

M. M. Institute of Computer Technology & Business Management
Maharishi Markandeshwar (Deemed to be University), Mullana
 (Established under Section 3 of the UGC Act, 1956)
 (Accredited by NAAC with Grade 'A++')

MCA – 1st Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Schedule			Credits	Examinational Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Core	MCA-101	Data Structure using C++	4	-	-	4.0	40	60	-	100
2.	Core	MCA-102	Advanced Database Management System	4	-	-	4.0	40	60	-	100
3.	Core	MCA-103	Operating System	3	1	-	4.0	40	60	-	100
4.	Core	MCA-104	Software Engineering	3	1	-	4.0	40	60	-	100
5.	Core	MCA-105	Business Intelligence and its Applications	4	-	-	4.0	40	60	-	100
6.	Core	MCA-106	Data Structure using C++ Lab.	-	-	2	2.0	60	-	40	100
7.	Core	MCA-107	Advanced Database Management System Lab.	-	-	2	2.0	60	-	40	100
8.	General	MCA-108	Seminar-I	1	-	-	1.0	100	-	-	100
			Total	19	2	4	25.0	420	300	80	800

One Course - 3 credit Swayam

* Swayam means subject that cover under self study/learning mode via online study material

Sr. No.	Course Category	Course Code	Course Title	Teaching Schedule			Credits	Examinational Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Bridge Course*	MCA-B101*	Computer Fundamentals and Web Design*	3	-	-	-	40	60	-	100

MCA – 2nd Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examination Marks			
								Internal	Theory	Practical	Total
1.	Core	MCA-201	Object Oriented Programming using Java	4	-	-	4.0	40	60	-	100
2.	Skill Enhancement Course	MCA-202	Web Technologies	4	-	-	4.0	40	60	-	100
3.	Core	MCA-203	Data Communication & Networking	3	1	-	4.0	40	60	-	100
4.	Core	MCA-204	Software Testing and Quality Assurance	3	1	-	4.0	40	60	-	100
5.	General	MCA-205	Digital Marketing	3	-	-	3.0	40	60	-	100
6.	Core	MCA-206	Object Oriented Programming using Java Lab.	-	-	2	2.0	60	-	40	100
7.	Skill Enhancement Course	MCA-207	Web Technologies Lab.	-	-	2	2.0	60	-	40	100
8.	General	MCA-208	Seminar-II	1	-	-	1.0	100	-	-	100
			Total	18	2	4	24.0	420	300	80	800

One Course - 3 credit Swayam

* Swayam means subject that cover under self-study/learning mode via online study material

Sr. No.	Course Category	Course Code	Course Title	Teaching Schedule			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Bridge Course*	MCA-B201*	Logical Organization of Computers*	3	-	-	-	40	60	-	100

MCA – 3rd Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examinational Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Core	MCA-301	Programming with Python	4	-	-	4.0	40	60	-	100
2.	Core	MCA-302	Cloud Computing	4	-	-	4.0	40	60	-	100
3.	Core	MCA-303	Advanced Computer Architecture	3	1	-	4.0	40	60	-	100
4.	Specialization	MCA-304	Elective – I	3	-	-	3.0	40	60	-	100
5.	Specialization	MCA-305	Elective – II	3	1	-	4.0	40	60	-	100
6.	Core	MCA-306	Programming with Python Lab.	-	-	2	2.0	60	-	40	100
7.	Core	MCA-307	Cloud Computing Lab.	-	-	2	2.0	60	-	40	100
8.	Specialization	MCA-308	Lab. based on Elective – I	-	-	2	2.0	60	-	40	100
9.	Skill Enhancement Course	MCA-309	Presentation/ viva-voce on Industry Internship	-	-	-	5.0	40	-	60	100
			Total	17	2	6	30.0	420	300	180	900

One Course - 3 credit Swayam

* Swayam means subject that cover under self-study/learning mode via online study material

Student can choose any one of the following departmental electives for MCA-304 and MCA-305:

Elective – I

- i) MCA-304 (a): Advanced Java Programming
- ii) MCA-304 (b): Mobile Application Development
- iii) MCA-304 (c): .Net Technologies

Elective – II

- i) MCA-305 (a): Artificial Intelligence
- ii) MCA-305 (b): Software Project Management
- iii) MCA-305 (c): Cryptography & Network Security

MCA – 4th Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Skill Enhancement Course	MCA-401	Industrial Project	-	-	-	18.0	-	-	-	400
2.	General	MCA-402	General Fitness & Professional Aptitude	-	-	-	4.0	-	-	-	200
			Total	-	-	-	22.0	-	-	-	600

OR

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Specialization	MCA-401	Machine Learning	4	-	-	4.0	40	60	-	100
2.	Specialization	MCA-402	Open Source Technologies using PHP	4	-	-	4.0	40	60	-	100
3.	Specialization	MCA-403	Elective – III	4	1	-	5.0	40	60	-	100
4.	Specialization	MCA-404	Elective – IV	4	1	-	5.0	40	60	-	100
5.	Specialization	MCA-405	Open Source Technologies using PHP Lab.	-	-	2	2.0	60	-	40	100
6.	General	MCA-406	Project	-	-	2	2.0	60	-	40	100
			Total	16	2	4	22.0	280	240	80	600

BCA – 1st Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Schedule			Credits	Examinational Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Core	BCA-101	Programming in C	4	-	-	4.0	40	60	-	100
2.	Core	BCA-102	Computer Fundamentals & MS Office	4	-	-	4.0	40	60	-	100
3.	Interdisciplinary	BCA-103	Digital Electronics	3	1	-	4.0	40	60	-	100
4.	Core	BCA-104	Introduction to Information Technology	3	1	-	4.0	40	60	-	100
5.	Ability Enhancement Course-I	BHUM -001	English	3	-	-	3.0	40	60	-	100
		BHUM -002	English Lab.	-	-	1	1.0	60	-	40	100
6.	Core	BCA-105	C Lab.	-	-	2	2.0	60	-	40	100
7.	Core	BCA-106	MS Office Lab.	-	-	2	2.0	60	-	40	100
Total				17	2	5	24.0	380	300	120	800

BCA – 2nd Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examination Marks			
								Internal	Theory	Practical	Total
1.	Core	BCA-201	Object Oriented Programming using C++	4	-	-	4.0	40	60	-	100
2.	Core	BCA-202	Data Structure	4	-	-	4.0	40	60	-	100
3.	General	BCA-203	Mathematical Foundation	3	1	-	4.0	40	60	-	100
4.	Core	BCA-204	System Analysis & Design	3	1	-	4.0	40	60	-	100
5.	Ability Enhancement Course-II	ES – 101	Environment Studies	4	-	-	4.0	40	60	-	100
6.	Core	BCA-205	C++ Lab.	-	-	2	2.0	60	-	40	100
7.	Core	BCA-206	Data Structure Lab.	-	-	2	2.0	60	-	40	100
8.	General	BCA-207	Seminar-I	1	-	-	1.0	100	-	-	100
Total				19	2	4	25.0	420	300	80	800

BCA – 3rd Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Core	BCA-301	Database Management System	4	-	-	4.0	40	60	-	100
2.	Core	BCA-302	Web Designing Fundamentals	4	-	-	4.0	40	60	-	100
3.	Core	BCA-303	Computer System Architecture	3	1	-	4.0	40	60	-	100
4.	Interdisciplinary	BCA-304	Principles of Management	3	1	-	4.0	40	60	-	100
5.	Skill Enhancement Course	BCA-305	Data Communication & Networking	4	-	-	4.0	40	60	-	100
6.	Core	BCA-306	Database Management System Lab.	-	-	2	2.0	60	-	40	100
7.	Core	BCA-307	Web Designing Lab.	-	-	2	2.0	60	-	40	100
			Total	18	2	4	24.0	320	300	80	700

BCA – 4th Semester

Sr. No.	Course Category	Course Code	Course Title	Teaching Load			Credits	Examination Marks			
				L	T	P		Internal	Theory	Practical	Total
1.	Core	BCA-401	Programming in Java	4	-	-	4.0	40	60	-	100
2.	Skill Enhancement Course	BCA-402	Open Source Programming using PHP	4	-	-	4.0	40	60	-	100
3.	Core	BCA-403	Operating System	3	1	-	4.0	40	60	-	100
4.	Core	BCA-404	Software Engineering	3	1	-	4.0	40	60	-	100
5.	Interdisciplinary	BCIV-080	Disaster Management	3	-	-	3.0	40	60	-	100
6.	Core	BCA-405	Programming in Java Lab.	-	-	2	2.0	60	-	40	100
7.	Skill Enhancement Course	BCA-406	Open Source Programming Lab. using PHP	-	-	2	2.0	60	-	40	100
8.	General	BCA-407	Seminar-II	1	-	-	1.0	100	-	-	100
9.	General	BCA-408	Project-I	-	-	1	1.0	100	-	-	100
			Total	18	2	5	25.0	520	300	80	900

BCA 5th Semester

Sr. No.		Paper Code	Title of Paper	L	T	P	Internal	Theory	Practical	Total	Credits
1.	Specialization	BCA-501	Cloud Computing	3	-	-	40	60	-	100	3.0
2.	Specialization	BCA-502	Python Programming	3	-	-	40	60	-	100	3.0
3.	Core	BCA-503	Data Communication and Networking	3	1	-	40	60	-	100	4.0
4.	Core	BCA-504	E-Commerce	4	-	-	40	60	-	100	4.0
5.	Specialization	BCA-505	S/w Lab.–IX, Cloud (Based on BCA - 501)	-	-	3	60	-	40	100	3.0
6.	Specialization	BCA-506	S/w Lab.–X, Python (Based on BCA - 502)	-	-	3	60	-	40	100	3.0
7.	General	ES-101	Environmental Studies	4	-	-	40	60	-	100	4.0
8.	General	BCA-507	Seminar	-	2	-	100	-	-	100	2.0
9.	Core	BCA-508	Project-III	-	-	2	100	-	-	100	2.0
10.	Specialization	CS-05	SAP ABAP-II	-	-	2	40	60	-	100	2.0
			Total	17	3	10	560	360	80	1000	30.0

BCA-6th Semester

Sr. No		Paper Code	Title of Paper	L	T	P	Internal	Theory	Practical	Total	Credits
1.	Specialization	BCA-601	Web Technologies	3	-	-	40	60	-	100	3.0
2.	Specialization	BCA-602	R Programming	3	-	-	40	60	-	100	3.0
3.	General	BCA-603	Cyber Security	3	-	-	40	60	-	100	3.0
4.	Specialization	BCA-604	Elective-I	3	1	-	40	60	-	100	4.0
5.	General	BCA-605	Numerical Analysis & Statistical Methods	2	1	-	40	60	-	100	3.0
6.	Specialization	BCA-606	S/w Lab. – XI, Web Technologies (Based on BCA - 601)	-	-	3	60	-	40	100	3.0
7.	Specialization	BCA-607	S/w Lab. – XII, R (Based on BCA - 602)	-	-	3	60	-	40	100	3.0
8.	Specialization	BCA-608	S/w Lab. – XIII, (Based on BCA - 604)	-	-	3	60	-	40	100	3.0
9.	General	BCA-609	Seminar	-	1	-	100	-	-	100	1.0
10.	Core	BCA-610	Project	-	-	1	100	-	-	100	1.0
11.	Specialization	CS-06	SAP ABAP-III	-	-	2	40	60	-	100	2.0
			Total	14	3	12	620	360	120	1100	29.0

Elective – I

- i) BCA-604 (a): Mobile Application Development
- ii) BCA-604 (b): Software Project Management
- iii) BCA-604 (c): Internet of Things