

6. Programme Structure:

Semester	Discipline Specific Core	Minor stream Disciplinary/ inter-disciplinary	Multi-disciplinary	Ability Enhancement Courses (AEC)	Skill Enhancement Courses (SEC)	Value Added Courses common for all UG (VAC)	Summer internship	Dissertation	Total Credit
I	4	4+4 (Any two: Phys/Chem/Math)	3 MDC	2 AEC	3	2 VAC			22
II	4	4+4 (Any two Phys/Chem/Math)	3 MDC	2 AEC	3	2 VAC			22
Certificate in Life Sciences									
III	3+3+3+3	3(Any one: Discipline minor/Phys/Chem/Bioinfo)	3 MDC	2 AEC	0	2 VAC			22
IV	3+3+3+3	3(Any one: Discipline minor/Phys/Chem/Bioinfo)	0	2 AEC	3	0			20
Diploma in Life Sciences									
V	3+3+3+3+3	3(Bioinfo)					2		20
VI	3+3+3+3+3+3	3(Bioinfo)							21
Total	65	28	9	8	9	6	2		127
Bachelor's Degree In Life Sciences									
VII (Hons)	3+3+3+3+3+3	3 (DSE)							21
VIII (Hons)	3+3+3+3+3+3	3 (DSE)							21
Total	101	34	9	8	9	6	2		169
Bachelor's Degree in Life Science (Honours)									
VII (Research)	3+3+3+3+3	3 (DSE)						3	21
VIII (Research)	3+3+3	3 (DSE)						9	21
Total	89	34	9	8	9	6	2	12	169
Bachelor's Degree in Life Science (Research)									

TEZPUR UNIVERSITY

**Department of Molecular Biology and Biotechnology
Course structure of FYUGP in Life Sciences**

Semester I

Course	Course code and name	L	T	P	Cr	CH
DSC-1	MBIN 101: Biology I	3	0	1	4	5
GE-1	Chem / Phy / Math (Any two)	3	0	1	4	5
GE-2		3	0	1	4	5
MDC-1	From University pool	3	0	0	3	3
AEC-1	From University pool	2	0	0	2	2
SEC-1	MBSE 107: Bioinstrumentation-I	1	1	1	3	4
VAC-1	From University pool	2	0	0	2	2
Total credit		17	1	4	22	28

Semester II

Course	Course code and name	L	T	P	Cr	CH
DSC-2	MBIN 102: Biology II	3	0	1	4	5
GE-3	Chem / Phy / Math (Any two)	3	0	1	4	5
GE-4		3	0	1	4	5
MDC-2	From University pool	3	0	0	3	3
AEC-2	From University pool	2	0	0	2	2
SEC-2	MBSE 108: Bioinstrumentation-II	1	1	1	3	4
VAC-2	From University pool	2	0	0	2	2
Total Credit		17	1	4	22	28

Semester III

Course	Course code and name	L	T	P	Cr	CH
DSC-3	MBIN 201: Genetics	2	1	0	3	3
DSC-4	MBIN 203: Cell Biology I	2	1	0	3	3
DSC-5	MBIN 205: Biochemistry I	2	1	0	3	3
DSC-6	MBIN 207: Biology Lab I(Biochemistry & Cell Biology)	0	0	3	3	6
GE-5/DSE-1	Chem / Phy / Math/ MBIN 209: Introduction to Computing (Any one)	2	1	0	3	3
MDC-3	From University pool	3	0	0	3	3
AEC-3	From University pool	2	0	0	2	2
VAC-3	From University pool	2	0	0	2	2
Total Credit		15	4	3	22	25

Semester IV

Course	Course code and name	L	T	P	Cr	CH
DSC-7	MBIN 202: Plant anatomy and embryology	2	1	0	3	3
DSC-8	MBIN 204: Comparative anatomy of vertebrates	2	1	0	3	3
DSC-9	MBIN 206: Microbiology	2	1	0	3	3
DSC-10	MBIN 208: Biology Lab. II (Plant anatomy & physiology)	0	0	3	3	6
GE-6/ DSE-2	Chem/Phy/Math/MBIN 210: Basics in Bioprogramming and Biostatistics	3	0	0	3	3
SEC-3	MBSE 212: Basic microbial techniques	0	0	3	3	4
AEC-4	From University pool	2	0	0	2	2
Total Credit		11	3	6	20	25

Semester V

Course	Course code and name	L	T	P	Cr	CH
DSC-11	MBIN 301: Plant physiology	2	1	0	3	3
DSC-12	MBIN 303: Animal physiology	2	1	0	3	3
DSC-13	MBIN 305: Wildlife Conservation and Management	2	1	0	3	3
DSC-14	MBIN 307: Evolutionary Biology	2	1	0	3	3
DSC-15	MBIN 309: Biology Lab. III (Animal anatomy & Physiology)	0	0	3	3	6
GE-7/DSE-3	MBIN 213: Introduction to Bioinformatics	2	1	0	3	3
Internship	MBIN 311: Summer Internship	0	0	2	2	4
Total Credit		10	5	5	20	25

Semester VI

Course	Course code and name	L	T	P	Cr	CH
DSC-16	MBIN 302: Developmental biology	2	1	0	3	3
DSC-17	MBIN 304: Molecular Biology	2	1	0	3	3
DSC-18	MBIN 306: Immunology	2	1	0	3	3
DSC-19	MBIN 308: Biotechniques	2	1	0	3	3
DSC-20	MBIN 310: Biology Lab IV (Molecular Biology)	0	0	3	3	6
DSC-21	MBIN 312: Biology Lab. V (Immunology)	0	0	3	3	6
GE-8/DSE-4	MBIN 214: Biological Database Management System	3	0	0	3	3
Total Credit		11	4	6	21	27

Semester VII (Honours)

Course	Course code and name	L	T	P	Cr	CH
DSC-22	MBIN 401: Biochemistry II	2	1	0	3	3
DSC-23	MBIN 403: Cell Biology II	2	1	0	3	3
DSC-24	MBIN 405: Plant metabolism and secondary metabolites	2	1	0	3	3
DSC-25	MBIN 407: Endocrinology	2	1	0	3	3
DSC-26	MBIN 409: Applied Microbiology	2	1	0	3	3
DSC-27	MBIN 411: Biology Lab VI (Biochemistry& Microbiology)	0	0	3	3	6
DSE-5	MBIN 313: Research Methodology	3	0	0	3	3
Total Credit		13	5	3	21	24

Semester VII (Research)

Course	Course code and name	L	T	P	Cr	CH
DSC-22	MBIN 401: Biochemistry II	2	1	0	3	3
DSC-23	MBIN 403: Cell Biology II	2	1	0	3	3
DSC-24	MBIN 405: Plant metabolism and secondary metabolites	2	1	0	3	3
DSC-25	MBIN 407: Endocrinology	2	1	0	3	3
DSC-26	MBIN 409: Applied Microbiology	2	1	0	3	3
DSE-5	MBIN 313: Research Methodology	3	0	0	3	3
Dissertation I	MBIN 413: Minor Project	0	0	3	3	6
Total Credit		13	5	3	21	24

Semester VIII (Honours)

Course	Course code and name	L	T	P	Cr	CH
DSC-28	MBIN 402: Economic Biology	2	1	0	3	3
DSC-29	MBIN 404: Biosafety and Bioethics	2	1	0	3	3
DSC-30	MBIN 406: Genetic Engineering	2	1	0	3	3
DSC-31	MBIN 408: Plant biotechnology	2	1	0	3	3
DSC-32	MBIN 410: Animal Biotechnology	2	1	0	3	3
DSC-33	MBIN 412: Biology Lab VII (Genetic Engineering)	0	0	3	3	6
DSE-6	MBIN 314: Computational Biology	2	1	0	3	3
Total Credit		12	6	3	21	24

Semester VIII (Research)

Course	Course code and name	L	T	P	Cr	CH
DSC-28	MBIN 402: Economic biology	2	1	0	3	3
DSC-29	MBIN 404: Biosafety and Bioethics	2	1	0	3	3
DSC-30	MBIN 406: Genetic Engineering	2	1	0	3	3
DSE-6	MBIN 314: Computational Biology	2	1	0	3	3
Dissertation II	MBIN 414: Major Project	0	0	9	9	18
Total Credit		8	4	9	21	30