PERIYAR UNIVERSITY

(NAAC 'A++' Grade with CGPA 3.61 (Cycle - 3)

State University - NIRF Rank 56 - State Public University Rank 25

SALEM - 636 011

CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

M.C.A

[SEMESTER PATTERN]

(2024-25 Onwards)

PROGRAMME PROJECT REPORT (PPR)

(Effective from the academic year 2024 – 2025)

Programme Project Report (PPR)

I. Programme's Mission and Objectives

Mission

- To offer accredited post graduate and research programmes with the state of-art technology throughout the Nation
- To maintain high academic standards and teaching quality
- To be a centre of excellence for research and innovation in frontierareas of Computer Science and technology relevant to the country

Programme Objectives

- Sound background in fundamental core concepts and Computational principles, which are applied for complex problems Solving
- Developing the professional skills and entrepreneur skills with Team work, leadership and communication qualities
- Practicing lifelong learning for successful professional career withEthical values

II. Relevance of the Program with HEI's Mission and Goals

The introduction of the M.C.A. program by the Centre for Distance and Online Education at Periyar University aligns with the institution's mission and goals, particularly in embracing technology-driven education. This approach enhances learning by effectively imparting advanced concepts. The Directorate of Distance Education, supported by a team of highly qualified and experienced educators, offers academic counseling and guidance to students. Therefore, integrating the M.C.A. Program into the university's distance education framework significantly contributes to fulfilling Periyar University's educational mission.

III. Nature of Prospective Target Group of Learners

The target audience for this program seeks to organize and provide a structured approach to learning experiences. It specifically aims to improve the professional competencies and computer skills of economically disadvantaged individuals, rural residents, women, unskilled men, and minority groups.

IV. Appropriateness of Programme to be conducted in Open and Distance Learning Mode to acquire specific skills and competence

Programme outcomes:

- **PO1:** Train the students with Deep Core subject knowledge (including the fundamental concepts, computational models, advanced core techniques, appropriate Domain expertise). Apply the knowledge of deep core concepts to conceptualize the computational models. Accredited or validated against national or international standards.

- **PO2:** Skilled with strategic thinking, problem solving, making better use of in tuition, learning to evaluate better, and recognizing the essence of things. Analyze the complex problems and to evaluate and assess information in a practical and technical way and ends up with the specialized computational models to provide valid decisions.

- **PO3:** Investigating the real world problems to design and develop the computational framework to cope with real world expectations; to fit that model to the complex real-time data and to apply appropriate research methods to synthesis the information to make appropriate decisions

- **PO4:** Trained to apply effective management skills to produce specific project outcomes

- **PO5:** Capable to learn and apply recent domain specific knowledge in the computer science and applications industry

- **PO6:** Skilled to work effectively as a member and also as a leader in multi-disciplinary teams.

- **PO7:** Trained to communicate the technical aspects with computing professionals and with society at large. Such ability includes listening reading, speaking and writing, and the ability to comprehend and effective technical report writing and document preparation.

- **PO8:** Trained to think and act professionally to adapt themselves in their work places and society to show case their talents and skills smartly for their self up liftmen. Aware about the cyber regulations and professional ethics, responsibilities and norms of professional computing practice.

- **PO9:** Trained to update themselves periodically with the current/modern technologies and enrich their knowledge through various online MOOC Courses to cope with the current industrialrequirements.

- **PO10:** To inculcate the passion for continuum learning for a successful Professional career

- **PO11:** Adapt at operating in other cultures, comfortable with different Nationalities and social contexts, able to determine and contribute to desirable social outcomes. Avoiding unethical behavior such as Fabrication, falsification of Data, committing plagiarism

- **PO12:** Identify the timely opportunity and using innovation to pursue that opportunity to create value and wealth for the better men to theindividual and the society at large.

Programme Specific Outcomes:

- **PSO1:** To develop the abilities to acquire deep knowledge of fundamental and core theoretical and programming concepts for holistic development

- **PSO2:** Design, develop and test the software systems for real-time socio-economic problems

- **PSO3:** Analyze and recommend appropriate IT Solutions

V. Instructional Design

Course	Paper Code	No. of Credits	Examination Duration (hrs)	Marks		
				I. A	ES E	Total
Semester-I						
Core Theory Linux and shell programming	24DPCA01	4	3	25	75	100
Core Theory Python Programming	24DPCA02	4	3	25	75	100
Core Theory Discrete Mathematics	24DPCA03	4	3	25	75	100
Core Lab Linux and shell programming Lab	24DPCAP01	2	3	40	60	100
Core Lab Python Programming Lab	24DPCAP02	2	3	40	60	100
Core Lab Industry Dynamics Technology - Data Visualization Lab (self-study course)	24DPCAP03	2	3	40	60	100
Core Lab Soft Skill Development Lab	24DPCAP04	2	3	100	-	100
Elective–01 Theory	24DPCAP04	3	3	25	75	100
Elective–01 Lab	24DPCAE02	1	3	40	60	100
Total		24				900

Course	Paper Code	No. of Credits	Examination Duration (hrs)	Marks		
				I.A	ES E	Total
Semester- II						
Core Theory Data Structures and Algorithms	24DPCAP05	4	3	25	75	100
Core Theory Big Data Analytics	24DPCA04	4	3	25	75	100
Core Lab Data Structures and Algorithms Lab	24DPCAP06	2	3	40	60	100
Core Lab Big Data Analytics -Lab	24DPCAP07	2	3	40	60	100
Core Mini Project		3	-	40	60	100
Fundamentals of Human Rights		2	3	25	75	100
Elective-02 Theory		3	3	25	75	100
Elective-02 Lab		1	3	40	60	100
Elective-03 Theory		3	3	25	75	100
Elective-03 Lab		1	3	40	60	100

SWAYAM		2	-	-	100	100
Total		**27**				**1000**

Course	Paper Code	No. of Credits	Examination Duration (hrs)	Marks		
				I.A	ESE	Total
Semester- III						
Core Theory Advanced Java Programming	24DPCA06	4	3	25	75	100
Core Theory Web Technology	24DPCA07	4	3	25	75	100
Core Theory Advanced Machine Learning (AML)	24DPCA08	4	3	25	75	100
Core Lab Advanced Java Programming lab	24DPCAP08	2	3	40	60	100
Core Lab WebTechnologyLab	24DPCAP09	2	3	40	60	100
Core Lab Integrated Technology (AML) Lab (Self-study course)	24DPCAP10	2	3	40	60	100
Core Internship		2	-	-	100	100
Supportive Course		4	3	25	75	100
Elective–04 Theory		3	3	25	75	100
Elective–04 Lab		1	3	40	60	100
Total		**28**				**1100**

Course	Number of Credits	Hours Per Week	Examination Duration(hrs)	Marks		
				I.A	ESE	Total
Semester IV						
Core Credit Seminar	02	-	-	100	-	100
Core Major Project	13	-	-	50	150	200
	15					300
Total	**94**					**3300**

Faculty and Support Staff:

The University has appointed the necessary faculty and support staff specifically for ODL mode, in compliance with UGC requirements. The course materials developed by the CDOE faculty meet the standards set by the 2020 regulations.

Staff Category	Required
Assistant Professor	2
Supportive Staff	1
Total	**3**

Delivery Mechanism:

CDOE ODL employs a modern ICT (Information & Communication Technology) enabled approach for instruction, distinct from conventional or regular programs. This methodology is more learner-oriented, with the learner actively participating in the teaching-learning process. The academic delivery system of CDOE ODL includes:

Print Material:

The printed material of the programme supplied to the students will be unit wise for every course.

Counselling Sessions:

There will be 6 counseling/ contact classes in face to face mode of two hours each for a course of 4 credits. The counseling sessions / Personal Contact Programme (PCP) classes will be held on the campus of the University on Saturdays and Sundays.

Medium of Instruction:

The medium of course instruction and examination will be in English.

VI. Procedure for admission, curriculum transaction and evaluation of M.C.A programme

Admission Procedure:

Admission to the M.C.A programme will be based on evaluating candidates' eligibility. Admission is not guaranteed, and Periyar University CDOE reserves the right to cancel any admission at any time if any irregularities are discovered in the admission process or eligibility criteria.

Duration of the Programme:

The maximum duration for **M.C.A**. programme is 2 (Course duration) + 5 years. If a student does not complete the program within seven years, they must apply for special examinations.

Eligibility:

A candidate who has passed 10, +2, +3 is eligible to apply for MCA programme.

Fee Structure:

Name of the Programme	Degree	Duration	Year	Fee (in Rs.)
Master of Computer Applications	PG	2 (Course duration) + 5 years	I	17,450
			II	16,530

Credit System:

Periyar University, CDOE plans to implement the 'Credit System' for most of its programs. Each credit corresponds to 30 hours of study, encompassing all learning activities. Therefore, an 8-credit course requires 240 hours, a 6-credit course requires 180 hours, a 4-credit course requires 120 hours, and a 2-credit course requires 60 hours of study. This system helps students gauge the academic effort needed to complete a course. To finish an academic program, students must successfully complete both the assignments and the term-end examinations for each course in the program.

Evaluation:

The evaluation system of the programme is based on two components:

Continuous Evaluation through assignments (25%weightage):

This component holds a 25% weightage. Each course will have at least one graded assignment and test. Students must submit these assignments to the Coordinator of the CDOE.

Term-End Examination (75% weightage):

These exams are conducted twice a year. Students may choose to take any of the exams offered by the University during the year. To be eligible for the Term-End Examination, students must have registered for the course and submitted the assignment. Students must submit an Examination form online (www.periyaruniversity.ac.in) or offline before the due dates specified in the schedule of operations. If a student misses any term-end examination for a course, they can appear for it in any subsequent term-end examinations. This option is available until the student secures the minimum pass grade in the courses. After this period, the student can extend for another ten semesters by paying the fee again. The Candidates shall be declared to have passed the examination if he/she secures not less than 50 marks in total (CIA mark + Theory Exam mark) with minimum of 30 marks in the Theory Exam conducted by the University practical Exam conducted by the University.

QUESTION PAPER PATTERN

Duration: **Three Hours** **Maximum Marks:75**

Part A: (10X2=20marks) Answer ALL Questions
Part B: (3X5=15marks) Answer any THREE Questions(THREE out of FIVE questions)
Part C: (5X8=40 marks) Answer ALL Questions (One Question from Each Unit with internal choice)

(a) Passing Minimum Theory and Practical examination:

The candidate shall be declared to have passed the examination if the candidate secures not less than 50% marks in the University examination in each paper / practical. However submission of a record notebook is a must.

(b) **Dissertation:**

For the project work and viva-voce a candidate should secure 50% of the marks for pass. The candidate should compulsorily attend viva-voce examination to secure pass in that paper.

QUESTION PAPER PATTERN

1. One compulsory question from the given list of programmes : 30 Marks
2. One Either / OR type question from the given list of programmes : 45Marks

Distribution of Marks

For Writing procedures / programs in the main answer book - 40%

For listing and debugging - 40%

For correct and formatted output- 20%

Dissertation and Project work

Evaluation (Internal)	: 50 Marks
Evaluation (External)	:100 Marks (Joint Viva Voce)
	50 Marks (External Evaluation)

Regulations of Project Work

a. Students should do their Project work in Company / Institutions.

b. The students should prepare three copies of the dissertation and submit the same to the study centre. One copy is to be retained in the centre library and one copy is to be submitted to the University (Director - CDOE) and the student can hold one copy.

Classification of Successful Candidates:

Candidates who secure not less than 60% of the aggregate marks in the whole examination shall be declared to have passed the examination in First Class. All other successful candidates shall be declared to have passed in Second Class. Candidates who obtain 75% of the marks in the aggregate shall be deemed to have passed the examination in First Class with Distinction provided they pass all the examinations prescribed for the course at the first appearance. Candidates who pass all the examinations prescribed for the course in the first instance and within a period of three academic years from the year of admission to the course only are eligible for University Ranking.

Scheme of evaluation for practicum

The student has to secure 50% in each and every category of practicum examinations.

Classification of Result

Marks	Grade Point	CGPA	Letter Grade	Description
96 and above	10	9.51 and above	S+	First Class –
91-95	9.5	9.01-9.50	S	Exemplary
86-90	9.0	8.51-9.00	D++	First Class
81-85	8.5	8.01-8.50	D+ D	Distinction
76-80	8.0	7.51-8.00		
71-75	7.5	7.01-7.50	A++	
66-70	7.0	6.51-7.00	A+	First Class

Passing Minimum 50% P: Pass, ESE: End Semester Examination, CIA: Continuous Internal Assessment

$$\mathbf{GPA} = \frac{\Sigma\ \mathbf{(CDT \times GPT)}}{\Sigma\ \mathbf{CDT}}$$

Where: CDT – No. of credits of core, optional and elective courses

GPT= Grade Point (obtained by dividing the percentage of marks scored by 10)

VII. Requirement of the Laboratory Support and Library Resources

Laboratory Support:

The well sophisticated Computer laboratory facilities of Periyar University provide the all technology resources like 120 Systems with HPC Server connection along with software. All the systems are well connected with LAN and WIFI facilities. The University provides a 1 GBPS internet connection to the learners for academic as well as research purposes.

Library Resources:

The Central Library is one of the important central facilities of Periyar University. It has Textbooks, reference books, conference proceedings, back volumes, standards, and

non-book material such as CD-ROMs and audio. The central library procured several e-books in different areas.

All routine functions of the library are automated with the help of an integrated library software package, developed and distributed by UGC INFLIBNET. The database the entire collection has been created and is available through the online Public Access Catalogue (OPAC) to the users via campus network.

The Centre for Distance and Online Education (CDOE) at Periyar University has begun establishing a dedicated library for the ODL program and is in the process of acquiring printed books and e-books for this purpose.

VIII. Cost Estimate of the Programme and the Provisions

The University has already incurred initial expenses for infrastructure, manpower, SLM preparation, and other necessities. The University plans to allocate expenses from the total fee collection, based on the admission of students as follows:

- ✓ SLM Printing and Delivery – 20%
- ✓ Salary and Administrative Expenses – 60%
- ✓ Software Development & Maintenance – 10%
- ✓ Future Developments – 10%

IX. Quality Assurance Mechanism

The University has established the Centre for Internal Quality Assurance (CIQA) on its campus. The CIQA will oversee and ensure the quality of the ODL programs. The CIQA of Periyar University's Centre for Online and Distance Education includes the Vice-Chancellor as the Chairperson, three senior teachers from Higher Educational Institutions, Heads of three departments or schools offering recognized programs in Open and Distance Learning and Online modes, two External Experts in Open and Distance Learning and/or online education, Officials from the Administration and Finance departments, and the Director of the Centre for Internal Quality Assurance as the Member Secretary.

The objective of the CIQA is to develop and implement a comprehensive and dynamic internal quality assurance system. This system will ensure that the higher education programs offered in the Open and Distance Learning (ODL) and Online modes by the Higher Educational Institutions are of acceptable quality and are continuously improved.