## BCA Semester wise Study Scheme with contact hours, assigned credits & distribution of marks

					S	SEME	STEF	R- I					
	Cour		e Cou	equisit Irse, if ny		Perio	ds/We	eek		Marks		Durati	Cre
Course Type	se Code	Title of Course	Title	Cod	L	т	Р	Tot al	Contin uous Asses sment	End Semester Exam	Total	on of Exam	dit s
					Com	puls	ory C	ourse	S				
Fundam entals	BCA- DS-10 1	Elements of Mathematics	NA	NA	3	1		4	100	100	200	3	4
Core	BCA- DS-10 2	Hardware Interfaces	NA	NA	3			3	100	100	200	3	3
Core	BCA- DS-10 4	Introduction to IT & Programming in C	NA	NA	3			3	100	100	200	3	3
Core	BCA- DS-10 5	Database Management System	NA	NA	3			3	100	100	200	3	3
<mark>Core</mark>	CDC- 111	Placement Competency Enhancement - I	NA	NA		<mark>4</mark>		<mark>4</mark>	<mark>50</mark>	50	100	3	2
Core	BCA- DS-15 4	C Programming Lab	NA	NA			4	4	50	50	100	3	2
Core	BCA- DS-15 5 A	<mark>Database</mark> Management System Lab	NA	NA			<mark>4</mark>	<mark>4</mark>	<mark>50</mark>	<mark>50</mark>	<mark>100</mark>	3	2
						Tota	I						19

\* Under Elective Courses, beside the mentioned Domain Specific Elective Courses, other Inter-disciplinary, Generic, on-line Courses (MOOCs etc) and other approved courses shall be offered, which shall be notified well before start of the semester. The student shall be required and allowed to opt the courses out of offered courses as per maximum limit for maximum credits and for the category of Elective Courses under University Rules.

				SEMES	STE	<u>R- I</u>	I						
Course Type	Course Code	Title of Course	ε Coι	equisit ırse, if ny	F	Perio	ds/V	Veek		Mark	5	Duration of Exam	Credit s
			Titl e	Cod e	L	т	Р	Tota I	Int	Ex t	Tota I		
			C	Compuls	ory (	Cours	ses				-		
Core	BCA-DS-2 01	Data Structures using C	NA	NA	3			3	10 0	10 0	200	3	3
Core	BCA-DS-2 02	Internet Technologies	NA	NA	3			3	10 0	10 0	200	3	3
Core	BCA-DS-2 03	Software Engineering	NA	NA	3			3	10 0	10 0	200	3	3
Fundamental s	CDC-112	Placement Competency Enhancement-II	NA	NA	0	4	0	4	50	50	100	3	2
Core	BCA-DS-2 51	Data Structures Lab	NA	NA			2	2	50	50	100	3	1
Core	BCA-DS-2 52A	Internet Technology Lab	NA	NA			2	2	50	50	100	3	1
Fundamental s	CH-202B	Environmental Studies	NA	NA	3			3	10 0	10 0	200	3	3+1*
	-	•	To	tal Credi	ts				-				17

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				SEME	STEF	<b>२- I</b> ]	I						
			Pre-requi	isite			ods/W	/eek		Marks		_	
Course Type	Course Code	Title of Course	Course, if Title	Code	L	т	Р	Total	Contin uous Asses sment	End Sem Exa m	Tota I	Dura tion of Exa m	Cred its
			C	ompuls	ory	Cou	rses						
Core	BCA-DS-30 1	Object Oriented Programming using C++	Introduction to IT & Programmin g in C	BCA-D S-104	3			3	100	100	200	3	3
Core	BCA-DS-30 2	Introduction to Operating System	NA	NA	3			3	100	100	200	3	3
Funda mental s	BCA-DS-30 3	Mathematics for Computer Science	Elements of Mathematic s	BCA-D S-101	3	1		3	100	100	200	3	4
Core	BCA-DS-35 1	C++ Lab	C Programmin g Lab	BCA-D S-154			4	4	50	50	100	3	2
Core	BCA-RIC-I	Research Innovation Catalyst-I	NA	NA		1		1	50		50		0.5
Funda mental s	CDC-211	Placement Competency Enhancement-I II	NA	NA		4		<mark>4</mark>	<mark>50</mark>	<mark>50</mark>	<mark>100</mark>	3	2
Domai n Specifi	BCA-DS-30 4	Web Applications Development	NA	NA	3			3	100	100	200	3	3
c Electiv e	BCA-DS-30 6	Shell Programming	NA	NA	5			5	100	100	200	5	5
Domai n Specifi c	BCA-DS-35 4	Web Applications Development Lab	NA	NA			2	2	50	50	100	3	1
Electiv e	BCA-DS-35 6	Shell Programming Lab	NA	NA									
				al Credit	-	-							18.5
	B	CA Specialization:	Data Science	and Big	Data	Anal	ytics (	In Asso	ciation wit	h Micros	oft)		
Domain Specific	BCA-ED-351	Azure Fundamentals	NA	NA			4	4	50	50	100	4	2
Domain Specific	BCS-DS-376	Azure Data Fundamentals	NA	NA			4	4	50	50	100	4	2
		BCA Spe	cialization: Cy	/ber Secu	irity 1	in As	sociat	ion with	n Microsoft	)			
Domain Specific	BCA-ED-351	Azure Fundamentals	NA	NA			4	4	50	50	100	4	2
Domain Specific	BCS-DS-376	Azure Data Fundamentals	NA	NA			4	4	50	50	100	4	2
	BCA S	Specialization: Art	tificial Intellig	ence and	Mac	hine	Learn	ing In A	ssociation	with Mic	crosoft)		
Domain Specific	BCS-DS-375	Azure AI Fundamentals	NA	NA			4	4	50	50	100	4	2

Domain Specific	BCS-DS-376	Azure Data Fundamentals	NA	NA			4	4	50	50	100	4	2
		-	Total Credi	ts (BCA	Speci	ializa	tion)			-			22 5

							SEMESTE	ER- IV				Duratio n of Exam   Total Diratio n of Exam   200 3   200 3   200 3   200 3   200 3   100 3   50 3   100 3   100 3   100 3   100 3   100 4   100 4   100 4	
Cours			Pre-requisite if any				ds/Week			Marks		n of Exam	
e Type	Course Code	Title of Course	Title	Code	L	т	Р	Tota I	Continu ous Assess ment	End Semest er Exam	Total		
						Cor	npulsory	Cours				·	
Funda ment als	BCA-DS-4 01	Numerical Analysis and Statistical Techniques	Elements of Mathematic s	BCA-D S-101	3	1		3	100	100	200	3	
Core	BCA-DS-4 02	Programming in Java	Object Oriented Programmi ng using C++	BCA-D S-301	3			3	100	100	200	3	
Core	BCA-DS-4 06	Computer System Architecture	NA	NA	3			3	100	100	200	3	
Core	BCA-DS-4 52	Java Lab	C++ Lab	BCA-D S-351			4	4	50	50	100	3	
Funda ment als	CDC-212	Placement Competency Enhancement-IV	NA	NA		<mark>4</mark>		<mark>4</mark>	<mark>50</mark>	<mark>50</mark>	<mark>100</mark>	<mark>3</mark>	
Core	BCA-RIC-II	Research Innovation Catalyst –II	Research Innovation Catalyst-	BCA-RI C-I		1		1	50		50		
Core	BCA-DS-4 54	Vocational Training	NA	NA		4 \	Week		100		100	3	
Doma in	BCA-DS-4 04	System Programming	NA	NA									
Specif ic Electi ve	BCA-DS-4 05	Fundamentals of Artificial Intelligence	NA	NA	3			3	100	100	200	3	
				Total Cred									
Doma in Specif ic	BCS-DS-490	Azure Database Administrator Associate	BCA Spe			cience ai		4	50	50			
Doma in Specif ic	BCA-ED-45 1	Azure Cosmos DB developer specialty					4	4	50	50	100	4	
				BCA Spe	cializati	on: Cybe	er Security	(In Asso	ciation with	Microsoft)		1	
Doma in Specif ic	BCA-EC-451	Security Operations Analyst Associate					4	4	50	50	100	4	
Doma in Specif ic	BCA-EC-452	Security, Compliance and Identity Fundamentals					4	4	50	50	100	4	

Doma in Specif ic	BCS-DS-489	Azure Developer Associate					4	4	50	50	100	4	
Doma in	BCS-DS-490	Azure Database Administrator Associate					4	4	50	50	100	4	
			Total C	Credits (B	JCA Sp	ecializa	ation)	/					
other a	approved co	Courses, beside th ourses shall be offe t of offered course	fered, which sh	hall be n	notified	d well b maxim	before num cr	e start of t redits and	the semest	ster. The s	student	t shall be r	required
—ı	· · · · · ·	r	Pre-requisite Co	ourse. if	<del></del>			STER- V				Duration	
	( I	(	any	Juise, ii		Perior	ods/Wee	ak 📃		Marks		of Exam	
Course Type	Course Code	Title of Course	Title	Code	L	т	Р	Total	Continuo us Assessm ent	End Semes ter Exam	Total		
						Com	ipulso	ory Course	es				
Core	BCA-DS-5 01	Data Communication & Networking	NA	NA	3			3	100	100	200	3	
Core	BCA-DS-5 02	RDBMS	Database Management System	BCA-D S-105	3			3	100	100	200	3	
Core	BCA-DS-5 03	Python Programming	Introduction to IT & Programming in C	BCA-D S-104	з	['		3	100	100	200	3	]
Core	BCA-DS-5 52	RDBMS Lab	Database Management System	BCA-D S-155			4	4	50	50	100	3	
Core	BCA-DS-5 53	Python Programming Lab	NA	NA			4	4	50	50	100	3	
Core	BCA-RIC-II I	Research Innovation Catalyst-III	Research Innovation Catalyst-II	BCA-RI C-II			2	2	100		100		
Domain Specific	BCA-DS-5 04	Fundamentals of Object-Oriented Analysis & Design	Object Oriented Programming using C++	BCA-D S-301	- 3		$\left[ \right]$	3	100	100	200	3	
Elective	BCA-DS-5 05	Introduction to Cloud Computing	Data Communicati on & Networking	BCA-D S-501				Ĵ	100	100	200		
					Total			Data Ar					
	<u>т                                    </u>	Azuro Data	BCA Specializa				<u>10 ы</u> б	, Data An		issociation	i with ivin	crosoft)	<u>т                                    </u>
Domain Specific	BCS-DS-5 93	Engineer Associate					4	4	50	50	100	) 4	
Domain Specific	BCA-ED-5 51	Customer Data platform specialty					4	4	50	50	100	) 4	
			BC/	A Specia	lizatio	n: Cybr	er Sec	.urity (In A	Association wi	ith Micros	oft)		
Domain Specific	BCA-EC-5 51	Azure Security Engineer Associate					4	4	50	50	100	) 4	
Domain Specific	BCA-EC-5 52						4	4	50	50	100	) 4	

					-								
		Administrator Associate											
		BC	A Specialization:	Artificia	al Intel	igence	and	Machine	Learning (I	n Associati	ion with I	Microsoft)	
Domain Specific	BCS-DS-5 92	Azure Al Engineer Associate					4	4	50	50	100	4	
Domain Specific	BCS-DS-5 93	Azure Data Engineer Associate					4	4	50	50	100	4	
			Total C	redits (B	CA Spe	ecializa	tion)						
* Under	r Elective C	ourses, beside	the mentioned I		-				her Inter-d ffered, wh	-	iry, Gen	eric, on-l	ine Cou
shall be r	notified we		of the semester. t for maximum o				-			-			

				SEN	<b>1EST</b>	ER-V	Ί						
			Pre-requisite Cou	rse, if any		Peri	ods/	Week	r	Marks			
Course Type	Course Code	Title of Course	Title	Code	L	т	Р	Total	Continuous Assessment	End Semest er Exam	Total	Durat ion of Exam	Credit s
Core	BCA-DS- 601	Programming in .NET using C#	Object Oriented Programming using C++	BCA-DS-3 01	3			3	100	100	200	3	3
Core	BCA-DS- 651	Programming in .NET using C# Lab	NA	NA			4	4	50	50	100	3	2
Core	BCA-DS- 652	Project	NA	NA			8	8	200	100	300	-	4
Domain Specific Elective	BCA-DS- 603	Security of Information System	Data Communication & Networking	BCA-DS-5 01	3			3	100	100	200	3	3
S	BCA-DS- 606	Machine Learning	NA	NA									
Domain Specific Elective	BCA-DS- 604	Multimedia & Animation	Elements of Computer Graphics	BCA-DS-4 03	3			3	100	100	200	3	3
S	BCA-DS- 605	Basics of MIS & ERP	Principles of Management	BCA-DS-3 07									
			Tota	al Credits (E	BCA	Gene	eral)					-	15
		BCA Speciali	zation: Data Scier	nce and Big	Data	a An	alyti	ics (In Ass	ociation with	Microso	ft)		
Domain Specific	BCS-DS- 692	Azure Data Scientist Associate					4	4	50	50	100	4	2
Domain Specific	BCS-DS- 693	Azure Enterprise Data Analyst Associate					4	4	50	50	100	4	2
		В	CA Specialization:	Cyber Secu	urity	(In /	Asso	ociation w	ith Microsoft	:)			
Domain Specific	BCA-EC- 651	Information protection Administrator Associate					4	4	50	50	100	4	2
Domain Specific	BCA-EC- 652	Cyber Security Architect Expert					4	4	50	50	100	4	2

	ВС	A Specializatio	on: Artificial Inte	elligence and	Ma	chin	e Le	arning (In	Association v	with Mic	rosoft)		
Domain Specific	BCS-DS- 692	Azure Data Scientist Associate					4	4	50	50	100	4	2
Domain Specific	BCS-DS- 693	Azure Enterprise Data Analyst Associate					4	4	50	50	100	4	2
			Total Cred	its (BCA Gen	eral	/ Sp	ecia	lization)					19
(MOOC	s etc) and	other approved	e the mentioned courses shall be o urses out of offer	ffered, which	shall per n	be ı naxiı	notifi mum	ied well be limit for n	fore start of th	e semeste	er. The st	udent sh	all be
**For	Successful	completion of t	he degree, the stu Op	dents need to en Elective/N					pulsory course	es & electi	ves and	at least :	L4 of
													120
			Total credit (BC	A with Specia	alizati	on)	(16 E	xtra Credit	s)				136