BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI
NEW COURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
Recommended scheme of study for M.Tech(Information Technology)

SEMESTER / Session of Study (Recomended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits L-Lecture; T-Tutorial;P-Practicals			Total Credits C- Credits
					L (Periods/week)	T (Periods /week)	P (Periods/ week)	C
				THEORY				
FIRST / Monsoon	Fifth	Programme Core (PC)	CS501	Mathematical Foundations of Computer Science	3	0	0	3
			CS502	Advanced Data Structures	3	0	0	3
			IT501	Information Theory and Coding	3	0	0	3
		Programme Elective (PE)	**	PE 1	3	0	0	3
			**	PE 3	3	0	0	3
		Open Elective (OE)	*	OE 1	3	0	0	3
				LABORATORIES				
	Fifth	Programme Core (PC)	CS503	Advanced Data Structures Lab	0	0	4	2
		Programme Elective (PE)	**	PE LAB 1	0	0	4	2
			**	PE LAB 3	0	0	4	2
				TOTAL				**24**

				THEORY				
SECOND/ Spring	Fifth	Programme Core (PC)	CS509	Advanced Computer Algorithm	3	0	0	3
			IT512	Advanced Web Technology	3	0	0	3
			IT513	Big Data Analytics	3	0	0	3
			CS601	Graph Theory	3	0	0	3
		Programme Elective (PE)	**	PE 2	3	0	0	3
		Open Elective (OE)	*	OE 2	3	0	0	3
				LABORATORIES				
	Fifth	Programme Core (PC)	CS510	Advanced Computer Algorithm Lab	0	0	4	2
		Programme Elective (PE)	**	PE LAB 2	0	0	4	2
				TOTAL				**22**
				TOTAL FOR FIRST YEAR				**46**
THIRD / Monsoon	Sixth	Programme Core (PC)	CS600	Thesis Part I				8
				TOTAL				**8**
FOURTH/ Spring	Sixth	Programme Core (PC)	CS650	Thesis Part II				16
				TOTAL				**16**
				TOTAL FOR SIXTH LEVEL				**24**
				GRAND TOTAL FOR M.TECH PROGRAMME (46 + 24)				**70**

Programme Elective List for M.Tech (Information Technology)

SEMESTER / Session of Study (Recommended)	Course Level	Category of Course	Course Code	Cources	Mode of delivery & credits L-Lecture; T-Tutorial;P-Practicals			Total Credits C-Credits
					L (Periods/week)	T (Periods/week)	P (Periods/week)	C
FIRST / Monsoon	5	PE 1	CS506	Machine Learning	3	0	0	3
	5		IT503	Wireless Sensor Networks	3	0	0	3
	5		CS507	Computability and Complexity Theory	3	0	0	3
			LABORATORIES					
	5	PE LAB 1	IT509	Matlab Programming	0	0	4	2
	5		IT510	Java Programming	0	0	4	2
SECOND / Spring	5	PE 2	IT508	Cloud Computing	3	0	0	3
	5		IT516	Data Mining and Data Analysis	3	0	0	3
	5		IT518	Internet of Things(IoT)	3	0	0	3
			LABORATORIES					
	5	PE LAB 2	IT517	Data Mining and Data Analysis Lab	0	0	4	2
	5		IT519	Internet of Things(IoT) Lab	0	0	4	2
	5		IT511	R Programming	0	0	4	2
THIRD / Monsoon	6	PE 3	CS607	Intelligent Systems	3	0	0	3
	6		CS605	High Performance Computing Architecture	3	0	0	3
	5		IT507	Data Communication and Computer Networks	3	0	0	3
			LABORATORIES					
	5	PE LAB 3	IT521	Data Communication and Computer Networks Lab	0	0	4	2
	6		IT603	Python Programming	0	0	4	2
	6		IT604	Web App Development Lab	0	0	4	2

Open Elective List for M. Tech Program

SEMESTER / Session of Study (Recommended)	Course Level	Category of Course	Course Code	Cources	Mode of delivery & credits L-Lecture; T-Tutorial;P-Practicals			Total Credits C-Credits
					L (Periods/week)	T (Periods/week)	P (Periods/week)	C

					k)			
FIRST / Monsoon	5	OE1	CS514	Software Metrics	3	0	0	3
	5		CS522	Pattern Recognition and Application	3	0	0	3
			IT570	Basics of python programming	0	1	4	3
	5		IT518	Internet of Things	3	0	0	3
	5		IT522	Cyber Security and Digital Forensics	3	0	0	3
SECOND / Spring	5	OE 2	IT523	Biometric Security	3	0	0	3
	5		IT504	Applied Cryptography	3	0	0	3
	5		IT524	Image Processing Techniques	3	0	0	3
	5		CS524	Soft Computing	3	0	0	3
			IT571	Introduction to R Programming	0	1	4	3
	5		CS512	Artificial Intelligence	3	0	0	3
	5		IT516	Data Mining and Data Analysis	3	0	0	3