

Bachelor of Microbiology (B.Sc. Hons)

Total Credit: 148

FIRST SEMESTER					SECOND SEMESTER						
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
BIO1101	Diversity of Lower Plants	2	1	0	3	BIO1201	Mycology and Plant Pathology	2	1	0	3
BIO1102	Fundamentals of Biotechnology	2	1	0	3	BIO1202	Elements of Biochemistry	2	1	0	3
BIO1103	Cell Biology: Structure & Functions	2	1	0	3	BIO1211	Cell Biology of Microorganisms	2	1	0	3
BIO1130	Botany Laboratory- I	0	0	2	1	BIO1212	Microbial Nutrition and Growth	2	1	0	3
BIO1131	Biotechnology Laboratory-I	0	0	4	2	BIO1232	Cell biology and Biochemistry Laboratory	0	0	4	2
CAP1170	Fundamentals of Computer	1	1	0	2	BIO1233	Microbiology Laboratory-II	0	0	4	2
CAP1175	Fundamentals of Computer lab	0	0	2	1	XXXXXX	GE-II (A)	2	1	0	3
CHY1003	Environmental Science	2	1	0	3	XXXXXX	GE-II (A) Lab	0	0	2	1
LLC1106	Communicative English	2	0	0	2	XXXXXX	GE-II (B)	2	1	0	3
XXXXXX	GE – I	2	1	0	3	XXXXXX	GE-II (B) Lab	0	0	2	1
XXXXXX	GE – I Lab	0	0	2	1						
		13	6	10	24			12	6	12	24
Total Contact Hours (L + T + P)		29			Total Contact Hours (L + T + P)		30				
THIRD SEMESTER					FOURTH SEMESTER						
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
BIO2101	Fundamentals of Bioinformatics	2	1	0	3	BIO2201	Introduction to Biotechniques	2	1	0	3
BIO2111	Microbial Genetics	3	1	0	4	BIO2202	Fundamentals of Immunology	2	1	0	3
BIO2112	Virology	3	1	0	4	BIO2203	Recombinant DNA Technology and Forensics	3	1	0	4
BIO2133	Biology Laboratory-III	0	0	4	2	BIO2211	Food & Dairy Microbiology	2	1	0	3
BIO2134	Microbiology Laboratory-III	0	0	4	2	BIO2212	Medical Microbiology	2	1	0	3
BIO2170	Industrial Visit	0	0	0	1	BIO2232	Biology Laboratory-IV	0	0	4	2
XXXXXX	GE – III (A)	2	1	0	3	BIO2233	Microbiology Laboratory-IV	0	0	4	2
XXXXXX	GE – III (A) Lab	0	0	2	1	BIOXXX	DSE – I	3	1	0	4
XXXXXX	GE – III (B)	2	1	0	3	XXXXXX	Open Elective				3
XXXXXX	GE – III (B) Lab	0	0	2	1						
		12	5	12	24			14	6	8	27
Total Contact Hours (L + T + P)		30			Total Contact Hours (L + T + P) + OE		28				

FIFTH SEMESTER						SIXTH SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
BIO3111	Industrial Microbiology	2	1	0	3	BIO3201	Physiology of Living Systems	2	1	0	3
BIO3114	Molecular Genetics	2	1	0	3	BIO3211	Bioprocess Technology	2	1	0	3
BIO3113	Environmental Microbiology	3	1	0	4	BIO3203	Applied Plant Biology	2	1	0	3
BIO3132	Microbiology Laboratory-V	0	0	4	2	BIO3232	Biology Laboratory-VI	0	0	2	1
BIO3170	DSE-II – Project	0	0	24	8	BIO3233	Microbiology Laboratory-VI	0	0	4	2
XXXXXX	DSE – IIIA -MOOC	2	0	0	2	BIOXXXX	DSE – IV (A)	2	1	0	3
XXXXXX	DSE-IIIB-MOOC	2	0	0	2	BIOXXXX	DSE – IV (B)	2	1	0	3
						XXXXXX	GE – IV	2	1	0	3
						XXXXXX	GE – IV Lab	0	0	2	1
						XXXXXX	Open Elective				3
		11	3	28	24			12	6	8	25
Total Contact Hours (L + T + P)		42				Total Contact Hours (L + T + P) + OE				26+3=29	

Discipline Specific Electives (DSE)		
IV	V	VI
Discipline Specific Electives 1 <ul style="list-style-type: none"> BIO2240: Ethical issues and IPR in Biotechnology BIO2241: Cell Based Assay 	Discipline Specific Electives 2 <ul style="list-style-type: none"> BIO3170: Project Discipline Specific Electives 4 <ul style="list-style-type: none"> MOOC Course-1 MOOC Course-2 	Discipline Specific Electives 5 <ul style="list-style-type: none"> BIO3240: Plant Breeding BIO3241: System Biology Discipline Specific Electives 6 <ul style="list-style-type: none"> BIO3242: Food Biotechnology BIO3243: Expression Purification of Therapeutic Proteins BIO3245 Neutraceuticals BIO3247: Sanitation and Sludge Management

Generic Electives (GE)			
I	II	III	V
Generic Electives 1 <ul style="list-style-type: none"> • CHY1160: General Chemistry- I • CHY1138: Organic Chemistry Laboratory 	Generic Electives 2 <ul style="list-style-type: none"> • CHY1260: General Chemistry –II • CHY1238: Inorganic Chemistry Laboratory Generic Electives 3 <ul style="list-style-type: none"> • CHY1261: General Chemistry –III • CHY1239: Physical Chemistry Laboratory 	Generic Electives 4 <ul style="list-style-type: none"> • CHY2160: Analytical Chemistry • CHY2138: Analytical Chemistry Laboratory Generic Electives 5 <ul style="list-style-type: none"> • MAS2146: Fundamentals of Biostatistics • MAS2134: Lab on Fundamentals of Biostatistics 	Generic Electives 6 <ul style="list-style-type: none"> • CHY3260: Biophysical Chemistry • CHY3238: Applied Chemistry Laboratory

Open Electives	
Graded OE	Non-Graded OE
<ul style="list-style-type: none"> • BIO2080: Elements of Bioscience and Biotechnology • BIO2081: Science of Living Systems 	