School of Computer Applications

Scheme & Syllabus

of

Bachelor of Computer Applications (BCA)

Specialization- Cloud Computing

(In Association with AWS Academy)

Academic Program

July 2024-27

JECRC University, Jaipur

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

Credits

Semester wise credit						Credits
I	II	III	IV	V	VI	Total
19	24	22	21	18	16	120

Cloud AWS Specializations Subjects (BCA)							
Semester	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
I	BC246A	Cloud Computing Fundamental	5	0	0	5	S
III	BCA248A	Cloud Security	4	0	0	4	S
IV	BCA249A	AWS Academy Cloud Foundation Course	4	0	0	4	S
IV	BCA247A	Introduction to Cloud Architecture	4	0	0	4	S
V	BCA250A	AWS Academy Cloud Developing	3	0	0	3	S
			20			20	

Semester – I								
S. No.	**Code**	**Course Name**	**L (Hr.)**	**T (Hr.)**	**P (Hr.)**	**Credits**	**Contact Hours**	**Type**
1	**BC246A**	**Cloud Computing Fundamental**	**5**	**0**	**0**	**5**	**5**	**S**
2	BCA302A	Fundamental of Computers & Programming in C	3	0	0	3	3	CORE
3	BCA303A	Fundamental of Computers & Programming in C Lab	0	0	4	2	4	CORE
4	BCA106A	Office Automation Tools Lab	0	0	2	1	2	CORE
5	DCH001A/ BCA113B	Environmental Studies/ Operating System	2	0	2	3	3	AEC/ CORE
6	DEN001A/ DEN001B	Communication Skills/ Communication Skills Lab	2	0	2	3	3	SEC
7	DIN001A	Culture Education-I	2	0	0	2	2	AEC
		Total	**14**	**0**	**10**	**19**	**22**	

Semester – II
S. No.	**Course Code**	**Course Name**	**L (Hr.)**	**T (Hr.)**	**P (Hr.)**	**Credits**	**Contact Hours**	**Type**
1	BCA114B	Database Management Systems	3	0	0	3	3	CORE
2	BCA126B	Object Oriented Programming Using C++	3	0	0	3	3	CORE
3	BCA113B/ DCH001A	Operating System/Environmental Studies	2	0	2	3	3	CORE
4	BCA300A	Python Programming	3	0	0	3	3	CORE
5	BCA130B	Project Lab Using C++	0	0	4	2	4	CORE
6	BCA301A	Python Programming Lab	0	0	4	2	4	CORE
7	BCA118B	Database Management Systems Lab	0	0	4	2	4	CORE
8	DIN002A	Culture Education-II	2	0	0	2	2	AEC
9	DEN002A/ DEN002B	Professional Skills/Professional Skills Lab	2	0	2	3	5	SEC
10	JIC002A	Entrepreneurship Development	0	0	2	1	2	SEC
Total			**15**	**0**	**18**	**24**	**33**	

S.No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Course Hours	Type
		Semester – III						
1	BCA305A	Data Structures and Algorithms -I	3	0	0	3	3	CORE
2	**BCA228A**	**Cloud Security**	**4**	**0**	**0**	**4**	**4**	**S**
3	BCA133B	Programming in JAVA	3	0	0	3	3	CORE
4	BCA306A	Data Structures and Algorithms -I Lab	0	0	4	2	4	CORE
5	BCA136B	Project Lab using JAVA	0	0	4	2	4	CORE
6	BCA176A/ BCA121B	Software Testing/Lab	4	0	2	5	6	CORE
7	DEN003A	Life Skills - 1 (Personality Development)	1	0	2	2	4	SEC
8	DIN003A	Value Education and Ethics -1	0	0	2	1	2	AEC
		Total	**15**	**0**	**14**	**22**	**30**	

S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Contact Hours	Type
		Semester – IV						
1	BCA135A	Computer Network	4	0	0	4	4	CORE
2	BCA127A	Software Engineering	3	0	0	3	3	CORE
3	DMA003A	Life Skills - 2 (Aptitude)	1	0	2	2	4	SEC
4	DIN004A	Value Education and Ethics -2	1	0	0	1	2	AEC
5		**AWS Academy Cloud Foundation Course (BCA249A)**	**4**	**0**	**0**	**4**	**4**	**S**
6		**Introduction to Cloud Architecture (BCA247A)**	**4**	**0**	**0**	**4**	**4**	**S**
7		Open Elective	3	0	0	3	3	GE
		Total	**20**	**0**	**2**	**21**	**24**	

Semester – V								
S. No.	**Course Code**	**Course Name**	**L (Hr.)**	**T (Hr.)**	**P (Hr.)**	**Cre dits**	**Conta ct Hours**	**Type**
1	BCA317A	Information Security Essentials	4	0	0	4	4	CORE
2	BCA147B	Major Project	0	0	4	2	4	CORE
3	**AWS Academy Cloud Developing (BCA250A)**		**3**	**0**	**0**	**3**	**3**	**S**
4	Departmental Elective –III		3	0	1	4	4	E
5	Open Elective		3	0	0	3	3	GE
6	**Technical Research Paper Writing (BCA600A)**		0	0	4	2	2	CORE
		Total	**13**	**0**	**9**	**18**	**20**	

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

List of courses for Electives

Course Code	Course Name	Credit	Course Code	Course Name	Credit
Specialization (Software Development)			**Specialization (Data Science and Analytics)**		
BCA309A	Programming in ASP.Net	3	BCA193A	Programming in R	3
BCA181A	Professional Java	3	BCA194A	Data Science and Analytics	3
BCA141A	Android Application Development	3	BCA161A	Big Data Analytics	3
BCA183A	Programming in ASP.Net Lab	1	BCA195A	Data warehousing and Data Mining	3
BCA145A	Android Application Development Lab	1	BCA196A	Programming in R Lab	1
BCA184A	Professional Java Lab	1	BCA197A	Data warehousing and Data Mining lab	1
BCA176A	Software Testing	3	BCA121B	Software Testing Lab	1
Specialization (System & Network Administration)			**Specialization (Cloud, process automation and blockchain)**		
BCA185A	Introduction to Linux System Administration	3	BCA164A	Introduction to Salesforce	3
BCA186A	Linux Server Administration and Automation	3	BCA172A	Robotics Process Automation	3
BCA187A	Software Development Using OpenShift Architecture	3	BCA198A	Artificial Intelligence and Machine Learning	3
BCA188A	Network Virtualization Using OpenStack	3	BCA199A	Introduction to Salesforce lab	1
DMA051A	Mathematical Foundation	3	BCA200A	Artificial Intelligence and Machine Learning Lab	1
BCA601A	Discrete Mathematics	3	BCA201A	Robotics Process Automation Lab	1
BCA602A	Statistical Analysis and Methods	3	BCA251A	Google Cloud Readiness	3