



**JECRC**<sup>TM</sup>  
**UNIVERSITY**  
BUILD YOUR WORLD

**School of Computer Applications**  
**Scheme & Syllabus**  
**Of**  
**Bachelor of Computer Applications (BCA)**  
**Specialization- Cyber Security**  
**(In Association with EC-Council)**  
**Academic Program**  
**July 2024-27**

JECRC University, Jaipur

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

303905

Semester wise credit						Credits
I	II	III	IV	V	VI	Total
19	28	18	25	14	16	120

EC Council Specializations Subjects (BCA)							
Semester	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
II	BCA202A	EC Certified Security Specialist (ECSS) (400)	4	0	0	4	S
III	BCA203A	Certified Network Defender (400)	5	0	0	5	S
IV	BCA204A	Certified Ethical Hacker (800)	0	0	8	8	S
			9		8	17	

Semester – I								
S. No.	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Contact Hours	Type
1	BCA152B	Web Technologies	3	0	0	3	3	CORE
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	BCA255A	Project Lab Using Web Technologies	0	0	4	2	4	CORE
5	BCA106A	Office Automation Tools Lab	0	0	2	1	4	CORE
6	DCH001A/ BCA113B	Environmental Studies/ Operating System	2	0	2	3	3	AEC
7	DEN001A/ DEN001B	Communication Skills/ Communication Skills Lab	2	0	2	3	3	SEC
8	DIN001A	Culture Education-I	2	0	0	2	2	AEC
<b>Total</b>			<b>12</b>	<b>0</b>	<b>14</b>	<b>19</b>	<b>26</b>	

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	4	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	<b>BCA202A</b>	<b>EC Certified Security Specialist (ECSS) (400)</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>S</b>
11	JIC002A	Entrepreneurship Development	0	0	2	1	2	SEC
<b>Total</b>			<b>19</b>	<b>0</b>	<b>18</b>	<b>28</b>	<b>38</b>	

Semester – III								
S.No	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Course Hours	Type
1	BCA305A	Data Structures and Algorithms -I	3	0	0	3	3	CORE
2	BCA203A	Certified Network Defender (400)	5	0	0	5	5	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	DEN003A	Life Skills - 1 (Personality Development)	1	0	2	2	4	SEC
7	DIN003A	Value Education and Ethics -1	0	0	2	1	2	AEC
		<b>Total</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>18</b>	<b>25</b>	

Semester – IV								
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Contact Hours	Type
1	BCA135A	Computer Network	4	0	0	4	4	CORE
2	BCA127A	Software Engineering	3	0	0	3	3	CORE
3	BCA115C	Computer Organization Architecture	4	0	0	4	4	CORE
5	DMA003A	Life Skills - 2 (Aptitude)	1	0	2	2	4	SEC
6	DIN004A	Value Education and Ethics -2	1	0	0	1	2	AEC
7	<b>Certified Ethical Hacker (800)- BCA204A</b>		<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>S</b>
8	Open Elective		3	0	0	3	3	GE
		<b>Total</b>	<b>24</b>	<b>0</b>	<b>2</b>	<b>25</b>	<b>28</b>	

Semester – V								
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Contact Hours	Type
1	BCA147B	Major Project	0	0	4	2	4	CORE
2	Departmental Elective –II		0	0	3	3	3	E
3	Departmental Elective –III		3	0	1	4	4	E
4	Open Elective		3	0	0	3	3	GE
5	<b>Technical Research Paper Writing (BCA600A)</b>		0	0	4	2	2	CORE
6	<b>Total</b>		<b>06</b>	<b>0</b>	<b>12</b>	<b>14</b>	<b>16</b>	

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

**List of courses for Electives**

<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>
<b>Specialization (Software Development)</b>			<b>Specialization (Data Science and Analytics)</b>		
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
<b>Specialization (System &amp; Network Administration)</b>			<b>Specialization (Cloud, process automation and blockchain)</b>		
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