

**MASTER OF COMPUTER APPLICATIONS**  
**REGULATIONS 2019**  
**CHOICE BASED CREDIT SYSTEM**  
**SUMMARY OF CREDIT DISTRIBUTION**

S. No	CATEGORY	CREDITS PER SEMESTER						TOTAL CREDIT	CREDITS IN %	Range Of Total Credits	
		I	II	III	IV	V	VI			Min	Max
1	FC	4						4	3%	1%	5%
2	PC	16	22	22	16	13		89	75%	80%	90%
3	PE				3	6		9	8%	5%	10%
4	EEC	2			1	2	12	17	14%	10%	20%
<b>TOTAL</b>		<b>22</b>	<b>22</b>	<b>22</b>	<b>20</b>	<b>21</b>	<b>12</b>	<b>119</b>	<b>100%</b>	<b>-</b>	<b>-</b>

FC	-	Foundation Course	L	-	Lecture
PC	-	Professional Core	T	-	Tutorial
PE	-	Professional Elective	P	-	Practical
EEC	-	Employability Enhancement Course	H	-	Hours

**MASTER OF COMPUTER APPLICATION**  
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**I – VI SEMESTERS CURRICULUM AND SYLLABI**

<b>FIRST SEMESTER</b>							
Code No.	Course	Category	L	T	P	C	H
19MA1257	Mathematical Foundations of Computer Science	FC	4	0	0	4	4
19CA1102	Computer Architecture	PC	3	0	0	3	3
19CA1103	Problem Solving using C Programming	PC	3	0	0	3	3
19CA1104	Database Management Systems	PC	3	0	0	3	3
19CA1105	Data Structures	PC	3	0	0	3	3
19CA1111	Data Structures Laboratory	PC	0	0	4	2	4
19CA1112	Database Management Systems Laboratory	PC	0	0	4	2	4
19CA1913	Communication Skills Laboratory	EEC	1	0	2	2	3
<b>TOTAL</b>			<b>17</b>	<b>0</b>	<b>10</b>	<b>22</b>	<b>27</b>

<b>SECOND SEMESTER</b>							
<b>Code No.</b>	<b>Course</b>	<b>Category</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>H</b>
19CA2101	Object Oriented Programming	PC	3	0	0	3	3
19CA2102	Design and Analysis of Algorithms	PC	3	0	0	3	3
19CA2103	Software Engineering	PC	3	0	0	3	3
19CA2104	Operating Systems	PC	3	0	0	3	3
19CA2105	Computer Graphics and Multimedia	PC	3	1	0	4	4
19CA2111	Object Oriented Programming Laboratory	PC	0	0	4	2	4
19CA2112	Design and Analysis of Algorithms Laboratory	PC	0	0	4	2	4
19CA2113	Operating Systems Laboratory	PC	0	0	4	2	4
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>12</b>	<b>22</b>	<b>28</b>

<b>THIRD SEMESTER</b>							
<b>Code No.</b>	<b>Course</b>	<b>Category</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>H</b>
19CA3101	Microprocessor and Microcontroller	PC	3	0	0	3	3
19CA3102	Computer Networks	PC	3	0	0	3	3
19CA3103	Web Programming Essentials	PC	3	0	0	3	3
19CA3104	Programming with Java	PC	3	0	0	3	3
19CA3105	Object Oriented Analysis and Design	PC	3	1	0	4	4
19CA3111	Networking Laboratory	PC	0	0	4	2	4
19CA3112	Web Programming Laboratory	PC	0	0	4	2	4
19CA3113	Programming with Java Laboratory	PC	0	0	4	2	4
19CA3M01	Effective Communication (For Lateral entry students)	NC	-	-	-	-	-
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>12</b>	<b>22</b>	<b>28</b>

<b>FOURTH SEMESTER</b>							
<b>Code No.</b>	<b>Course</b>	<b>Category</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>H</b>
19CA4401	Resource Management Techniques	PC	3	0	0	3	3
19CA4102	Mobile Communications	PC	3	0	0	3	4
19CA4103	Data Mining	PC	3	0	0	3	3
19CA4104	Web Application Development	PC	3	0	0	3	4
	Professional Elective – I	PE	3	0	0	3	3
19CA4111	Mobile Application Development Laboratory	PC	0	0	4	2	4
19CA4112	Web Application Development Laboratory	PC	0	0	4	2	4
19CA4913	Technical Seminar and Report Writing	EEC	0	0	2	1	2
<b>TOTAL</b>			<b>15</b>	<b>2</b>	<b>10</b>	<b>20</b>	<b>27</b>

**FIFTH SEMESTER**

Code No.	Course	Category	L	T	P	C	H
19CA5101	Cloud Computing	PC	3	0	0	3	3
19CA5102	Big Data Analytics	PC	3	0	0	3	3
19CA5103	Machine Learning	PC	3	0	0	3	3
	Professional Elective – II	PE	3	0	0	3	3
	Professional Elective – III	PE	3	0	0	3	3
19CA5111	Cloud and Big Data Laboratory	PC	0	0	4	2	4
19CA5112	Dot Net Laboratory	PC	0	0	4	2	4
19CA5913	Mini Project	EEC	0	0	4	2	4
19CA5M01	PHP Programming	NC	-	-	-	-	-
<b>TOTAL</b>			<b>15</b>	<b>2</b>	<b>12</b>	<b>21</b>	<b>29</b>

**SIXTH SEMESTER**

Code No.	Course	Category	L	T	P	C	H
19CA6901	Project Work	EEC	0	0	24	12	24
<b>TOTAL</b>			<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>	<b>24</b>

Code No.	Course	L	T	P	C
<b>PROFESSIONAL ELECTIVES</b>					
<b>PROFESSIONAL ELECTIVE I</b>					
19CA4201	Soft Computing	3	0	0	3
19CA4202	Accounting and Financial Management	3	0	0	3
19CA4203	Software Project Management	3	0	0	3
19CA4204	Security in Computing	3	0	0	3
19CA4205	Adhoc and Sensor Network	3	0	0	3
<b>PROFESSIONAL ELECTIVE II</b>					
19CA5201	Professional Ethics	3	0	0	3
19CA5202	Health Care Management	3	0	0	3
19CA5203	Geological Information Systems	3	0	0	3
19CA5204	Human Resource Management	3	0	0	3
19CA5205	Internet of Things	3	0	0	3

Code No.	Course	L	T	P	C
<b>PROFESSIONAL ELECTIVE III</b>					
19CA5206	Software Testing and Quality Assurance	3	0	0	3
19CA5207	Web Server Programming in .NET	3	0	0	3
19CA5208	Game Programming	3	0	0	3
19CA5209	Computational Intelligence	3	0	0	3
19CA5210	Principles of Programming Languages	3	0	0	3
<b>EMPLOYABILITY ENHANCEMENT COURSE</b>					
19CA1913	Communication Skills Laboratory	1	0	2	2
19CA4913	Technical Seminar and Report Writing	0	0	2	1
19CA5913	Mini Project	0	0	4	2
19CA6911	Project Work	0	0	24	12
<b>MANDATORY COURSES (NON CREDIT COURSES)</b>					
19CA3M01	Effective Communication (For Lateral entry students)	-	-	-	-
19CA5M01	PHP Programming	-	-	-	-