



**BRAINWARE UNIVERSITY**  
**SCHOOL OF BIOTECHNOLOGY & BIOSCIENCES**  
**DEPARTMENT OF BIOTECHNOLOGY**  
**Bachelor of Science (Honours) in Biotechnology 2021**  
**(As per UGC CBCS Template)**

**SEMESTER – I**

Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
HU101	English Communication	AECC-1	3-0-0	3	100
HU191	English Communication Lab	AECC-1	0-0-2	1	100
BBTC101	General Microbiology	CC-1	4-0-0	4	100
BBTC191	General Microbiology Lab	CC-1	0-0-4	2	100
BBTC102	Genetics	CC-2	4-0-0	4	100
BBTC192	Genetics Lab	CC-2	0-0-4	2	100
GE**	Generic Elective-1 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-1	4-0-0/5-0-0	4/5	200/100
GE**	Generic Elective -1 (Practical/Tutorial)	GE-1	0-0-4/0-1-0	2/1	
	<b>Total</b>			<b>22</b>	<b>800/700</b>

**SEMESTER – II**

Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
ENV201	Environmental Studies	AECC-2	3-1-0	4	100
BBTC201	Cell Biology	CC-3	4-0-0	4	100
BBTC291	Cell Biology Lab	CC-3	0-0-4	2	100
BBTC202	Plant Physiology and Biotechnology	CC-4	4-0-0	4	100
BBTC292	Plant Physiology and Biotechnology Lab	CC-4	0-0-4	2	100
GE**	Generic Elective-2 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-2	4-0-0/5-0-0	4/5	200/100
GE**	Generic Elective -2 (Practical/Tutorial)	GE-2	0-0-4/0-1-0	2/1	
	<b>Total</b>			<b>22</b>	<b>700/600</b>

**SEMESTER – III**



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Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
BBTC301	Mammalian Physiology	CC-5	4-0-0	4	100
BBTC391	Mammalian Physiology Lab	CC-5	0-0-4	2	100
BBTC302	Biochemistry and Metabolism	CC-6	4-0-0	4	100
BBTC392	Biochemistry and Metabolism Lab	CC-6	0-0-4	2	100
BBTC303	General Chemistry	CC-7	4-0-0	4	100
BBTC393	General Chemistry Lab	CC-7	0-0-4	2	100
BBTS301	A. Molecular Diagnostics B. Enzymology	SEC-1	4-0-0	4	100
GE**	Generic Elective-3 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-3	4-0-0/5-0-0	4/5	200/100
GE**	Generic Elective -3 (Practical/Tutorial)	GE-3	0-0-4/0-1-0	2/1	
	<b>Total</b>			<b>28</b>	<b>900/800</b>

**SEMESTER – IV**

Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
BBTC401	Molecular Biology	CC-8	4-0-0	4	100
BBTC491	Molecular Biology Lab	CC-8	0-0-4	2	100
BBTC402	Immunology	CC-9	4-0-0	4	100
BBTC492	Immunology Lab	CC-9	0-0-4	2	100
BBTC403	Advanced Chemistry	CC-10	4-0-0	4	100
BBTC493	Advanced Chemistry Lab	CC-10	0-0-4	2	100
BBTS401	A. Drug Designing B. Industrial Fermentations	SEC-2	4-0-0	4	100
GE**	Generic Elective-4 (Any one from the List of Generic Elective / Interdisciplinary Courses from other Subjects)	GE-4	4-0-0/5-0-0	4/5	200/100
GE**	Generic Elective -4 (Practical/Tutorial)	GE-4	0-0-4/0-1-0	2/1	
	<b>Total</b>			<b>28</b>	<b>900/800</b>

**SEMESTER – V**



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Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
BBTC501	Bioprocess Technology	CC-11	4-0-0	4	100
BBTC591	Bioprocess Technology Lab	CC-11	0-0-4	2	100
BBTC502	Recombinant DNA Technology	CC-12	4-0-0	4	100
BBTC592	Recombinant DNA Technology Lab	CC-12	0-0-4	2	100
BBTD501	A. Animal Diversity I B. Plant Diversity I C. Computer Application	DSEC-1	4-0-0	4	100
BBTD591	A. Animal Diversity I Lab B. Plant Diversity I Lab C. Computer Application Lab	DSEC-1	0-0-4	2	100
BBTD502	A. Animal Diversity II B. Plant Diversity II C. Bio-mathematics	DSEC-2	4-0-0	4	100
BBTD592	A. Animal Diversity II Lab B. Plant Diversity II Lab C. Bio-mathematics Lab	DSEC-2	0-0-4	2	100
	<b>Total</b>			<b>24</b>	<b>800</b>

**SEMESTER - VI**

Course Code	Course Name	Course Type	L-T-P	Credits	Total Marks
BBTC601	Bio-Analytical Tools	CC-13	4-0-0	4	100
BBTC691	Bio-Analytical Tools Lab	CC-13	0-0-4	2	100
BBTC602	Genomics and Proteomics	CC-14	4-0-0	4	100
BBTC692	Genomics and Proteomics Lab	CC-14	0-0-4	2	100
BBTD601	A. Biostatistics B. Plant Biotechnology C. Environmental Biotechnology	DSEC-3	4-0-0	4	100
BBTD691	A. Biostatistics Lab B. Plant Biotechnology Lab C. Environmental Biotechnology Lab	DSEC-3	0-0-4	2	100
BBTD692	Project Work	DSEC-4	0-0-12	6	100
	<b>Total</b>			<b>24</b>	<b>700</b>

**Total Credits: 148**  
**Total Marks: 4400 - 4800**