



JECRCTM
UNIVERSITY
BUILD YOUR WORLD

Faculty of IT & Computer Application
Scheme
of

Bachelor of Computer Applications (BCA)

(Specialization in Cloud Computing & Full Stack Development)

(Specialization in Artificial Intelligence & Machine Learning)

(In Association with IBM)

Academic Programme

July 2020-21

Total Credits for the Batch 2020-23 = 168 Credits

- 1. Minimum Credits required = 155 Credits**
- 2. Total Relaxation = 13 Credits**
- 3. No relaxation in Core and Foundation subjects**
- 4. Theory exams duration will be of 03 hours and Practical exams will be of 02 hours.**
- 5. Internal Assessment will be of 50 marks and End Term Assessment will be of 50 marks for both lab and theory courses.**

Semester wise credit						Credits	Minimum Credit for degree
I	II	III	IV	V	VI	Total	
28	28	28	28	28	28	168	155

Semester – I

Course Code	Course Name	L (Hr.))	T (Hr.)	Pr (Hr.)	Credits	Type
BCA101A	Fundamentals of Computer Systems	3	0	0	3	F
BCA102A	Programming Fundamentals using C-I	3	1	0	4	CORE
BCA104A	Digital Electronics	3	0	0	3	F
BCA105B	Communication Skills	3	0	0	3	F
BCA106A	Office Automation Tools Lab	0	0	2	2	F
BCA107A	Programming Fundamentals using C-I Lab	0	0	2	2	CORE
BCA108B	Communication Skills Lab	0	0	2	2	F
BCA166A	Designing Lab(Photoshop and CorelDraw)	0	0	2	2	S
BCA110A	Digital Electronics Lab	0	0	2	2	F
BCA111A	Seminar	0	0	2	2	S
BIBM101 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
	Total	15	1	12	28	

❖ **F- Foundation, ID- Interdisciplinary, S- Specialization (Skill Enhance Courses)**

❖ **L- Lecture, T- Tutorial, P- Practical**

Semester – II

Course Code	Course Name	L (Hr.)	T (Hr.)	Pr (Hr.)	Credits	Type
BCA112A	Environmental Studies	2	0	0	2	F
BCA113B	Operating System	3	1	0	4	CORE
BCA114B	Database Management System	3	0	0	3	CORE
BCA115B	Computer Architecture	3	1	0	4	F
BCA116A	Programming Fundamentals using C-II	3	1	0	4	CORE
BCA118B	Database Management System Lab	0	0	2	2	CORE
BCA119A	Programming Fundamentals using C-II Lab	0	0	2	2	CORE
BCA120B	HTML Lab	0	0	2	2	F
BCA121A	UNIX and Shell Programming Lab	0	0	2	2	CORE
BIBM102 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
	Total	17	3	8	28	

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Semester – III

Course Code	Course Name	L (Hr.)	T (Hr.)	Pr (Hr.)	Credits	Type
BCA135B	Computer Network	3	0	0	3	CORE
BCA123A	Programming in PHP	3	0	0	3	S
BCA125A	Data Structures and Algorithms using C	3	1	0	4	CORE
BCA126A	Programming Fundamentals using C++	3	1	0	4	CORE
BCA128A	PHP Lab	0	0	2	2	S
BCA129A	Data Structure and Algorithm using C Lab	0	0	2	2	CORE
BCA130A	Programming Fundamentals using C++ Lab	0	0	2	2	CORE
BCA167A	Multimedia Lab (Audio/Video editing tools, Flash, Dreamweaver)	0	0	2	2	S
BIBM103 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
BIBM104 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
	Total	18	2	8	28	

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Semester – IV

Course Code	Course Name	L (Hr.)	T (Hr.)	Pr (Hr.)	Credits	Type
BCA171A	Soft Skills	2	0	0	2	F
BCA133A	Programming in Java	3	1	0	4	CORE
BCA134A	Programming in Python	2	1	0	3	S
BCA169A	Data Science & Analytics	3	0	0	3	S
BCA136A	Programming in Java Lab	0	0	2	2	CORE
BCA137A	Programming in Python Lab	0	0	2	2	S
BCA170A	Data Science & Analytics Lab	0	0	2	2	S
BIBM105 Specialization	AI & ML / Cloud & Full Stack Development	4	0	0	4	CORE
BIBM106 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
BIBM107 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
	Total	16	2	10	28	

❖ **F- Foundation, ID- Interdisciplinary, S- Specialization (Skill Enhance Courses)**

❖ **L- Lecture, T- Tutorial, P- Practical**

Semester – V

Course Code	Course Name	L (Hr.)	T (Hr.)	P (Hr.)	Credits	Type
BCA132A	Introduction to Accounting and Economics	3	0	0	3	ID
BCA141A	Android Applications Development	3	0	0	3	S
BCA142A	Information Security and Cyber Law	3	1	0	4	CORE
BCA143A	Advance Java	3	1	0	4	CORE
BCA145A	Android Applications Development Lab	0	0	2	2	S
BCA146A	Advance Java Lab	0	0	2	2	CORE
BCA138A	Introduction to PL/SQL Lab	0	0	2	2	S
BCA147A	Project	0	0	2	2	S
BIBM108 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
BIBM109 Specialization	AI & ML / Cloud & Full Stack Development	3	0	0	3	CORE
	Total	18	2	8	28	

❖ **F- Foundation, ID- Interdisciplinary, S- Specialization (Skill Enhance Courses)**

❖ **L- Lecture, T- Tutorial, P- Practical**

Semester – VI

Course Code	Course Name	Credits	Type
BCA165A	Internship/Industrial Training/Internship/Project Presentation	28	CORE

List of Courses

IBM – Specialization in Cloud Computing & Full Stack Development

S No	Course Name	Credits
1	JSP & Servlets	3
2	IBM Cloud Fundamentals - Services	3
3	Angular	3
4	Spring framework	3
5	Web Services & REST API Development	3
6	Agile, Design thinking and DevOps	3
7	JUNIT+ Automated Testing Using Selenium	4
8	Set up of Private Cloud	3
9	Cloud Security	3

Note:

- 1. Students have to complete all 9 Courses from attached list for IBM Specialization in Clouding Computing & Full Stack Development.**
- 2. The credits of these courses will be considered on submission of copy of course completion certificate.**

List of Courses

IBM – Specialization in AI & Machine Learning

S No	Course Name	Credits
1	Predictive Analytics Modeler	3
2	Python	3
3	Text Analytics	3
4	Data Visualization	3
5	Rapid Development for AI - Watson Services	3
6	AI Services	3
7	Machine Learning Services with Watson Studio	3
8	Python for Data Science, Machine Learning with Python, Data Visualization with Python	3
9	Deep Learning Fundamentals, Deep Learning with Tensor Flow, Accelerating Deep Learning with GPU	4

Note:

- 1. Students have to complete all 9 Courses from attached list for IBM Specialization in AI & Machine Learning.**
- 2. The credits of these courses will be considered on submission of copy of course completion certificate.**