JECRC™
UNIVERSITY
BUILD YOUR WORLD

# Faculty of IT & Computer Application

# Scheme

# Master of Computer Applications (MCA)-Artificial Intelligence & Machine Learning (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 | MCAAI103 | Machine Learning Practical with Python Lab (202) | 2 | 0 | 4 | 4 | CORE |
| MCAAI101 | Data Analytics using Python | 4 | 0 | 0 | 4 | CORE | MCAAI104 | Machine Learning and Pattern Recognition (202) | 2 | 0 | 4 | 4 | CORE |
| MCAAI102 | 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 |
| | **Total** | 20 | 1 | 8 | 25 | | | **Total** | 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 | | | | | | |
| MCAAI105 | Neural Networks and Deep Learning (Vision and NLP)- | 2 | 0 | 4 | 4 | CORE | | | | | | |
| MCAAI106 | Data Visualization | 2 | 0 | 4 | 4 | CORE | | | | | | |
| MCAAI107 | 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 | | | | | | |
| | **Total** | **11** | **0** | **16** | **19** | | | | | | | |

# 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 | | |
| | | | |