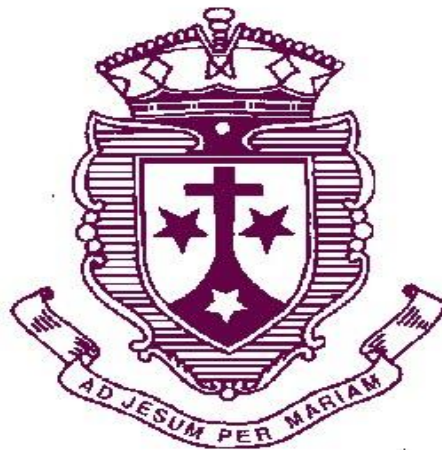# DEPARTMENT OF

MASTER OF COMPUTER APPLICATIONS

MOUNT CARMEL COLLEGE AUTONOMOUS

58, PALACE ROAD,

BENGALURU – 560 052

MOUNT CARMEL COLLEGEAUTONOMOUS

MCA SYLLABUS

CHOICE BASED CREDIT SYSTEM

(w.e.f. 2018 BATCH)

Mount Carmel College, Autonomous
MCA Syllabus
Choice Based Credit System
(w.e.f. 2018 batch)

I SEMESTER

Sem	Paper Code	Paper Title	No. of Hours (per week)			Total	Marks		
			L	T	P	Credit	CIA	ESE	Total
I	1MCACC1	Programming and Problem Solving Using C	4	-	-	**4**	30	70	100
	1MCACC2	Computer Organization and Assembly Language Programming	4	-	-	**4**	30	70	100
	1MCACC3	Discrete Mathematics	4	-	-	**4**	30	70	100
	1MCACC4	Management Information Systems	4	-	-	**4**	30	70	100
	1MCAAC1	Accounting and Financial Management	3	1	-	**2**	30	70	100
	1MCAP1	C Programming Lab	-	-	6	**3**	30	70	100
	1MCAP2	Tally and ALP Lab	-	-	6	**3**	30	70	100
		Total	**19**	1	**12**	**24**	**210**	**490**	**700**

L – Lecture   T – Tutorial   P – Practical
CIA – Continuous Internal Assessment   ESE – End Semester Examination

II SEMESTER

Sem	Paper Code	Paper Title	No. of Hours (per week)			Total	Marks		
			L	T	P	Credit	CIA	ESE	Total
II	2MCACC1	Database Management Systems	4	-	-	**4**	30	70	100
	2MCACC2	Operating Systems	4	-	-	**4**	30	70	100
	2MCACC3	Data and File Structures	4	-	-	**4**	30	70	100
	2MCACC4	Java Programming	4	-	-	**4**	30	70	100
	2MCAAC1	Probability and Statistics	3	1	-	**2**	30	70	100
	2MCAP1	Java Programming Lab	-	-	6	**3**	30	70	100
	2MCAP2	Data and File Structures Lab	-	-	6	**3**	30	70	100
		Total	**19**	1	**12**	**24**	**210**	**490**	**700**

L – Lecture   T – Tutorial   P – Practical
CIA – Continuous Internal Assessment   ESE – End Semester Examination

III SEMESTER

Sem	Paper Code	Paper Title	No. of Hours (per week)			Total	Marks		
			L	T	P	Credit	CIA (30)	ESE (70)	Total (100)
III	3MCACC1	Advanced Web Programming	4	-	-	4	30	70	100
	3MCACC2	Finite Automata and Formal Languages	4	-	-	4	30	70	100
	3MCACC3	Software Engineering	4	-	-	4	30	70	100
	3MCACC4	Mobile Applications Development	4	-	-	4	30	70	100
	3MCAP1	Advanced Web Programming Lab	-	-	6	3	30	70	100
	3MCAP2	DBMSLab	-	-	6	3	30	70	100
	3MCAP3	Mobile Applications Development Lab	-	-	6	3	30	70	100
		Total	16	-	18	25	210	490	700

L – Lecture   T – Tutorial   P – Practical
CIA – Continuous Internal Assessment   ESE – End Semester Examination

IV SEMESTER

Sem	Paper Code	Paper Title	No. of Hours (per week)			Total	Marks		
			L	T	P	Credit	CIA (30)	ESE (70)	Total (100)
IV	4MCACC1	Data Communication and Computer Networks	4	-	-	**4**	30	70	100
	4MCACC2	Design and Analysis of Algorithms	4	-	-	**4**	30	70	100
	4MCACC3	Data Warehousing and Knowledge Mining	4	-	-	**4**	30	70	100
	4MCAEC11/ 4MCAEC12/ 4MCAEC13	Elective 1	4	-	-	**4**	30	70	100
	4MCAP1	UML and Software Testing Tools Lab	-	-	6	**3**	30	70	100
	4MCAP2	Data Analytics Lab	-	-	6	**3**	30	70	100
	4MCAECP11/ 4MCAECP12/ 4MCAECP13	Elective 1 Lab	-	-	6	**3**	30	70	100
	Total		**16**	**-**	**18**	**25**	**210**	**490**	**700**

L – Lecture　　　　　T – Tutorial　　　　　P – Practical
CIA –Continuous Internal Assessment　　　ESE – End Semester Examination

Elective 1
4MCAEC11 Multimedia Systems and Communications
4MCAEC12 Open Source Technologies

4MCAEC13 Artificial Intelligence

Elective 1 Lab
4MCAECP11 Multimedia Lab

4MCAECP12 Open SourceTechnologiesLab

4MCAECP13 J2EE Lab

V SEMESTER

Sem	Paper Code	Paper Title	No. of Hours (per week)			Total	Marks		
			L	T	P	Credit	CIA (30)	ESE (70)	Total (100)
V	5MCACC1	Machine Learning using Python	4	-	-	**4**	30	70	100
	5MCACC2	Network Information Security	4	-	-	**4**	30	70	100
	5MCACC3	Cloud Computing	4	-	-	**4**	30	70	100
	5MCAEC21/ 5MCAEC22/ 5MCAEC23	Elective 2	4	-	-	**4**	30	70	100
	5MCAP1	Cloud Computing Lab	-	2	4	**3**	30	70	100
	5MCAP2	Python Programming Lab	-	-	6	**3**	30	70	100
	5MCAECP21/ 5MCAECP22/ 5MCAECP23	Elective 2 Lab	-	-	6	**3**	30	70	100
	5MCAIMC1	Open Elective	2	-	-	**1**	15	35	50
		Total	**18**	2	**16**	**26**	**225**	**525**	**750**

L – Lecture   T – Tutorial   P – Practical
CIA – Continuous Internal Assessment   ESE – End Semester Examination

Elective 2
5MCAEC21 Digital Image Processing
5MCAEC22 Internet of Things
5MCAEC23 System Modeling and
             Simulation

Elective 2 Lab
5MCAECP21 Digital Image Processing Lab
5MCAECP22 Internet of things Lab
5MCAECP23 System Modeling and Simulation
             Lab

Inter/Multidisciplinary Course: 5MCAIMC13D Animation using Maya

VI SEMESTER

Sem	Paper Code	Paper Title	Total Credit	Marks		
				CIA	ESE	Total
VI	6MCAEC31	Elective 3	**4**	30	70	100
	6MCAEC41	Elective 4	**4**	30	70	100
	6MCACC1	Project	**08**	75	125	200
	6MCACDP1	Community Development Project	**01**	15	35	50
		Total	**17**	**150**	**300**	**450**

Elective 3 & 4:

- Advanced Algorithms
- Optimization Techniques
- Advanced Networks
- Storage Area Networks
- Parallel Computing
- Software Project Management
- Software Testing and Quality Assurance
- Enterprise Resource Planning
- Micro services