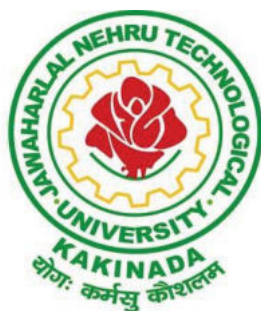


DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE STRUCTURE & SYLLABUS M.Tech CSE for COMPUTER SCIENCE & ENGINEERING PROGRAMME

(Applicable for batches admitted from 2019-2020)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

I-SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	MTCSE1101	Program Core-1 Mathematical Foundations of Computer Science	PC	3	0	0	3
2	MTCSE1102	Program Core-2 Advanced Data Structures & Algorithms	PC	3	0	0	3
3	MTCSE1103	Program Elective-1 1. Big Data Analytics 2. Digital Image Processing 3. Advanced Operating Systems	PE	3	0	0	3
4	MTCSE1104	Program Elective-2 1. Advanced Computer Networks 2. Internet of Things 3. Object Oriented Software Engineering	PE	3	0	0	3
5	MTCSE1105	Research Methodology and IPR	CC			0	2
6	MTCSE1106	Laboratory-1 Advanced Data Structures & Algorithms Lab	LB	0	0	4	2
7	MTCSE1107	Laboratory-2 Advanced Computing Lab	LB	0	0	4	2
8	MTCSE1108	Audit Course-1*	AC	2	0	0	0
Total Credits							18

***Student has to choose any one audit course listed below.**

II SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	MTCSE1201	Program Core-3 Machine learning	PC	3	0	0	3
2	MTCSE1202	Program Core-4 MEAN Stack Technologies	PC	3	0	0	3
3	MTCSE1203	Program Elective-3 1. Advanced Databases and Mining 2. Ad Hoc & Sensor Networks 3. Soft Computing	PE	3	0	0	3
4	MTCSE1204	Program Elective-4 1. Cloud Computing 2. Principles of computer security 3. High Performance Computing	PE	3	0	0	3
5	MTCSE1205	Laboratory-3 Machine Learning with python lab	LB	0	0	4	2
6	MTCSE1206	Laboratory-4 MEAN Stack Technologies Lab	LB	0	0	4	2
7	MTCSE1207	Mini Project with Seminar	MP	2	0	0	2
8	MTCSE1208	Audit Course-2 *	AC	2	0	0	0
Total Credits							18

***Student has to choose any one audit course listed below.**

Audit Course 1 & 2:

- | | |
|---------------------------------------|--|
| 1. English for Research Paper Writing | 5. Constitution of India |
| 2. Disaster Management | 6. Pedagogy Studies |
| 3. Sanskrit for Technical Knowledge | 7. Stress Management by Yoga |
| 4. Value Education | 8. Personality Development through Life Enlightenment Skills |

III-SEMESTER

S.No	Course Code	Courses	Category	L	T	P	C
1	MTCSE2101	Program Elective-5 1. Deep Learning 2. Social Network Analysis 3. MOOCs-1 (NPTEL/SWAYAM) 12 Week Program related to the programme which is not listed in the course structure	PE	3	0	0	3
2	MTCSE2102	Open Elective 1. MOOCs-2 (NPTEL/SWAYAM)-Any 12 Week Course on Engineering/ Management/ Mathematics offered by other than parent department 2. Course offered by other departments in the college	OE	3	0	0	3
3	MTCSE2103	Dissertation-I/ Industrial Project #	PJ	0	0	20	10
Total Credits							16

#Students going for Industrial Project/Thesis will complete these courses through MOOCs

M. Tech. (CSE) IV SEMESTER							
S.No	Course Code	Courses	Category	L	T	P	C
1	MTCSE2201	Dissertation-II	PJ	0	0	32	16
Total Credits							16

Open Electives offered by the Department of CSE

1. Python Programming
2. Principles of Cyber Security
3. Internet of Things
4. Machine Learning
5. Digital forensics
6. Next Generation Databases

I Year - I Semester	L	T	P	C
	3	0	0	3
Mathematical Foundations of Computer Science (MTCSE1101)				

Course Objectives: This course is aimed at enabling the students to

- To understand the mathematical fundamentals that is prerequisites for variety of courses like Data mining, Network protocols, analysis of Web traffic, Computer security, Software engineering, Computer architecture, operating systems, distributed systems bioinformatics, Machine learning.
- To develop the understanding of the mathematical and logical basis to many modern techniques in computer science technology like machine learning, programming language design, and concurrency.
- To study various sampling and classification problems.

Course Outcomes:

After the completion of the course, student will be able to