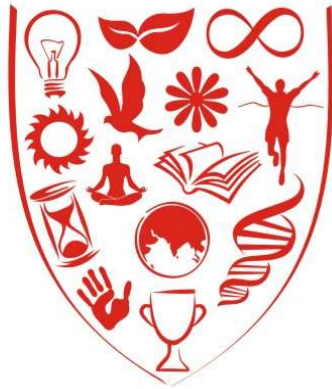




JECRCTM
UNIVERSITY
BUILD YOUR WORLD

School of Computer Application
Scheme & Syllabus
of
Bachelor of Computer Applications (BCA)
Specialization- Cloud Computing & Full-stack Development
(In Association with IBM)
Academic Program
July 2026

JECRC University, Jaipur
Plot No. IS-2036 to IS-2039 Ramchandrapura Industrial Area Jaipur, Sitapura, Vidhani,
Rajasthan 303905

Cloud Fullstack-IBM Specializations Subjects (BCA)							
Semester	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
I	BCA205B	Web Development Using HTML, Java Script. NODE JS	3	0	0	3	S
II	BCA206A	IBM Cloud Fundamental	3	0	0	3	S
III	BCA207A	Angular JS	2	0	0	2	S
III	BCA208A	Spring Framework	2	0	0	2	S
IV	BCA209A	DevOps Fundamentals and Design Thinking	3	0	0	3	S
IV	BCA211A	Dockers and Kubernetes Implementation	3	0	0	3	S
IV	BC210A	Web Services	3	0	0	3	S
V	BCA212A	Deployment of Private Cloud	3	0	0	3	S
V	BCA213A	REST API and IBM Watson Studio	3	0	0	3	S
			25			25	

SEMESTER I							
S. No.	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1	BCA205B	Web Development Using HTML, Java Script. NODE JS	3	0	0	3	S
2	BCA925A	Programming in C	3	0	0	3	CORE
3	BCA926A	Programming in C Lab	0	0	2	1	CORE
4	BCA113B	Operating System	4	0	0	4	CORE
5	DCH010A	Environmental Education	2	0	0	2	VAC
6	BCO570A	Digital Data and AI Literacy	0	0	4	2	SEC
7	DEN001C/ D	Communication Skills/ Communication Skills Lab	1	0	2	2	AEC
8	JIC002A	Entrepreneurship Development	0	0	2	1	SEC
9	BCA106A	Office Automation Tools Lab	0	0	2	1	CORE
Total			13	0	12	19	

SEMESTER II							
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1	BCA114B	Database Management Systems	3	0	0	3	CORE
2	BCA126B	Object Oriented Programming Using C++	2	0	0	2	CORE
3		Departmental Elective 1	3	0	0	3	DE
4	BCA130B	Project Lab Using C++	0	0	4	2	CORE
5	BCA118B	Database Management Systems Lab	0	0	4	2	CORE
6	IKS001A	Inculcation of Human Values and Professional Ethics in Higher Education Institutions	2	0	0	2	VAC
7	DCO018A	Advance Excel	0	0	4	2	SEC
8	DEN002C/ DEN002D	Professional Skills / Lab	1	0	2	2	AEC
9	BCA206A	IBM Cloud Fundamental	3	0	0	3	S
Total			14	0	14	21	

SEMESTER III							
S.No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1	BCA305A	Data Structures and Algorithms -I	3	0	0	3	CORE
2	BCA207A	Angular JS	2	0	0	2	S
3	BCA208A	Spring Framework	2	0	0	2	S
4	BCA133B	Programming in JAVA	3	0	0	3	CORE
5	BCA306A	Data Structures and Algorithms -I Lab	0	0	4	2	CORE
6	BCA136B	Project Lab using JAVA	0	0	4	2	CORE
7		Mathematics in India	2	0	0	2	VAC
8		Leadership and Managemnet Skills	1	0	2	2	AEC
9		Generative Artificial Intelligence Tools	0	0	4	2	SEC
10		Open Elective/MOOC	3	0	0	3	MD
		Total	16	0	14	23	

SEMESTER IV							
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1	BCA211A	Dockers and Kubernetes Implementation (BCA211A)	3	0	0	3	S
2	BC210A	Web Services	3	0	0	3	S
3	BCA300A	Python Programming	3	0	0	3	CORE
4	BCA301B	Programming in Python Lab	0	0	4	2	CORE
5	BCA209A	DevOps Fundamentals and Design Thinking	3	0	0	3	S
6		Universal Human Values	2	0	0	2	VAC
7		Health and Yoga	1	0	2	2	AEC
8		Prompt Engineering for coding	0	0	4	2	SEC
9	Open Elective/Mooc		3	0	0	3	GE
		Total	18	0	10	23	

SEMESTER V							
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1	BCA212A	Deployment of Private Cloud	3	0	0	3	S
2	BCA147B	Major Project (IOT/Mobile app/AI ML/Soft) (IOT/Mobile app/AI ML/Soft)	0	0	6	3	CORE
3	BCA135A	Computer Network	3	0	0	3	CORE
4	REST API and IBM Watson Studio (BCA213A)		3	0	0	3	S
5	Open Elective/Mooc		3	0	0	3	GE
6	Departmental Elective 7		3	0	0	3	DE
		Total	15	0	06	18	

Semester – VI					
Course Code	Course Name	L(Hr.)	P(Hr.)	Credits	Type
BCA165A	Industrial Training/Internship	0	0	16	CORE

SEMESTER VII							
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1		Literature Review	3	0	0	3	CORE
2		Statistical Analysis using R	3	0	4	5	CORE
3		Data Analytics	3	0	4	5	CORE
4		Scientific Paper Writing	3	0	0	3	CORE
5		Research Project-I/ Research Internship Report and viva voce	0	0	8	4	CORE
Total			12	0	16	20	

Semester – VIII					
Course Code	Course Name	L (Hr.)	P (Hr.)	Credits	Type
	Research Project/Capstone Project/ Dissertation (For Research Track)	0	40	20	CORE