



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

---

## DEPARTMENT OF MASTER OF COMPUTER APPLICATION

### PROGRAMME: MASTER OF COMPUTER APPLICATION

#### VISION

- ❖ Build a strong teaching and learning environment that responds swiftly to the global Challenges through the advancement of Knowledge base and exemplary Education.

#### MISSION

- ❖ To provide quality post graduate education applied Foundations of Computers through Intellectual Transformations
- ❖ To foster the overall Development through Research and Developmental Activities
- ❖ To Empower to Students with global Knowledge and Skills.

#### PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- ❖ Apply their computing skills to analyse, design and develop innovative software products to meet the industry needs and excel as software professionals.
- ❖ Pursue lifelong learning and do research in the computing field based on solid technical foundations.
- ❖ Communicate and function effectively in teams in multidisciplinary fields within the global, societal and environmental context.
- ❖ Exhibit professional integrity, ethics and an understanding of responsibility to contribute technical solutions for the sustainable development of society.

#### PROGRAM OUTCOMES (POs)

- ❖ Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ❖ Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.



# The Javery Engineering College

*(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.*

- 
- ❖ Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
  - ❖ Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
  - ❖ Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
  - ❖ The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
  - ❖ Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
  - ❖ Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
  - ❖ Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
  - ❖ Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
  - ❖ Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
  - ❖ Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

- ❖ Design, develop and implement interdisciplinary application software projects to meet the demands of industry requirements using modern tools and technologies.
- ❖ Analyze the societal needs to provide novel solutions through technological based research.

## COURSE OUTCOMES (COs)

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MA5101
<b>Subject Name</b>	Matrices, Probability And Statistics
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Test the consistency and solve system of linear equations as well as find the Eigenvalues and Eigenvector.</li><li>• Apply the Probability axioms as well as rules and the distribution of discrete and continuous ideas in solving real world problems.</li><li>• Apply the concepts of correlation and regression of random variables in solving application problems.</li><li>• Use statistical techniques in testing hypothesis on data analysis.</li><li>• Use the appropriate statistical technique of design of experiments in data analysis.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5301
<b>Subject Name</b>	Advanced Data Structures And Algorithms
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Implement a program using stack, queue, linked list data structures</li></ul>



# The Javary Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

	<ul style="list-style-type: none"><li>• Design and Implement Tree data structures and Sets</li><li>• Apply the Graph Data structure and to find shortest path among the several possibilities</li><li>• Perform analysis of various algorithms</li><li>• Analyze and design algorithms to appreciate the impact of algorithm design in practice.</li></ul>
--	--

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5105
<b>Subject Name</b>	Advanced Database Technology
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Design a distributed database system and execute distributed queries. Use NoSQL database systems and manipulate the data associated with it.</li><li>• Design a data warehouse system and apply OLAP operations.</li><li>• Design XML database systems and validating with XML schema.</li><li>• Apply knowledge of information retrieval concepts on web databases.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5106
<b>Subject Name</b>	Object Oriented Software Engineering



# The Javary Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Able to identify the appropriate process model to develop the object oriented software Gain knowledge about requirement elicitation and analyzing techniques</li><li>• Able to choose and design suitable UML diagrams and method</li><li>• Able to apply correct testing methods and maintain software systems.</li><li>• Able to estimate the object oriented application by applying metric data.</li></ul>
-----------------------	--

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5107
<b>Subject Name</b>	Python Programming
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Develop algorithmic solutions to simple computational problems Structure simple Python programs for solving problems.</li><li>• Read and write data from/to files in Python Programs.</li><li>• Represent compound data using Python lists, tuples, dictionaries.</li><li>• Decompose a Python program into functions.</li></ul>



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5108
<b>Subject Name</b>	Research Methodology And Intellectual Property Rights
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Understand the research problem and Literature review.</li><li>• Understand the various research designs and their characteristics. Prepare a well-structured research paper and scientific presentations.</li><li>• Explore on various IPR Components and process of filing.</li><li>• Develop awareness the patent law and procedural mechanism in obtaining a patent.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5114
<b>Subject Name</b>	Advanced Database Technology Laboratory
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Formulate complex queries using SQL Design and Implement applications that have GUI and access databases for backend connectivity</li><li>• To design and implement Mobile Databases</li><li>• To design and implement databases to store spatial and temporal data objects</li></ul>



# The Javary Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5115
<b>Subject Name</b>	Advanced Data Structures And Python Programming Laboratory
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Develop algorithmic solutions to simple computational problem</li><li>• Develop and execute Python programs.</li><li>• Decompose a Python program into functions Represent compound data using Python data structures.</li><li>• Apply Python features in developing software applications.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	01
<b>Subject Code</b>	MC5116
<b>Subject Name</b>	Communication Skills - I
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Listen and comprehend Lectures in English Articulate well and give presentations clearly</li><li>• Participate in Group Discussions successfully</li><li>• Communicate effectively in formal and informal writing</li><li>• Write proficient essays and emails</li></ul>



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Regulation</b>	2017
<b>Sem</b>	02
<b>Subject Code</b>	MC5206
<b>Subject Name</b>	Internet Programming
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• To write client side scripting.</li><li>• To implement the server side of the web application.</li><li>• To implement Web Application using Spring.</li><li>• To implement a Java application using Java Persistence API.</li><li>• To implement a full-stack Single Page Application using React, spring and JPA.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	02
<b>Subject Code</b>	MC5207
<b>Subject Name</b>	Cloud Computing Technologies
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Use Distributed systems in Cloud Environment</li><li>• Articulate the main concepts, key technologies, strengths and limitations of Cloud computing</li><li>• Identify the Architecture, Infrastructure and delivery models of Cloud computing</li><li>• Install, choose and use the appropriate current technology for the implementation of Cloud</li><li>• Adopt Micro services and Develops in Cloud environment</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	02





# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Subject Code</b>	MC5208
<b>Subject Name</b>	Artificial Intelligence And Machine Learning
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Apply the techniques of Problem Solving in Artificial Intelligence.</li><li>• Implement Knowledge and Reasoning for real world problems.</li><li>• Model the various Learning features of Artificial Intelligence</li><li>• Analyze the working model and features of Decision tree</li><li>• Apply k-nearest algorithm for appropriate research problem.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	02
<b>Subject Code</b>	MC5209
<b>Subject Name</b>	Mobile Application Development
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Understand the basics of mobile application development frameworks and tools</li><li>• To be able to develop a UI for mobile application</li><li>• To design mobile applications that manages memory dynamically</li><li>• To build applications based on mobile OS like Android, iOS</li><li>• To build location based services</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	02
<b>Subject Code</b>	MA5210
<b>Subject Name</b>	Cyber Security



# The Javary Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
 Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>• Develop a set of risk and security requirements to ensure that there are no gaps in an organization's security practices.</li> <li>• Achieve management, operational and technical means for effective cyber security.</li> <li>• Audit and monitor the performance of cyber security controls.</li> <li>• To spot gaps in the system and devise improvements.</li> <li>• Identify and report vulnerabilities in the system</li> </ul>
-----------------------	---

<b>Regulation</b>	2017	
<b>Sem</b>	02	PROFESSIONAL ELECTIVE-I
<b>Subject Code</b>	MC5003	
<b>Subject Name</b>	Software Project Management	
<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>• Understand the activities during the project scheduling of any software application.</li> <li>• Learn the risk management activities and the resource allocation for the projects.</li> <li>• Apply the software estimation and recent quality standards for evaluation of the software projects</li> <li>• Acquire knowledge and skills needed for the construction of highly reliable software project</li> <li>• Create reliable, replicable cost estimation that links to the requirements of project planning and managing</li> </ul>	

<b>Regulation</b>	2017
<b>Sem</b>	02



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Subject Code</b>	MC5214
<b>Subject Name</b>	Internet Programming Laboratory
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• To implement client and server side of the web application.</li><li>• To implement a real time application using WebSocket.</li><li>• To use Spring framework in web development.</li><li>• To implement applications using Java Persistence API.</li><li>• To implement applications using the JavaScript framework react.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	02
<b>Subject Code</b>	MC5215
<b>Subject Name</b>	Artificial Intelligence And Machine Learning Laboratory
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Apply the techniques of Problem Solving in Artificial Intelligence.</li><li>• Implement Knowledge and Reasoning for real world problems.</li><li>• Model the various Learning features of Artificial Intelligence</li><li>• Analyze the working model and features of Decision tree</li><li>• Apply k-nearest algorithm for appropriate research problem.</li></ul>



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Regulation</b>	2017
<b>Sem</b>	02
<b>Subject Code</b>	MC5216
<b>Subject Name</b>	Communication Skills Enhancement - II
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Students will be able to make presentations and participate in Group discussions with confidence.</li><li>• Students will be able to perform well in the interviews.</li><li>• Students will make effective presentations.</li></ul>

<b>Regulation</b>	2017
<b>Sem</b>	03
<b>Subject Code</b>	MC5306
<b>Subject Name</b>	Data Science
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Convert real world problems to hypothesis and perform statistical testing.</li><li>• Perform data analysis using R.</li><li>• Design efficient modeling of very large data and work with big data platforms.</li><li>• Implement suitable data analysis for stream data.</li><li>• Write efficient MapReduce programs for small problem solving methods</li></ul>

<b>Regulation</b>	2017
-------------------	------



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
 Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Sem</b>	03
<b>Subject Code</b>	MC5307
<b>Subject Name</b>	Embedded Systems And Internet Of Things
<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>Analyze architecture of embedded processors and micro controllers. Design and deploy timers and interrupts.</li> <li>Design and develop the prototype of embedded and IoT systems.</li> <li>Design portable IoT using Arduino/Raspberry Pi /equivalent boards.</li> <li>Analyze and develop applications of IoT in real time scenario.</li> </ul>

<b>Regulation</b>	2017
<b>Sem</b>	03
<b>Subject Code</b>	MC5308
<b>Subject Name</b>	Accounting And Financial Management For Application Development
<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>Able to understand the basics of accounting Able to understand balance sheet preparation and do analysis</li> <li>Able to understand the partnership accounts</li> <li>Able to appreciate and depreciate the assets of an organization in accounting</li> <li>Able to understand Single Entry Accounting</li> </ul>

<b>Regulation</b>	2017	
<b>Sem</b>	03	PROFESSIONAL ELECTIVE-II
<b>Subject Code</b>	MC5022	



# The Javery Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Subject Name</b>	C# and .NET Programming
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Understand the difference between .NET and Java framework. Work with the basic and advanced features of C# language.</li><li>• Create applications using various data providers.</li><li>• Create web application using ASP.NET.</li><li>• Create mobile application using .NET compact framework.</li></ul>

<b>Regulation</b>	2017	
<b>Sem</b>	03	PROFESSIONAL ELECTIVE-III
<b>Subject Code</b>	MC5032	
<b>Subject Name</b>	Data Mining And Data Warehousing Techniques	
<b>Course Outcome</b>	<ul style="list-style-type: none"><li>• Identify data mining techniques in building intelligent model.</li><li>• Illustrate association mining techniques on transactional databases.</li><li>• Apply classification and clustering techniques in real world applications.</li><li>• Evaluate various mining techniques on complex data objects.</li><li>• Design, create and maintain data warehouses</li></ul>	

<b>Regulation</b>	2017	
<b>Sem</b>	03	PROFESSIONAL ELECTIVE-IV
<b>Subject Code</b>	MC5038	
<b>Subject Name</b>	Business Data Analytics	



# The Javary Engineering College

(Approved by AICTE, New Delhi & Affiliated to Anna University)  
 Mecheri, Mettur Tk. Salem Dt - 636 453.

<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>• Identify data mining techniques in building intelligent model.</li> <li>• Illustrate association mining techniques on transactional databases.</li> <li>• Apply classification and clustering techniques in real world applications.</li> <li>• Evaluate various mining techniques on complex data objects.</li> <li>• Design, create and maintain data warehouses</li> </ul>
-----------------------	--

<b>Regulation</b>	2017	
<b>Sem</b>	03	PROFESSIONAL ELECTIVE-V
<b>Subject Code</b>	MC5043	
<b>Subject Name</b>	Big Data Processing	
<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>• Work with big data tools and its analysis techniques Analyze data by utilizing clustering and classification algorithms</li> <li>• Learn and apply different mining algorithms and recommendation systems for large</li> <li>• Volumes of data Perform analytics on data streams</li> <li>• Learn NoSQL databases and management.</li> </ul>	

<b>Regulation</b>	2017	
<b>Sem</b>	03	
<b>Subject Code</b>	MC5315	
<b>Subject Name</b>	Internet Of Things Laboratory	
<b>Course Outcome</b>	<ul style="list-style-type: none"> <li>• Write and implement simple assembly programs that use various features of the processor.</li> <li>• Test and experiment different sensors for application development Arduino/Raspberry Pi/ Equivalent boards.</li> <li>• Develop IOT applications with different platform and frameworks.</li> </ul>	



# The *Javery* Engineering College

*(Approved by AICTE, New Delhi & Affiliated to Anna University)  
Mecheri, Mettur Tk. Salem Dt - 636 453.*

---