

Credit Breakup in 2 year MCA Degree Curriculum 2024-26

S. No	Course Work -Subject Area	Break Down of Credits
1	Humanities and Social Sciences (HS), Including Management	4
2	Professional Subjects-Core (PC) Relevant to chosen branch	44
3	Major Projects	20
4	Profession Subjects -Electives (PE) Relevant to chosen specialization/ Branch;	12
	Total Credits	80

Curriculum of 2 year MCA Degree Course 2024-26

First Semester							
S. No.	Course Code	Course Title	Credit Structure				Contact Hours
			L	T	P	Credits	
1	24M11CA111	Data Structure Using C	3	0	0	3	3
2	24M11CA112	Data Base Management Systems	3	0	0	3	3
3	24M11CA113	Object Oriented Programming using JAVA	3	0	0	3	3
4	24M11CA114	Machine Learning	3	0	0	3	3
5	24M11CA115	Computer System Architecture	3	0	0	3	3
6	24M15CA111	Data Structure Using C Lab	0	0	2	2	4
7	24M15CA112	Data Base Management Systems Lab	0	0	1	1	2
8	24M15CA113	Object Oriented Programming using JAVA Lab	0	0	1	1	2
9	24M15CA114	Machine Learning lab	0	0	1	1	2
Total credits						20	25

Second Semester							
S. No.	Course Code	Course Title	Credit Structure				Contact Hours
			L	T	P	Credits	
1	24M11CA116	Design and Analysis of Algorithms	3	0	0	3	3
2	24M11CA117	Computer Networks	3	0	0	3	3
3	24M11CA118	Operating System	3	0	0	3	3
4	24M11CA119	Information Security	3	0	0	3	3
5	24XXHSXXX	Humanities and Social Sciences (HS)	2	0	0	2	2
6	24M12CA111	Elective-I	3	0	0	3	3

7	24M15CA116	Design and Analysis of Algorithms Lab	0	0	1	1	2
8	24M15CA117	Computer Networks Lab	0	0	1	1	2
9	24M15CA118	Operating System Lab	0	0	1	1	2
10	24M15CA119	Information Security Lab	0	0	1	1	2
Total credits						21	22

Third Semester								
S. No.	Course Code	Course Title	Credit Structure				Credits	Contact Hours
			L	T	P			
1	24M11CA211	Software Engineering	3	0	0	3	3	
2	24M11CA212	Web Technology	2	0	0	2	2	
3	24XXXHSXXX	Humanities and Social Sciences (HS)	2	0	0	2	2	
4	24M12CA211	Elective-II	3	0	0	3	3	
5	24M12CA212	Elective-III	3	0	0	3	3	
6	24M12CA213	Elective-IV	3	0	0	3	3	
7	24M15CA211	Software Engineering Lab	0	0	1	1	2	
8	24M15CA212	Web Technology (Full-Stack Development) Lab	0	0	2	2	4	
Total credits						19	22	

Fourth Semester								
S. No.	Course Code	Course Title	Credit Structure				Credits	Contact Hours
			L	T	P			
1	24M17CA211	Project Work – (Major)	0	0	20	20	40	
Total credits						20	40	

Overall Total Credits in Programme

80

Proposed Elective Basket and Courses

Elective Baskets

ML and AI:

Artificial Intelligence
 Mathematical Foundations of Machine Learning
 Neural Networks and Deep Learning
 Natural Language Processing (NLP)
 Digital Image Processing
 Computer Vision
 Reinforcement Learning Applications
 Big Data Analytics

Cloud Computing
Data analyst
Social Network Analysis

Cyber Security:

Cyber Security Essentials
Introduction to Forensic Science and Cyber Law
Digital Forensics & Cyber Law
Ethical Hacking and AI Security
Security Analysis and Reporting
Application and Network Security
Malware Analysis and Reverse Engineering
Threat Hunting and Scripting

Full Stack Development Electives:

Web Development with Spring Boot
Frontend Frameworks (e.g., React, Angular, or Vue.js)
RESTful API Design and Implementation
Cloud Computing and Deployment
Microservices Architecture
DevOps Practices and Tools

Java Electives:

Advanced Java Programming
Java Enterprise Edition (Java EE)
JavaFX for Desktop Applications
Java Performance Tuning
Spring Framework Advanced Topics
Hibernate for Data Persistence

Mobile Application Electives:

Android App Development with Java
iOS App Development with Swift
Cross-Platform Mobile Development
Mobile UI/UX Design
Mobile Security and Privacy
Mobile App Testing and Debugging

Generic Electives:

Design Thinking and Innovation

Project Management on JIRA
Internet Technology & Applications
Optimization Techniques & Statistical Methods
Internet of Things (IoT) Programming and Applications
Emotional Intelligence
Internet of Things (IoT) Programming and Applications
Soft Computing
Data Analytics and Business Intelligence
Serverless Architecture
Data Mining & Applications
Blockchain Technology
Big Data Technologies