

SCHOOL OF LIFE SCIENCE AND BIOTECHNOLOGY								
UNDERGRADUATE COURSE STRUCTURE								
B.Sc. MICROBIOLOGY								
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	BIC101	Molecules of Life	2	1	1	4	CC-1
2	CC	MIB102	Fundamentals of Microbiology	2	1	1	4	CC-2
3	MDC	BIT105	Renewable energy resources	2	0	1	3	MDC1
4	AEC	AEC101	Communicative English-I	2	1	0	3	AEC1
5	Minor	100-199	To be chosen from a pool of minors	2	1	1	4	Minor1
6	VAC	VAC101	Environmental Education-I	2	0	0	2	VAC1
Semester Credits							20	
SEMESTER II								
7	CC	MIB103	Cell biology	2	1	1	4	CC-3
8	CC	MIB104	Bacteriology and Virology	2	1	1	4	CC-4
9	MDC	MIB108	Microbes for sustainable development	2	0	1	3	MDC2
10	SEC	SEC139	Applied Biophysics1	1	0	1	2	SEC-1
11	VAC	VAC105	Community engagement and Social responsibility	1	0	0	2	VAC2
12	AEC	AEC102	Communicative English-II	2	1	0	3	AEC2
13	Minor	100-199	To be chosen from a pool of minors	2	1	1	4	Minor2
Semester Credits							22	
SEMESTER III								
14	CC	MIB201	Microbial Metabolism	2	1	1	4	CC-5
15	CC	BIC202	Basics of Plant and Animal Sciences	2	1	1	4	CC-6
16	MDC	BIT206	Introduction to Biomaterials	2	0	1	3	MDC3
17	Minor	200-299	To be chosen from a pool of minors	3	1	0	4	Minor3
18	AEC	AEC106	Professional Communication Skills	2	0	0	2	AEC3
19	SEC	SEC140	Applied Biophysics2	1	0	1	2	SEC-2
20	VAC	VAC102	Human Values and Ethics	2	0	0	2	VAC3
21	PDC	PDC201	Professional development course-1	0	0	1	1	
Semester Credits							22	
SEMESTER IV								
22	CC	MIB203	Environmental Microbiology	2	1	1	4	CC-7

23	CC	MIB204	Microbial Genetics	2	1	1	4	CC-8
24	CC	MIB205	Molecular Biology	2	1	1	4	CC-9
25	SEC	SEC141	Microbial and Molecular diagnostics	1	0	1	2	SEC-3
26	Minor	200-299	To be chosen from a pool of minors	2	1	1	4	Minor4
27	VAC		To be chosen from subjects offered from University	2	0	0	2	VAC4
28	PDC	PDC202	Professional development course-2	0	0	1	1	
Semester Credits							21	
SEMESTER V								
29	CC	MIB301	Immunology	2	1	1	4	CC-10
30	CC	MIB302	Recombinant DNA Technology	2	1	1	4	CC-11
31	CC	MIB303	Pharmaceutical Microbiology	2	1	1	4	CC-12
32	Minor	300-399	To be chosen from a pool of minors	2	1	1	4	Minor5
33	SEC	SEC142	IPR and Biosafety	1	1	0	2	SEC-4
34	INT	MIB304	Internship	0	0	4	4	
35	PDC	PDC301	Professional development course-3	0	0	1	1	
Semester Credits							23	
SEMESTER VI								
36	CC	MIB305	Bioinformatics	2	1	1	4	CC-13
37	CC	MIB306	Industrial Microbiology	2	1	1	4	CC-14
38	CC	BIC307	Nutrition and toxicology	2	1	1	4	CC-15
39	Minor	300-399	To be chosen from a pool of minors	2	1	1	4	Minor6
40	SEC	SEC143	Quality control and quality assurance	1	0	1	2	SEC-5
41	Project	MIB308	Project Work on Microbiology	0	0	4	4	
42	PDC	PDC302	Professional development course-4	0	0	1	1	
Semester Credits							23	
Total Credits of the Program after 3rd Year							131	
SEMESTER VII								
43	CC	MIB401	Food Microbiology	2	1	1	4	CC-16
44	CC	MIB402	Medical Microbiology	2	1	1	4	CC-17
45	CC	MIB403	Microbial Genomics and proteomics	2	1	1	4	CC-18
46	CC (For With	MIB404	Research Methodology for	3	1	0	4	CC-19 (Research)

	research)		Microbiology (should start working on dissertation topic)					
47	CC (For Without research)	MIB405	Modern techniques and bioinstrumentation	3	1	0	4	CC-19(without Research)
48	Minor	400-499	To be chosen from a pool of minors	2	1	1	4	Minor7
49	PDC	PDC401	Professional development course-5	0	0	1	1	
Total Semester Credit							21	
			Semester VIII					
49	CC	MIB406	Biostatistics and biomathematics	2	1	1	4	CC-20
50	CC (For Without research)	MIB407	Clinical trial management	2	1	1	4	CC-21 (without Research)
51	CC (For Without Research)	MIB408	Biomedical Nanotechnology	2	1	1	4	CC-22(without Research)
52	Minor (For without research)	400-499	To be chosen from a pool of minors				4	Minor8
53	Minor (For With /without research)	400-499	To be chosen from a pool of minors				4	Minor8
54	Dissertation (For With research)	MIB409	Dissertation on Microbiology	0	0	12	12	
Total Semester Credit							20	
Total Credits of the Program after 4th Year							172	

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

Minors to be offered by Department of Biological Sciences

Semester	Course Code	Courses	L	T	P	C
1	BIC151	Biomolecules	2	1	1	4
2	MIB152	Elementary cell science	2	1	1	4
3	BIC251	Basic metabolism	2	1	1	4
4	MIB252	Microbial Ecology	2	1	1	4
5	MIB351	Genetic engineering	2	1	1	4

6	BIC352	Basics of Nutrition and toxicology	2	1	1	4
7	BIC451	Introduction to Genomics and proteomics	2	1	1	4
8	MIB452	Fundamentals of Nanobiotechnology	2	1	1	4
9	BIC453	Drug Design and Development	2	1	1	4

List of Multi-disciplinary courses to be offered by Department of Biological Sciences

Semester	Course Code	Courses	L	T	P	C
2	MIB108	Microbes for sustainable development	2	0	1	3
3	MIB203	Biomaterial Sciences	2	0	1	3