

MASTER OF COMPUTER APPLICATION (M.C.A.) :

Duration : Three Years.

Eligibility : Any graduate with 50 % marks (5 % relaxation for Backward Class Candidates) and Mathematics up to 12th Standard.

Medium of Instructions : English.

FIRST YEAR (SEMESTER-I)

1	1CSA-1	Computer Organization & Architecture
2	1CSA-2	Object Oriented Programming using C++
3	1CSA-3	Operating System
4	1CSA-4	Digital Electronics & Microprocessor
5	1CSA-5	System Analysis & Design
6	1CSA-6	Practical - I (Based on C++)
7	1CSA-7	Practical - II (Based on Microprocessor)

FIRST YEAR (SEMESTER-II)

1	2CSA-1	Data Structures
2	2CSA-2	Database Management Systems
3	2CSA-3	Discrete Mathematics & Graph Theory
4	2CSA-4	Java Programming
5	2CSA-5	Statistics & Numerical Mathematics
6	2CSA-6	Practical - I (Based on Java)
7	2CSA-7	Practical - II (Based on Data Structures & Statistics & Numerical Mathematics using C++)
8	2CSA-8	Project - I (using C++ or Java & Application area related to one of the subject studied till now)

SECOND YEAR (SEMESTER-III)

1	3CSA-1	E-Commerce
2	3CSA-2	Data Communication & Network
3	3CSA-3	Design & Analysis of algorithm
4	3CSA-4	Operation Research
5	3CSA-5	Database Administration
6	3CSA-6	Practical - I (Based on Oracle)
7	3CSA-7	Practical - II (Based on Operation Research using C++)

SECOND YEAR (SEMESTER-IV)

1	4CSA - 1	Computer Hardware Interfacing
2	4CSA - 2	Distributed Database Management System
3	4CSA - 3	Computer Graphics
4	4CSA - 4	Distributed Operating System
5	4CSA - 5	C# & Dot net
6	4CSA - 6	Practical - I (based on C# & Don net)
7	4CSA - 7	Practical - II (Based on Computer Graphics C++)
8	4CSA - 8	Project - II (using C++, C# or Java & Application area related to one of the subject studied till now.)

THIRD YEAR (SEMESTER-V) PROJECT

1	5CSA -1	Data Warehousing and Data Mining	1	6CSA-1	Topic Synopsis Seminar
2	5CSA -2	Embedded Systems	2		a) Defining & Outlining of the topic
3	5CSA -3	Network Security	3		b) Literature Survey
4	5CSA -4	Elective - I (a) Legal Aspects of IT (b) Software Engineering (c) System Management	4		c) Tool to be using for carrying out the work
5	5CSA -5	Elective - II (a) VB.NET (b) ASP.NET	5	6CSA-2	Mid term Seminar for evaluating the progress
6	5CSA -6	Practical - I (Based on Embedded Systems, Network Security & Data Warehousing & Data Mining)	6	6CSA-3	End Semester evaluation of the project work
7	5CSA -7	Practical - II (Based on Elective - I or Elective- II)	Note : All the evaluation for project work mentioned at 1,2,&3 will be done by Internal Guide & External Examiner. The External Examiner for 6CSA-1, 6CSA-2 & 6CSA-3 will not be same.		
			OR Certification of the following		
			01	Sun Certification	
			02	CISCO Certifications	
			03	Microsoft Certification	
			04	ORACLE Certification	

Note : Changes, if any, in the syllabus will be subject to those made by Rashtrasant Tukadoji Maharaj Nagpur University.