CMR UNIVERSITY

Private University Estd in Karnataka State by Act No.45 of 2013

BENGALURU

RECOGNISED BY **UGC**

SCHOOL OF SCIENCE STUDIES (SOSS)

MASTER OF COMPUTER APPLICATIONS (MCA)

PROGRAMME STRUCTURE-2023

MCA

I Semester

Course	CMRU Category	CMRU Sub category	UGC category	School	Contact Hours/Week	Credit Distribution L-T-P-C
Advanced Data Structures using C and Lab	Foundation	AC	Program Core	SOSS	7	3-0-2-5
Advanced Database Management Systems and Lab	Foundation	IC	Program Core	SOSS	7	3-0-2-5
Operating System	Foundation	IC	Program Core	S0SS	3	3-0-0-3
Probability and Statistics	Foundation	IC	Program Core	SOSS	3	3-0-0-3
Elective 1 : Artificial Intelligence and Lab / Object Oriented Modelling and Design and Lab	Discipline Specific Elective	AC	Discipline Specific Elective	SOSS	7	3-0-2-5
Community Service - I (COS- I) *	CS	-	-	DCCC	(30)	0-0-1-1*
TOTAL						**21 +1***
Common Core (Non-Credit) - Graduate Requirement:						-
Oral and Written Communication	CC	GR	AECC	DCCC	2	
Career Preparedness Courses: Career Preparedness Program -1 (Career Essentials + Prepare for Aptitude Tests - I)	CC	GR	AECC	DCCC	3	

Internship- I (CIP) of 2 credits to be carried out between I and I Semester break. The corresponding 2 credits will be reflected in the IV Semester.

II Semester

Course	CMRU Category	CMRU Sub category	UGC category	School	Contact Hours/Week	Credit Distribution L-T-P-C
Machine Learning using Python and Lab	Foundation	AC	CC	SOSS	7	3-0-2-5
Advanced Java Programming and Lab	Foundation	AC	CC	SOSS	7	3-0-2-5
Distributed and Parallel Computing	Foundation (INDUSTRY EXPERT/POP)	AC	CC	SOSS	3	3-0-0-3
Advanced Computer Networks	Foundation (INDUSTRY FACING MODULE)	AC	CC	SOSS	3	3-0-0-3
Optimization Techniques	Foundation	IC	CC	SOSS	3	3-0-0-3
Elective 2: Data Warehousing & Data Mining and Lab/ Mobile Application Development and Lab	Discipline Specific Elective (INDUSTRY EXPERT/POP)	DSE	ELECTIVE	SOSS	7	3-0-2-5
Internship I† (CIP)	Foundation	Internship	CC	SOSS		
Community Service - II (COS-II) *	CS	-	-	DCCC	(30)	0-0-1-1*
TOTAL						**24 +1***
Common Core (Non-Credit) - Graduate Requirement:						-

Design Thinking (DTP)	CC	GR	AECC	DCCC	(30)	
Career Preparedness Courses: Career Preparedness Program -2(Career Effectiveness + Prepare for Aptitude Tests - II)	CC	GR	AECC	DCCC	3	

Internship- II (SIP) should be done between 2nd and 3rd semester break, and allocated 4 credits. The corresponding 4 credits is reflected in the IV Semester.

III Semester

Course	CMRU Category	CMRU subcategory	UGC Category	school	Contact Hours/Week	Credit Distribution L-T-P-C
Full Stack Development and Lab	Foundation (INDUSTRY FACING MODULE)	AC	CC	SOSS	7	3-0-2-5
.NET Framework & Applications and Lab	Foundation	AC	CC	SOSS	7	3-0-2-5
Network Information Security and Cyber Laws	Foundation (ONLINE)	AC	CC	S0SS	3	3-0-0-3
Software Project Management	Foundation	IC	Program Core	SOSS	3	3-0-0-3
Research Methodology and IPR	Multidisciplinary	MDC	MDC	SOSS	3	2-0-0-2

Elective 3: Data Visualization and Lab /Internet of Things and Lab	Foundation (INDUSTRY EXPERT/POP)	AC	ELECTIVE	SOSS	7	3-0-2-5
MOOC	Foundation			-		4-0-0-4
Internship I†† (SIP)	Foundation	Internship	CC	SOSS		
					Credits	**27**

Common Core (Non-Credit) - Graduate Requirement:						
Career Preparedness Courses: Career Preparedness Program -3 (Strategies for Self-management (SSM))	CC	GR	AECC	DCCC	1	-

† Internship II - Summer Internship Program (SIP) credits are reflected in the IV Semester

IV Semester

Course	CMRU Category	CMRU subcategory	UGC Category	school	Contact Hours/Week	Credit Distribution L-T-P-C
Advanced Cloud Computing	Foundation (INDUSTRY EXPERT/POP)	AC	CC	SOSS	3	3-0-0-3
Elective 4: Blockchain Technology/Digital Image Processing	Discipline Specific Elective (INDUSTRY FACING MODULE)	DSE	EC	SOSS	3	3-0-0-3

Elective 5: Cloud Security/Wireless Sensor Networks	Discipline Specific Elective (INDUSTRY FACING MODULE)	DSE	EC	SOSS	3	3-0-0-3
Internship-1 (CIP)	Foundation	Internship	CC			0-0-2-2
Internship-2 (SIP)	Foundation	Internship	CC			0-0-4-4
Capstone Project	Foundation	captones	DSE	SOSS		6
Community Service - I (COS- I) *	CS	-	-	DCCC	(30)	0-0-1-1
Community Service - II (COS- II) *	CS	-	-	DCCC	(30)	0-0-1-1
Research Publication			DSE	SOSS		1
TOTAL						24

Paper Publication Scopus Indexed/Web of Science or equivalent esteemed journals

† The credits of Internship I - Community Internship Program (CIP) taken up after the I Semester is reflected in the IV Semester

†† The credits of Internship II - - Summer Internship Program (SIP) taken up after the II Semester is reflected in the IV Semester

* The credit of Community Service - I (COS-I) / Community Service - II (COS-II) of 30 hours each that was carried out in the I and II Semesters respectively is reflected in the IV Semester.