

BCA Scheme

BCA SEM I										
Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	PCC	BC1T001	Mathematics Foundations to Computer Science - I	3			3	40	60	100
2	SEC	BC1T002	Problem Solving Techniques	3			3	40	60	100
3	PCC	BC1T003	Computer Architecture	3			3	40	60	100
4	AEC	BC1A004	General English - I	1	1		2	40	60	100
5	MDE	BC1M005	Indian Knowledge System	2			2	40	60	100
6	VAC	BC1V006	Environmental Science and sustainability	2			2	40	60	100
Practical										
7	SEC	BC1L007	Problem Solving Techniques (LAB)			4	2	60	40	100
8	PCC	BC1L008	Computer Architecture (LAB)			4	2	60	40	100
TOTAL							19	360	440	800
BCA SEM II										
Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	PCC	BC2T001	Mathematics Foundations to Computer Science - II	3			3	40	60	100
2	PCC	BC2T002	Data Structures	3			3	40	60	100
3	SEC	BC2T003	Python Programming	2			2	40	60	100
4	SEC	BC2T004	Object Oriented Programming using Java	3			3	40	60	100
5	SEC	BC2T005	Web Technologies	1			1	20	30	50
6	VAC	BC2V006	Indian Constitution	2			2	40	60	100
Practical										
7	PCC	BC2L007	Data Structures LAB			4	2	60	40	100
8	SEC	BC2L008	Python Programming LAB			4	2	60	40	100
9	SEC	BC2L009	Object Oriented Programming using Java LAB			4	2	60	40	100
10	SEC	BC2L010	Web Technologies LAB			2	1	30	20	50
TOTAL							21	430	470	900

BCA SEM III

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	PCC	BC3T001	Probability and Statistics	3			3	40	60	100
2	PCC	BC3T002	Computer Networks	3			3	40	60	100
3	PCC	BC3T003	Operating Systems	3			3	40	60	100
4	PCC	BC3T004	Design and Analysis of Algorithm	3			3	40	60	100
5	DSE	BC3E005	Professional Elective - I	1			1	20	30	50
Practical										
6	PCC	BC3L006	Computer Networks LAB			4	2	60	40	100
7	PCC	BC3L007	Operating Systems LAB			2	1	60	40	100
8	DSE	BC3L008	Professional Elective - I LAB			4	2	60	40	100
9	VAC	BC3L009	Yoga/Sports/NCC/NSS/Disaster Management			4	2	60	40	100
TOTAL							20	420	430	850

BCA SEM IV

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	SEC	BC4E001	Quantitative Techniques		2		2	40	60	100
2	PCC	BC4T002	Data Base Management System	3			3	40	60	100
3	PCC	BC4T003	Software Engineering	3			3	40	60	100
4	PCC	BC4T004	Artificial Intelligence	3			3	40	60	100
5	DSE	BC4E005	Professional Elective - II	1			1	20	30	50
6	SEC	BC4T006	Design Thinking and Innovation	1	1		2	40	60	100
Practical										
7	PCC	BC4L007	Data Base Management System LAB			4	2	60	40	100
8	PCC	BC4L008	Artificial Intelligence LAB			4	2	60	40	100
9	DSE	BC4L009	Professional Elective - II LAB			4	2	60	40	100
TOTAL							20	400	450	850

BCA SEM V

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	DSE	BC5E001	Professional Elective – III	3			3	40	60	100
2	DSE	BC5E002	Professional Elective – IV	3			3	40	60	100
3	DSE	BC5E003	Professional Elective – V	3			3	40	60	100
4	PCC	BC5T004	Entrepreneurship and Startup Ecosystem	1	1		2	40	60	100
Practical										
5	DSE	BC5L005	Professional Elective – III LAB			4	2	60	40	100
6	DSE	BC5L006	Professional Elective – IV LAB			4	2	60	40	100
7	DSE	BC5L007	Professional Elective – V LAB			4	2	60	40	100
8	SEC	BC5L008	Internship/capstone Project			8	4	120	80	200
9	SEC	BC6P008*	Major Project [evaluation in sixth semester]	-	-	-	0			
TOTAL							21	460	440	900

BCA SEM VI

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	PCC	BC6T001	Generative AI	2			2	40	60	100
2	DSE	BC6E002	Professional Elective – VI	3			3	40	60	100
3	DSE	BC6E003	Professional Elective – VII	3			3	40	60	100
4	AEC	BC6A004	Soft Skills		1		1	20	30	50
Practical										
5	PCC	BC6L005	Generative AI LAB			4	2	60	40	100
6	DSE	BC6L006	Professional Elective – VI LAB			4	2	60	40	100
7	DSE	BC6L007	Professional Elective – VII LAB			4	2	60	40	100
8	SEC	BC6P008	Major Project [Initiated in 5th Semester]			8	4	60	40	100
TOTAL							19	380	370	750

Specialization - AI & ML

BCA SEM VII (Honours)

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	MDE	BC7M001	Social Network Analysis	3			3	40	60	100
2	PCC	BC7T002	Optimization of ML	3			3	40	60	100
3	DSE	BC7E003	Professional Elective - VIII	3			3	40	60	100
4	DSE	BC7E004	Professional Elective - IX	3			3	40	60	100
Practical										
5	PCC	BC7L006	Optimization of ML LAB			4	2	60	40	100
6	DSE	BC7L007	Professional Elective - VIII LAB			4	2	60	40	100
8	SEC	BC7L008	Summer Internship II			8	4	60	40	100
7	SEC	BC8P006*	Dissertation work [evaluation in Eight semester]	-	-	-	-			
TOTAL							20	340	360	700

Specialization - Data Science

BCA SEM VII (Honours)

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	MDE	BC7M001	Advanced Statistical methods for Data Science	3			3	40	60	100
2	PCC	BC7T002	Python for Data Science	3			3	40	60	100
3	DSE	BC7E003	Professional Elective - VIII	3			3	40	60	100
4	DSE	BC7E004	Professional Elective - IX	3			3	40	60	100
Practical										
5	PCC	BC7L005	Python for Data Science LAB			4	2	60	40	100
6	DSE	BC7L006	Professional Elective - VIII LAB			4	2	60	40	100
8	SEC	BC7L007	Summer Internship II			8	4	60	40	100
7	SEC	BC8P006*	Dissertation work [evaluation in Eight semester]	-	-	-	-			
TOTAL							20	340	360	700

SEMESTER VII - (BCA - (Honours with Research))

Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	PCC	BC7T001	Advanced Data Analysis Tools		2	4	2	40	60	100
2	PCC	BC7T002	Research Methodology	2	2		4	40	60	100
3	DSE	BC7E003	Professional Elective - IX	-	-	-	4	40	60	100
4	DSE	BC7E004	Professional Elective - X	-	-	-	4	40	60	100
Practical										
5	PCC	BC7L005	Advanced Data Analysis Tools LAB			4	2	60	40	100
6	PCC	BC7L006	Research Internship Report and Viva - Voce			8	4	120	80	200
TOTAL							20	340	360	700

SEMESTER VIII - (BCA (Honours))										
Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
Theory										
1	DSE	BC8E001	Professional Elective - X	3			3	40	60	100
2	DSE	BC8E002	Professional Elective - XI	3			3	40	60	100
3	DSE	BC8E003	Professional Elective - XII	2			2	40	60	100
Practical										
4	DSE	BC8L004	Professional Elective - X LAB			4	2	60	40	100
5	DSE	BC8L005	Professional Elective - XI LAB			4	2	60	40	100
6	SEC	BC8P006	Dissertation work [Started in Seventh semester]			16	8	120	80	200
TOTAL							20	360	340	700

MCA SEM VIII (Honours with Research)										
Sr No	Category	Course Code	Course Title	L	T/A	P	Credit	CA	ESE	Total
1	SEC	BC8P001	Dissertation (For Research Track)*	-	-	-	20	300	400	700
TOTAL							20	300	400	700

Data Science				
Sr No	Semester	Category	Course Code	Professional Elective
1	III	DSE	BC3E005	Basics of Data Analytics using Spreadsheet
2	IV	DSE	BC4E005	Data Visualization
3	V	DSE	BC5E001	Introduction to Data Science
4	V	DSE	BC5E002	Time Series Analysis
5	V	DSE	BC5E003	Machine Learning
6	VI	DSE	BC6E002	Big Data Analytics
7	VI	DSE	BC6E003	Exploratory Data Analysis
8	VII	DSE	BC7E003	Business Intelligence & Analytics
9	VII	DSE	BC7E004	Data Mining & Warehousing
10	VIII	DSE	BC8E001	Advanced Data Visualization
11	VIII	DSE	BC8E002	Cloud Computing for Data Analytics
12	VIII	DSE	BC8E003	Data Security & Privacy

Artificial Intelligence & Machine Learning				
Sr No	Semester	Category	Course Code	Professional Elective
1	III	DSE	BC3E005	Feature Engineering
2	IV	DSE	BC4E005	Introduction to ML
3	V	DSE	BC5E001	Neural Network
4	V	DSE	BC5E002	Digital Image Processing
5	V	DSE	BC5E003	Natural Language Processing
6	VI	DSE	BC6E002	Deep Learning for Computer Vision
7	VI	DSE	BC6E003	Predictive Analysis
8	VII	DSE	BC7E003	Explainable AI
9	VII	DSE	BC7E004	Evolutionary Algorithm
10	VIII	DSE	BC8E001	Speech Recognition
11	VIII	DSE	BC8E002	Augmented Reality & Virtual Reality
12	VIII	DSE	BC8E003	Security aspects of ML