

Curriculum for 2- year MCA Program

SUBJECTS FOR BRIDGE COURSE

Note that students with B.Sc./ B. Com./ B.A. degree (Non-Computer Science/Non-IT) would have to satisfactorily complete the **Four-weeks Bridge Course** (B-I and B-II) before the commencement of the first semester of the 2-year MCA program.

Theoretical Courses	Subjects for Bridge Course		Periods/week			Examination	Sessional	Credit Points
	Subject Code	Subject Name	L	T	P			
B-I	CSE/MCA /T/B11	Fundamentals of Computer Science				50		0
B-II	CSE/MCA/T/B12	Basic Electronics				50		0
						100		00

FIRST YEAR FIRST SEMESTER

Theoretical Courses	Subjects		Periods/Weeks			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Paper-I	CSE/MCA/T/111A	Programming Fundamentals and Object Oriented Concepts	4			100		4
Paper-II	CSE/MCA/Math/T/112A	Mathematical Foundations	3			100		3
Paper-III	CSE/MCA/T/113A	Management Information Systems	3			100		3
Paper-IV	CSE/MCA/T/114A	Digital Systems	3			100		3
Paper-V	CSE/MCA/T/115A	Graph theory and Combinatorics	3			100		3
Sessional Courses	Subjects		Periods/Weeks			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Sessional-I	CSE/MCA/S/111	Computer Programming Lab			3		100	2
Sessional-II	CSE/MCA/S/112	Digital Systems Lab			3		100	2
Sessional-III	CSE/MCA/Hum/S/113	Communication Skills and Language Lab			3		100	2
			16		9	500	300	22

FIRST YEAR SECOND SEMESTER

Theoretical Courses	Subjects		Periods/Weeks			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Paper-VI	CSE/MCA/T/121A	Data Structures and Algorithms	3			100		3
Paper-VII	CSE/MCA/T/122A	Advanced Programming with Java and Python	3			100		3
Paper-VIII	CSE/MCA/T/123A	Computer Organization and Architecture	3			100		3
Paper-IX	CSE/MCA/T/124A	Operating Systems	3			100		3
Paper-X	CSE/MCA/T/125A	Database Management Systems	3			100		3
Sessional Courses	Subjects		Periods/Weeks			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Sessional-IV	CSE/MCA/S/121	Data Structures and Algorithms Lab			3		100	2
Sessional-V	CSE/MCA/S/122	Operating Systems Lab			3		100	2
Sessional-VI	CSE/MCA/S/123	Database Management Systems Lab			3		100	2
Sessional-VII	CSE/MCA/S/124	Advanced Programming lab			3		100	2
			15		12	500	400	23

SECOND YEAR FIRST SEMESTER

Theoretical Courses	Subjects		Periods/Weeks			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Paper-XI	CSE/MCA/T/211A	Software Engineering	3			100		3
Paper-XII	CSE/MCA/T/212A	Automata and Language Processors	3			100		3
Paper-XIII	CSE/MCA/T/213A	Data Communication and Computer Networks	3			100		3
Paper-XIV	CSE/MCA/T/214	Eective-1	3			100		3
Paper-XV	CSE/MCA/T/215	Eective-II	3			100		3
Paper-XVI	CSE/MCA/T/216	Elective-III	3			100		3
Sessional Courses								
Sessional Courses	Subjects		Periods/Weeks			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Sessional-VIII	CSE/MCA/S/211	Software Engineering Lab			3		100	2
Sessional-IX	CSE/MCA/S/212	Data Communication and Computer Networks Lab			3		100	2
			18		6	600	200	22

SECOND YEAR SECOND SEMESTER

Sessional Courses	Subjects		Periods/week			Marks		Credit Points
	Subject Code	Subject Name	L	T	P	Examination	Sessional	
Sessional-X	CSE/MCA/S/221	Seminar			3		100	2
Sessional-XI	CSE/MCA/S/222	Project			9		300	6
			00		12		400	8

LIST OF ELECTIVES

Note that students have to choose one subject from each of the following elective baskets

Subject Code	Elective-1	Subject Code	Elective-II	Subject Code	Elective-III
CSE/MCA/T/214A	Artificial Intelligence and Applications	CSE/MCA/T/215A	Distributed computing	CSE/MCA/T/216A	Computer Graphics
CSE/MCA/T/214B	Machine Learning	CSE/MCA/T/215B	Internet of Things (IOT)	CSE/MCA/T/216B	Computer Vision
CSE/MCA/T/214C	Pattern Recognition	CSE/MCA/T/215C	Network Security	CSE/MCA/T/216C	Bioinformatics
CSE/MCA/T/214D	Introduction to Data Science	CSE/MCA/T/215D	Web Technologies	CSE/MCA/T/216D	Information Retrieval
CSE/MCA/T/214E	Optimization Techniques	CSE/MCA/T/215E	Software Project Management	CSE/MCA/T/216E	Natural Language Processing
CSE/MCA/T/214F	Soft Computing	CSE/MCA/T/215F	Microprocessors and Embedded systems	CSE/MCA/T/216F	Multimedia
				CSE/MCA/T/216G	Biometric Systems