

BCA 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 (BACHELOR OF COMPUTER APPLICATIONS)

Semester/ Session of Study (Recommended)	Course Level	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P- Practicals</i>			Total Credits <i>C- Credits</i>
				L (Period s/ week)	T (Periods / week)	P (Periods / week)	C
				THEORY			
FIRST Monsoon	FIRST	CA101	Problem Solving and Programming in C	3	0	0	3
		CA103	Logical Organizations of Computers	3	1	0	4
		MT124	Business Communication Basics	2	0	0	2
		CE101	Environmental Science	2	0	0	2
		CA104	Mathematics-I (Elementary Mathematics)	3	0	0	3
		LABORATORIES					
	FIRST	CA102	Problem Solving and Programming in C Lab	0	0	4	2
		PE(SEC-I)	Paper-I (Skill Enhancement Course)	0	0	4	2

TOTAL							18
SECOND Spring		THEORY					
	FIRST	CA155	Data Structures	3	1	0	4
		CA157	Discrete Structures	3	0	0	3
		CA160	Operating System Concepts	3	0	0	3
		CA158	Numerical and Statistical Methods	3	0	0	3
		LABORATORIES					
	FIRST	CA156	Data Structures Lab	0	0	4	2
		CA161	Operating System Lab	0	0	4	2
		CA159	Numerical and Statistical Methods Lab	0	0	4	2
		PE(SEC-II)	Paper-II (Skill Enhancement Course)	0	0	4	2
TOTAL							21
THIRD Monsoon		THEORY					
	SECON D	CA201	Object Oriented Programming using Java	3	0	0	3
		CA203	Database Management Systems	3	1	0	4
		**	Program Elective-I	3	1	0	4
		LABORATORIES					
	SECON D	CA202	OOP in Java Lab	0	0	4	2
		CA204	DBMS Lab	0	0	4	2
		**	Program Elective-I Lab	0	0	4	2
		PE(SEC-III)	Paper-III (Skill Enhancement Course)	0	0	4	2
	TOTAL						
FOURTH Spring	THEORY						
	SECON D	CA255	Fundamentals of Computer Algorithms	3	1	0	4
		CA256	Web Programming	3	0	0	3
		CA258	Software Engineering	3	0	0	3
		**	Program Elective-II	3	1	0	4
	LABORATORIES						
		CA257	Web Programming Lab	0	0	4	2

	SECOND	CA259	Software Engineering Lab	0	0	4	2
		**	Program Elective-II Lab	0	0	4	2
TOTAL							20
FIFTH Monsoon	THEORY						
	THIRD	CA301	Computer Graphics and Multimedia	3	0	0	3
		CA303	Computer Networks	3	0	0	3
		CA304	Management Information Systems	3	0	0	3
		PE-III	Program Elective-III	3	0	1	4
		PE-IV	Program Elective-IV	3	0	0	3
	LABORATORIES						
	THIRD	CA302	Computer Graphics Lab	0	0	4	2
		**	Program Elective-III Lab	0	0	4	2
		PE(SEC-IV)	Paper-IV (Skill Enhancement Course)	0	0	4	2
TOTAL							22
SIXTH Spring	THEORY						
	THIRD	CA355	Data Mining	3	0	0	3
		CA356	Distributed Computing	3	0	0	3
		**	Program Elective-V	3	1	0	4
		**	Program Elective-VI	3	1	0	4
		CA360	Project	0	0	0	6
TOTAL							20
TOTAL PROGRAM CREDITS							120
LIST OF PROGRAM ELECTIVES							
PE/LEVEL		Code No	Courses	Mode of delivery & credits L-Lecture; T-Tutorial; P- Practicals			Total Credits
				L (Periods/ week)	T (Periods/ week)	P (Periods/ week)	C
2	PEI	CA220	Internet Technologies	3	1	0	4
2		CA221	Internet Technologies Lab	0	0	4	2

2		CA222	Mobile Application (MA)	3	1	0	4
2		CA226	Mobile Application Lab	0	0	4	2
2		CA223	Ecommerce Technology	3	1	0	4
2		CA271	Soft Computing and Applications	3	1	0	4
2		CA282	Soft Computing Lab	0	0	4	2
2		CA273	Data Analytics	3	1	0	4
2		CA274	Data Analytics Lab using R Language	0	0	4	2
3		CA224	Cloud Computing	3	1	0	4
3		CA275	Android Programming	3	1	0	4
3		CA276	Android Programming Lab	0	0	4	2
3		CA277	Python Programming	3	1	0	4
3		CA278	Python Programming Lab	0	0	4	2
3		CA320	Software Testing	3	0	0	3
3		CA321	Software Testing Lab	0	0	4	2
3		CA322	Network Security	3	0	0	3
3		CA323	Cyber Forensics	3	1	0	4
3		CA325	Unix and Shell Programming	3	1	0	4
3		CA326	Unix and Shell Programming Lab	0	0	4	2
3		CA327	System Programming	3	1	0	4
3		CA328	Distributed Database Systems	3	1	0	4
3		CA331	Decision Support System	3	1	0	4

PROGRAM ELECTIVES (LIST OF SKILL ENHANCEMENT COURSES)

PE/LEVEL		Code No	Subjects	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-</i>			Total Credits
				L <i>(Periods/ week)</i>	T <i>(Periods / week)</i>	P <i>(Periods / week)</i>	C
1	PE(SEC-I)	CA180	Office Automation Tools	0	0	4	2
1	PE(SEC-II)	CA182	Desktop Publishing	0	0	4	2
1		CA280	HTML Programming	0	0	4	2
2	PE(SEC-III)	CA281	Programming in Visual Basic/GAMBAS	0	0	4	2
3	PE(SEC-IV)	CA382	Computerized Accounting and ERP	0	0	4	2
3		CA 384	Graphic Design and Photo Editing	0	0	4	2