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(Computer Science & Engineering)

Fifth	SEMESTE R / Session of Study (Recomen	Course Level	Category of Course	Course Code	Courses	Mode of L-Lecture;	Total Credits C- Credits		
Fifth Programme Core CS501 Mathematical S Foundations of Computer Science CS502 Advanced Data S O O CS502 Advanced Data S O O CS504 Distributed Systems S O O CS505 O Distributed Systems S O O O CS505 O Distributed Systems S O O O O O O O O O	ded)					(Periods/w	(Periods/	(Periods/	С
Monsoon			1	•			·	I .	
Structures		Fifth			Foundations of Computer Science				3
Programme *** PE					Structures				3
Elective (PE)									3
Elective (PE)			Elective (PE)						3
Column			Elective (PE)	**			0	0	3
Fifth				*	OE 1	3	0	0	3
Programme Prog						TORIES			
SECOND/ Spring Fifth Programme Core CS510 Advanced Computer Algorithm Algori		Fifth	C	CS503		0	0	4	2
SECOND/Spring Fifth Programme Core (PC) CS509 Advanced Computer 3 0 0 3 3 0 0 3 3 3				**	PE LAB 1	0	0	4	2
SECOND/ Spring					PE LAB 3	0	0	4	2
Spring					TOTAL	<u> </u>	I	1	24
Management System CS512		Fifth			Algorithm				3
Programme ** PE 2 3 0 0 3 3 3 3 3 3 3				CS511	Management	3	0	0	3
Programme ** PE 2 3 0 0 3 3 3 3 3 3 3				CS512		3	0	0	3
Elective (PE)				CS601	Graph Theory	3	0	0	3
COE LABORATORIES LABORATORIES Fifth Programme Core (PC) CS510 Advanced Computer Algorithm Lab Programme ** PE LAB 2 O O O O O O O O O				**	PE 2	3	0	0	3
Fifth				*	OE 2	3	0	0	3
Computer Algorithm Lab Programme ** PE LAB 2 0 0 4 2									
Elective (PE)		Fifth		CS510	Computer	0	0	4	2
TOTAL 22 1 1 2 2 2 3 3 3 3 3 3 3				**	PE LAB 2	0	0	4	2
THIRD				1					22
/Monsoon (PC) TOTAL 8 FOURTH/ Spring Sixth Programme Core (PC) CS650 Thesis Part II 1 TOTAL 1 1 TOTAL 1							T	1	46
FOURTH/ Sixth Programme Core (PC) Thesis Part II 11 TOTAL 11		Sixth		CS600					8
TOTAL 1		Sixth		CS650					8 16
	Spring		(PC)		ΤΩΤΔΙ				16
			Т 7	TOTAL FO					24
GRAND TOTAL FOR M.TECH PROGRAMME (46 + 24)						(46 + 24)			70

Programme Elective List for M.Tech (Computer Science & Engineering)

SEMES	Course		Course	Courses	Mode of d	Total				
TER /	Level		Code		L-Lecture	e; T-Tutoria	l;P-	Credits		
Session					P	racticals		C-		
of Study								Credits		
(Recome										
nded)					L	T	P	С		
					(Periods/	(Periods/	(Peri			
					week)	week)	ods/			
							week			
)			
FIRST /	5		CS506	Machine Learning	3	0	0	3		
Monsoon				_						
	5		IT503	Wireless Sensor	3	0	0	3		
				Networks						
	5		CS507	Computability and	3	0	0	3		
				Complexity Theory						
		LABORATORIES								
			T	ı			1			
	5	PE	IT509	Matlab Programming	0	0	4	2		
	5	LAB 1	IT510	Java Programming	0	0	4	2		
	3		11310	Java Flogramming	U	U	 '+	<i>L</i>		
			IT516	Python Programming	0	0	4	2		
	5		IT511	R Programming	0	0	4	2		

SECOND/	5		IT518	Internet of Things(IoT)	3	0	0	3			
	5	PE 2	IT516	Data Mining and Data Analysis	3	0	0	3			
	5		CS517	Design and Analysis of Parallel Algorithm	3	0	0	3			
Spring			LABORATORIES								
	5		IT517	Data Mining and Data Analysis Lab	0	0	4	2			
	5	PE LAB 2	CS518	Parallel Computing Lab	0	0	4	2			
	5		IT519	Internet of Things(IoT) Lab	0	0	4	2			

THIRD /	6	DE 2	CS605	High Performance Computing Architecture	3	0	0	3
Monsoon	6	PE 3	IT508	Cloud Computing	3	0	0	3
	5		IT516	Advanced Operating System	3	0	0	3
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Open Elective List for M. Tech Program

								Total
					Mode of	Credits		
SEMESTER /		Catego			L-Lecture; '	T-Tutorial;P	-Practicals	C-
Session of		ry	Course	Subjects				Credits
Study (Recomended)		of Course	Code		L	Т	P	
(Recomended)		Course			(Periods/	(Periods/	(Periods/	С
					week)	week)	week)	
			CS514	Software Metrics	3	0	0	3
				Pattern				
				Recognition and	3	0	0	3
FIRST / Monsoon			CS522	Application				
		OE 1	IT518	Internet of Things	3	0	0	3
			IT570	Basics of Python Programming	0	1	4	3
			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
1		<u>I</u>						

5 IT516	Data Mining and Data Analysis	3	0	0	3	
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^{**} indicates program elective (PE)

^{*} indicates Open Elective (OE)