

MAHENDRA ARTS & SCIENCE COLLEGE

(Autonomous)

Affiliated to Periyar University, Salem.

**Accredited by NAAC with 'A' Grade & Recognized u/s 2(f) and 12(B) of the UGC Act 1956
Kalippatti – 637 501, Namakkal (Dt), Tamil Nadu.**



DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

COURSE OUTCOMES (COs)

M.Sc. COMPUTER SCIENCE

PRINCIPAL

MAHENDRA ARTS & SCIENCE COLLEGE

(Autonomous)

Kalippatti (PO) - 637 501, Namakkal (DT)

**For the students
admitted from the
Academic Year 2019-2020 onwards**

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS01		Core Course – I - Design and Analysis of Algorithm		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	5	75	4

Course Objectives

This course covers the fundamental techniques for designing and analysing algorithms, including, Trees, graphs, divide and conquer algorithms and recurrences. It also presents effective search methods, graph algorithms and randomized algorithms.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the basics and data structures of algorithm	K2
CO2	Understand data structures and the concepts of algorithms for searching, sorting	K2
CO3	Understand the Knapsack problem and greedy method	K1
CO4	Apply appropriate algorithms and data structures for various applications	K3
CO5	Analyze the backtracking method and branch and bound	K4

Programme Code: PCS		MSc. Computer Science		
Course Code: M19PCS02		Core Course – II - Advanced Web Technology		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	5	75	4

Course Objectives

This course explores the backbone of web page creation by developing .NET skill and to enrich knowledge about HTML control and web control classes, to provide depth knowledge about ADO.NET. Also to understand the need of usability, evaluation methods for web services.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the overview of ASP.NET and web control classes	K2
CO2	Understand about developing ASP.NET Applications	K2
CO3	Remember the ADO.NET and SQL basics	K1
CO4	Apply ADO control and creating web services	K3
CO5	Evaluate the data list and data grid control in accessing data.	K5

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS03		Core Course – III - Advanced Database Management Systems		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	4	60	4

Course Objectives

This course presents the advanced concepts of Database Management Systems and various databases like parallel, distributed and object oriented database management systems.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the concepts of ER model and Normalization	K1
CO2	Understand the Object based databases and data types	K2
CO3	Remember various data's in spatial database	K1
CO4	Apply the XML databases in various process	K3
CO5	Analyze the multimedia databases and broadcast data	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS04		Core Course –IV - Compiler Design		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	4	60	4

Course Objectives

This course presents the advanced concepts of Compiler Design techniques that can be used to construct various phases of compiler.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember acquire knowledge about finite automata and regular expressions	K1
CO2	Evaluate context free grammars, compiler parsing techniques	K5
CO3	Apply knowledge about syntax directed definitions and translation scheme	K3
CO4	Analyze the Intermediate code generation of compiler	K4
CO5	Understand intermediate machine representations and actual code generation	K2

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSP01		Core Practical -I - Algorithm Using C++		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	4	60	2

Course Objectives

This course covers the fundamental techniques for designing and analysing algorithms, including performance analysis, stack and queue divide and conquer algorithms and recurrences, dynamic programming, backtracking. It also presents effective search methods, graph algorithms and randomized algorithms.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand data structures and the concepts of Stack and Queue	K2
CO2	Remember the Algorithm for Binary Search and Selection Sort	K1
CO3	Apply the major algorithms for Kruskal algorithm and single source shortest path	K3
CO4	Understand the concept of Knapsack and dynamic programming	K2
CO5	Analyse the backtracking method	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSP02		Core Practical – II - Advanced Web Technology		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	4	60	2

Course Objectives

This course introduces the concepts of Dot net Programming. It provides technical skill, basic concepts like data items, lists, dictionaries and tuples and develops various applications

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the fundamental concept of Web Programming	K1
CO2	Understand the concepts of Objects and Controls used for web development	K2
CO3	Apply how the Information passing between websites.	K3
CO4	Apply the in-depth knowledge of data process.	K3
CO5	Analyze the data process in various real time applications.	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS05		Core Course – V - Distributed Operating System		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	4

Course Objectives

This course introduces the architecture of distributed operating system concepts. It also includes hardware, software and communication in distributed OS. To learn the distributed resource management components, and program the principles of OS.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the concept of distributed operating system	K1
CO2	Knowledge on mutual exclusion and deadlock detection of distributed operating system	K2
CO3	Apply the concept of design issues, algorithm	K3
CO4	Understand the recovery approaches, to implement fault tolerance issues and commit protocols	K2
CO5	Analyze effective synchronization process and various operating system to run a task in a distributed system.	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS06		Core Course – VI - Advanced Java Programming		
Batch 2019-2020	Semester II	Hours / Week 4	Total Hours 60	Credits 4

Course Objectives

This course introduces advance concepts such as networking, AWT controls and Java Beans. It covers concepts such as Applet, Swing, Servlet and Event Handling methods. It provides technical skills to design and develop various internet applications.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the basic concepts of Design patterns and collections.	K2
CO2	Remember the basic APPLETT, AWT and SWING concepts.	K1
CO3	Apply the basic operations of JDBC and My SQL server.	K3
CO4	Analyze the techniques of SERVLETS and JSB.	K4
CO5	Understand the concept of Web development using Java script with using query framework.	K2

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS07		Core Course – VII - Cryptography And Network Security		
Batch 2019-2020	Semester II	Hours / Week 4	Total Hours 60	Credits 4

Course Objectives

This course provides the technology behind the network security, methods of Encryption web security, IP security. And also learn about intruders, malicious software's and firewalls.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the basic concepts of Information security basics and encryption techniques	K2
CO2	Remember the Concept symmetric encryption and public key cryptography	K1
CO3	Apply to authentication application and E-mail security.	K3
CO4	Apply to IP security, web security and network management security	K3
CO5	Analysis the concept of intruders, malicious software and firewalls	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSP03		Core Practical – III - Advanced Java		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	2

Course Objectives

This course introduces the concepts of Java programming. It provides technical skill advanced concepts like Java bean, Networking, Servlet, Applet and JDBC connectivity.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the basic java classes and methods	K1
CO2	Understand the fundamental programming concepts	K2
CO3	Apply the programming technique to analyze software problems	K3
CO4	Apply the concepts to develop a simple graphics and records	K3
CO5	Analyze and develop the internet application	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS08		Core Course - VIII - Digital Image Processing		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	III	5	75	4

Course Objectives

To provide Complete Knowledge on Digital Image Processing Methods, such as image processing methods in Spatial domain and Frequency domain, Edge detection, Compression, Segmentation and Morphological concepts which enable the students to understand the concepts and implement them empirically.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Review the Fundamental concepts of a digital image processing system	K1
CO2	Analyze images in the Frequency domain using various transforms	K3
CO3	Analyze the various types of Edge detection techniques	K3
CO4	Apply appropriate Image Compression Standards and Interpret image Segmentation and representation techniques	K4
CO5	Evaluate the results Region-based Segmentation	K5

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCS09		Core Course – IX - Internet of Things		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	III	4	60	4

Course Objectives

This course gain knowledge on bases of Internet of Things (IoT), IoT Architecture, and the Protocols related to IoT, and understand the concept of the Web of Thing and the relationship between IoT and WoT.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the IoT Enabling Technologies	K2
CO2	Remember the IoT reference model and IoT architecture	K1
CO3	Analyze applications of IoT in real time scenario	K3
CO4	Apply web services to access /control IoT devices	K4
CO5	Analyze IoT application and connect to the cloud	K3

Programme Code: PCS		MSc. Computer Science		
Course Code: M19PCS10		Core Course – X - Machine Learning		
Batch 2019-2020	Semester III	Hours / Week 5	Total Hours 75	Credits 4

Course Objectives

To Learn about Machine Intelligence and Machine Learning applications. To implement and apply machine learning algorithms to real-world applications. To identify and apply the appropriate machine learning technique to classification, pattern recognition, optimization and decision problems. To understand how to perform evaluation of learning algorithms and model selection.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the fundamental issues and challenges of machine learning: data, model selection, model complexity	K1
CO2	Have an understanding of the strengths and weaknesses of many popular machine learning approaches.	K2
CO3	Appreciate the underlying mathematical relationships within and across Machine Learning algorithms and the paradigms of supervised and un-supervised learning	K4
CO4	Design the various machine learning algorithms	K3
CO5	Be able to implement various machine learning algorithms in a range of real-world applications	K3

Programme Code: PCS		M.Sc.Computer Science		
Course Code: M19PCSP04		Core Practical – IV - Image Processing Lab		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	III	4	60	2

Course Objectives

This course presents the introduction to digital image processing, fundamentals, and image enhancement and image restoration techniques

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the basic Relationship between Pixels	K2
CO2	Remember the fundamental Spatial Enhancement Methods	K1
CO3	Apply appropriate Image Compression Standards	K3
CO4	Analyze the techniques Geometric Transformations.	K4
CO5	Evaluate the results Region-based Segmentation	K5

Programme Code: PCS		M.Sc.Computer Science		
Course Code: M19PCSP05		Core Practical - V – Machine Learning		
Batch 2019-2020	Semester III	Hours / Week 4	Total Hours 60	Credits 2

Course Objectives

This course provides the technology to learn about the machine and to develop the application by using PYTHON language to command over the machine by using various algorithms.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the concepts of linear regression and logistic regression.	K1
CO2	Apply the basic operations of decision tree and SVM.	K3
CO3	Apply the concept of Naïve Bayes and KNN.	K3
CO4	Apply the operations of K- means.	K3
CO5	Understand the concept of random forest and dimensionality reduction algorithm.	K2

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE01		Elective – I : Mobile Computing		
Batch 2019-2020	Semester I	Hours / Week 4	Total Hours 60	Credits 4

Course Objectives

This course introduces basics of mobile telecommunication system. It covers concepts such as wireless networks, mobile internet protocol, wireless protocol and security. It provides technical skills to design and develop mobile platforms and applications.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the basic concepts of Mobile Computing	K2
CO2	Remember the Mobile GUIs	K1
CO3	Analyze the basics of mobile Payment System	K4
CO4	Understand the Mobile Ad hoc networks and its routing	K2
CO5	Apply the different types of security features	K3

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE02		Elective – I - Statistical Computing		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	4	60	4

Course Objectives

- To understand the application of various correlations methods
- To study and model the sampling concepts
- To acquire knowledge on Hypotheses test

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	understand the applications of various correlation methods	K2
CO2	Remember the Regression analysis with equations	K1
CO3	Apply the study and model the sampling concepts	K3
CO4	Analyze the distribution samplings	K4
CO5	Analyze acquire knowledge on Hypotheses test	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE03		Elective – I - Object Oriented System Development		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	I	4	60	4

Course Objectives

- Introduce the concept of Object-oriented design and understand the fundamentals of OOSD life cycle.
- Familiar with evolution of object-oriented model, classes and its notations
- Practice UML in order to express the design of software projects.
- Specify, analyze and design the use case driven requirements for a particular system.
- Enrich knowledge about DBMS, designing classes and object oriented testing.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the object-oriented approach differs from the traditional approach to systems analysis and design	K2
CO2	Analyze, design, document the requirements through use case driven approach	K4
CO3	Learn the importance of modeling and how the Unified Modeling Language represents an object-oriented system using a number of modeling views	K1
CO4	Analyze the difference between various object relationships: inheritance, association and aggregation	K4
CO5	Design the role and function of test cases, testing strategies and test plans in developing object-oriented software	K3

Programme Code: 09		M.Sc. Computer Science		
Course Code:M19PCSE04		Elective – I - Soft Computing		
Batch 2019-2020	Semester I	Hours / Week 4	Total Hours 60	Credits 4

Course Objectives

- Develop the skills to gain a basic understanding of neural network theory and fuzzy logic theory.
- Introduce students to artificial neural networks and fuzzy theory from an engineering perspective.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Learn the fuzzy logic and the concept of fuzziness involved in various systems and fuzzy set theory	K1
CO2	Understand the concepts of fuzzy sets, knowledge representation using fuzzy rules, approximate reasoning, fuzzy inference systems, and fuzzy logic	K2
CO3	Understand the fundamental theory and concepts of neural networks, Identify different neural network architectures, algorithms, applications and their limitations	K2
CO4	Understand appropriate learning rules for each of the architectures and learn several neural network paradigms and its applications	K2
CO5	Apply the different applications of these models to solve engineering and other problems	K3

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE05		Elective – II - Data Science And Big Data Analytics		
Batch 2019-2020	Semester II	Hours / Week 4	Total Hours 60	Credits 4

Course Objectives

The course provides grounding in basic and advanced methods to big data technology and tools, including Map Reduce and Hadoop and its ecosystem.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the concepts of Big Data Analytics	K1
CO2	Understand the Data Analytics methods using R	K2
CO3	Analyze the various Algorithms, validate and testing methods	K4
CO4	Apply the various classification techniques	K3
CO5	Able to apply Hadoop ecosystem components	K3

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE06		Elective – II - Advanced Computer Networks		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	4

Course Objectives

- To study communication network protocols, different communication layer structure.
- To learn security mechanism for data communication.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the basic concept about the fundamentals of computer networks	K1
CO2	Understand Error detection and correction in Data link layer	K2
CO3	Analyze the ADSL and Medium Access Layer	K4
CO4	Understand about the service provided by the Network layer	K2
CO4	Understand Error control, flow control in Transport Layer	K2

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE07		Elective - III – Data Mining		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	4

Course Objectives

To introduce the fundamental concepts of Data Mining Techniques and various Algorithms used for Information Retrieval from Datasets.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the concepts of Data mining and data preprocessing	K2
CO2	Remember to implement the data warehousing in Multidimensional data model	K1
CO3	Analyze the Apriori algorithm and its classification by Decision Tree Induction	K4
CO4	Understand the Categorization of major Clustering Techniques	K2
CO5	Apply Spatial Data Mining in Web	K3

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE08		Elective - III - Web Services		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	4

Course Objectives

- To enable the student to be familiar with distributed services, XML and web services
- To study the use of web services in B2C and B2B applications

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the design principles and application of SOAP and REST based web services	K2
CO2	Design collaborating web services according to a specification	K4
CO3	Learn an application that uses multiple web services a realistic business scenario	K1
CO4	Apply the industry standard to open source tools such as Apache Axis2, Tomcat, Derby and Eclipse to build and test	K3
CO5	Design to deploy and execute web services and web applications	K4

Programme Code: PCS		MSc. Computer Science		
Course Code: M19PCSE09		Elective – IV - Optimization Techniques		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	III	4	60	4

Course Objectives

- To understand the concepts of optimization.
- To develop mathematical Model of real time cases.
- To study optimization algorithms.

Course Outcomes (CO)

CO	CO Statement	Knowledge Level
CO1	Remember the Linear Programming	K1
CO2	Understand the Algorithms	K2
CO3	Apply the Transportation all methods	K3
CO4	Analyze the Project scheduling	K4
CO5	Analyze the measurement activities	K5

Programme Code: PCS		MSc. Computer Science		
Course Code: M19PCSE10		Elective - IV - Cloud Computing		
Batch 2019-2020	Semester III	Hours / Week 4	Total Hours 60	Credits 4

Course Objectives

This course introduces basics of Cloud Computing concepts, technologies, architecture and applications by introducing and researching state-of-the-art in Cloud Computing, fundamental issues, technologies, applications and implementations.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the Cloud Computing environments & computing platforms	K2
CO2	Remember the Cloud data Services	K1
CO3	Understand Cloud Application Design and Application	K2
CO4	Apply the Python data Types and Structures	K3
CO5	Remember the Big Data Analytics and key Management	K1

Programme Code: PCS		M.Sc .Computer Science		
Course Code: M19PCSE11		Elective - V - WAP and XML		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	III	4	60	4

Course Objectives

The purpose of the course is to impart knowledge on Extensible Markup Language (XML) and to achieve secured, messaging through web services.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand the WAP application architecture and resources	K2
CO2	Remember the WAP gateway and WML structure	K1
CO3	Analyze the basics of WML script and standard libraries	K4
CO4	Develop SOA application using XML and Web services	K2
CO5	Extract information from the Web sites using XML programming	K5

Programme Code:PCS		M.Sc. Computer Science		
Course Code: M19PCSE12		Elective - V - Embedded Systems		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	III	4	60	4

Course Objectives

- Understand the basic hardware components and their selection method based on the characteristics and attributes of an embedded system.
- Describe the hardware software co-design and firmware design approaches
- Know the RTOS internals, multitasking, task scheduling, task communication and synchronization
- Learn the development life cycle of embedded systems

Course Outcomes (CO)

CO	CO Statement	Knowledge Level
CO1	Remember the Computing Systems	K1
CO2	Understand and recognize the classification of Embedded Systems	K2
CO3	Understand the aware of interrupts , hyper threading and software optimization	K2
CO4	Design real time Embedded Systems using the concepts of RTOS	K4
CO5	Analyze the Emulators and Debugging	K3

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE13		Elective - VI - Wireless Networks		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	IV	4	60	4

Course Objectives

- To Study about Wireless Networks, Protocol Stack and Standards.
- To Study about Fundamentals of 3G Services, Its Protocols and Applications.
- To Study about Evolution of 4G Networks, its Architecture and Applications

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Understand about Wireless Networks, Protocol Stack And Standards	K2
CO2	Learn the latest 3G/4G and Wi-MAX Networks and Architecture	K1
CO3	Apply the concepts of protocols and TCP enhancement	K3
CO4	Design and implement Wireless Network Environment for any application using latest Wireless Protocols And Standards	K3
CO5	Implement different type of applications for Smart phones and Mobile devices with latest Network standards	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE14		Elective - VI - Theory Of Computation		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	IV	4	60	4

Course Objectives

The learning objectives of this course are to introduce students to the mathematical foundations of computation including automata theory; the theory of formal language and grammars; the notions of algorithm, decidability, complexity, and computability. To enhance/develop students' ability to understand and conduct mathematical proofs for computation and algorithms.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Analyze and design finite automata, pushdown automata, Turing machines, formal languages, and grammars	K3
CO2	Remember the concepts of regular expression and automata	K1
CO3	Analyze the CFG grammars and Pushdown automata	K3
CO4	Demonstrate the understanding of key notions, such as algorithm, computability, decidability, and complexity through problem solving	K2
CO5	Evaluate the basic results of the Theory of Computation, state and explain the relevance of the Church-Turing thesis	K5

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE15		Elective - VII - Artificial Intelligence		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	IV	4	60	4

Course Objectives

This course introduces advanced concepts about artificial intelligence. It offers a detailed knowledge about the problem solving techniques.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the basic concept about the artificial intelligence	K1
CO2	Understand, generate and test means-end analysis and problem reduction	K2
CO3	Analyze the Blind method	K4
CO4	Understand about trees and adversarial search its algorithm methods	K2
CO5	Apply Fuzziness as multivalence and signal monotonicity	K3

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19PCSE16		Elective - VII - Software Project Management		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	IV	4	60	4

Course Objectives

- Understand the framework of project management
- Learn to monitor and control the project
- Know the sound knowledge in Agile method
- Know the team, cost, quality and resource management
- Identify and control the risk in the projects

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Analyze the scope, cost, timing, and quality of the project, at all times focused on project success as defined by project stakeholders	K1
CO2	Design the project to the organization's strategic plans and business justification throughout its lifecycle	K3
CO3	Identify project goals, constraints, deliverables, performance criteria, control needs, and resource requirements in consultation with stakeholders	K3
CO4	Implement project management knowledge, processes, lifecycle and the embodied concepts, tools and techniques in order to achieve project success.	K4
CO5	Adapt projects in response to issues that arise internally and externally	K5

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19ECS01		EDC – I - Fundamentals Of Computers And Communications		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	4

Course Objectives

To provide the Basic Concepts in Computers and Networking concepts

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the Components of Computers	K1
CO2	Understand the I/O Devices, CPU and Memory	K2
CO3	Analyze Operating system	K3
CO4	Analyze Internet and data communications	K3
CO5	Apply the Database concepts and Computer security	K4

Programme Code: PCS		M.Sc. Computer Science		
Course Code: M19ECS02		EDC – I - Principles Of Information Technology		
Batch	Semester	Hours / Week	Total Hours	Credits
2019-2020	II	4	60	4

Course Objectives

To Provide the Basic Concepts in Information Technology.

Course Outcomes (CO)

CO	Statement	Knowledge Level
CO1	Remember the Generation of Computers	K1
CO2	Understand the CPU and Memory	K2
CO3	Analyze the Programming Language	K3
CO4	Analyze WWW & Internet	K3
CO5	Apply the Computer Security	K4

M. S. Murthy

Head of the Department

**Head of the Department,
Department of Computer Science
Mahendra Arts & Science College
Kalippatti (PO.) Pin-637 501.**

S. J.
Principal

S. J.

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DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

PROGRAMME OUTCOMES (POs) OF M.Sc. COMPUTER SCIENCE

Academic year 2020-2021

- PO1:** To enhance their skills in new computing technologies through practical and theoretical knowledge of computer science and software engineering.
- PO2:** To think creatively, propose real ideas in explaining facts and figures or providing new solutions as computer professionals.
- PO3:** To contribute to the economic development of the region, state and nation.
- PO4:** To analyze the impact of computing on individuals, organizations, and society.
- PO5:** To progress as developers providing software solutions for ethical, legal security, and global policy issues.
- PO6:** To identify, analyse and synthesize scholarly literature relating to the field of Computer Science.
- PO7:** To apply knowledge of computing to create effective designs and solutions for complex problems.
- PO8:** To develop scientific outlook that solves any problem, encompassing the expected aspects of market demands.

Head of the Department
Head of the Department,
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Kalippatti – 637 501, Namakkal (Dt), Tamil Nadu.

DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS

PROGRAMME SPECIFIC OUTCOMES (PSOs) OF M.Sc. COMPUTER SCIENCE

Academic year 2020-2021

- PSO 1:** Acquires adequate knowledge of fundamentals to enhance the skills in contemporary computing technology.
- PSO 2:** Capable to establish and configure computer networks and resolve security conflicts.
- PSO 3:** Proficiency in optimizing issues in data management with varying complexity.
- PSO 4:** Construct and simulate computerized solution for defined objectives.
- PSO 5:** Evolves with exposure in advanced computing favoring research.

M. Annalakshmi

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Kalippatti (PO.) Pin-637 501.

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