Department of Computer Science and Engineering

Curriculum for M Tech in Computer Science and Engineering (Information Security)

Semester 1

	Code	Title	L	T	P/S	Cr
1	CS 6101D	Mathematical Foundations of Computer Science	4	0	0	4
2	CS 6213D	Foundations of Information Security	3	0	2	4
3	CS 6103D	Software Systems Lab	1	0	6	4
4		Elective	3/4	0	2/0	3/4
		Total credits				15-16

Semester 2

	Code	Title	L	T	P/S	Cr
1		Elective	3/4	0	2/0	4
2		Elective	3/4	0	2/0	4
3		Elective	3/4	0	2/0	4
4		Elective	3/4	0	2/0	3/4
		Total credits				15-16

Semester 3

	Code	Title	L	T	P/S	Cr
1	CS 7298D	Project			20	14
		Total credits				14

Semester 4

	Code	Title	L	T	P/S	Cr
1	CS 7299D	Project			28	16
		Total credits				16

Note
1. A Candidate should have earned a total of at least 60 credits, including 30 credits from projectwork.
2. Credits for elective courses may vary depending on the practical work involved.
3. A student can credit as an elective any relevant course offered for M. Tech or Ph. D students in other departments with permission from the Programme Co-ordinator.

LIST OF ELECTIVES

1	CS 6102D	Compiler Design	4
2	CS 6112D	Operating System Design	4
3	CS 6121D	Computability Theory	4
4	CS 6122D	Computer Architecture	4
5	CS 6123D	Database Design	4
6	CS 6124D	Topics in Programming Languages	4
7	CS 6125D	Computer Networking	4
8	CS 6131D	Logic and Computation	4
9	CS 6132D	Topics in Algorithms	4
10	CS 6133D	Game Theory	4
11	CS 6134D	Quantum Computation	4
12	CS 6135D	Logic for Computer Science	4
13	CS 6136D	Topics in Combinatorial Algorithms	4
14	CS 6139D	Computational Geometry	4
15	CS 6140D	Topics in Computational Geometry	4
16	CS 6141D	Distributed Computing	4
17	CS 6142D	Topics in Computer Architecture	4
18	CS 6143D	Trends in Middleware Systems	4
19	CS 6144D	Multicore Systems	4
20	CS 6151D	Software Engineering	4
21	CS 6152D	Object Oriented Modeling and Design	4
22	CS 6154D	Topics in Database Design	4
23	CS 6161D	Embedded Systems and Applications	4
24	CS 6171D	Natural Language Processing	4
25	CS 6172D	Artificial Intelligence	4
26	CS 6173D	Image Processing	4
27	CS 6174D	Pattern Recognition	4
28	CS 6181D	Bioinformatics	4
29	CS 6155D	Topics in Data Analytics	4
30	CS 6145D	Heterogeneous Parallel Programming	4
31	CS 6137D	Parameterized Algorithms	4
32	CS 6138D	Parameterized Complexity Theory	4
33	CS 6130D	Topics in Computational Complexity	4
34	CS 6191D	Mathematical foundations of Machine Learning	4
35	CS 6192D	Machine Learning	4
36	CS 6193D	Machine Learning Laboratory	4
37	CS 6201D	Cryptography	4
38	CS 6211D	Formal Methods in Secure Computing	4
39	CS 6212D	Network Security	4
40	CS 6111D	Algorithms and Complexity	4
41	CS 6214D	Topics in Information Security	4
42	CS 6231D	Theoretical aspects of cryptographic algorithms	4
43	CS 6232D	Cryptocomplexity	4
44	CS 6233D	Information Theory and Coding	4
45	CS 6271D	Data Compression	4
46	CS 6283D	Computer Laws and Ethics	4
47	CS 6285D	Information Security Management	4
48	CS 6203D	Information Security Laboratory	4
49	CS 6104D	Term Paper	4
50	MA 7355D	Fuzzy Set Theory and Applications	4
51	MA 7350D	Advanced Topics in Graph Theory	4