Proposed Revised M.Tech (CSE) Programme Structure May, 2017

FIRST SEMESTER

SNo	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	17M11CS111	Data Structures and Algorithms for Big Data	3	-	-	03	3
2.	17M11CS112	Machine Learning and Data Mining	3	-	-	03	3
3.		Elective – I	3	-	-	03	3
4.		Elective – II	3	-	-	03	3
5.		Elective – III	3	-	-	03	3
6.	17M17CS111	Project Based Learning-I (Open Source Software Development)		-	4	04	2
7.	17M15CS111	Advanced Algorithms Lab	-	-	2	02	1
8.	17M15CS112	Machine Learning and Data Mining Lab			2	02	1
9.	17M15CS113	Cloud Technology Lab			2	02	1
		TOTAL	15	-	10	25	20

Elective Courses (To be updated time to time)

1.	17M12CS111	High Performance Computer Architecture
2.	17M12CS112	Operating Systems for Scalable High-Performance Computing
3.	17M12CS113	Computational Optimization
4.	17M12CS114	Approximation and Randomized algorithms
5.	14M1NCI335 /17M12CS115	3D Graphics and Animation
6.	17M12CS116	Parallel and Distributed Algorithms
7.	17M12CS117	Concurrent Computing
8.	17M12CS118	Real Time Systems
9.	17M12CS119	Software Development Process Management
10.	17M12CS121	Software Verification and Validation
11.	17M12CS122	Software Requirements Engineering
12.	17M12CS123	User and Activity Centered Design
13.	17MINCI131 /17M12CS124	Flexible Computer Networks
14.	17M12CS125	Wireless Ad-hoc Networks
15.	14M1NCI339 /17M12CS126	Wireless Sensor and Actuator Networks
16.	13M11CI114 /17M12CS127	Distributed Systems
17.	13M1NCI431	Theory of Cryptography

	/17M12CS128	
18.	17M12CS129	Computing Systems and Research Thinking
19.	14M1NCI334	Web Algorithms
20.	17M31CS111	Design, Innovation, and Incubation-I
21.	15M3NCI231	E-Commerce and Social Web
22.		Advanced Programming and Software Construction
23.	14M1NCI331	Mobile and pervasive Computing
24.		Parallel and Distributed Databases
25.	17M21CS111	Cloud based Big Data Systems-I
26.	17M21CS122	Empirical Research and Performance Evaluation
27.	17M31CS112	Digital Business Marketing
28.	17M31CS122	Finance and Law for Digital Business
29.	17M41CS111	Advanced data structures and algorithms
30.	17M41CS112	Computer and Information Security
31.	17M41CS121	Cryptography and cryptanalysis
32.	17M41CS122	Network and mobile security
33.	15M51CI111 / 17M51CS111	Advanced Mobile Computing
34.	17M51CS121	Mobile Systems and Architecture
35.	17M51CS122	Heterogeneous and Mobile Databases

SECOND SEMESTER

SNo	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	17M11CS121	Cloud and Web Services Software Engineering	3	-	-	03	3
2.	17M11CS122	Performance Evaluation of Computing Systems	3	-	-	03	3
3.		Elective – IV	3	-	-	03	3
4.		Elective – V	3	-	-	03	3
5		Elective – VI	3	-	-	03	3
6.	17M17CS121	Project Based Learning-II (Open Source Software Development contd.)		-	4	04	2
7.	17M15CS121	Cloud and Web Services Lab	-	-	2	02	1
8.	17M15CS122	Performance Engineering Lab			2	02	1
9.	17M15CS123	IOT Systems Development Lab			2	02	1
		TOTAL	15	-	10	25	20

Elective Courses (To be updated time to time)

2 ND SEM EVEN 2018

1	17M12CS131	Power-Efficient and Reconfigurable Architectures
2	17M12CS132	Compilers for High-Performance Computing
3	17M12CS133	Resilient and Fault Tolerant Algorithms
4	17M12CS134	GPU Computing
5	17M12CS135	Advanced Cloud Computing
6	17M12CS136	Multi-objective Optimization
7	17M12CS137	Meta-Heuristic algorithms
8	17M12CS138	Dynamic Graph Algorithms
9	17M12CS139	Algorithmic Game Theory
10	17M12CS141	Modeling and Simulation
11	17M12CS142	Complexity Theory
12	17M12CS143	Dependable and Fault Tolerant Systems
13	17M12CS144	System Description Languages
14	17M12CS145	Software Architecture and Design
15	17M12CS146	Software Re-engineering
16	17M12CS147	Systems and Network security
17	17M12CS148	Database and Software security
18	17M12CS149	Computing Education

THIRD SEMESTER

SNo	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	17M17CS212	Seminar & Term Paper/ Supervised Study or credits transfer from another university through normal course or MOOC					4
2.	17M17CS211	Project Based Learning-III (Software Development Automation)					4
3.	17M17CS213/ 17M17CS214/ 17M17CS215	Dissertation /Industrial Project/Entrepreneurial Project					4
		TOTAL					12

FOURTH SEMESTER

SNo	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	17M17CS223/ 17M17CS224/ 17M17CS225	Dissertation /Industrial Project/ Entrepreneurial Project					18
		TOTAL					18

TOTAL CREDITS : 70

Upto one elective from Maths/JBS/HSS may be taken