



**JECRC**<sup>TM</sup>  
**UNIVERSITY**  
BUILD YOUR WORLD

**Faculty of IT & Computer Application**  
**Scheme**

**Master of Computer Applications (MCA)-Data Science & Data Analytics**

**(In Association with Samatrix)**

**Academic Programme-July 2021-22**

## MCA

Semester wise Credit				Total Credits	Minimum Credits Required for Degree
III	IV	V	VI		
25	20	19	16	80	80

Semester – I							Semester – II						
Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
MCA201	Programming in Java	4	0	0	4	CORE	MCA209	Data Structures Lab Using JAVA-II	0	0	2	1	F
MCA203	Data Structures and Algorithms	3	1	0	4	F	MCA210	Advance Database Management System	3	0	0	3	CORE
MCA205	Project Lab in Java	0	0	2	1	CORE	MCA212	Project Lab in Advance Database Management Systems	0	0	2	1	CORE
MCA206	Data Structures Lab -I	0	0	2	1	F	MCA213	Minor Project	0	0	4	2	CORE
MCA207	Computer Programming Lab	0	0	2	1	F	MCADS 103	R Programming for Data Science and Analysis (202)	2	0	4	4	CORE
MCADS101	Data Analytics using Python	4	0	0	4	CORE	MCADS 104	Machine Learning and Pattern Recognition (202)	2	0	4	4	CORE
MCADS102	Probabilistic Modeling & Reasoning	4	0	0	4	CORE		Life Skills-I (Aptitude)	1	0	0	1	F
	Communication Skills	2	0	2	3	ID		Life Skills-I Lab	0	0	2	1	F
	Open Elective -I	3	0	0	3	GE		Open Elective -II	3	0	0	3	GE
	<b>Total</b>	20	1	8	25			<b>Total</b>	11	0	18	20	

Semester – III							Semester – IV					
Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type	Course Code	Course Name	L (Hr.)	P (Hr.)	Credits	Type
MCA215	Internet Security and Cryptography	3	0	0	3	CORE	MCA218	Industrial Training/Internship/Dissertation Project Presentation	0	0	16	CORE
MCA217	Cryptography Lab	0	0	2	1	CORE						
MCADS105	Data Visualization using Tableau or other advance Tool & Techniques (202)	2	0	4	4	CORE						
MCADS106	Big Data Analytics (202)	2	0	4	4	CORE						
MCADS107	Project	0	0	4	2	CORE						
	Life Skills-II ( Personality Development)	1	0	0	1	F						
	Life Skills-II -Lab	0	0	2	1	F						
	Open Elective -III	3	0	0	3	GE						
	<b>Total</b>	<b>11</b>	<b>0</b>	<b>16</b>	<b>19</b>							

## List of Elective Courses

Elective-II/IV		Elective-I/III	
Course Code	Course name	Course Code	Course name
MCA219	Programming in ASP.Net	MCA241	Data warehousing and Data Mining
MCA220	Programming in R	MCA242	Data Science and Analytics
MCA221	Programming in C#	MCA243	Distributed Computing
MCA222	Professional Java	MCA244	Big Data Analytics
MCA223	MEAN Fullstack Development	MCA245	Cloud Computing
MCA224	Programming Using Ruby On Rails	MCA246	Introduction to Salesforce
MCA225	Programming Using Scala	MCA247	Big Data Analytics using Hadoop
MCA226	Design & Analysis of Algorithms	MCA248	System and Network Administrator
MCA227	Machine Learning	MCA249	Artificial Intelligence and Expert System
MCA228	Programming in ASP.Net Lab	MCA250	Compiler Design
MCA229	Programming in R Lab	MCA251	Advance Computer Network
MCA230	Programming in C# Lab	MCA252	Theory of Computation
MCA231	Professional Java Lab	MCA253	Robotics Process Automation
MCA232	MEAN Fullstack Development Lab	MCA254	Advance Computer Architecture
MCA233	Programming Using Ruby On Rails	MCA255	Agile Software Development
MCA234	Programming Using Scala Lab	MCA256	Introduction to Blockchain
MCA235	Design & Analysis of Algorithms Lab	MCA257	Software Project Management
MCA236	Machine Learning Lab		
MCA237	Introduction to Linux System		
MCA238	Linux Server Administration and		
MCA239	Software Development Using		
MCA240	Network Virtualization Using		