FATIMA COLLEGE

(Autonomous)

Re-Accredited with 'A++' by NAAC (Cycle- IV)

Mary Land, Madurai - 625018.

NAME OF THE DEPARTMENT : UG COMPUTER APPLICATIONS

NAME OF THE PROGRAMME : PGDCA

PROGRAMME CODE : OSCA

ACADEMIC YEAR : 2023-2024

Fatima College (Autonomous), Madurai - 625 018

The Minutes Of The Board Of Studies

Department Of Computer Applications [BCA & PGDCA]

To Be Implemented From 2022-2023 Onwards

The board of Studies meet for framing the Syllabus for Department of Computer Applications [BCA & PGDCA] Was held on 21.03.2022 at 10:30 Am

The members of the board were,

University Nominee (BCA) :

Dr. M. Ramakrishnan,
Professor & Head Chair Person,
Department Of Computer Applications,
School Of Information Technology
Madurai Kamaraj University
Madurai.

University Nominee (PGDCA) :

Dr. M. Ramaswami
Professor,
Department Of Computer Applications,
School Of Information Technology,
Madurai Kamaraj University,
Madurai.

SUBJECT EXPERT :

Dr. S. Shajun Nisha
Assistant Professor & Head,
PG & Research Department Of Computer Science,
Sadakkathulla Appa College,
Rahmath Nagar,
Tirunelveli.

SUBJECT EXPERT :

Dr. S. Padmavathi,
Professor,
Department Of Information Technology,
Thiagarajar College Of Engineering,
Madurai - 625 015.

INDUSTRIALIST :

Ms. A. Divya Sri,
Software Developer,
BSE Tech Pvt Ltd,
Madurai - 16

ALUMNA :

Ms. Varshini Oom
3.6.2 Rajaji Street,
Melachokkanathapuram,
Bodi Nayakanur
Theni.

Ms. S. Selva Rani,
Assistant Professor & Head,
Department Of Computer Applications
Fatima College
Madurai — 18

Dr. G. Preetha,
Assistant Professor,
Department Of Computer Applications
Fatima College
Madurai — 18

Ms. R. Ramya,
Assistant Professor,
Department Of Computer Applications,
Fatima College,
Madurai — 18

Ms. J. Arockia Jackuline Joni,
Assistant Professor,
Department Of Computer Applications
Fatima College
Madurai — 18

Ms. A. Punitha Rosliive
Assistant Professor,
Department Computer Applications
Fatima College
Madurai — 18

DEAN OF ACADEMIC AFFAIRS :

Ms. A. Mable Jasmine Shoba.   1. Mable Jasmini Sho

In the beginning of the meeting the Head of
Department Ms.S.Selvarani Welcomed all the members of
board and briefed them about the current updations a
progress of the department.

The members of the board expressed their li
appreciation and Satisfaction about the department.

Action taken Report for 2021-2022

S.NO	COMMON SUGGESTIONS OFFERED IN THE PREVIOUS BOARD	ACTION TAKEN FOR THE ACADEMIC YEAR 2021-22
1.	The Skill based Course 19J3SB1 Quantitative Aptitude Can be replaced with the title Logical Reasoning and Data Interpretation.	Title Change was done to make the Students Concentrate more on data interpretation and reasoning.
2.	The 19JINME - Non major Elective Flash is outdated and can be replaced with any other Open Source Animation tool.	NME - Animation Tools and Techniques (ALICE - Open Source Tool) was introduced to develop creativity Skills and to impart animation techniques and create motion movies.
	For Diploma,	
3.	The title for the Course 19PDB101 - Computer Fundamentals and OS can be replaced with Computer Fundamentals.	Title Change was done and the fundamentals of Operating System Concept was included.
4.	Lab Course 19PBB105 - web programming and photo Editing Techniques can be replaced with the title web programming.	Title Change was done, to get more Knowledge in web development Skills.

S.NO	COMMON SUGGESTIONS OFFERED IN THE PREVIOUS BOARD	ACTION TAKEN FOR THE ACADEMIC YEAR 2021-22.
5.	Photo Editing Techniques can be given as separate lab Course.	Photo Editing Techniques w introduced as a separate Course.
6.	Python Programming can be introduced as a new Course	Python Programming was introduced to gain knowled in real time applications.

CHANGE OF COURSE TITLE - 2020-2021

S.NO	OLD COURSE CODE	NEW COURSE CODE	OLD COURSE TITLE	NEW COURSE TITLE	NEED FOR CHANG
1.	19J3SB1	19J3SB1	Quantitative Aptitude	Logical Reasoning and Data Interpretation	To make the stud Concentrate mor on data interpretat and reasoning
2.	19PDB101	19PDB101	Computer Fundamentals and OS	Computer Fundamentals	To make the Students learn the working of Operating system
3.	19PDB105	19PDB105	Web Programming and Photo editing Techniques.	Web Programming	To get more knowledge in website developmen Skills.

NEW COURSES INTRODUCED - 2020-2021

S.No	COURSE CODE	COURSE TITLE	RELEVANCE TO*			SCOPE FOR #				NEED FOR INTRODUCTION
			L	R	N	G	EMP	ENT	SD	
1	21J1NME	NON MAJOR ELECTIVE- ANIMATION TOOLS AND TECHNIQUES				*	#	#	#	To develop programming skills and impart animation techniques and motion movies.
	21J2NME	Non major Elective -Ani -mation Tools & Techniques.				*	#	#	#	To develop programming skills and impart animation techniques and motion movies.
	21J2SL1	OPEN SOURCE ANIMATION TOOLS				*	#	#	#	To develop programming skills and impart animation techniques and motion movies.
	21J4SLJm2	CONTENT WRITING AND VIDEO MAKING				*	#	#	#	To create Content while designing web pages and working on videos.
	21J6SLT6	DATA SCIENCE				*	#	#	#	To know about R language that is widely used to do analysis and focus on research.
	21PDB106	LAB III - DESIGN Techniques.				*	#	#	#	To improve employability skills.
	19PDB202	Python programming				*	#			To gain knowledge in real time applications.

Revised Courses 2020-2021

S. No	Course Code	Course Title	No. & Title of units Revised with the Revised Content Specified if it is Not the Whole Unit	% of Revision	Need For Revision	Relevance To *				Scope For #	
						L	R	N	G	Emp	Ent
1.	J5CC12	Java Programming	Control Statements, Inheritance, I/o Streams, Two event handling mechanism, Gui Programming.	45%	Concepts are more detailed.				*	#	
2.	J5CC13	Lab-V Java Programming	Revision based on theory.	45%	—				*	#	S.
3.	J5CC14	Lab-VI Dot Net Programming	Rension based on theory.	70%	—				*	#	#
4.	J5ME1	Dot Net Programming	Dot net framework, VB.Net features, Removed, VB.Net, ADo.Net.	70%	more Concepts of Asp. net instead of VB.Net				*	#	#

2022 Onwards

1. Updation of open educational Resources in the list of references of each course.

S.No	Course Code	Course Title	Details Of Updation
	NIL		

2. REVISION OF COURSES

S.No	Course Code	Course Title	No. & Title of Units Revised with the Revised Content Specified If it is Not The Whole Unit	% of Revision	Need for Revision	Relevance TO *				Scope For #		
						L	R	IV	bn	Emp	Entre	SD
1.	19J1CC1	Programming in C	II & IV - Application Implementation	10%	To know how to use the concept real time			*	#			#
2.	19J1CC2	Lab in C	Revision based on Theory.	10%	To know how to use the concept real time			*	#			#
3.	19J2CC3	Object oriented Programming in C++	III & IV - Application Implementation.	10%	To know how to use the concept real time			*	#			

S. No	Course Code	Course Title	No & Title of units Revised with the Revised Content Specified If it is Not The Whole Unit	% of Revision	Need for Revision	Relevance to *						Scope for #	S. No
						L	R	N	G	Emp	Entre		
4.	19J2CC4	Lab in CH	Revision based on Theory	10%	To know how to use the concept real time				*	#			9.
5.	19J3CC5	Operating Systems	III - Bankers Algorithm V - RISC & CISC to be added.	10%	Get knowledge on algorithms				*			#	10.
6.	19J3CC6	Lab in Relational Database Management Systems.	Include Lab programs based on real time applications.	10%	To know how to use the concept real time				*	#			
7.	19J5CC9	Software Engineering	II - Models to be added	10%	To analyze on the different kinds of models.				*			#	
8.	19J5ME1	Cloud Computing	Cloud Services and Stack - II unit	10%	To know about Services				*	#			

FOR DIPLOMA

S.No	Course Code	Course Title	No & Title of Units Revised with the Revised Content Specified if it is Not The Whole Unit.	% of Revision	Need For Revision	Relevance To *						Scope For #
						L	R	N	G	Emp	Entre	SD
9.	19PDB101	Computer Funda -mentals	Allocation of frames and thrashing – IV	10%	To know about thrashing					* #		
10.	19PDB105	Lab - Web progra -mming	Programs using JavaScript added	10%	To get knowledge On scripts					*		#

3. New Courses Introduced – 2022 – 2023.

NEW COURSES INTRODUCED

S.No	Course Code	Course Title	Relevance To *							Scope For #	Need For Introduction
			L	R	N	G	Emp	Entre	SD		
1.	22J6SB5	Skill based - V Power- BI			*					#	To make the Students learn about the latest Collection of Software Services, apps and Connections working together.

4. Introduction of purely Skill embedded Certificate/ Diploma / Advanced Diploma Value - Added Course Other than the Value added Course that is already being offered.

S. NO	COURSE CODE	COURSE TITLE	MOU with INDUSTRY/ ORGANIZA-TION	SKILLS SHARPENED	COURSE OUTCOME
		Value added Certificate Course Cloud Computing Services.	-	Improving App development Skills Services and know about Various Cloud terminologies	Understand properties, methods and events of cloud Services. Utilize and understand different cloud Service formats. - Utilize the free and open source cloud Services_ Analyze the use of Virtualization.

5. Approval of Ph.D Course work Syllabus - NIL

6. Rubrics for Internship / Project.

S.NO	C1 20marks	C2 20 marks	CIA Total 40 marks	EXTERNAL 60 marks.
1.				

DETAILS OF PROPOSED / SIGNED MoUs.

- L - Local   # - Employability

- R - Regional   # - Entrepreneurship

- N - National   # - Skill Development.

- G - Global.

OTHER SUGGESTIONS :

1. In Data Mining Algorithms can be reduced

2. For E-Content Development Course practical oriented Concepts can be added.

3. L/P/T - Lecture Practical Tutorial Concepts can be followed in the Syllabus.

4. Including latest Concepts like Cloud, IoT, Networks and Information Security for Pㄴ Diploma.

COMMENDATIONS :

1. PHP can be added in Web Programming instead of Ag

2. Online Courses or Self learning Course can be taken by advanced Learners.

3. Latest Edition of Text books to be given and maintain the order.

4. E-books can be Circulated for Pㄴ Diploma Students.

1. Dr. M. Ramakrishnan

2. Dr. M. Ramaswami

3. Dr. S. Shajun Nisha

4. Dr. S. Padmavathi

5. Ms. A. Divya Sri

6. Ms. Varshini Dom

7. Ms. S. Selva Rani

8. Dr. G. Preetha

9. Ms. R. Ramya

10. Ms. J. Arockia Jackuline Joni

11. Ms. A. Punitha Rosline.

12. Ms. A. Mable Jasmine Shoba
    Dean Of Academic Affairs.

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.

PROGRAMME OUTCOMES (PO)

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

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.
PSO 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
PGDCA

PROGRAMME CODE: OSCA

COURSE CODE	COURSE TITLE	HRS / WK	CREDIT	CIA Mks	ESE Mks	TOT. MKs
SEMESTER - I						
19PDB101	Computer Fundamentals	3	3	40	60	100
23PDB102	Problem solving using C and C++	3	3	40	60	100
19PDB103	Web Designing	3	3	40	60	100
23PDB104	Lab –I Programming in C and C++	3	2	40	60	100
19PDB105	Lab –II Web Programming	3	2	40	60	100
19PDB106	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	4	3	40	60	100
19PDB203	Lab –IV RDBMS	3	2	40	60	100
21PDB204	Lab –V Python Programming	3	2	40	60	100
19PDB205	Project & viva voce	4	4	40	60	100
19PDB206	Internship (1month)	-	5	100	-	100

COURSE CODE	COURSE TITLE	HRS / WK	CREDIT	CIA Mks	ESE Mks	TOT. MKs
Total		18	19	-	-	-

PGDCA
SEMESTER –I

PROGRAM ME CODE	COURSE CODE	COURSE TITLE	CATEGO RY	HRS	CREDITS
OSCA	19PDB101	COMPUTER FUNDAMENTALS	THEORY	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.

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/

NEW

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

4. To have in–depth knowledge about the functionalities of the operating systems.
5. To learn the mechanisms of OS to handle processes and threads and their communication.
6. 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:

6.   Alexis Leon, Mathews Leon, "Fundamentals of Information Technology", Leon Press, 1999.

7.   Deitel H.M, Operating System, 7th Edition, Pearson Education, 1996

8.   Silberscahatz Galvin Gagne, Operating System Concept, VI Edition, John Wiley's Sons, 2010.

9.   Operating System, Concept & Design, II Edition,2001 TATA McGraw – Hill.

10.   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/

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SEMESTER –I

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
OSCA	19PDB105	LAB-II Web Programming	PRACTICAL	3	2

COURSE DESCRIPTION:

- To provide the student with foundationalprogramming 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

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SEMESTER –I

NEW

PROGRAMME CODE	COURSE CODE	COURSE TITLE	CATEGORY	HRS/WEEK	CREDITS
OSCA	19PDB105	LAB-II Web Programming	PRACTICAL	3	2

10%

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
- Captcha Generation using String functions
- validation
- conditional statements in Javascript
- Looping in javascript