PROGRAMME COURSE STRUCTURE (ALL SEMESTERS)

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI

NEWCOURSE STRUCTURE - To be effective from academic session 2018-19 Based on CBCS & OBE model

Recommended scheme of study for MCA Programme

SEMESTER / Session of Study (Recomended)	Course Level	Category of Course	Course Code	Courses	Mode o c L-Lecture Pro	Tota l Cre dits C- Cred its		
					L (Periods/ week)	T (Perio ds/we ek)	P (Peri ods/ week)	С
			THEORY	7				
	FOURTH	Fundamental	MA430	Discrete Mathematical Structure	3	0	0	3
FIRST /	FOURTH	Science (FS)	MA428	Numerical and Statistical Methods	3	0	0	3
	FIRST	Humanities & Social Sciences (HSS)	MT123	Business Communication	2	0	2	3
			MT114	Fundamentals of management & Organization Behaviour	3	0	0	3
Monsoon	FOURTH	Programme	CA401	Programming with C	3	0	0	3
		Core (PC)	CA403	Computer Organization and Architecture	3	0	0	3
				LABORATO	RIES			
	FOURTH	Programme	CA402	Programming Lab in C	0	0	3	1.5
		Core (PC)	MA429	Numerical and Statistical Methods Lab	0	0	3	1.5
				TOTAL				21
THEORY								
SECOND/ Spring	FOURTH	Fundamental Science (FS)	CA455	Fundamentals of Data Structures	3		1 0	4

	FIRST		BT417	Bioinformatics	3	0	0	3
			CA457	Operating				
			CH-31	System	3	0	0	3
				Object Oriented				
	FOURTH	Programme	CA459	Design and				
		Core (PC)		Programming	3	0	0	3
				Database				
			CA461	Management				
		1100		System	3	1	0	4
		HSS		Basics of				
	FIRST		MT117	Financial				
				Accounting	2		0	2
				Management	3	0	0	3
				LABORATO	KIES			
			CA456	Data Structures	0	0	3	1 5
				Lab	0	0	3	1.5
		Programme	CA458	Operating	0	0	3	1 5
	FOURTH	Core (PC)		System Lab C++	0	0	3	1.5
			CA460					
			CA400	Programming Lab	0	0	3	1.5
			CA412	RDBMS Lab				
				L	0	0	3	1.5
				TOTAL				26
		T	THEC				1	
	FIFTH	Programme Core (PC)	CA501	Java	3	0	0	3
				Programming				
			CA503	Computer Algorithm	3	1	0	4
				Design	3	1	U	4
			CA504	Automata			_	
				Theory	3	1	0	4
			CA 505	Software	2	1		4
			CA505	Engineering	3	1	0	4
		HSS		Corporate				
THIRD!	FIRST		MT121	Social	2	0	0	2
THIRD/				Responsibility				
Monsoon				Programme	3	0	0	3
<u> </u>		Programme		Elective-I	3	-		3
		Elective (PE)		Programme	3	0	0	3
_				Elective-I				
			1	LABORATO	KIES			
	FIFTH	D	G 4 502	Java	0	_		1.5
		Programme	CA502	Programming	0	0	3	1.5
		Core		Lab Software				
		(PC)	CA506		0	0	3	1.5
 			1	Engineering Lab			I	26
THEORY								

FIFTH Programme Core (PC) Programme Core (PC) CA559 Data Communication and Computer Network CA561 Software Project Management * Programme * Programme * Programme	4 3 3	U	1	3	Design								
FIFTH Programme Core (PC) Programme Core (PC) CA561 Software Project Management * Programme * Programme	3												
Core (PC) and Computer Network CA561 Software Project Management * Programme	3				Data	CA559							
Core (PC) and Computer Network CA561 Software Project Management 3 0 0	3	0	1	2	Communication		Programme	FIFTH					
CA561 Software Project Management 3 0 0		U	1	3	and Computer		Core (PC)						
Management 3 0 0 0					Network								
Management		0	0	2	Software Project	CA561							
* Programme 2 0 0	3	U	U	3	Management								
	3	0	0	3	Programme	*							
Programme Elective- II		U	U	3	Elective- II		Programme						
FOURTH/Spri Elective(PE) * Programme 3 0 0	3	0	0	3	_	*	Elective(PE)		EOUDTH/Com				
Elective- II		U	U	3					_				
MOOC CA590 Massive Online						CA590	MOOC		ng				
	4	0	0	4									
Assignments					Assignments								
LABORATORIES			1	RIES		1							
CA558 Front end 0 0 3 1	1.5	3	0	0		CA558							
Programme Design Lab	1.5	5	· ·	Ů			Programme						
FIFTH Core CA560 Data						CA560	_	FIFTH					
(PC) Communication 0 3		3	0	0									
and Computer		5					(10)						
	1.5				l .								
TOTAL	24				TOTAL								
THEORY					1								
Humanities MT116 Quantitative					•	MT116		FIEST					
FIEST & Social methods for							& Social						
Sciences Business													
	3	0	0	3			(HSS)						
CA601 Computer					_	CA601							
	3	0	0	3									
Programme CA603 System Simulation and						CA603	Programme						
SIXIH Core (PC) Simulation and	2	0						SIXTH					
Modelling 3 0 0	3	Ü	0	3	•	G 4 605	, ,						
CA605 Optimization	2	0		2		CA605							
	3	U	U	3		Ψ.	D						
FIFTH/Monso	3	0		2			_						
on Elective(PE) Elective-III 3 0 0 * Programme	3	U	U	3		*	Elective(FE)		on				
1 Togramme	4	0	1	3									
GA (00)		J	1	3		CA600	GIEL / C. C.						
SII / Soit Shari massian						C/1000							
			0	0									
	6	6	U	<u>U</u>	1 TOJECT /		/ Extra OE						
LABORATORIES				RIES	LABORATO								
SIXTH Programme CA602 Computer					_	CA602	_	CIYTU					
Core (PC) Graphics Lab 0 0 3 1	1.5	3	0	0	Graphics Lab		Core (PC)	SIAIII					

			CA604	System Simulation and Modeling Lab	0	0	3	1.5
				TOTAL				28
PROJECT								
SIXTH/ Spring	SIXTH	Project(P)	CA656	Project				15
TOTAL								15
GRAND TOTAL								140

	List of Program Electives:							
PE/ LEVEL		Code No.	Name of the PE courses	L	Т	P	C	
5		CA530	Distributed Databases	3	0	0	3	
5	PE1	CA531	Decision Support Systems	3	0	0	3	
5		CA532	Data Mining and Warehousing	3	0	0	3	
5		CA533	Multimedia Databases	3	0	0	3	
5		CA580	Advanced Java Programming	3	0	0	3	
5		CA581	Systems Programming	3	0	0	3	
5	PE2	CA582	Compiler Design	3	0	0	3	
5		CA583	Programming Language Design and Concepts	3	0	0	3	
5		CA584	Web Programming	3	0	0	3	
6		CA635	Natural Language Processing	3	0	0	3	
6		CA636	Artificial Intelligence	3	0	0	3	
6		CA637	Image Processing					
6	PE3	CA638	Soft Computing	3	0	0	3	
6		CA639	Cloud Computing	3	0	0	3	
6		CA640	Machine Learning	3	0	0	3	

6		CA641	In-Memory Computing				
O				3	0	0	3
6		CA630	Network Security and				
6			Cryptography	3	1	0	4
		CA631	Internet of Things(IoT)				
6	PE4			3	1	0	4
	PE4	CA632	Mobile Computing				
6				3	1	0	4
		CA634	Multimedia and Animation				
6				3	1	0	4