

## BCA (Bachelor of Computer Applications) Data Science-2020

	Course Code	Course Title	L T P	Cr	ES	Course Code	Course Title	L T P	Cr	ES	
<b>SEMESTER 1</b>						<b>SEMESTER 2</b>					
		Cultural Education I	2 0 0	2			Cultural Education II	2 0 0	2		
		Communicative English	2 0 2	3			Professional Communication	1 0 3	2		
		Language I	1-1-0	2			Language II	1 1 0	2		
		Mathematical Foundations for Data Science	3 1 0	4			Statistics and Probability	3 1 0	4		
		Environmental Science and Sustainability	3 0 0	3			Database Management System	3 0 0	3		
		Computer Essentials for Data science	3 0 0	3			Object Oriented Programming using Java	3 1 0	4		
		Problem solving and Programming in C	3 1 0	4			Operating Systems	3 1 0	4		
		Problem solving and Programming in C Lab	0 0 3	1			Object Oriented Programming Using Java Lab	0 0 3	1		
		Computer Essentials for Data science Lab	0 0 3	1			Database Management System Lab	0 0 3	1		
		<b>TOTAL</b>		<b>23</b>			<b>TOTAL</b>		<b>23</b>		
<b>SEMESTER 3</b>						<b>SEMESTER 4</b>					
		Amrita Value Programme I	1 0 0	1			Amrita Value Programme II	1 0 0	1		
		Life Skills I	1 0 2	2			Life Skills II	1 0 2	2		
		Linear Algebra for Data Science	3-1-0	4			Data mining	3 0 0	3		
		Exploratory Data Analysis using python	3-0-3	4			R Programming for data sciences	2 0 3	3		
		Data Structure and Algorithms	3 1 0	4			Software Engineering	2-1-0	3		
		Computer Networks	3 1 0	4			Web Technologies	3 0 3	4		
		Inferential Statistics	2-1-0	3			Elective A	3 0 0	3		
		Data Structures and Algorithms Lab	0 0 3	1			Live in Labs / Open Elective A	3 0 0	3		
		Data Science using Spread sheet modelling lab	0-0-3	1			Data mining Lab	0 0 3	1		
							Case study based Seminar	1 0 0	1		
		<b>TOTAL</b>		<b>24</b>			<b>TOTAL</b>		<b>24</b>		
<b>SEMESTER 5</b>						<b>SEMESTER 6</b>					
		Life skills III	1 0 2	2			Big Data Analytics and Visualization	3 0 0	3		
		Artificial Intelligence	3-0-0	3			Data Governance	3-0-0	3		
		Machine Learning	3 0 0	3			Elective D	3 0 0	3		
		Elective B	3 0 0	3			Big Data Analytics Lab	0 0 3	1		
		Cloud Computing	3 0 0	3			Major Project		10		
		Elective C	3 0 0	3							
		Cloud computing Lab	0 0 3	1							
		Machine Learning Lab	0 0 3	1							
		Minor Project		4							
		<b>TOTAL</b>		<b>23</b>			<b>TOTAL</b>		<b>20</b>		
<b>LANGUAGES</b>											
		<b>Paper I</b>					<b>Paper II</b>				
		Hindi I	1 0 2	2	B		Hindi II	1 0 2	2	B	
		Kannada I	1 0 2	2	B		Kannada II	1 0 2	2	B	

		Malayalam I	1 0 2	2	B			Malayalam II	1 0 2	2	B	
		Sanskrit I	1 0 2	2	B			Sanskrit II	1 0 2	2	B	
		Tamil I	1 0 2	2	B			TAMIL II	1 0 2	2	B	
Elective A, B,C												
		Time-series Analysis	3 0 0	3	E							
		Introduction to IoT	3 0 0	3	E							
		Embedded Systems	3 0 0	3	E							
		Non-relational Databases	3 0 0	3	E							
		Pattern Recognition	3 0 0	3	E							
		Image Processing	3 0 0	3	E							
		Wireless Networks and communication										
		Multimedia and Graphics	3 0 0	3	E							
		Bio informatics	3 0 0	3	E							
		Soft Computing	3 0 0	3	E							
		Advanced operating system and Distributed computing	3 0 0	3	E							
		Natural Language Processing	3 0 0	3	E							
		Text Mining and Analytics	3 0 0	3	E							
		Secure Data Analytics	3 0 0	3	E							
		Business intelligence	3 0 0	3	E							
		Quantum Computing	3 0 0	3	E							
		Visual Programming using C#	3 0 0	3	E							
		Design Pattern	3 0 0	3	E							
		BlockChain										