

COURSE STRUCTURE
OF
MASTER OF TECHNOLOGY
(COMPUTER SCIENCE & ENGINEERING)
NEP 2020 w.e.f. 2024-25



RAJIV GANDHI UNIVERSITY
RONO HILLS
DOIMUKH
ARUNACHAL PRADESH - 791112

MASTER OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING

(COURSEWORK AND RESEARCH)

Semester – I											
S/ N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End- Semeste r	Total Marks
				L	T	P					
1	CSE-101-CC-5110	Mathematical Foundation of Computer Science	3	3	0	0	45	T	20	80	100
2	CSE-101-CC-5120	Advanced Programming Practices	4	2	0	2	30	T	20	80	100
							60	P	20	80	100
3	CSE-101-CC-5130	Advanced Algorithm Design	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
4	CSE-101-CC-5140	Advanced Computer Architecture	3	3	0	0	45	T	20	80	100
5	CSE-101-CC-5150	Advanced Computer Networks	3	2	0	1	30	T	20	80	100
							30	P	20	80	100
6	CSE-101-RC-5110	Research Methodology	4	3	1	0	45	T	20	80	100
		TOTAL	21	16	1	4					

Semester – II											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CC-5210	Advanced Operating System	3	3	0	0	45	T	20	80	100
2	CSE-101-CC-5220	Machine Learning Concepts with Python	4	2	0	2	30	T	20	80	100
							60	P	20	80	100
3	CSE-101-CC-5230	Data Science	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
4	CSE-101-CC-5240	Principles of Cryptography	3	3	0	0	45	T	20	80	100
5	CSE-101-DE-520X0	Elective – 1	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
6	CSE-101-RC-5210	Research and Publication Ethics	3	3	0	0	45	P	20	80	100
		TOTAL	21	17	0	4					

Semester – III											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-611X0	Coursework – I	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-612X0	Coursework – II	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-613X0	Coursework – III	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
5	CSE-101-RP-6110	Research Project-I	8	0	0	8	240	P	80	120	200
			20	9		11					

- X – Paper code of each Coursework

Semester – IV											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-RP-6210	Research project-II	20	0	0	20	600	-	120	180	300
			20	0		20					

Elective -1											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-DE-52010	Advanced Database Management System	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-DE-52020	Wireless Sensor Network	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-DE-52030	Internet of Things	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework -I											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61110	Mathematical Concept for Machine Learning Introduction to Cyber security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61120	Data Engineering Mathematical Concept for Machine Learning	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61130	Introduction to Cyber security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework -II											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61210	Data pre-processing and feature engineering Cyber security Policy and Law	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61220	Data Warehousing & Data Mining Data pre-processing and feature engineering	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61230	Cyber security Policy and Law	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework -III											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61310	Big Data Analytics and Visualization Ethical hacking	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61320	Big Data Analytics and Visualization Big Data Analytics and Visualization	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61330	Ethical hacking	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework –IV											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61410	Deep Learning Wireless network security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61420	Deep Learning for Data Science Deep Learning	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61430	Wireless network security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework –V											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61510	Natural Language Processing Cloud & IoT Security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61520	Natural Language Processing Natural Language Processing	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61530	Cloud & IoT Security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework –VI											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61610	Computer Vision AI and Cyber security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61620	Social Network Analysis Computer Vision	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61630	AI and Cyber security	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Coursework –VII											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-61710	Robotics and automation Coding Theory	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-61720	Block chain technology Robotics and automation	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-61730	Coding Theory	4	3	0	1	45	T	20	80	100
							30	P	20	80	100

Elective – I

01 - Advanced Database Management System

02 - Wireless Sensor Network

03 - Internet of Things

For Coursework select any one of the group

Group –I (Machine Learning)

1. CSE-101-CW-61110 : Mathematical Concept for Machine Learning
2. CSE-101-CW-61210 : Data pre-processing and feature engineering
3. CSE-101-CW-61310 : Big Data Analytics and Visualization
4. CSE-101-CW-61410 : Deep Learning
5. CSE-101-CW-61510 : Natural Language Processing
6. CSE-101-CW-61610 : Computer Vision
7. CSE-101-CW-61710 : Robotics and automation

Group-II (Cyber Security)

1. CSE-101-CW-61120 : Introduction to Cyber security
2. CSE-101-CW-61220 : Cyber security Policy and Law
3. CSE-101-CW-61320 : Ethical hacking
4. CSE-101-CW-61420 : Wireless network security
5. CSE-101-CW-61520 : Cloud & IoT Security
6. CSE-101-CW-61620 : AI and Cyber security
7. CSE-101-CW-61720 : Coding Theory

Group-III (Data Science)

1. CSE-101-CW-61130 : Data Engineering
2. CSE-101-CW-61230 : Data Warehousing & Data Mining
3. CSE-101-CW-61330 : Big Data Analytics and Visualization
4. CSE-101-CW-61430 : Deep Learning
5. CSE-101-CW-61530 : Natural Language Processing
6. CSE-101-CW-61630 : Social Network Analysis
7. CSE-101-CW-61730 : Block chain technology

MASTER OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING
(RESEARCH)

Semester – I											
S/ N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End - Sem este r	Total Marks
				L	T	P					
1	CSE-101-CC-5110	Mathematical Foundation of Computer Science	3	3	0	0	45	T	20	80	100
2	CSE-101-CC-5120	Advanced Programming Practices	4	2	0	2	30	T	20	80	100
							60	P	20	80	100
3	CSE-101-CC-5130	Advanced Algorithm Design	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
4	CSE-101-CC-5140	Advanced Computer Architecture	3	3	0	0	45	T	20	80	100
5	CSE-101-CC-5150	Advanced Computer Networks	3	2	0	1	30	T	20	80	100
							30	P	20	80	100
6	CSE-101-RC-5110	Research Methodology	4	3	1	0	45	T	20	80	100
		TOTAL	21	16	1	4					

Semester – II											
S/ N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End- Semeste r	Total Marks
				L	T	P					
1	CSE-101-CC-5210	Advanced Operating System	3	3	0	0	45	T	20	80	100
2	CSE-101-CC-5220	Machine Learning Concepts with Python	4	2	0	2	30	T	20	80	100
							60	P	20	80	100
3	CSE-101-CC-5230	Data Science	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
4	CSE-101-CC-5240	Principles of Cryptography	3	3	0	0	45	T	20	80	100
5	CSE-101-DE-520X0	Elective – 1	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
6	CSE-101-RC-5210	Research and Publication Ethics	3	3	0	0	45	T	20	80	100
		TOTAL	21	17	0	4					

Semester – III											
S/ N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End- Semest er	Total Marks
				L	T	P					
1	CSE-101-RD-6110	Dissertation -I	20	0	0	20	600		80	120	200

Semester – IV											
S/ N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End- Semest er	Total Marks
				L	T	P					
1	CSE-101-RD-6210	Dissertation -II	20	0	0	20	600		120	180	300

MASTER OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING

(COURSEWORK)

Semester – I											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CC-5110	Mathematical Foundation of Computer Science	3	3	0	0	45	T	20	80	100
2	CSE-101-CC-5120	Advanced Programming Practices	4	2	0	2	30	T	20	80	100
							60	P	20	80	100
3	CSE-101-CC-5130	Advanced Algorithm Design	4	3	0	1	30	T	20	80	100
							30	P	20	80	100
4	CSE-101-CC-5140	Advanced Computer Architecture	3	3	0	0	45	T	20	80	100
5	CSE-101-CC-5150	Advanced Computer Networks	3	2	0	1	30	T	20	80	100
							30	P	20	80	100
6	CSE-101-RC-5110	Research Methodology	4	3	1	0	60	T	20	80	100
		TOTAL	21	16	1	4					

Semester – II											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CC-5210	Advanced Operating System	3	3	0	0	45	T	20	80	100
2	CSE-101-CC-5220	Machine Learning Concepts with Python	4	2	0	2	30	T	20	80	100
							30	P	20	80	100
3	CSE-101-CC-5230	Data Science	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
4	CSE-101-CC-5240	Principles of Cryptography	3	3	0	0	45	T	20	80	100
5	CSE-101-DE-520X0	Elective – 1	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
6	CSE-101-RC-6210	Research and Publication Ethics	3	3	0	0	45	T	20	80	100
		TOTAL	21	17	0	4					

Semester – III											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-611X0	Coursework – I	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-612X0	Coursework – II	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
3	CSE-101-CW-613X0	Coursework – III	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
4	CSE-101-CW-614X0	Coursework – IV	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
5	CSE-101-CW-615X0	Coursework – V	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
		TOTAL	20	15	0	5					

Semester – IV											
S/N	Course Code	Course Name	Total Credits	Credits			Contact Hours	T/ P	Internal	End-Semester	Total Marks
				L	T	P					
1	CSE-101-CW-626X0	Coursework – VI	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
2	CSE-101-CW-627X0	Coursework – VII	4	3	0	1	45	T	20	80	100
							30	P	20	80	100
5	CSE-101-MP-6210	Minor Project	12	0	0	12	360	P	80	120	200
			20	6	0	14					