



BRAINWARE UNIVERSITY
School of Biotechnology & Biosciences
Department of Biotechnology
Bachelor of Science in Biotechnology/
Bachelor of Science (Honours) in Biotechnology/
Bachelor of Science (Honours with Research) in Biotechnology - 2023

SEMESTER – I

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT10101	Microbiology	3	0	0	40	60	100	3	Major
2	BBT19102	Microbiology Lab	0	0	2	40	60	100	1	Major
3	BBT10103	Chemistry	3	0	0	40	60	100	3	Major
4	BBT19104	Chemistry Lab	0	0	2	40	60	100	1	Major
5	BBT10001	Computer Application for Biotechnology	2	1	0	40	60	100	3	IC
6	AEC00005	Functional English	2	0	0	40	60	100	2	AEC
7	BBT10002	Food Technology	3	0	0	40	60	100	3	SEC
8	VAC00006	Environmental Studies	2	0	0	40	60	100	2	VAC
9	VAC00007	Human Values and Ethics	2	0	0	40	60	100	2	VAC
TOTAL			17	1	4	360	540	900	20	

SEMESTER – II

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT20105	Biochemistry and Metabolism	3	0	0	40	60	100	3	Major
2	BBT29106	Biochemistry and Metabolism Lab	0	0	2	40	60	100	1	Major
3	BBT20107	Molecular Biology	3	0	0	40	60	100	3	Major
4	BBT29108	Molecular Biology Lab	0	0	2	40	60	100	1	Major
5	BBT20001	Forensic Sciences	3	0	0	40	60	100	3	IC
6	AEC00002	Communicative English	2	0	0	40	60	100	2	AEC
7	BBT29002	Bioanalytical Tools and Techniques Lab	0	0	6	40	60	100	3	SEC
8	VAC00009	Industrial Fermentations	3	1	0	40	60	100	4	VAC
TOTAL			14	1	10	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	BBT30109	Plant Biotechnology	4	0	0	40	60	100	4	Major
2	BBT39110	Plant Biotechnology Lab	0	0	4	40	60	100	2	Major
3	BBT30111	Cell Biology	4	0	0	40	60	100	4	Major
4	BBT39112	Cell Biology Lab	0	0	4	40	60	100	2	Major
5	BBT30001	Indian Health Sciences	3	0	0	40	60	100	3	IC
6	AEC00006	Modern Indian Language A. Hindi B. Bengali C. Alternative English	2	0	0	40	60	100	2	AEC
7	BBT30002	Soft Skills	3	0	0	40	60	100	3	SEC
TOTAL			16	0	8	280	420	700	20	

SEMESTER – IV

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT40113	Genetics	3	0	0	40	60	100	3	Major
2	BBT49114	Genetics Lab	0	0	4	40	60	100	2	Major
3	BBT40115	Animal Biotechnology	3	0	0	40	60	100	3	Major
4	BBT49116	Animal Biotechnology Lab	0	0	4	40	60	100	2	Major
5	BBT40201	Bioprocess Technology	3	1	0	40	60	100	4	Minor
6	BBT40202	Indian Agriculture	4	0	0	40	60	100	4	Minor
7	AEC09001	Communicative English lab	0	0	4	40	60	100	2	AEC
TOTAL			13	1	12	280	420	700	20	



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SEMESTER – V

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT50117	Recombinant DNA Technology	3	0	0	40	60	100	3	Major
2	BBT59118	Recombinant DNA Technology Lab	0	0	4	40	60	100	2	Major
3	BBT50119	Rural Biotechnology	3	0	0	40	60	100	3	Major
4	BBT59120	Rural Biotechnology Lab	0	0	4	40	60	100	2	Major
5	BBT50203	Emerging Trends in Biotechnology	2	0	0	40	60	100	2	Minor
6	BBT50204	Environmental Biotechnology	3	1	0	40	60	100	4	Minor
7	BBT50205	Bioethics and Biosafety	2	0	0	40	60	100	2	Minor
8	BBT58001	Internship/Project	0	0	0	0/40	100/60	100	2	IAPC
TOTAL			13	1	8	280/320	520/480	800	20	

SEMESTER – VI

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT60121	Immunology	4	0	0	40	60	100	4	Major
2	BBT69122	Immunology Lab	0	0	4	40	60	100	2	Major
3	BBT60123	Genomics and Proteomics	3	1	0	40	60	100	4	Major
4	BBT60124	Fundamentals of Biostatistics	2	0	0	40	60	100	2	Major
5	BBT60206	Nanobiology	3	1	0	40	60	100	4	Minor
6	BBT60207	Aquaculture	2	0	0	40	60	100	2	Minor
7	BBT60208	Bioentrepreneurship	2	0	0	40	60	100	2	Minor
TOTAL			16	2	4	280	420	700	20	



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SEMESTER VII (Honours/ Honours with Research)

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT70125	Research Methodology	3	1	0	40	60	100	4	Major
2	BBT70126	Biophysics	4	0	0	40	60	100	4	Major
3	BBT79127	Biophysics Lab	0	0	4	40	60	100	2	Major
4	BBT70128	Drug Designing	4	0	0	40	60	100	4	Major
5	BBT79129	Drug Designing Lab	0	0	4	40	60	100	2	Major
6	BBT70209	Biomathematics	3	1	0	40	60	100	4	Minor
TOTAL			14	2	8	240	360	600	20	

SEMESTER VIII (Honours)

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT80130H	Intellectual Property Rights	3	0	0	40	60	100	3	Major
2	BBT80131H	Developmental Biology	2	1	0	40	60	100	3	Major
3	BBT80132H	Bioinformatics	3	0	0	40	60	100	3	Major
4	BBT89133H	Bioinformatics Lab	0	0	4	40	60	100	2	Major
5	BBT80134H	Clinical Biochemistry	3	0	0	40	60	100	3	Major
6	BBT89135H	Clinical Biochemistry Lab	0	0	4	40	60	100	2	Major
7	BBT80210H	Cell Culture Techniques	2	0	0	40	60	100	2	Minor
8	BBT89211H	Cell Culture Techniques Lab	0	0	4	40	60	100	2	Minor
TOTAL			13	1	12	320	480	800	20	



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SEMESTER – VIII (Honours with Research)

Sl. No.	Course Code	Course	L	T	P	Evaluation Scheme		Total	Credits	Course Type
						CIE	ESE			
1	BBT80130R	Research Ethics	4	0	0	40	60	100	4	Major
2	BBT80210R	Computational Biology	2	0	0	40	60	100	2	Minor
3	BBT89211R	Computational Biology Lab	0	0	4	40	60	100	2	Minor
4	BBT88001R	Research Project	0	0	0	40	60	100	12	RPC
TOTAL			6	0	4	160	240	400	20	