

Bachelor of Computer Applications (Hons with Research) with Industry Oriented Specialization in Data Analytics

Revised Scheme from 2023

Semester 1

S No.	Name of the Course	L	T	P	S	C	H	Remarks
1	Open Elective-I	3	0	0	0	3	3	
2	Discrete Mathematics	3	0	0	0	3	3	
3	Computer System	3	0	0	0	3	3	
4	Programming for IIT	3	0	1	1	5	8	
5	Co-curricular Elec	2	0	0	0	2	2	
6	Vocational Elective	3	0	1	0	4	5	
Total Credits (BC)		17	0	2	1	20	24	

Proposed Scheme from 2023

Semester II

SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Open Elective-II	3	0	0	0	3	3	
2	Probability and Sta	3	0	0	0	3	3	
3	Data Structures	3	0	1	0	4	5	
4	Object Oriented Pr	3	0	1	1	5	8	
5	Database Manager	3	0	1	1	5	8	
Total Credits (BC)		15	0	3	2	20	27	

Open Elective-II for II sem

SN	Name of the Course	L	T	P	S	C	H	School
1	Environmental Lit	3	0	0	0	3	3	SOLE
2	Linear Algebra	3	0	0	0	3	3	SBS
3	Understanding Ind	3	0	0	0	3	3	SOLE
4	Report Writing	3	0	0	0	3	3	SOLE
5	Environmental Stu	3	0	0	0	3	3	SBS
6	Introduction to Jap	3	0	0	0	3	3	SOLE

Proposed Scheme from 2023								
Semester III								
SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Open Elective-III	3	0	0	0	3	3	
2	Operating Systems	3	0	1	0	4	5	
3	Design and Analysis	3	0	1	0	4	5	
4	Java Programming	3	0	1	1	5	8	
5	Elective-I	3	0	0	0	3	3	
Total Credits (BC)		15	0	3	1	19	24	
Proposed Scheme from 2023								
Semester IV								
SI No	Name of the Course	L	T	P	S	C	H	Remarks
1	Machine Learning	3	0	1	1	5	8	
2	Open Elective-IV	3	0	0	0	3	3	
3	Computer Networks	3	0	0	0	3	3	
4	Advanced Web Technologies	3	0	1	1	5	8	
5	Introduction to Data Analytics	3	0	1	0	4	5	DA Specialization
Total Credits (BC)		15	0	3	2	20	27	
Proposed Scheme from 2023								
Semester V								
SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Software Engineering	3	0	1	0	4	5	Students will do project in
2	Open Elective-V	3	0	0	0	3	3	
3	Campus to Corporate	1	0	1	0	2	3	
4	Mobile Application Development	3	0	1	1	5	8	
5	Project	0	0	0	0	4	0	
6	Internship	0	0	0	0	4	0	
7	Advanced Data Analytics	3	0	1	0	4	5	DA Specialization

	Total Credits (BC	13	0	4	1	26	24	
Proposed Scheme from 2023								
Semester VI								
SI No	Name of the Course	L	T	P	S	C	H	Remarks
1	Capstone Project	0	0	0	0	15		
	Total Credits (BC	0	0	0	0	15	0	
	Credits	I	II	III	IV	V	VI	ToTal
	BCA Specialisation	20	20	19	20	26	15	120
Proposed Scheme from 2023								
Semester VII								
SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Research Methodology	2	0	0	0	2	2	
2	Advanced ML	3	0	1	0	4	5	
3	Optimization Techniques	3	0	0	0	3	3	
4	Advanced Data Structures	3	0	1	0	4	5	
5	Elective -IV	3	0	0	0	3	5	
6	Research Project-I	0	0	0	4	4	8	
	Total Credits (BC	14	0	2	5	20	31	
Proposed Scheme from 2023								
Semester VIII								
SI No	Name of the Course	L	T	P	S	C	H	Remarks
1	Colloquium	0	0	0	0	5	10	
2	Research Project -II	0	0	0	0	15	20	
	Total Credits (BC	0	0	0	0	20	30	
	Total Credits upto	160						

Proposed Scheme from 2023

List of Electives-I for Semester- III

SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Introduction to Data Science	3	0	0	0	3	3	
2	Introduction to Computer Graphics	3	0	0	0	3	3	

List of Electives-II for Semester- IV

SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Cryptography	3	0	1	0	4	5	
2	Computer Graphics	3	0	1	0	4	5	

List of Electives-III for Semester- V

SN	Name of the Course	L	T	P	S	C	H	Remarks
1	Data Mining and Visualization	3	0	1	0	4	5	
2	BigData	3	0	1	0	4	5	

List of Electives-IV for Semester- VII

SN	Name of the Elective	L	T	P	S	C	H	Remarks
1	R Programming	2	0	1	0	3	4	
2	Numerical Methods	2	0	1	0	3	4	

Specializations Core-I (IV sem)

SI No	Name of the Elective	L	T	P	S	C	H	Remarks
1	Introduction to Data Science	3	0	1	0	4	5	DA

Specializations Core-II (V Sem)

SI No	Name of the Elective	L	T	P	S	C	H	Remarks
1	Advanced Data Analytics	3	0	1	0	4	5	DA

Vocational category for the programmes which follow NEP 2020

SN	Course Name	L	T	P	S	C	H	Remarks
1	Introduction to We	3	0	1	0	4	5	Semester 1 and 2
2	Introductory Comp	3	0	1	0	4	5	
3	Office Automation	3	0	1	0	4	5	Semester 3 and 4
4	Introduction to Sys	3	0	1	0	4	5	
Open Elective Basket								
SN	Course Name	L	T	P	S	C	H	Remarks
1	Introduction to Jap	3	0	0	0	3	3	Semester 1 and 2
2	Introduction to Jap	3	0	0	0	3	3	
3	Maths and Puzzles	3	0	0	0	3	3	
4	Environmental Lit	3	0	0	0	3	3	
5	Environmental Stu	3	0	0	0	3	3	
6	Heartfulness (SOL	3	0	0	0	3	3	
7	Introduction to Co	3	0	0	0	3	3	Semester 3 and 4
8	Understanding Ind	2	0	1	0	3	4	
9	Linear Algebra	2	0	1	0	3	4	
10	Report Writing	3	0	0	0	3	3	
11	Principles of Mana	3	0	0	0	3	3	