



JECRCTM
UNIVERSITY
BUILD YOUR WORLD

School of Computer Applications
Scheme & Syllabus
of
Bachelor of Computer Applications (BCA)
3 Years Full time program
Specialization- Health Informatics
Academic Program
July 2026

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
20	22	23	22	17	16	120

Health Informatics-Specializations Subjects (BCA)							
Semester	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
I	BBI301A	Introduction to Health Informatics	3	0	0	3	S
I	BBI302A	/Medical analytics Lab	0	0	2	1	S
II	BBI303A	Basics of Healthcare and Bioinformatics	3	0	0	3	S
II	BBI304A	Basics of Healthcare and Bioinformatics Lab	0	0	2	1	S
III	BBI305A	Health Information Systems	3	0	0	3	S
III	BBI306A	Health Information Systems Lab	0	0	2	1	S
IV	BBI307A	Medical Coding and Classification Systems	3	0	0	3	S
IV	BBI308A	Medical Coding and Classification SystemsLab	0	0	2	1	S
IV	BBI309A	Bioinformatics Tools	3	0	0	3	S
IV	BBI310A	Bioinformatics Tool Lab	0	0	2	1	S
V	BBI311A	Artificial Intelligence and Health care	3	0	0	3	S
V	BBI312A	Artificial Intelligence and Health careLab	0	0	2	1	S
V	BBI313A	Elective	3	0	0	3	S
Total			21	0	12	27	

SEMESTER I							
S. No.	Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
1	BBI301A/B BI302A	Introduction to Health Informatics/Medical analytics Lab (301)	3	0	2	4	S
2	BCA925A	Programming in C	2	0	0	2	CORE
3	BCA926A	Programming in C Lab	0	0	4	2	CORE
4	BCA106A	Office Automation Tools Lab	0	0	2	1	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	BCA113B	Operating System	4	0	0	4	CORE
Total			12	0	16	20	

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	BCA130B	Project Lab Using C++	0	0	4	2	CORE
4	BCA118B	Database Management Systems Lab	0	0	4	2	CORE
5	BBI303A/B BI304A	Basics of Healthcare and Bioinformatics/Lab (301)	3	0	2	4	S
6		Departmental Elective 2	3	0	0	3	DE
7	IKS001A	Inculcation of Human Values and Professional Ethics in Higher Education Institutions	2	0	0	2	VAC
8	DCO018A	Advance Excel	0	0	4	2	SEC
9	DEN002C/ DEN002D	Professional Skills / Lab	1	0	2	2	AEC
Total			14	0	16	22	

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	BBI305A/ BBI306A	Health Information Systems/Lab (301)	3	0	2	4	S
3	BCA133B	Programming in JAVA	3	0	0	3	CORE
4	BCA306A	Data Structures and Algorithms -I Lab	0	0	4	2	CORE
5	BCA136B	Project Lab using JAVA	0	0	4	2	CORE
6		Mathematics in India	2	0	0	2	VAC
7		Leadership and Management Skills	1	0	2	2	AEC
8		Generative Artificial Intelligence Tools	0	0	4	2	SEC
9		Open Elective/MOOC	3	0	0	3	MD
		Total	15	0	16	23	

SEMESTER IV							
S. No.	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Cre dits	Type
1	BCA300 A/BCA 301A	Python Programming/Lab	3	0	4	5	CORE
2	BBI307 A/BBI3 08A	Medical Coding and Classification Systems/Lab (301)	3	0	2	4	S
3		Universal Human Values	2	0	0	2	AEC
5		Health and Yoga	1	0	2	2	VAC
6		Prompt Engineering for coding	0	0	4	2	SEC
7	BBI309 A/BBI3 10A	Bioinformatics Tools/Lab (301)	3	0	2	4	S
8	Open Elective/Mooc/MOOC		3	0	0	3	MD
Total			15	0	14	22	

SEMESTER V							
S. No	Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Cre dits	Type
1	BCA135A	Computer Network	3	0	0	3	CORE
2	BBI311A/ BBI312A	Artificial Intelligence and Health care/Lab	3	0	2	4	S
3	BCA147B	Major Project (IOT/Mobile app/AI ML/Soft) (IOT/Mobile app/AI ML/Soft) (IOT/Mobile app/AI ML)	0	0	6	3	CORE
4	BCA121B	Software Testing	0	0	2	1	CORE
5	Departmental Elective 5 (Health)— BBI313A		3	0	0	3	DE
6	Open Elective/Mooc/MOOC		3	0	0	3	MD
Total			12	0	10	17	

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