



BRAINWARE UNIVERSITY
SCHOOL OF COMPUTATIONAL & APPLIED SCIENCES
DEPARTMENT OF COMPUTATIONAL SCIENCES
BACHELOR OF COMPUTER APPLICATIONS /
BACHELOR OF COMPUTER APPLICATIONS (HONOURS) /
BACHELOR OF COMPUTER APPLICATIONS (HONOURS with RESEARCH) - 2023
SEMESTER – I

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA10101	Digital Logic	3	1	0	40	60	100	4	Major
2	BCA19102	Digital Logic Lab	0	0	4	40	60	100	2	Major
3	BCA19103	Programming in C Lab	0	0	4	40	60	100	2	Major
4	BCA10001	Mathematics and Numerical Methods	3	0	0	40	60	100	3	IC
5	AEC00005	Functional English	2	0	0	40	60	100	2	AEC
6	BCA10002	Soft Skills	3	0	0	40	60	100	3	SEC
7	VAC00012	Problem-Solving Methodologies	2	0	0	40	60	100	2	VAC
8	VAC00007	Human Values and Ethics	2	0	0	40	60	100	2	VAC
TOTAL			15	1	8	320	480	800	20	

SEMESTER – II

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA20104	Data Structure and Algorithm	3	1	0	40	60	100	4	Major
2	BCA29105	Data Structure and Algorithm Lab	0	0	4	40	60	100	2	Major
3	BCA29106	Python Lab	0	0	4	40	60	100	2	Major
4	BCA20001	Discrete Mathematical Structure	3	0	0	40	60	100	3	IC
5	AEC00002	Communicative English	2	0	0	40	60	100	2	AEC
6	BCA20002	HTML, CSS and CSS Preprocessor	3	0	0	40	60	100	3	SEC
7	VAC00003	Computer Architecture	2	0	0	40	60	100	2	VAC
8	VAC00006	Environmental Studies	2	0	0	40	60	100	2	VAC
TOTAL			15	1	8	320	480	800	20	



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SEMESTER – III

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA37107	Database Management System	3	0	2	40	60	100	4	Major
2	BCA30108	Object Oriented Programming in JAVA	3	0	0	40	60	100	3	Major
3	BCA39109	Object Oriented Programming in JAVA Lab	0	0	4	40	60	100	2	Major
4	BCA30110	Operating System	3	0	0	40	60	100	3	Major
5	BCA30001	Vedic Mathematics	3	0	0	40	60	100	3	IC
6	AEC09001	Communicative English Lab	0	0	4	40	60	100	2	AEC
7	BCA37002	Internet and Web Technologies	2	0	2	40	60	100	3	SEC
TOTAL			14	0	12	280	420	700	20	

SEMESTER – IV

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA47111	Design and Analysis of Algorithm	2	0	4	40	60	100	4	Major
2	BCA49112	PHP and MySQL Lab	0	0	4	40	60	100	2	Major
3	BCA47113	Full-stack Development-I	2	0	4	40	60	100	4	Major
4	BCA40201	Sustainability in Indian Knowledge System	4	0	0	40	60	100	4	Minor
5	BCA40202	Computer Network	3	1	0	40	60	100	4	Minor
6	AEC00006	Modern Indian Language A. Hindi B. Bengali C. Alternative English	2	0	0	40	60	100	2	AEC
TOTAL			13	1	12	240	360	600	20	



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SEMESTER –V

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA50114	Software Engineering	3	1	0	40	60	100	4	Major
2	BCA50115	Cloud Computing	2	0	0	40	60	100	2	Major
3	BCA57116	Full-stack Development -II	2	0	4	40	60	100	4	Major
4	BCA57203	Artificial Intelligence	2	0	4	40	60	100	4	Minor
5	BCA57204	Machine Learning	2	0	4	40	60	100	4	Minor
6	BCA58001	Project-I	0	0	0	40	60	100	2	IAPC
TOTAL			11	1	12	240	360	600	20	

SEMESTER – VI

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA60117	E-Commerce Technologies	4	0	0	40	60	100	4	Major
2	BCA60118	Cyber Security	2	0	0	40	60	100	2	Major
3	BCA60119	IT Enabled Services and Entrepreneurship	4	0	0	40	60	100	4	Major
4	BCA68120	Project-II	0	0	0	40	60	100	2	Major
5	BCA60205	Data Warehousing and Data Mining	4	0	0	40	60	100	4	Minor
6	BCA60206	Big Data Analytics	4	0	0	40	60	100	4	Minor
TOTAL			18	0	0	240	360	600	20	



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SEMESTER – VII

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA70121	Research Methodologies	4	0	0	40	60	100	4	Major
2	BCA70122	Distributed Database	4	0	0	40	60	100	4	Major
3	BCA70123	Client Server Computing	4	0	0	40	60	100	4	Major
4	BCA70124	Formal Language and Automata Theory	4	0	0	40	60	100	4	Major
5	BCA77207	Image Processing	3	0	2	40	60	100	4	Minor
TOTAL			19	0	2	200	300	500	20	

SEMESTER – VIII (Honours)

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA80125H	Compiler Design	4	0	0	40	60	100	4	Major
2	BCA80126H	Blockchain Technology	4	0	0	40	60	100	4	Major
3	BCA87127H	Pattern Recognition	3	0	2	40	60	100	4	Major
4	BCA88128H	Project-III	0	0	0	40	60	100	4	Major
5	BCA87208H	Soft Computing	3	0	2	40	60	100	4	Minor
TOTAL			14	0	4	200	300	500	20	

SEMESTER – VIII (HONOURS with RESEARCH)

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BCA80125R	Natural Language Processing	3	1	0	40	60	100	4	Major
2	BCA80208R	Virtual Reality and Augmented Reality	3	1	0	40	60	100	4	Minor
3	BCA88001R	Research Project	0	0	0	40	60	100	12	RPC
Total			6	2	0	120	180	300	20	