



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM

VIZIANAGARAM – 535 003 Andhra Pradesh (India)

(Established by Andhra Pradesh Act No.22 of 2021)

MCA COURSE STRUCTURE & SYLLABUS

(Applicable for batches admitted from 2025-26)

CURRICULUM STRUCTURE and DETAILED SYLLABUS for

Two Year PG Program

MCA (Master of Computer Applications)

(Applicable for batches admitted from 2025-26)





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I Semester

S.No.	Course Code	Course Name	Category	L	T	P	Credits
1	MCA1101	Data Structures	PC	3	0	0	3
2	MCA1102	Computer Organization	PC	3	0	0	3
3	MCA1103	Database Management Systems	PC	3	0	0	3
4	MCA1104	Operating Systems	PC	3	0	0	3
5	MCA1105	Mathematical and Statistical Foundations	BS&H	3	1	0	4
6	MCA1106	Database Management Systems Lab	PC	0	0	3	1.5
7	MCA1107	Data Structures using C Lab	PC	0	0	4	2
8	MCA1108	Operating Systems and Linux Lab	PC	0	0	3	1.5
Total				15	1	10	21



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II Semester

S.No.	Course Code	Course Name	Category	L	T	P	Credits
1	MCA1201	Computer Networks	PC	3	0	0	3
2	MCA1202	Full Stack Development	PC	3	0	0	3
3	MCA1203	Object Oriented Programming Using JAVA	PC	3	0	0	3
4	MCA1204	Object Oriented Software Engineering	PC	3	0	0	3
5	MCA1205	Artificial Intelligence	PC	3	0	0	3
6	MCA1206	Program Elective-1 1. Design and Analysis of Algorithms 2. Advanced Unix Programming 3. Data Warehousing and Data mining 4. MOOCS-1(NPTEL / SWAYAM) (Recommended 12 week course with 3 credits)	PC/ PE	3	0	0	3
7	MCA1207	Object Oriented Programming Using JAVA Lab	PC	0	0	3	1.5
8	MCA1208	Full Stack Development Lab	PC	0	0	3	1.5
9	MCA1209	Employability Skills-1 ^{\$}	AC	1	0	0	0
Total				19	0	6	21

*This may be conducted in Zero Hour.

^{\$}Internal Evaluation



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III Semester

S.No.	Course Code	Course Name	Category	L	T	P	C
1	MCA2101	Machine Learning using Python	PC	3	0	0	3
2	MCA2102	Network Security and Cyber Security	PC	3	0	0	3
3	MCA2103	Big Data Analytics	PC	3	0	0	3
4	MCA2104	Program Elective-2 1. Cloud Computing 2. Image Processing 3. Internet of Things 4. MOOCS – 2 (NPTEL /SWAYAM) (Recommended 12 week course with 3 credits)	PE	3	0	0	3
5	MCA2105	Human Resource Management	BS&H	3	0	0	3
6	MCA2106	Networks and Security Lab	PC	0	0	3	1.5
7	MCA2107	Machine Learning with Python Lab	PC	0	0	4	2
8	MCA2108	Big Data Analytics Lab	PC	0	0	3	1.5
9	MCA2109	Employability Skills–2 ^{\$}	AC	1	0	0	0
10	MCA2110	Internship/Industry Oriented Mini Project#	MC	0	0	0	2
Total							22

^{\$}Internal Evaluation

#This can be done during semester break and evaluated at the end of 3rd Sem.



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IV Semester

S.No.	Course Code	Course Name	Category	L	T	P	C
1	MCA2201	Program Elective-3 1. Soft Computing 2. Blockchain Technologies 3. e-Commerce 4. MOOCs-3 (NPTEL/SWAYAM) Recommended 12 week course with 3 credits	PE	3	0	0	3
2	MCA2202	Program Elective-4 1. Mobile Adhoc Networks 2. Quantum Computing 3. Agile Methodologies 4. MOOCs-4 (NPTEL/SWAYAM) Recommended 12 week course with 3 credits	PE	3	0	0	3
3		Project Work/Dissertation		0	0	0	10
Total				6	0	0	16

***Students going for Industrial Project/ Thesis will complete these courses through MOOCs (or even in earlier semester)**