



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA**  
**KAKINADA – 533 003, Andhra Pradesh, India**

**MASTER OF COMPUTER APPLICATIONS (MCA)**  
**COURSE STRUCTURE**

*(Applicable for batches admitted from 2019-2020)*



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**

**MCA I SEMESTER**

S.No	Code	Courses	L	T	P	C
1	R19MCA1101	Problem Solving with C	3	0	0	3
2	R19MCA1102	Computer Organization	3	0	0	3
3	R19MCA1103	Discrete Mathematical Structures	3	0	0	3
4	R19MCA1104	Probability and Statistics	3	0	0	3
5	R19MCA1105	Accounting and Financial Management	3	0	0	3
6	R19MCA1106	English Language Communication Skills Lab	0	0	3	1.5
7	R19MCA1107	Problem Solving with C Lab	0	0	3	1.5
8	R19MCA1108	IT Workshop (Lab)	0	0	3	1.5
<b>Total Credits</b>						19.5

**MCA II SEMESTER**

S.No	Code	Courses	L	T	P	C
1	R19MCA1201	Data Structures	3	0	0	3
2	R19MCA1202	Operating Systems	3	0	0	3
3	R19MCA1203	Software Engineering	3	0	0	3
4	R19MCA1204	OOP Through Java	3	0	0	3
5	R19MCA1205	Optimization Techniques	3	0	0	3
6	R19MCA1206	OOP Through Java Lab	0	0	3	1.5
7	R19MCA1207	Data Structures Lab	0	0	3	1.5
8	R19MCA1208	Operating Systems and Linux Lab	0	0	3	1.5
<b>Total Credits</b>						19.5

-- (1)

### MCA III SEMESTER

S.No	Code	Courses	L	T	P	C
1	R19MCA2301	Database Management Systems	3	0	0	3
2	R19MCA2302	Computer Networks	3	0	0	3
3	R19MCA2303	Design and Analysis of Algorithms	3	0	0	3
4	R19MCA2304	Advanced Java Programming	3	0	0	3
5	R19MCA2305	Object Oriented Analysis and Design	3	0	0	3
6	R19MCA2306	Database Management Systems Lab	0	0	3	1.5
7	R19MCA2307	Advanced Java Programming Lab	0	0	3	1.5
8	R19MCA2308	OOAD through UML Lab	0	0	3	1.5
<b>Total Credits</b>						19.5

### MCA IV SEMESTER

S.No	Code	Courses	L	T	P	C
1	R19MCA2401	Data Warehousing and Data Mining	3	0	0	3
2	R19MCA2402	Full Stack Technologies	3	0	0	3
3	R19MCA2403	Python Programming	3	0	0	3
4	R19MCA2404	<b>Elective-1</b> 1. Embedded Computing 2. Artificial Intelligence 3. MOOCs-1 (NPTEL/SWAYAM)(Self learning courses)	3	0	0	3
5	R19MCA2405	<b>Elective-2</b> 1. Cloud Computing 2. Multimedia Application Development 3. MOOCs-2 (NPTEL/SWAYAM)	3	0	0	3
6	R19MCA2406	Full Stack Technologies Lab	0	0	3	1.5
7	R19MCA2407	Data Mining with R Lab	0	0	3	1.5
8	R19MCA2408	Python Programming Lab	0	0	3	1.5
<b>Total Credits</b>						19.5

## MCA V SEMESTER

S.No	Code	Courses	L	T	P	C
1	R19MCA3501	Cryptography and Network Security	3	0	0	3
2	R19MCA3502	Big Data Analytics	3	0	0	3
3	R19MCA3503	Machine Learning	3	0	0	3
4	R19MCA3504	<b>Elective-3</b> 1. Digital Marketing 2. Natural Language Processing 3. MOOCs-3 (NPTEL/SWAYAM)	3	0	0	3
5	R19MCA3505	<b>Elective-4</b> 1. Internet of Things 2. DevOps 3. MOOCs-4 (NPTEL/SWAYAM)	3	0	0	3
6	R19MCA3506	Cryptography and Network Security Lab	0	0	3	1.5
7	R19MCA3507	Big Data Analytics Lab	0	0	4	2
8	R19MCA3508	Machine Learning with Python Lab	0	0	3	1.5
<b>Total Credits</b>						20

## MCA VI SEMESTER

S.No	Code	Courses	L	T	P	C
1	R19MCA3601	Project Seminar	0	0	0	2
2	R19MCA3602	Dissertation/Thesis	0	0	0	10
<b>Total Credits</b>						12

**Total Credits: 19.5 + 19.5 + 19.5 + 19.5 + 20 + 12= 110**

  
Director (i/c)  
Academic Planning  
JNTUK Kakinada