



### MCA - COURSE STRUCTURE

FIRST YEAR MCA					
Subject Code	Trimester – I	Subject Code	Trimester – II	Subject Code	Trimester - III
MCA111	Structured Programming using C	MCA121	Data Structures	MCA131	Fundamentals of Operating System
MCA112	Computer Organization and Architecture	MCA122	Database Management Systems –II	MCA132	Object Oriented Concepts and Programming using
MCA113	Database Management Systems-I	MCA123	Programming using C and C++	MCA133	System Software
MCA114	IT Tools	MCA124	Discrete Mathematics for Computer Science	MCA134	Computer Oriented Numerical and Statistical
		MCA125	Communication Skills	MCA	Management Systems
SECOND YEAR MCA					
Subject Code	Trimester – IV	Subject Code	Trimester – V	Subject Code	Trimester – VI
MCA241	Core Java	MCA251	Web Development using ASP.NET	MCA261	TCP/IP Protocol Suite
MCA242	Software Engineering	MCA252	Object Oriented Analysis and Design using UML	MCA262	Open Source Technologies
MCA243	Operations Research	MCA253	Managerial Economics	MCA263	Elective-I
MCA244	Introduction to .NET Technology using VB.NET	MCA254	Data Communication and Networking	MCA264	Dissertation
MCA245	Advances in Operating Systems with Linux	MCA255	Seminar and Professional Skills Development		
THIRD YEAR MCA					
Subject Code	Trimester – VII	Subject Code	Trimester - VIII	Subject Code	Trimester – IX
MCA371	Software Project Management	MCA381	Enterprise Applications (ERP, SCM, CRM)	MCA391	System Development Project (Major)
MCA372	Mobile Computing	MCA382	Distributed Computing and Service Oriented Architecture (SOA)		
MCA373	Enterprise Application Development using Java EE	MCA383	Elective-III		
MCA374	Elective-II	MCA384	System Development Project (Minor)		

Elective-I	Elective-II	Elective-III
<ol style="list-style-type: none"> <li>Artificial Intelligence</li> <li>Linux Kernel Programming</li> <li>Computer Graphics</li> <li>Search Engine Optimization</li> <li>Advanced Software Engineering using IBM Rational Suite</li> </ol>	<ol style="list-style-type: none"> <li>Compiler Construction</li> <li>Multimedia Systems</li> <li>Software Quality Management</li> <li>Data Warehousing and Data Mining</li> </ol>	<ol style="list-style-type: none"> <li>Information Security</li> <li>GIS</li> <li>Cyber Laws</li> <li>IT Infrastructure Management</li> <li>E-Governance</li> <li>Grid and Cloud Computing</li> </ol>



### Teaching Scheme

### First Year MCA

### Trimester – I

**Note: 1theory/tutorial hour = 1 credit and 1 practical hours = 1 credit**

Sr. No.	Subject	Contact hrs/week				Total (credits)
		Theory (hrs)	Tutorial (hrs)	Practical (hrs)	Total (hrs)	
MCA111	Structured Programming using C	3	1	4	8	8
MCA112	Computer Organization and Architecture	3	1	-	4	4
MCA113	Database Management System-I	3	1	4	8	8
MCA114	IT Tools (*)	-	-	5	5	2
	<b>Total</b>	<b>9</b>	<b>3</b>	<b>13</b>	<b>25</b>	<b>22</b>

\* indicates bridge course

### Trimester – II

Sr. No.	Subject	Contact hrs/week				Total (credits)
		Theory (hrs)	Tutorial (hrs)	Practical (hrs)	Total (hrs)	
MCA121	Data Structures	3	1	3	7	7
MCA122	Database Management System-II	3	1	3	7	7
MCA123	Programming using C and C++	3	1	4	8	8
MCA124	Discrete Mathematics for Computer Science	3	1	-	4	4
MCA125	Communication Skills	3	1	-	4	4
	<b>Total</b>	<b>15</b>	<b>5</b>	<b>10</b>	<b>30</b>	<b>30</b>

### Trimester – III

Sr. No.	Subject	Contact hrs/week				Total (credits)
		Theory (hrs)	Tutorial (hrs)	Practical (hrs)	Total (hrs)	
MCA131	Fundamentals of Operating System	3	1	-	4	4
MCA132	Object Oriented Concepts and Programming using C++	3	1	4	8	8
MCA133	System Software	3	1	4	8	8
MCA134	Computer Oriented Numerical and Statistical Methods	3	1	2	6	6
MCA135	Management Systems	3	1	-	4	4
	<b>Total</b>	<b>15</b>	<b>5</b>	<b>10</b>	<b>30</b>	<b>30</b>



### Examination Scheme

#### First Year MCA

#### Trimester – I

Sr. No.	Subject	Internal Assessment		External Assessment		Total
		Mid-Term	Assignment	Theory	Practical	
MCA111	Structured Programming using C	25	25	50	50	150
MCA112	Computer Organization and Architecture	25	25	50	-	100
MCA113	Database Management Systems-I	25	25	50	50	150
MCA114	IT Tools				50	50
	<b>Total</b>	<b>75</b>	<b>75</b>	<b>150</b>	<b>150</b>	<b>450</b>

#### Trimester – II

Sr. No.	Subject	Internal Assessment		External Assessment		Total
		Mid-Term	Assignment	Theory	Practical	
MCA121	Data Structures	25	25	50	50	150
MCA122	Database Management System – II	25	25	50	50	150
MCA123	Programming using C and C++	25	25	50	50	150
MCA124	Discrete Mathematics for Computer Science	25	25	50	-	100
MCA125	Communication Skills	25	25	50	-	100
	<b>Total</b>	<b>125</b>	<b>125</b>	<b>250</b>	<b>150</b>	<b>650</b>

#### Trimester – III

Sr. No.	Subject	Internal Assessment		External Assessment		Total
		Mid-Term	Assignment	Theory	Practical	
MCA131	Fundamentals of Operating System	25	25	50	50	150
MCA132	Object Oriented Concepts and Programming using C++	25	25	50	50	150
MCA133	System Software	25	25	50	50	150
MCA134	Computer Oriented Numerical and Statistical Methods	25	25	50	50	150
MCA135	Management Systems	25	25	50	-	100
	<b>Total</b>	<b>125</b>	<b>125</b>	<b>250</b>	<b>200</b>	<b>700</b>