FATIMA COLLEGE (AUTONOMOUS)

Re-Accredited with "A" Grade by NAAC (3rd Cycle)

74th Rank in India Ranking 2021 (NIRF) by MHRD

Maryland, Madurai- 625 018, Tamil Nadu, India

NAME OF THE DEPARTMENT : COMPUTER APPLICATIONS

NAME OF THE PROGRAMME : PGDCA

PROGRAMME CODE : OSCA

ACADEMIC YEAR : 2021-2022

COLLEGE PROFILE

Fatima College (Autonomous), Mary Land, Madurai, is a Post Graduate and Research Institution for Women affiliated to Madurai Kamaraj University. It is a Catholic Minority institution established and run by St. Joseph's Society of Madurai (of the Congregation of the Sisters of St. Joseph of Lyons, France). This institution came into existence through the tireless efforts of the missionary sisters of St. Joseph of Lyons and the zeal and heroic sacrifice of Rev. Sr. Rose Benedicta, the Foundress of the College.

The College was started in St. Joseph's Campus Madurai as a Second Grade College with 63 students in 1953. It was upgraded into a Post Graduate College in 1964; Autonomous in 1990 and a Research Institute in 2004. The College now offers 21 Undergraduate Programmes, 13 Postgraduate Programmes, 2 Professional Programme, 5 M.Phil. Programmes and 6 Departments have become Research Centres. It has strength of 4134 Students, 206 Teaching Staff and 100 Non-Teaching Staff.

The comprehensive assessment by NAAC in 1999 placed Fatima College in Five Star Status of merit. The college strives to sustain excellence, quality and relevance while equipping the students to meet the demands of higher education in India. In 2004 UGC conferred on Fatima College the status of College with Potential for Excellence. In 2006 and 2013 NAAC Re-Accredited the College with 'A' Grade. The College was ranked 94th in the All India NIRF Ranking in 2019 by MHRD.

VISION

WOMEN'S EMPOWERMENT THROUGH EDUCATION

The vision of the college is to empower women by developing human capabilities through quality education based on Christian values, making them responsible citizens who can work for the advancement of the society and promote communal harmony in the multi-religious and multi-cultural reality of India eventually evolving into women of communion.

MISSION

- To enhance quality of life through the development of individuals.
- To enable women to become contributors in the economic, social and political development of India.
- To equip the students with 21st century skill-sets with a focus on problem-solving abilities
- To motivate them to work for social justice
- To give preference to the rural economically backward and first-generation learners
- To enable students to be employed in the technology oriented competitive market

MISSION OF THE DEPARTMENT

- To empower women by bringing out their hidden potentials by providing quality education to meet excellence and adapt to the challenges of the society.
- To prepare Postgraduates for productive careers in software industry, corporate sector, govt. organizations and academia by providing skill based environment for teaching and research in the core and emerging areas of the discipline.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

A Post graduate Diploma in Computer Application programme after years will be

PEO 1	PGDCA graduates who will have successful careers based on their understanding of formal and practical methods of Application Development using the concepts of computer programming, software and design principles
PEO 2	PGDCA graduates are provided with practical training, hands-on and project experience to meet the industrial needs.
PEO 3	This programme enrich the students with sound and comprehensive knowledge of widely known programming languages like java, android and python
PEO 4	The program offers specialization in computer science with technical, professional skills along with training to groom future industry professionals.

GRADUATE ATTRIBUTES (GA)

Fatima College empowers her women graduates holistically. A Fatimite achieves all-round empowerment by acquiring Social, Professional and Ethical competencies. A graduate would sustain and nurture the following attributes:

I. SOCIAL COMPETENCE	
GA 1	Deep disciplinary expertise with a wide range of academic and digital literacy
GA 2	Hone creativity, passion for innovation and aspire excellence
GA 3	Enthusiasm towards emancipation and empowerment of humanity
GA 4	Potentials of being independent

GA 5	Intellectual competence and inquisitiveness with problem solving abilities befitting the field of research
GA 6	Effectiveness in different forms of communications to be employed in personal and professional environments through varied platforms
GA 7	Communicative competence with civic, professional and cyber dignity and decorum
GA 8	Integrity respecting the diversity and pluralism in societies, cultures and religions
GA 9	All – inclusive skill sets to interpret, analyse and solve social and environmental issues in diverse environments
GA 10	Self awareness that would enable them to recognise their uniqueness through continuous self-assessment in order to face and make changes building on their strengths and improving their weaknesses
GA 11	Finesse to co-operate exhibiting team-spirit while working in groups to achieve goals
GA 12	Dexterity in self-management to control their selves in attaining the kind of life that they dream for
GA 13	Resilience to rise up instantly from their intimidating setbacks
GA 14	Virtuosity to use their personal and intellectual autonomy in being life-long learners
GA 15	Digital learning and research attributes
GA 16	Cyber security competence reflecting compassion, care and concern towards the marginalised
GA 17	Rectitude to use digital technology reflecting civic and social responsibilities in333 local, national and global scenario
II. PROFESSIONAL COMPETENCE	
GA 18	Optimism, flexibility and diligence that would make them professionally competent
GA 19	Prowess to be successful entrepreneurs and become employees of trans-national societies

GA 20	Excellence in Local and Global Job Markets
GA 21	Effectiveness in Time Management
GA 22	Efficiency in taking up Initiatives
GA 23	Eagerness to deliver excellent service
GA 24	Managerial Skills to Identify, Commend and tap Potentials
III. ETHICAL COMPETENCE	
GA 25	Integrity and be disciplined in bringing stability leading a systematic life promoting good human behaviour to build better society
GA 26	Honesty in words and deeds
GA 27	Transparency revealing one's own character as well as self-esteem to lead a genuine and authentic life
GA 28	Social and Environmental Stewardship
GA 29	Readiness to make ethical decisions consistently from the galore of conflicting choices paying heed to their conscience
GA 30	Right life skills at the right moment

PROGRAMME OUTCOMES (PO)

On completion (after one year) of PGDCA, the students are able,

PO 1	To learn the latest trends in various subjects of computers applications.
PO 2	To learn computer applications in different fields like banking, insurance, software industry, govt & Corporate sectors.
PO 3	To provides specialisation in computer science with technical, professional and communications skills. It also trains students to become future IT professionals.

PO 4	To design, implement and evaluate a computer-based system, process, component, or programme.
PO 5	To Design and develop applications to analyze and solve all computer related problems.

PROGRAMME SPECIFIC OUTCOMES (PSO)

On completion (after one year) of PGDCA, the students are able to

PSO 1	To expose the students to open Source technologies so that they become familiar with it and can seek appropriate opportunity in trade and industry
PSO 2	To the ability to employ modern computer languages and graphics editor for their successful career, to create platforms to become an entrepreneur and a relish for higher studies.
PSO 3	To train themselves professionally in the areas of programming, multimedia, animation, web designing, and networking and to acquire knowledge in various domains based electives.
PS0 4	To generate ideas of innovation and to identify, formulate and solve problems in software solutions, outsourcing services, public and private sectors
PSO 5	To equip the students to meet the requirement of Corporate world and Industry standards

FATIMA COLLEGE (AUTONOMOUS), MADURAI-18
DEPARTMENT OF PGDCA

PROGRAMME CODE: PDB

COURSE CODE	COURSE TITLE	HRS / WK	CREDIT	CIA Mks	ESE Mks	TOT. MKs
SEMESTER - I						
19PDB101	Computer Fundamentals	3	3	40	60	100
19PDB102	Problem solving using C	3	3	40	60	100
19PDB103	Web Designing	3	3	40	60	100
19PDB104	Lab –I Programming in C	3	2	40	60	100
19PDB105	Lab –II Web Programming	3	2	40	60	100
21PDB106	Lab –III Design Techniques	3	2	40	60	100
19PDB107	Mini Project	-	4	40	60	100
Total		**18**	**19**			
SEMESTER - II						
19PDB201	Database Management System	4	3	40	60	100
21PDB202	Python Programming	4	3	40	60	100
19PDB203	Lab –IV RDBMS	3	2	40	60	100
19PDB204	Lab –V Python Programming	3	2	40	60	100

COURSE CODE	COURSE TITLE	HRS / WK	CREDIT	CIA Mks	ESE Mks	TOT. MKs
19PDB205	Project	4	4	40	60	100
19PDB206	Internship (1month)	-	5	100	-	100
Total		**18**	**19**	-	-	-

OFF-CLASS PROGRAMME

Courses	Hrs.	Credits	Semester in which the course is offered	CIA Mks	ESE Mks	Total Marks
COMPUTER APPLICATIONS For 1 Semester – UG SCIENCE (I Yr)	30	2	I	100	-	100
COMPUTER APPLICATIONS For II Semester – UG ARTS (I Yr)	30	2	II	100	-	100
TOTAL	60	4		100		100

- **Lab Courses :**
  - A range of 10-15 exercises per semester

- **Internship:**

- o Duration-1 month (2nd Week of Feb to 2nd week of Mar-before college gets closed)

- **Project:**
  - o Evaluation components-Report writing + Viva Voce (Internal marks-40) + External marks 60

PGDCA

SEMESTER –I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS	CREDITS
OSCA	19PDB101	COMPUTER FUNDAMENTALS	LECTURE	3	3

COURSE DESCRIPTION

To Study about the concepts, structure and mechanisms of operating systems. To examine the operations of processes and threads, scheduling, deadlock, memory management and file systems.

COURSE OBJECTIVES

1. To have in–depth knowledge about the functionalities of the operating systems.
2. To learn the mechanisms of OS to handle processes and threads and their communication.
3. To learn the mechanisms involved in memory management

To gain knowledge on distributed operating system concepts

UNIT I :INTRODUCTION TO COMPUTER   (6HRS)

Introduction–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: PROCESSES   (6HRS)

Introduction: Definition, Main frame System, Multiprocessor System, Distributed systems – Process: Process concept, Process scheduling.

UNIT III: CPU SCHEDULING, PROCESS SYNCHRONIZATION   (6HRS)

CPU Scheduling: Basic concepts – scheduling criteria – scheduling algorithms – Process Synchronization: Background – the critical section problem, Semaphores – Usage, Monitors.

UNIT IV: MEMORY MANAGEMENT   (6HRS)

Background – Swapping, Contiguous Memory Allocations, Paging, Segmentation, Segmentation with paging. Background – demand paging – page replacement algorithms – allocation of frames – thrashing

UNIT V: FILESYSTEM CONCEPTS   (6HRS)

File concept – access methods – directory structures – protection – File system structure – allocation methods.

REFERENCE BOOKS:

1. Alexis Leon, Mathews Leon, "Fundamentals of Information Technology", Leon Press, 1999.
2. Deitel H.M, Operating System, 7th Edition, Pearson Education, 1996
3. Silberscahatz Galvin Gagne, Operating System Concept, VI Edition, John Wiley's Sons, 2010.
4. Operating System, Concept & Design, II Edition,2001 TATA McGraw – Hill.
5. Abraham Silberschatz, Peter Baer Galvin, Operating System Concepts, VII Edition ,2014.

WEB REFERENCES :

1. http://Williamstallings.com/os/animations
2. https://www.tutorial.com/operating_system/

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT 1 - INTRODUCTION TO COMPUTERS				
1.1	Introduction–Types of computers	3	Chalk & Talk	Black Board
1.2	Characteristics of Computers	3	Chalk & Talk	Black Board
1.3	Classification of Digital Computer Systems	3	Chalk & Talk	Black Board
1.4	Anatomy of a Digital Computer	3	Chalk & Talk	Black Board
1.5	Application of IT(Computers Entertainment, Science and Medicine)	3	Chalk & Talk	Black Board
UNIT 2: PROCESSES				
1.1	Definition,	3	Chalk & Talk	Black Board
1.2	Main frame System	3	Chalk & Talk	LCD

1.3	Multiprocessor System	3	Lecture	PPT & White board
1.4	Distributed systems, Process	3	Lecture	Smart Board
1.5	Process concept	3	Lecture	Black Board
1.6	Process scheduling	3	Discussion	Google classroom
UNIT 3: CPU SCHEDULING, PROCESS SYNCHRONIZATION				
2.1	Basic concepts, scheduling criteria	3	Chalk & Talk	Black Board
2.2	Scheduling algorithms, Process Synchronization	3	Chalk & Talk	LCD
2.3	Background	3	Lecture	PPT & White board
2.4	the critical section problem	3	Lecture	Smart Board
2.5	Semaphores	3	Lecture	Black Board
2.6	Usage, Monitors	3	Discussion	Google classroom
UNIT -4 MEMORY MANAGEMENT				
4.1	Background	3	Chalk & Talk	Black Board
4.2	Swapping, Contiguous Memory Allocations	3	Chalk & Talk	LCD

4.3	Paging	3	Lecture	PPT & White board
4.4	Segmentation	3	Lecture	LCD
4.5	Segmentation with paging	3	Lecture	LCD
4.6	Background, demand paging	3	Discussion	Google classroom
4.7	Page replacement algorithms	3	Lecture	Black Board
4.8	Allocation of frames	3	Lecture	Black Board
4.9	Thrashing	3	Lecture	Black Board
UNIT -5 FILESYSTEM CONCEPTS				
5.1	File concept	3	Chalk & Talk	Black Board
5.2	Access methods	3	Chalk & Talk	LCD
5.3	Directory structures	3	Lecture	PPT & White board
5.4	Protection	3	Lecture	Smart Board
5.5	File system structure	3	Lecture	Black Board
5.6	Allocation methods	3	Discussion	Google classroom

Curriculum for PGDCA

INTERNAL - PG

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1	T2	Seminar	Assignment	OBT/PPT				
	10 Mks.	10 Mks.	5 Mks.	5 Mks	5 Mks	35 Mks.	5 Mks.	40 Mks.	
K2	4	4	-	-	-	8	-	8	20 %
K3	2	2	-	5	-	9	-	9	22.5 %
K4	2	2	-	-	5	9	-	9	22.5 %
K5	2	2	5	-	-	9	-	9	22.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

END SEMESTER - PG

Levels	Section A	Section B	Section C	Section D	Section E	Total	
	10 Mks	20 Mks.	10 Mks	10 Mks.	10 Mks.	60Mks.	
K2	10	5	-	-	-	15	25 %
K3	-	5	10	-	-	15	25 %
K4	-	5	-	-	10	15	25 %
K5	-	5	-	10	-	15	25 %
Total	10	20	10	10	10	60	100 %

CIA

Curriculum for PGDCA

Scholastic	35
Non Scholastic	5
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

   K1- Remember,   **K2-**Understand,   **K3-**Apply,   **K4-**Analyse

✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Outline the structure of OS, basic architectural components	K1	PSO1& PSO2
CO 2	Analyze on the different scheduling algorithms and critical section problems	K1, K2 & K3	PSO1, PSO2, PSO3
CO 3	Critique device and resource management techniques by concentrating on deadlocks	K1, K2 & K3	PSO5
CO 4	Identify and know about memory management techniques	K1, K2, K3 & K4	PSO3, PSO5
CO 5	Interpret the mechanisms adopted for file sharing in distributed Applications	K2, K3 & K4	PSO4, PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	1	1
CO2	3	3	3	1	2
CO3	2	2	2	3	3
CO4	2	2	3	2	3
CO5	2	2	1	3	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	1	1	1
CO2	3	3	2	1	2
CO3	3	2	2	3	3
CO4	2	1	2	3	2
CO5	1	2	1	3	3

COURSE DESIGNER:

STAFF NAME: 1. AROCKIA JACKULINE JONI J

2. PUNITHA ROSLINE A

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATE GORY	HRS/WE EK	CREDITS
OSCA	19PDB102	Problem Solving Using C	PG Core	3	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: INTRODUCTION TO 'C'   (6HRS)

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

UNIT II: DECISION MAKING, BRANCHING AND LOOPING   (6HRS)

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: ARRAYS, STRINGS & FUNCTIONS   (6HRS)

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: FUNCTION DEFINITION   (6HRS)

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

UNIT V: STRUCTURES AND POINTERS   (6HRS)

Definition - Giving Values to Members – Structure Initialization -Comparison of Structure Variables - Array of Structures - Declaring and Initializing Pointers - Accessing a Variable through Pointers – <mark>Pointer Expression.</mark>

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.

PROBLEM SOLVING USING C – 19PDB102				
Modul e No.	Topic	No. of Lecture s	Teaching Pedagogy	Teaching Aids
UNIT -I INTRODUCTION TO C				
1.1	Overview of C-Constants	1	Lecture	PPT & White board
1.2	Variables and Data types	1	Lecture	PPT & White board
1.3	Operators and Expression	1	Lecture	PPT & White board
1.4	Managing Input and output Operators	1	Lecture	LCD
1.5	Managing Input and output Operators	1	Lecture	PPT
UNIT -II DECISION MAKING, BRANCHING AND LOOPING				
2.1	Decision making, branching and looping	1	Lecture	PPT & White board

2.2	Simple If Statement - The if else Statement - Nesting of if...else statement - The Else if Ladder	1	Lecture	PPT & White board
2.3	The switch statement - the conditional operator – the goto statements	4	Lecture	PPT & White board
2.4	The while Statements – The DO Statements	1	Lecture	Smart Board
2.5	The for statements & Jump in loops	1	Lecture	PPT

UNIT –III   ARRAYS, STRINGS & FUNCTIONS

3.1	Arrays, strings & functions	1	Lecture	PPT & White board
3.2	One dimensional arrays - two dimensional arrays - initializing two dimensional arrays -	1	Lecture	PPT & White board
3.3	Multi - dimensional arrays	1	Lecture	PPT & White board
3.4	Declaring and Initializing and String Variables .	1	Lecture	Smart Board
3.5	Reading and Writing of Strings & Comparison of Two Strings	1	Lecture	PPT

UNIT -IV   TITLE FUNCTION DEFINITION

4.1	Function definition	1	Lecture	PPT & White board
4.2	Elements of User-defined Functions – Definition of Functions	1	Lecture	PPT & White board
4.3	Function calls – function declaration	1	Lecture	PPT & White board

4.4	Category of Function	1	Lecture	LCD
4.5	Recursion	1	Lecture	PPT

	UNIT -V STRUCTURES AND POINTERS			
5.1	Structures and pointers	1	Lecture	PPT & White board
5.2	Structures Definition - Giving Values to Members	1	Lecture	PPT & White board
5.3	Structure Initialization - Comparison of Structure Variables - Array of Structures	1	Lecture	PPT & White board
5.4	Declaring and Initializing Pointers - Accessing a Variable through Pointers	1	Lecture	LCD
5.5	Pointer expression	1	Lecture	PPT

INTERNAL - PG

Levels	C1	C2	C3	C4	C5	Total Scholast	Non Schola	CIA Total	

Curriculum for PGDCA

	T1 10 Mks.	T2 10 Mks.	Semi nar 5 Mks.	Ass ign me nt 5 Mks	OBT/ PPT 5 Mks	ic Marks 35 Mks.	stic Marks C6 5 Mks.	40 Mks.	% of Assess ment
K2	4	4	-	-	-	8	-	8	20 %
K3	2	2	-	5	-	9	-	9	22.5 %
K4	2	2	-	-	5	9	-	9	22.5 %
K5	2	2	5	-	-	9	-	9	22.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

END SEMESTER - PG

Levels	Section A 10 Mks	Section B 20 Mks.	Section C 10 Mks	Sectio n D 10 Mks.	Section E 10 Mks.	Total 60Mks.	
K2	10	5	-	-	-	15	25 %
K3	-	5	10	-	-	15	25 %
K4	-	5	-	-	10	15	25 %
K5	-	5	-	10	-	15	25 %
Total	10	20	10	10	10	60	100 %

CIA

Scholastic	35

Non Scholastic	**5**
	40

- ✓ **All the course outcomes are to be assessed in the various CIA components.**

- ✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

   K1- Remember,   **K2-**Understand,   **K3-**Apply,   **K4-**Analyse

- ✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	**C2**	**C3**	**C4**	**C5**	**CIA**	**ESE**	**Total**
5	**10**	**15**	**5**	**5**	**40**	**60**	**100**

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Acquire basic understanding of C Programming	K1	PSO1, PSO2
CO 2	Illustrate how arrays and strings are implemented in C	K1& K2	PSO1, PSO2,PSO3
CO 3	Utilize the knowledge of Functions and Pointers	K1 & K2	PSO3, PSO4
CO 4	Analyze the memory management concept in C using structure and Unions	K1, K2, K3 & K4	PSO4, PSO5
CO 5	Outline the file operations in C	K2, K3& K4	PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	1
CO2	3	3	3	2	1
CO3	2	2	3	3	2
CO4	2	2	2	3	3
CO5	2	2	2	2	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5

CO1	3	3	2	2	1
CO2	3	3	2	1	2
CO3	3	2	2	3	3
CO4	2	1	2	3	2
CO5	3	2	2	1	3

COURSE DESIGNER:

STAFF NAME: 1. AROCKIA JACKULINE JONI J

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –I

PROGRAMM E CODE	COURSE CODE	COURSE TITLE	CATEGOR Y	HRS/WEE K	CREDIT S
OSCA	**19PDB103**	**WEB DESIGNING**	**PG Core**	**3**	**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.

WEB DESIGNING – PDB103				
Module No.	**Topic**	**No. of Lectures**	**Teaching Pedagogy**	**Teaching Aids**
UNIT -I TITLE INTRODUCTION TO HTML				
1.1	Information files creation-web server-web client/browser-internet & intranet	1	Lecture	PPT

1.2	HTML-Commonly Used HTML Commands-Structure of an HTML Program	2	Lecture	PPT & White board
1.3	Titles and Footers, Text Formatting	1	Lecture	LCD
1.4	Emphasizing Material in a Webpage	1	Lecture	PPT
1.5	Text Styles and Other Text Effects.	1	Lecture	PPT & White board
UNIT –II	**TITLE GRAPHICS AND FRAMES**			
2.1	Types of Lists Documents	1	Lecture	PPT & White board
2.2	Adding Graphics to HTML	1	Lecture	PPT & White board
2.3	Tables	1	Lecture	PPT & White board
2.4	Linking Documents	1	Lecture	Smart Board
2.5	Frames	1	Lecture	PPT
UNIT -III	**TITLE INTRODUCING TO JAVASCRIPT**			
3.1	Introducing to JavaScript	1	Lecture	PPT & White board
3.2	Advantages – Writing JavaScript – Basic Programming Techniques	1	Lecture	PPT & White board
3.3	Type Casting, Creating Variables, Operators and Expressions,	1	Lecture	PPT & White board

3.4	Conditional checking, super controlled – functions	1	Lecture	LCD
3.5	User-defined Functions – Dialogue Boxes.	1	Lecture	PPT
UNIT -IV	**TITLE JAVASCRIPT DOCUMENT OBJECT MODEL**			
4.1	JavaScript document object model	1	Lecture	PPT & White board
4.2	Introduction-assisted style sheets dom[jsss dom]	1	Lecture	PPT & White board
4.3	Understanding Objects in HTML- Browser Objects	1	Lecture	PPT & White board
4.4	Object Hierarchy-Handling Events. Forms used by a Website.	1	Lecture	LCD
4.5	Form Object-Other Built-in Objects in JavaScript-User Defined Objects.	1	Lecture	PPT
UNIT -V	**TITLE DYNAMIC HTML**			
5.1	Dynamic HTML	1	Lecture	PPT
5.2	Cascading style sheets: font	2	Lecture	PPT & White board
5.3	Color & background, text	1	Lecture	LCD
5.4	Border, Margin Related and Text Attributes	1	Lecture	PPT
5.5	Use of class	1	Lecture	PPT & White board

INTERNAL - PG

Levels	C1	C2	C3	C4	C5	Total Scholastic Marks	Non Scholastic Marks C6	CIA Total	% of Assessment
	T1 10 Mks.	T2 10 Mks.	Seminar 5 Mks.	Assignment 5 Mks	OBT/ PPT 5 Mks	35 Mks.	5 Mks.	40 Mks.	
K2	4	4	-	-	-	8	-	8	20 %
K3	2	2	-	5	-	9	-	9	22.5 %
K4	2	2	-	-	5	9	-	9	22.5 %
K5	2	2	5	-	-	9	-	9	22.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

END SEMESTER - PG

Levels	Section A 10 Mks	Section B 20 Mks.	Section C 10 Mks	Section D 10 Mks.	Section E 10 Mks.	Total 60Mks.	
K2	10	5	-	-	-	15	25 %
K3	-	5	10	-	-	15	25 %
K4	-	5	-	-	10	15	25 %
K5	-	5	-	10	-	15	25 %
Total	10	20	10	10	10	60	100 %

Curriculum for PGDCA

CIA

Scholastic	**35**
Non Scholastic	**5**
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

 K1- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Acquire basic understanding of Web designing	K1	PSO1, PSO2
CO 2	Writing valid and concise code for web pages	K1& K2	PSO1, PSO2,PSO3
CO 3	Utilize the knowledge of web creation	K1 & K2	PSO3, PSO4
CO 4	Analyze the validations for website	K1, K2, K3 & K4	PSO4, PSO5
CO 5	Outline the file operations	K2, K3& K4	PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	1
CO2	3	3	3	2	1
CO3	2	2	3	3	2
CO4	2	2	2	3	3
CO5	2	2	2	2	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	3	3	2	2
CO3	3	2	2	3	3
CO4	2	3	2	3	2
CO5	3	2	2	3	3

COURSE DESIGNER:

STAFF NAME: 1. PUNITHA ROSLINE A

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/ WEEK	CREDITS
OSCA	**19PDB104**	**LAB-I** **Programming in C**	**PG Core**	**3**	**2**

COURSE DESCRIPTION:

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

COURSE OBJECTIVE:

1. To develop programming skills in C.To understand fundamentals of programming such as variables, conditional and iterative execution, methods, etc.
2. To develop programming skills in C.

PROGRAM LIST:

To develop simple C programs using the following concepts

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

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
LAB -I PROGRAMMING IN C -19PDB104				
1.1	Conditional Statements	1	Demo & Working in Lab	LCD
1.2	Looping Statements	1	Demo & Working in Lab	LCD
1.3	Arrays	1	Demo & Working in Lab	LCD
1.4	Strings	1	Demo & Working in Lab	LCD
1.5	Functions	1	Demo & Working in Lab	LCD
1.6	Structures	1	Demo & Working in Lab	LCD
1.7	Files	1	Demo & Working in Lab	LCD
1.8	Pointers	1	Demo & Working in Lab	LCD

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Acquire basic understanding of C programming	K1	PSO1, PSO2
CO 2	Illustrate how arrays and strings are implemented in C	K1& K2	PSO1, PSO2,PSO3
CO 3	Utilize the knowledge of Functions and Pointers	K1 & K2	PSO3, PSO4
CO 4	Analyze the memory management concept in C using structure and Unions	K1, K2, K3 & K4	PSO4, PSO5
CO 5	Outline the file operations in C	K2, K3& K4	PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	1
CO2	3	3	3	2	1
CO3	2	2	3	3	2
CO4	2	2	2	3	3

CO5	2	2	2	2	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	3	2	1	2
CO3	3	2	2	3	3
CO4	2	1	2	3	2
CO5	3	2	2	1	3

CIA

Scholastic	35
Non Scholastic	5
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

   K1- Remember**,**   **K2-**Understand**,**   **K3-**Apply**,**   **K4-**Analyse

✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC	NON - SCHOLASTIC	MARKS

C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE DESIGNER:

STAFF NAME: 1. AROCKIA JACKULINE JONI J

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATE GORY	HRS/WEEK	CREDITS
OSCA	19PDB105	LAB-II Web Programming	PG Core	3	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.

PROGRAM LIST:

- 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

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
LAB -II WEB PROGRAMMING				
1.1	HTML- Home Page	1	Demo & Working in Lab	LCD
1.2	Image Src	1	Demo & Working in Lab	LCD
1.3	Table Creation	1	Demo & Working in Lab	LCD
1.4	Application Form	1	Demo & Working in Lab	LCD
1.5	Frameset	1	Demo & Working in Lab	LCD
1.6	Built-in Object	1	Demo & Working in Lab	LCD
1.7	User defined functions	1	Demo & Working in Lab	LCD
1.8	Dialog box and Login form	1	Demo & Working in Lab	LCD

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Acquire basic understanding of Web designing	K1	PSO1, PSO2
CO 2	Writing valid and concise code for web pages	K1& K2	PSO1, PSO2,PSO3
CO 3	Utilize the knowledge of web creation	K1 & K2	PSO3, PSO4
CO 4	Analyze the validations for website	K1, K2, K3 & K4	PSO4, PSO5
CO 5	Outline the file operations	K2, K3& K4	PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	1
CO2	3	3	3	2	1
CO3	2	2	3	3	2
CO4	2	2	2	3	3
CO5	2	2	2	2	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	3	3	2	2
CO3	3	2	2	3	3
CO4	2	3	2	3	2
CO5	3	2	2	3	3

CIA

Scholastic	**35**
Non Scholastic	**5**
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

  K1- Remember, **K2-**Understand, **K3-**Apply, **K4-**Analyse

✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE DESIGNER:

STAFF NAME: 1. PUNITHA ROSLINE A

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATE GORY	HRS/WEEK	CREDITS
PGD	21PDB106	LAB – III DESIGN TECHNIQUES	PG Core	3	2

COURSE DESCRIPTION

This course gives knowledge on the editing of images and created animated images.

COURSE OBJECTIVE:

1. To develop skills for editing and altering photographs through tools, layers, and the adjustments panel.
2. To know about basic photo repairs and color enhancements
3. To design impressive cards for various occasions.

PHOTOSHOP

- 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.

COREL DRAW

1. Design a Logo for Coffee Shop.
2. Create a 3D button for a Web Page.

3. Create a Logo for Pepsi Company.

4. Create a Logo for Whatsapp.

5. Create a Logo for Olymbic.

6. Create the Car Advertisement in Corel Draw.

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
LAB III DESIGN TECHNIQUES – 19PDB106				
1.1	Marquee Tool, Crop Tool,Lasso Tool- Move Tool	2	Demo & Working in Lab	LCD
1.2	Gradient fills	2	Demo & Working in Lab	LCD
1.3	Rubber, Clone Stamp tool, Eraser Tool, Paint Brush Tool, Art History Brush Tool, Text Tool	2	Demo & Working in Lab	LCD
1.4	Resizing, Rotating of Images, Sharpen, Blur Filters, Noise Filters, Render Filters	2	Demo & Working in Lab	LCD
1.5	3D transform	2	Demo & Working in Lab	LCD
1.6	Introduction, Selecting Objects, Creating Basic Shapes, Reshaping Objects	2	Demo & Working in Lab	LCD

| 1.7 | Organizing objects, Applying Color fills, Outline -Artistic | 2 | Demo & Working in Lab | LCD |
| 1.8 | Paragraph Text Formatting, Applying Effects | 2 | Demo & Working in Lab | LCD |

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Analyze on the various tools of Photoshop	K1	PSO1& PSO2
CO 2	Compare different types of filters used in photop	K1, K2	PSO2, PSO4
CO 3	Apply the techniques available in CorelDraw	K1 & K3	PSO4, PSO5
CO 4	Create animated banners and various simple animations	K3& K4	PSO3
CO 5	How to prepare and process photos for the Web?	K2, K3& K4	PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	1
CO2	3	3	3	2	1
CO3	2	2	3	3	2
CO4	2	2	2	3	3

CO5	2	2	2	2	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	3	2	1	2
CO3	3	2	2	3	3
CO4	2	1	2	3	2
CO5	3	2	2	3	3

COURSE DESIGNER

STAFF NAME: 1. RAMYA R

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –II

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
OSCA	19PDB201	Database Management System	PG Core	4	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.

DATABASE MANAGEMENT SYSTEM –19PDB201				
Modul e No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT - I	TITLE INTRODUCTION TO DATABASE MANAGEMENT SYSTEM			
1.1	Introduction to database management system	1	Lecture	PPT & White board
1.2	Characteristics of Data Base	1	Lecture	PPT & White board
1.3	Services Provided by DBMS	1	Lecture	PPT & White board
1.4	Services Provided by DBMS	1	Lecture	Smart Board
1.5	Types of DBMS	1	Lecture	PPT
UNIT -II	TITLE INTRODUCTION TO RDBMS			
2.1	Introduction to RDBMS	1	Lecture	PPT & White board

2.2	The relational data structure - data integrity-domain constraints	1	Lecture	PPT & White board
2.3	Entity integrity - Referential Integrity	1	Lecture	PPT & White board
2.4	Operational Constraints- Relational Data Manipulation	1	Lecture	Smart Board
2.5	Entities and Attributes - ER model- Relationship- ER Diagram.	1	Lecture	PPT
UNIT -III	**TITLE DATA NORMALIZATION**			
3.1	Data normalization	1	Lecture	PPT & White board
3.2	Three Normal form analyses: FIRST NORMAL FORM	1	Lecture	PPT & White board
3.3	Second normal form, third normal form	1	Lecture	PPT & White board
3.4	BCNF	1	Lecture	Smart Board
3.5	Denormalization.	1	Lecture	PPT
UNIT -IV	**TITLE INTRODUCTION TO SQL & DDL, DML**			
4.1	Introduction to SQL AND DDL, DML	1	Lecture	PPT
4.2	SQL data types and literals Operators Precedence- Creating, Dropping and Altering tables and views: Creating a table	1	Lecture	PPT & White board

4.3	Types of SQL commands- SQL Operators-Logical Operators-Set Operators	1	Lecture	PPT & White board
4.4	Dropping tables – Altering tables – Creating a view – Creating a table from a table. Changing Date	1	Lecture	LCD
4.5	Insert-rollback, commit and auto commit-delete-update.	1	Lecture	PPT
UNIT -V TITLE QUERIES AND SUB QUERIES				
5.1	Queries and sub queries	1	Lecture	PPT & White board
5.2	Selecting columns, AND, OR, NOT	1	Lecture	PPT & White board
5.3	Aggregate Function, General rules	1	Lecture	PPT & White board
5.4	COUNT, SUM, AVG	1	Lecture	Smart Board
5.5	Insert, Update, Delete Statements.	1	Lecture	PPT

INTERNAL - PG

Levels	C1 T1 10 Mks.	C2 T2 10 Mks.	C3 Seminar 5 Mks.	C4 Assignment 5 Mks	C5 OBT/PPT 5 Mks	Total Scholastic Marks 35 Mks.	Non Scholastic Marks C6 5 Mks.	CIA Total 40 Mks.	% of Assessment
K2	4	4	-	-	-	8	-	8	20 %
K3	2	2	-	5	-	9	-	9	22.5 %
K4	2	2	-	-	5	9	-	9	22.5 %
K5	2	2	5	-	-	9	-	9	22.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

END SEMESTER - PG

Levels	Section A 10 Mks	Section B 20 Mks.	Section C 10 Mks	Section D 10 Mks.	Section E 10 Mks.	Total 60Mks.	
K2	10	5	-	-	-	15	25 %
K3	-	5	10	-	-	15	25 %
K4	-	5	-	-	10	15	25 %
K5	-	5	-	10	-	15	25 %
Total	10	20	10	10	10	60	100 %

CIA

Scholastic	**35**

Non Scholastic	**5**
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

 K1- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Critique SQL commands to create tables and indexes	K1	PSO1& PSO2
CO 2	Apply DDL and DML commands in real time applications	K1, K2 & K3	PSO1, PSO2, PSO3
CO 3	Understand the needs of triggering applications	K2, K3 & K4	PSO5
CO 4	Disseminate knowledge of RDBMS and SQL, both in terms of design and implementation usage	K1, K2, K3 & K4	PSO3, PSO5
CO 5	Write dynamic queries to demonstrate the concepts of RDBMS	K2, K3 & K4	PSO4, PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	2
CO2	3	3	3	2	1
CO3	2	2	1	2	3
CO4	2	2	3	2	3
CO5	2	2	2	3	3

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	3	2	1	2
CO3	2	3	2	3	3
CO4	2	1	2	3	2
CO5	3	2	2	3	3

COURSE DESIGNER

STAFF NAME:1 . AROCKIA JACKULINE JONI J

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA
SEMESTER –II

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATE GORY	HRS /WEEK	CREDITS
OSCA	21PDB202	Python Programming	THEOR Y	4	3

COURSE DESCRIPTION

To enable the students to get better understanding in the OOPS Concept and to have basic knowledge in writing programs using Python Programming.

COURSE OBJECTIVES

1. To acquire programming skills in core Python.
2. To acquire Object Oriented Skills in Python.
3. To develop the skill of designing Graphical user Interfaces in Python.
4. To develop the ability to write database applications in Python.

UNIT I: INTRODUCTION TO PYTHON   [6 HRS]

Installation and Working with Python - Understanding Python variables - Python basic Operators - Understanding python blocks - Declaring and using Numeric data types: int, float, complex -Using string data type and string operations - Defining list and list slicing - Use of Tuple data type

UNIT II: PYTHON PROGRAM FLOW CONTROL   [6 HRS]

Conditional blocks using if, else and elif - Simple for loops in python - For loop using ranges, string, list and dictionaries - Use of while loops in python - Loop manipulation using pass, continue, break and else - Programming using Python conditional and loops block

UNIT III: PYTHON FUNCTIONS, MODULES AND PACKAGES   [6 HRS]

Organizing python codes using functions - Organizing python projects into modules - Importing own module as well as external modules - Understanding Packages -

Powerful Lamda function in python - Programming using functions, modules and external packages.

UNIT IV: PYTHON STRING, LIST, DICTIONARY MANIPULATIONS [6 HRS]

Building blocks of python programs - Understanding string in build methods - List manipulation using in build methods - Dictionary manipulation - Programming using string, list and - Dictionary in build functions

UNIT V: PYTHON FILE OPERATION   [6 HRS]

Design with functions: hiding redundancy, complexity; arguments and return values; formal vs actual arguments, named arguments - Recursive functions - Understanding read functions, read(), readline() and readlines() - Understanding write functions, write() and writelines() - manipulating file pointer using seek - Programming using file operations

TEXT BOOKS :

1. Python Programming – Reema Thareja , Oxford University Press , 2017.

2. Think Python – Allen B.Downey ,O'Reilly Publications, 2nd Edition.

REFERENCE BOOK:

1. Exploring Python – Timothy A.Budd, Tata Mc Graw Hill, 2017

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
UNIT – I INTRODUCTION TO PYTHON				
1.1	Installation and Working with Python	2	Chalk & Talk	Black Board
1.2	Python basic Operators	3	Chalk & Talk	LCD
1.3	Declaring and using Numeric data types: int, float, complex	2	Lecture	PPT & White board
1.4	Testing a "Stand Alone" Application Using the command window	2	Lecture	Smart Board
1.5	-Using string data type and string operations	2	Lecture	Smart Board
1.6	Use of Tuple data type	2	Lecture	Smart Board
UNIT -II PYTHON PROGRAM FLOW CONTROL				
2.1	Organizing python codes using functions	2	Chalk & Talk	Black Board
2.2	Organizing python projects into modules -undocking the windows	2	Chalk & Talk	LCD
2.4	Importing own module as well as external modules	3	Lecture	Smart Board
2.5	Programming using functions,	3	Lecture	Smart Board

2.6	Powerful Lamda function in python	2	Lecture	LCD
2.7	classification of properties	2	Lecture	Smart Board
2.8	Modules and external packages.	2	Lecture	Smart Board
UNIT III - PYTHON FUNCTIONS, MODULES AND PACKAGES				
3.1	Organizing python codes using functions	3	Lecture	Smart Board
3.2	Importing own module as well as external modules	3	Lecture	Smart Board
3.3	–Powerful Lambda function in python	3	Lecture	Smart Board
3.4	Auto list members and parameter information	3	Lecture	Smart Board
3.5	Programming using functions	2	Chalk & Talk	Black Board
3.6	External Functions	2	Lecture	Smart Board
3.7	setting run-time properties.	1	Chalk & Talk	LCD
UNIT IV PYTHON STRING, LIST, DICTIONARY MANIPULATIONS				
4.1	Building blocks of python programs	2	Chalk & Talk	Black Board
4.2	Understanding string in build methods	2	Chalk & Talk	LCD
4.3	Arithmetic operators	3	Lecture	PPT & White board
4.4	Data types	2	Lecture	Smart Board

4.5	Programming using string, list	2	Lecture	Black Board
4.6	Dictionary manipulation ,	2	Discussion	Google classroom
4.7	List manipulation using in build methods	2	Lecture	Black Board
UNIT V – PYTHON FILES OPERATIONS				
5.1	Design with functions: hiding redundancy, complexity.	2	Chalk & Talk	Black Board
5.2	Understanding read functions, read(), readline() and readlines()	3	Chalk & Talk	LCD
5.3	Recursive functions	2	Lecture	PPT & White board
5.4	List-Box Control	3	Lecture	Smart Board
5.5	Arguments and return values; formal vs actual arguments,	3	Lecture	Smart Board
5.6	Understanding write functions, write() and writelines()	2	Lecture	Smart Board
5.7	Named arguments	2	Lecture	Smart Board
5.8	Programming using file operations	2	Lecture	Smart Board
5.9	Manipulating file pointer using seek	2	Lecture	Smart Board

INTERNAL - PG

Levels	C1 T1 10 Mks.	C2 T2 10 Mks.	C3 Seminar 5 Mks.	C4 Assignment 5 Mks	C5 OBT/PPT 5 Mks	Total Scholastic Marks 35 Mks.	Non Scholastic Marks C6 5 Mks.	CIA Total 40 Mks.	% of Assessment
K2	4	4	-	-	-	8	-	8	20 %
K3	2	2	-	5	-	9	-	9	22.5 %
K4	2	2	-	-	5	9	-	9	22.5 %
K5	2	2	5	-	-	9	-	9	22.5 %
Non Scholastic	-	-	-	-	-		5	5	12.5 %
Total	10	10	5	5	5	35	5	40	100 %

END SEMESTER - PG

Levels	Section A 10 Mks	Section B 20 Mks.	Section C 10 Mks	Section D 10 Mks.	Section E 10 Mks.	Total 60Mks.	
K2	10	5	-	-	-	15	25 %
K3	-	5	10	-	-	15	25 %
K4	-	5	-	-	10	15	25 %
K5	-	5	-	10	-	15	25 %
Total	10	20	10	10	10	60	100 %

Curriculum for PGDCA

CIA

Scholastic	**35**
Non Scholastic	**5**
	40

✓ **All the course outcomes are to be assessed in the various CIA components.**

✓ **The levels of CIA Assessment based on Revised Bloom's Taxonomy for I PG are :**

K1- Remember, **K2**-Understand, **K3**-Apply, **K4**-Analyse

✓ **The I PG course teachers are requested to start conducting S1, W1, M1.**

EVALUATION PATTERN

SCHOLASTIC				NON - SCHOLASTIC	MARKS		
C1	C2	C3	C4	C5	CIA	ESE	Total
5	10	15	5	5	40	60	100

C1 – Average of Two Session Wise Tests

C2 – Average of Two Monthly Tests

C3 - Mid Sem Test

C4 – Best of Two Weekly Tests

C5 – Non – Scholastic

COURSE OUTCOMES

On the successful completion of the course, students will be able to:

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Assess why Python is a useful scripting language for developers.	K1	PSO1& PSO2
CO 2	Identify Python object types.	K1, K2 & K3	PSO1, PSO2, PSO3
CO 3	Illustrate the usage of Lists, tuples, and Dictionaries in Python Programs.	K2, K3 & K4	PSO5
CO 4	Acquire how to design and program Python applications.	K1, K2, K3 & K4	PSO3, PSO5
CO 5	Outline the file operations in Python.	K2, K3 & K4	PSO4, PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	1	2
CO2	2	3	3	2	1
CO3	2	1	3	2	3
CO4	2	2	1	2	3
CO5	2	1	2	2	1

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	2	2	1	2
CO3	2	3	2	3	3
CO4	3	1	2	3	2
CO5	2	2	2	3	3

COURSE DESIGNER

STAFF NAME:1. PUNITHA ROSLINE A

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –II

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATE GORY	HRS/WEEK	CREDITS
OSCA	**19PDB20 3**	**LAB –IV RDBMS**	**PG Core**	**3**	**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.

COURSE CONTENTS & LECTURE SCHEDULE:

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
LAB IV RDBMS				
1.1	DDL & DML Commands	1	Demo & Working in Lab	LCD
1.2	Simple Queries	1	Demo & Working in Lab	LCD
1.3	Simple Queries	1	Demo & Working in Lab	LCD
1.4	Fibonacci	1	Demo & Working in Lab	LCD
1.5	Sum of numbers	1	Demo & Working in Lab	LCD
1.6	Perfect and Prime	1	Demo & Working in Lab	LCD
1.7	EB calculations	1	Demo & Working in Lab	LCD
1.8	Reverse	1	Demo & Working in Lab	LCD

COURSE OUTCOMES

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Critique SQL commands to create tables and indexes	K1	PSO1& PSO2
CO 2	Apply DDL and DML commands in real time applications	K1, K2 & K3	PSO1, PSO2, PSO3
CO 3	Understand the needs of triggering applications	K2, K3 & K4	PSO5
CO 4	Disseminate knowledge of RDBMS and SQL, both in terms of design and implementation usage	K1, K2, K3 & K4	PSO3, PSO5
CO 5	Write dynamic queries to demonstrate the concepts of RDBMS	K2, K3 & K4	PSO4, PSO5

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	1	2
CO2	2	3	3	2	1
CO3	2	1	3	2	3
CO4	2	2	1	2	3
CO5	2	1	2	2	1

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	3	2	1	2
CO3	2	3	2	3	3
CO4	2	1	2	3	2
CO5	3	2	2	3	3

COURSE DESIGNER

STAFF NAME:1. AROCKIA JACKULINE JONI J

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE

PGDCA

SEMESTER –II

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
OSCA	19PDB204	LAB –V PYTHON PROGRAMMING	PG Core	3	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.

PROGRAM LIST:

- 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

Curriculum for PGDCA

Module No.	Topic	No. of Lectures	Teaching Pedagogy	Teaching Aids
LAB V PYTHOM PROGRAMMING				
1.1	Python basic Operators	1	Demo & Working in Lab	LCD
1.2	Declaring and using Numeric data types: int, float, complex	1	Demo & Working in Lab	LCD
1.3	Use of Tuple data type	1	Demo & Working in Lab	LCD
1.4	Using string data type and string operations	1	Demo & Working in Lab	LCD
1.5	Programming using functions	1	Demo & Working in Lab	LCD
1.6	External Functions	1	Demo & Working in Lab	LCD
1.7	Programming using file operations	1	Demo & Working in Lab	LCD
1.8	Named arguments	1	Demo & Working in Lab	LCD

COURSE OUTCOMES

NO.	COURSE OUTCOMES	KNOWLEDGE LEVEL (ACCORDING TO REVISED BLOOM'S TAXONOMY)	PSOs ADDRESSED
CO 1	Assess why Python is a useful scripting language for developers.	**K1**	**PSO1& PSO2**
CO 2	Identify Python object types.	**K1, K2 & K3**	**PSO1, PSO2, PSO3**
CO 3	Illustrate the usage of Lists, tuples, and Dictionaries in Python Programs.	**K2, K3 & K4**	**PSO5**
CO 4	Acquire how to design and program Python applications.	**K1, K2, K3 & K4**	**PSO3, PSO5**
CO 5	Outline the file operations in Python.	**K2, K3 & K4**	**PSO4, PSO5**

Mapping COs Consistency with PSOs

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	1	2
CO2	2	3	3	2	1
CO3	2	1	3	2	3
CO4	2	2	1	2	3
CO5	2	1	2	2	1

Mapping of COs with POs

CO/PO	PO1	PO2	PO3	PO4	PO5
CO1	3	3	2	2	1
CO2	3	2	2	1	2
CO3	2	3	2	3	3
CO4	3	1	2	3	2
CO5	2	2	2	3	3

COURSE DESIGNER

STAFF NAME:1. PUNITHA ROSLINE A

FORWARDED BY

(S.SELVARANI)

HOD'S NAME & SIGNATURE