



MCA SYLLABUS

MCA IIIrd Semester

MCA Year 2 Semester III								
Sr. No.	COURSE CODE	SUBJECT	PERIODS			INTERNAL ASSESSMENT	ESE	SUBJECT TOTAL
			L	T	P			
1	MCA-301	Java Technologies	3	1		20	80	100
2	MCA-302	Web Technologies	3	1		20	80	100
3	MCA-303	Computer Graphics	3	1		20	80	100
4	MCA-304	Advanced Database System	3	1		20	80	100
5	MCA-305	Theory of Computation	3	1		20	80	100
Practicals								
1	MCA-351	Mini Project using Java			4	20	80	100
2	MCA-352	Web Design Lab			4	20	80	100
3	MCA-353	Computer Graphics Lab using C/C++			4	20	80	100
4	MCA-354	Advanced DBMS Lab			4	20	80	100
		Total				180	720	900

MCA IVTH SEMESTER

MCA Year 2 Semester IV								
Sr. No.	COURSE CODE	SUBJECT	PERIODS			INTERNAL ASSESMENT	ESE	SUBJECT TOTAL
			L	T	P			
1	MCA-401	Software Engineering & UML	3	1		20	80	100
2	MCA-402	.Net Framework and Programming in ASP.Net	3	1		20	80	100
3	MCA-403	Open Source Operating System	3	1		20	80	100
4	MCA-404	Artificial Intelligence	3	1		20	80	100
5	MCA- 405	Elective 1*	3	1		20	80	100
Practicals								
1	MCA-451	Seminar Presentation-I			4	20	80	100
2	MCA-452	. Net Mini Project			4	20	80	100
3	MCA-453	Linux Lab(Shell Script & Security)			4	20	80	100
4	MCA-454	Colloquium (Group Discussion)			4	20	80	100
		Total				180	720	900
		Elective 1*						
	MCA-405A	Data Mining & Data Warehousing						
	MCA-405B	Information Protection & Security						
	MCA-405C	Soft Computing						
	MCA-405D	Mobile Application Development						
	MCA-405E	E-Commerce						

Note: A student can opt for **one** of the five given specializations in semester **IV**. Accordingly corresponding electives will be chosen from the given category for **Elective 2** and **Elective 3** in semester **V**.

Specializations

A: Database Systems [MCA-405A, MCA-504A, MCA-505A]

ELECTIVES	COURSE CODE	SUBJECT
Elective 1	MCA-405A	Data Mining & Data Warehousing
Elective 2	MCA-504A	Big Data Technologies & Analytics
Elective 3	MCA-505A	Database Intensive Computing & Security

B: Security [MCA-405B, MCA-504B, MCA-505B]

ELECTIVES	COURSE CODE	SUBJECT
Elective 1	MCA-405B	Information Protection & Security
Elective 2	MCA-504B	Cyber Security & Quantum Cryptography
Elective 3	MCA-505B	Cryptography

C: Artificial Intelligence [MCA-405C, MCA-504C, MCA-505C]

ELECTIVES	COURSE CODE	SUBJECT
Elective 1	MCA-405C	Soft Computing
Elective 2	MCA-504C	Bio-Informatics
Elective 3	MCA-505C	Artificial Neural Networks

D: Mobile Application & Development [MCA-405D, MCA-504D, MCA-505D]

ELECTIVES	COURSE CODE	SUBJECT
Elective 1	MCA-405D	Mobile Application Development
Elective 2	MCA-504D	Mobile Operating System
Elective 3	MCA-505D	Embedded Systems

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E: e-business Technologies [MCA-405E, MCA-504E, MCA-505E]

ELECTIVES	COURSE CODE	SUBJECT
Elective 1	MCA-405E	E-Commerce
Elective 2	MCA-504E	ERP Systems
Elective 3	MCA-505E	Web Mining

MCA VTH SEMESTER

Sr. No.	COURSE CODE	SUBJECT	PERIODS			INTERNAL ASSESMENT	ESE	SUBJECT TOTAL
			L	T	P			
1	MCA-501	Cloud Computing & Service Oriented Architecture	3	1		20	80	100
2	MCA-502	Analysis and Design of Algorithms	3	1		20	80	100
3	MCA-503	Wireless Technologies	3	1		20	80	100
4	MCA-504	Elective 2**	3	1		20	80	100
5	MCA-505	Elective 3***	3	1		20	80	100
Practicals								
1	MCA-551	Case Study on Mobile Applications			4	20	80	100
2	MCA-552	ADA Lab Mini Project			4	20	80	100
3	MCA-553	Wireless Technology Lab			4	20	80	100
4	MCA-554	Seminar Presentation-II			4	20	80	100
		Total				180	720	900
		Elective 2**						
	MCA-504A	Big Data Technologies & Analytics						
	MCA-504B	Cyber Security & Quantum Cryptography						
	MCA-504C	Bio-Informatics						
	MCA-504D	Mobile Operating System						
	MCA-504E	ERP Systems						
		Elective 3***						
	MCA-505A	Database Intensive Computing & Security						
	MCA-505B	Cryptography						
	MCA-505C	Artificial Neural Networks						
	MCA-505D	Embedded Systems						

	MCA-505E	Web Mining						
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MCA Vith Semester

MCA Year 3 Semester VI								
Sr. No.	COURSE CODE	SUBJECT	PERIODS			INTERNAL ASSESMENT	ESE	SUBJECT TOTAL
			L	T	P			
1	MCA-601	Industrial Project				50	150	200
		Total				50	150	200
		Grand Total						4700

All Mini Projects will be group activity having maximum of 3 students.

All Seminar presentations will be an individual activity in which student has to prepare and present a seminar along with report on some latest topics related with computer applications