## BIRLA IN+A1:I30STITUTE OF TECHNOLOGY- MESRA, RANCHI REVISED COURSE STRUCTURE - To be effective from academic session 2021-22 Based on CBCS & OBE Model

Recommended scheme of study for M.Tech Information Security

SEMESTER / Session of Study (Recomende d)	Cours e Level	Categor y of Course	Cours e Code	Courses		elivery & cro	Total Credi ts C- Credi ts	
					L (Periods/ week)	T (Periods/ week)	P (Periods/w eek)	С
	THEORY	<i>'</i>						
FIRST / Monsoon	Fifth	Program me Core (PC)	CS501	Mathema tical Foundati ons of Compute r Science	3	0	0	3
			CS502	Advance d Data Structure s	3	0	0	3
			IT502	Fundame ntals of Informati on Security	3	0	0	3
				PE I	3	0	0	3
		Program me Elective (PE)		PE III	3	0	0	3
		LABORAT	ORIES					
	Fifth	Program me Core (PC)	CS503	Advance d Data Structure s Lab	0	0	4	2
			**	PE LAB 1	0	0	4	2
		TOTAL						19
	1							1
SECOND/ Spring	Fifth	Program me Core (PC)	CS509	Advance d Compute r	3	0	0	3

				Algorith				
				m				
			IT514	Cryptogr aphy	3	0	0	3
			IT515	Digital Forensics	3	0	0	3
			CS602	Data Compres	3	0	0	3
				sion				
				PE II	3	0	0	3
		LABORAT	ORIES					
	Fifth	Program me Core (PC)	CS510	Advance d	0	0	4	2
		(PC)		Compute r Algorith				
				m Lab				
			**	PE LAB 2	0	0	4	2
		TOTAL						19
THIRD / Monsoon	Sixth	Program me Core (PC)	CS600	Thesis (Part I)				8
		Open Elective		OE I / MOOC				3
		(OE)		OE II / MOOC				3
		TOTAL						14
FOURTH/ Spring	Sixth	Program me Core (PC)	CS650	Thesis (Part II)				16
		TOTAL	•			•	•	16
	1	1						

SEMESTER	Cour	Cour	Courses	Mode of deli	very & credits		Total
/ Session	se	se					
of Study	Level	Code					
(Recomen				L-Lecture; T-	Tutorial;P-Prad	cticals	Credi
ded)							ts
							C-
							Credi
							ts
				L	Т	Р	С
				(Periods/w	(Periods/w	(Periods/w	
				eek)	eek)	eek)	
FIRST /	5	CS50	Machine	3	0	0	3

			6	Learning				
Monsoon	5		IT50 3	Wireless Sensor Networks	3	0	0	3
	5		CS50 7	Computabili ty and Complexity Theory	3	0	0	3
		LABORA	TORIES				I	
	5	PE LAB	IT50 9	Matlab Programmi ng	0	0	4	2
	5		IT51 0	Java Programmi ng	0	0	4	2
			1T60 3	Python Programmi ng	0	0	4	2
	5		IT51 1	R Programmi ng	0	0	4	2
SECOND/	5	PE 2	IT52 0	Network Security	3	0	0	3
Spring	5		IT51 6	Data Mining and Data Analysis	3	0	0	3
	5		IT51 8	Internet of Things(IoT)	3	0	0	3
		LABORA	TORIES				•	
	5	PE LAB	IT51 7	Data Mining and Data Analysis Lab	0	0	4	2
	5		IT51 9	Internet of Things(IoT) Lab	0	0	4	2
THIRD /	6	PE 3	IT50 7	Data Communica tion and Computer Networks	3	0	0	3
Monsoon	6		IT60 1	Cloud Security	3	0	0	3
	5		1T60 2	Cyber Security	3	0	0	3

Open Electi	ve List fo	or M. Tech	Progra	m				
SEMESTER / Session of Study		Catego ry	Cour se Code	Subjects	Mode of del	ivery & credits	5	Total
(Recomen ded)	-	of Course			L-Lecture; T-	Tutorial;P-Pra	cticals	Credi ts
					L	Т	Р	Credi ts
					(Periods/w eek)	(Periods/w eek)	(Periods/w eek)	
FIRST /		OE 1	CS51 4	Software Metrics	3	0	0	3
Monsoon			CS52 2	Pattern Recognition and Application	3	0	0	3
			IT51 8	Internet of Things	3	0	0	3
			IT57 0	Basics of Python Programmi ng	0	1	4	3
			IT52 2	Cyber Security and Digital Forensics	3	0	0	3
		1						
SECOND/	5	OE 2	1T52 3	Biometric Security	3	0	0	3
Spring	5		IT50 4	Applied Cryptograp hy	3	0	0	3
	5		IT52 4	Image Processing Techniques	3	0	0	3
	5		CS52 4	Soft Computing	3	0	0	3
			IT57 1	Introductio n to R Programmi ng	0	1	4	3
	5		CS51 2	Artificial Intelligence	3	0	0	3

	5	IT51	Data Mining	3	0	0	3
		6	and Data				
			Analysis				