common dialog control: Open, Save as, Color, Font, Print, ShowHelp.

UNIT V:

(6Hrs)

MENUS, FILES AND ADO CONTROL-Creating Menus – Adding code to Menus – Creating Shortcut menus.Database: Opening, Closing and Deleting files – Reading and Writing files – Using ADO data control.

TEXT BOOK: “Teach yourself Visual Basic 6” – Scott warner – Tata McGraw Hill Publications.

Chapters: 1-10

REFERENCE BOOK: “Visual Basic 6 from the Ground Up” – Gary Cornell, Tata McGraw Hill Publications.

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
PGD	19PGD203	LAB -IV RDBMS	PG Core	3HRS	2

COURSE DESCRIPTION:

To inculcate knowledge on RDBMS concepts and Programming with SQL.

COURSE OBJECTIVE:

- To encapsulate the implementation of Database System Concepts in SQL.
 - DDL Commands.
 - DML Commands
 - Simple Queries.
 - Positive, Negative or Zero.
 - Odd or Even.
 - Factorial.
 - Fibonacci Series.
 - Multiplication Table
 - Sum of First n numbers.
 - Perfect or Not.
 - Prime or Not
 - EB Bill.
 - Reverse a Number.

PGDCA

SEMESTER -I

For those who joined in 2019 onwards

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
PGD	19PGD204	LAB -V VISUAL BASIC	PG Core	2HRS	2

COURSE DESCRIPTION:

Analyze program requirements. Design/develop programs with GUI interfaces.

COURSE OBJECTIVE:

- To Learn to design and develop Windows-Based Business Application using VB program that meet commercial program standard
 - Design a form that acts as a Mortgage calculator.
 - Design an objective type questionnaire.
 - Design a form that dynamically adds a given text to a combo box.
 - Design traffic signals using radio buttons.
 - Write a program that inserts a given value to a dynamic array until a specific condition is met.
 - Design an Arithmetic calculator using control arrays.
 - Write a function that eliminates the extra spaces available in a given string.
 - Design a sketch pad.
 - Design a form that converts one basic unit to another using menu.
 - Create a file open dialogue box to load a picture.
 - Write a program to read and write a sequential file.
 - View record using data control.
 - Write a program to add, edit and delete records in a database using data control.

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEEK	CREDITS
PGD	19PGD20 5	PROJECT	PG Core	-	4

PGDCA

SEMESTER –I

For those who joined in 2019 onwards

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEEK	CREDITS
PGD	19PGD20 6	INTERNSHIP	PG Core	-	4