

**Proposed Scheme & Syllabus**  
**For**  
**Computer Science & Engineering Department**



**National Institute of Technology**  
**Delhi**

**Proposed Curriculum**

**M. Tech. Programme**  
**Computer Science and Engineering**  
**(Analytics)**

**Course Structure of M.Tech. Computer Science and Engineering**  
**(Analytics)**

**SEMESTER – I**

S.No.	Course No.	Course Name	L	T	P	Credits
1.	CSL 501	Mandatory Course 1 (Computational Mathematics)	3	0	0	3
2.	CSL 51X	Core 1	3	0	0	3
3.	CSL 51X	Core 2	3	0	0	3
4.	CSL 52X/53X	Elective 1	3	0	0	3
5.	CSL 52X/53X	Elective 2	3	0	0	3
6.	CSP 502	Core Lab 1	0	0	4	3
<b>Total Credits</b>			<b>15</b>	<b>0</b>	<b>4</b>	<b>18</b>

**SEMESTER II**

S. No.	Course No.	Course Name	L	T	P	Credits
1	CSL 51X	Core 3	3	0	0	3
2	CSL 51X	Core 4	3	0	0	3
3	CSL 551	Mandatory Course 2 (Algorithms for Analytics)	3	0	0	3
4	CSL 52X/53X	Elective 3	3	0	0	3
5	CSL 52X/53X	Elective 4	3	0	0	3
6	CSP 552	Core Lab II	0	0	4	3
<b>Total Credits</b>			<b>15</b>	<b>0</b>	<b>4</b>	<b>18</b>

**SEMESTER III**

S. No.	Course No.	Course Name	L	T	P	Credits
1	CSP 600	Dissertation I	-	-	-	8
2	CSL 52X/53X	Elective 5	3	0	0	3
3	CSL 52X/53X	Elective 6	3	0	0	3
4	CSP 601	Independent Study & Seminar	-	-	-	2
<b>Total Credits</b>			<b>6</b>	<b>0</b>	<b>0</b>	<b>16</b>

**SEMESTER IV**

S. No.	Course No.	Course Name	L	T	P	Credits
1	CSP 650	Dissertation II	-	-	-	12
2	CSP 651	Independent Study & Seminar	-	-	-	4
<b>Total Credits</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>16</b>

**I. Core Courses**

S. No	Course No.	Course	L	T	P	Credit
1	CSL 511	Quantitative Techniques	3	0	0	3
2	CSL 512	Optimization Techniques	3	0	0	3
3	CSL 513	Data Mining	3	0	0	3
4	CSL 514	Big Data Analytics	3	0	0	3
5	CSL 515	Simulation and Modeling	3	0	0	3
6	CSL 516	Data Warehousing	3	0	0	3
7	CSL 517	Information Search and Retrieval	3	0	0	3
8	CSL 518	Pattern Recognition and Rule Based Computing	3	0	0	3

**II. Elective Courses**

S. No	Course No.	Course	L	T	P	Credit
1	CSL 521	Natural Language Processing	3	0	0	3
2	CSL 522	Machine Learning	3	0	0	3
3	CSL 523	Neural Networks	3	0	0	3
4	CSL 524	Soft Computing	3	0	0	3
5	CSL 525	Advanced Image Processing	3	0	0	3
6	CSL 526	Large Network Analysis	3	0	0	3
7	CSL 527	Knowledge Representation & Reasoning	3	0	0	3
8	CSL 528	Social Media & Online Marketing	3	0	0	3
9	CSL 529	Game Theory	3	0	0	3
10	CSL 530	Cloud Computing	3	0	0	3
11	CSL 531	Recommender Systems	3	0	0	3
12	CSL 532	Research Methodology	3	0	0	3
13	CSL 533	Advanced Databases	3	0	0	3
14	CSL 534	Special Topics on Distributed Databases	3	0	0	3