

SCHOOL OF LIFE SCIENCE AND BIOTECHNOLOGY								
UNDERGRADUATE COURSE STRUCTURE								
B.SC (H) BIOTECHNOLOGY								
BATCH 2024-28								
SEMESTER I								
S. No.	Type of Course	Code	Title of the Course	Contact Hours Per Week				Remarks
				L	T	P	C	
1	CC	BIT101	Biochemistry and Metabolism	2	1	1	4	CC-1
2	CC	BIT102	Cell Biology	2	1	1	4	CC-2
3	MDC	BIT105	Renewable Energy Resources	2	0	1	3	MDC 1
4	AEC	AEC101	Communicative English-I	2	1	0	3	AEC I
5	Minor	100-199	To be chosen from a pool of minors	2	1	1	4	Minor I
6	VAC	VAC101	Environmental Education-I	2	0	0	2	VAC 1
Semester Credits							20	
SEMESTER II								
7	CC	BIT107	Basics of Animal Sciences	2	1	1	4	CC-3
8	CC	BIT104	Microbiology	2	1	1	4	CC-4
9	MDC	BIT106	Astrobiology	2	0	1	3	MDC 2
10	SEC	SEC134	Enzymology	1	0	1	2	SEC 1
11	VAC	VAC105	Community Engagement and Social Responsibility	1	0	1	2	VAC 2
12	AEC	AEC102	Communicative English-II	2	1	0	3	AEC 2
13	Minor	100-199	To be chosen from a pool of minors	2	1	1	4	Minor II
Semester Credits							22	
SEMESTER III								
14	CC	BIT207	Basics in Plant Biology	2	1	1	4	CC-5
15	CC	BIT202	Genetics	2	1	1	4	CC-6
16	MDC	BIT206	Introduction to Biomaterials	2	0	1	3	MDC 3

17	Minor	200-299	To be chosen from a pool of minors	2	1	1	4	Minor III
18	AEC		Pan University Course				2	AEC 3
19	SEC	SEC135	Basics of Forensic Biology	1	0	1	2	SEC 2
20	VAC	VAC102	Human Values and Ethics	2	0	0	2	VAC 3
21	PDC	PDC201	Professional Development Course-I	0	0	1	1	PDC 1
Semester Credits							22	
SEMESTER IV								
22	CC	BIT208	Animal Biotechnology	2	1	1	4	CC-7
23	CC	BIT209	Plant Biotechnology	2	1	1	4	CC-8
24	CC	BIT205	Molecular Biology	2	1	1	4	CC-9
25	SEC	SEC136	Applied Biophysics	1	0	1	2	SEC 3
26	Minor	200-299	To be chosen from a pool of minors	2	1	1	4	Minor IV
27	VAC		Pan University Course				2	VAC 4
28	PDC	PDC202	Professional Development Course- II	0	0	1	1	PDC 2
Semester Credits							21	
SEMESTER V								
29	CC	BIT301	Immunology	2	1	1	4	CC-10
30	CC	BIT302	Recombinant DNA Technology	2	1	1	4	CC-11
31	CC	BIT303	IPR and Biosafety	2	1	1	4	CC-12
32	Minor	300-399	To be chosen from a pool of minors	2	1	1	4	Minor V
33	SEC	SEC137	Molecular Diagnostics	1	0	1	2	SEC 4
34	INT	BIT304	Internship	0	0	4	4	Internship 1
35	PDC	PDC301	Professional Development Course- III	0	0	1	1	PDC 3

Semester Credits								23
SEMESTER VI								
36	CC	BIT305	Bioinformatics	2	1	1	4	CC-13
37	CC	BIT306	Bioprocess Technology	2	1	1	4	CC-14
38	CC	BIT307	Bioanalytical Tools	2	1	1	4	CC-15
39	Minor	300-399	To be chosen from a pool of minors	2	1	1	4	Minor VI
40	SEC	SEC138	Biostatistics	1	0	1	2	SEC 5
41	Project	BIT308	Project Work	0	0	4	4	Project 1
42	PDC	PDC302	Professional Development Course-IV	0	0	1	1	PDC 4
Semester Credits								23
Total Credits of the Program after 3rd Year								13
SEMESTER VII								1
43	CC	BIT401	Genomics and Proteomics	2	1	1	4	CC-16
44	CC	BIT402	Environmental Biotechnology	2	1	1	4	CC-17
45	CC	BIT403	Developmental Biology	2	1	1	4	CC-18
46	CC (For With research)	BIT404	Research Methodology (should start working on dissertation topic)	3	1	0	4	CC-19 (Research)
47	CC (For Without research)	BIT405	Ecology and Environmental Management	3	1	0	4	CC-19 (without Research)
48	Minor	400-499	To be chosen from a pool of minors	2	1	1	4	Minor VII
49	PDC	PDC401	Professional Development Course-V	0	0	1	1	PDC 5
Total Semester Credit								21
Semester VIII								
50	CC	BIT406	Molecular Modelling and Drug Design	2	1	1	4	CC-20

51	CC (For Without research)	BIT407	Medical Microbiology	2	1	1	4	CC-21 (without Research)
52	CC (For Without Research)	BIT408	Nanotechnology	2	1	1	4	CC-22 (without Research)
53	Minor (For without research)	400-499	To be chosen from a pool of minors	2	1	1	4	
54	Minor (For with/without research)	400-499	To be chosen from a pool of minors	2	1	1	4	
55	Dissertation	BIT409	Project/Dissertation	1 2	0	0	12	
Total Semester Credit							20	
Total Credits of the Program after 4th Year							17	
							2	

*NOTE: With research is only allowed for Students *who secure 75% marks and above in the first six semesters*

Minors to be offered by Biotechnology Department

1. Biochemistry– Sem I (BIT151)
2. Basic Animal Science– Sem II (BIT152)
3. Basic Plant Science – Sem III (BIT251)
4. Elementary Molecular Biology – Sem IV (BIT252)
5. Basics of IPR and Biosafety - Sem V (BIT353)
6. Introduction to Bioinformatics – Sem VI (BIT352)
7. Elementary Genomics and Proteomics-Sem VII (BIT451)
8. Basic Medical Microbiology - Sem VIII (BIT452)

MDC Courses from the Department of Biotechnology

1. Renewable Energy Resources (BIT105)
2. Astrobiology (BIT106)
3. Introduction to Biomaterials (BIT206)

List of Minors to be offered

Semester	Course Code	Courses	L	T	P	C
1	BIT151	Biochemistry	2	1	1	4
2	BIT152	Basic Animal Science	2	1	1	4
3	BIT251	Basic Plant Science	2	1	1	4
4	BIT252	Elementary Molecular Biology	2	1	1	4

5	BIT353	Basics of IPR and Biosafety	2	1	1	4
6	BIT352	Introduction to Bioinformatics	2	1	1	4
7	BIT451	Elementary Genomics and Proteomics	2	1	1	4
8	BIT452	Basic Medical Microbiology	2	1	1	4

List of Multi-disciplinary courses to be offered

Semester	Course Code	Courses	L	T	P	C
1	BIT105	Renewable Energy Resources	2	0	1	3
2	BIT106	Astrobiology	2	0	1	3
3	BIT206	Introduction to Biomaterials	2	0	1	3