

2-YEAR POST GRADUATE MCA (MASTER OF COMPUTER APPLICATIONS) CURRICULUM

**A Two-Year Fulltime Semester Based PG Programme in
Master of Computer Applications
2021 – 22 onwards**

Total Credit: 88

I	II	III	IV	Total
19	24	24	21	88

First Semester

A. Theory							
Sl. No.	Code	Subject Name	L	T	P	Total	Credit Points
1	MCAPGPC01	Discrete Mathematics and Graph Theory	3	0	0	3	3
2	MCAPGPC02	Database Management Systems	3	0	0	3	3
3	MCAPGPC03	Computer Organization and Architecture	3	0	0	3	3
4	MCAPGPC04	Computational Mathematics	3	0	0	3	3
5	MCAPGPC05	Formal Languages and Automata Theory	3	0	0	3	3
Total of Theory						15	15
B. Practical							
1	MCAPGPC06	Database Lab	0	0	3	3	1.5
2	MCAPGPC07	Programming Lab	0	0	3	3	1.5
3	MBAUGHU04	Communication and Soft Skills	0	0	2	2	1
Total of Practical						8	4
Total of Semester						22	19

Second Semester

A. Theory							
Sl. No.	Code	Subject Name	L	T	P	Total	Credit Points
1	MCAPGPC08	Data Structures and Algorithms	3	0	0	3	3
2	MCAPGPC09	Operating Systems	3	0	0	3	3
3	MCAPGPC10	Computer Networks	3	0	0	3	3
4	MCAPGPC11	Object Oriented Programming with Java	3	0	0	3	3
5	MCAPGPC12	Artificial Intelligence	3	0	0	3	3
6	MCAPGPE01	Mobile Technology	3	0	0	3	3
	MCAPGPE02	Image Processing	3	0	0		
	MCAPGPE03	Modelling and Simulation	3	0	0		
	MCAPGPE04	Visual Programming & Multimedia	3	0	0		
	MCAPGPE05	Computer Graphics	3	0	0		
Total of Theory						18	18
B. Practical							
1	MCAPGPC13	Data Structures Lab with Python	0	0	3	3	1.5
2	MCAPGPC14	Operating Systems Lab	0	0	3	3	1.5
3	MCAPGPC15	Computer Networks Lab	0	0	3	3	1.5
4	MCAPGPC16	Object Oriented Programming Lab	0	0	3	3	1.5
Total of Practical						12	6
Total of Semester						30	24

Third Semester

A. Theory							
Sl. No.	Code	Subject Name	L	T	P	Total	Credit Points
1	UCCUGES01	Elementary Arabic & Islamic Studies	4	0	0	4	0
2	MCAPGPC17	Design and Analysis of Algorithms	3	0	0	3	3
3	MCAPGPC18	Information Security	3	0	0	3	3
4	MCAPGPC19	Compiler Design	3	0	0	3	3
5	MCAPGPC20	Internet and Web Technology	3	0	0	3	3
6	MCAPGPC21	Software Engineering	3	0	0	3	3
7 PROFESSIONAL ELECTIVE II	MCAPGPE06	Pattern Recognition	3	0	0	3	3
	MCAPGPE07	Distributed Database Design	3	0	0		
	MCAPGPE08	Operations Research	3	0	0		
	MCAPGPE09	Wireless Sensor Networks	3	0	0		
	MCAPGPE10	Bioinformatics	3	0	0		
	MCAPGPE11	Computer Vision	3	0	0		
Total of Theory						18	18
B. Practical							
1	MCAPGPC22	Web Technology Lab	0	0	3	3	1.5
2	MCAPGPC23	Information Security Lab	0	0	3	3	1.5
3	MCAPGPR01	Minor Project	0	0	6	6	3
Total of Practical						12	6
Total of Semester						34	24

Fourth Semester

A. Theory							
Sl. No.	Code	Subject Name	L	T	P	Total	Credit Points
1	MBAUGHU05	Industrial Ethics and Values	3	0	0	3	3
2 PROFESSIONAL ELECTIVE III	MCAPGPE12	E-Commerce and ERP	3	0	0	3	3
	MCAPGPE13	Natural Language Processing	3	0	0		
	MCAPGPE14	Advanced Java Programming	3	0	0		
	MCAPGPE15	Embedded Systems	3	0	0		
	MCAPGPE16	Distributed & Cloud Computing	3	0	0		
	MCAPGPE17	Big Data Analytics	3	0	0		
3 PROFESSIONAL ELECTIVE IV	MCAPGPE18	Internet of Things	3	0	0	3	3
	MCAPGPE19	GIS and Remote Sensing	3	0	0		
	MCAPGPE20	Data Warehouse and Data Mining	3	0	0		
	MCAPGPE21	Parallel Computing Techniques	3	0	0		
	MCAPGPE22	VLSI Design	3	0	0		
MCAPGPE23	Machine Learning	3	0	0			
Total of Theory						9	9
B. Practical							
1	MCAPGPR02	Major Project	0	0	16	16	8
2	MCAPGPR03	Seminar	0	0	3	3	2
3	MCAPGPC24	Viva-Voce	0	0	0	0	2
Total of Practical						19	12
Total of Semester						28	21

Bridge Courses (need to be completed by 1st year):

- MCAPGBR01-Foundations of Computer Science
- MCAPGBR02-Programming Techniques
- MCAPGBR03-Digital Logic