

B.Sc. (Hons.) Microbiology

SEMESTER I						
S.N	Course Name	Category of Course	L	T	P	Credits
1	Fundamentals of Cell Biology	Discipline Core Course 1	3	0	1	4
2	Biochemistry & Physiology	Discipline Core Course 2	4	0	0	4
3	Introduction to Microbial World	Discipline Core Course 3	3	0	1	4
4	Generic Elective (Forensic Science/Maths/Chemistry /Physics/Economics/ Computer Science)	Generic Electives - 1				4
5	Ecology and Environment	Ability Enhancement course-1	2	0	0	2
6	Introduction to Python programming/ Graphical Tools	Skill Enhancement course- 1	1	0	1	2
7	Health and Nutrition/First Aid	Value Added Course-1	2	0	0	2
TOTAL						22

SEMESTER II						
S.N	Course Name	Category of Course	L	T	P	Credits
1	Microbial Physiology and Metabolism	Discipline Core Course 4	4	0	0	4
2	Bacteriology	Discipline Core Course 5	3	0	1	4
3	Phycology and Mycology	Discipline Core Course 6	3	0	1	4
4	Generic Elective (Forensic Science/Maths/Chemistry/ Physics/Economics/ Computer Science)	Generic Electives - 2				4

5	Logical Communication	Ability Enhancement course-2	1	0	1	2
6	Essentials of IT Tools	Skill Enhancement course- 2	1	0	1	2
7	Art of Happiness	Value Added Course-2	2	0	0	2
TOTAL						22

SEMESTER III						
S.N	Course Name	Category of Course	L	T	P	Credits
1	Fundamentals of Molecular Biology	Discipline Core Course 7	3	0	1	4
2	Virology	Discipline Core Course 8	4	0	0	4
3	Microbial Genetics and Genomics	Discipline Core Course 9	3	0	1	4
4	Generic Elective (Forensic Science/Maths/Chemistry/Physics/Economics/Computer Science)	Generic Electives - 3	4	0	0	4
5	Critical Thinking & Writing	Ability Enhancement Course-3	2	0	0	2
6	Introduction to Artificial Intelligence	Skill Enhancement Course- 3	2	0	0	2
7	NCC/NSS/Social Internship/Vedic Mathematics	Value Added Course-3	2	0	0	2
TOTAL						22

SEMESTER IV						
S.N	Course Name	Category of Course	L	T	P	Credits
1	Concept of Immunology	Discipline Core Course 10	3	0	1	4
2	Gene Technology and Human Welfare	Discipline Core Course 11	3	0	1	4

3	Bioinstrumentation & Biotechniques	Multi Disciplinary Course 1	3	0	0	3
4	Generic Elective (Forensic Science/Maths/Chemistry/Physics/Economics/Computer Science)	Generic Electives - 4				4
5	Disaster Management	Ability Enhancement Course-4	2	0	0	2
6	Cyber Sphere & Security Global Concern	Skill Enhancement Course- 4	2	0	0	2
7	Nanobiotechnology	Multi Disciplinary Course 2	3	0	0	3
TOTAL						22

SEMESTER V

S.N	Course Name	Category of Course	L	T	P	Credits
1	Soil & Agricultural Microbiology	Discipline Core Course 12	3	0	1	4
2	Inheritance Biology	Discipline Core Course 13	3	0	1	4
3	Research Methodology and Ethics	Multi Disciplinary Course 3	4	0	0	4
4	DSE from Gp. 1	DSE-1				4
5	Generic Elective (Forensic Science/Maths/Chemistry/Physics/Economics/Computer Science)	Generic Elective - 5				4
6	Internship	Industrial/Academic Internship	0	0	2	2
TOTAL						22

SEMESTER VI

S.N	Course Name	Category of Course	L	T	P	Credits
1	Medical Microbiology	Discipline Core 14	4	0	0	4
2	Food and Dairy Microbiology	Discipline Core 15	3	0	1	4

3	DSE from Gp. 1	DSE-2				4
4	DSE from Gp. 1	DSE-3				4
5	Generic Elective (Forensic Science/Maths/Chemistry /Physics/Economics/ Computer Science)	Generic Electives - 6				4
6	One from the List of choices	Skill Enhancement Course- 5	2	0	0	2
		TOTAL				22

**After 3 years, Students will get the degree of B.Sc. (Hons.) Microbiology with
Total Credits=132**

Choices for Skill Enhancement Course- 4/5

Subject	L	T	P	Credits
Testing of cosmetics and hygienic products	1	0	1	2
Innovation and Entrepreneurship	2	0	0	2
Statistics with R	1	0	1	2
Electronic Product Testing	1	0	1	2
Fundamentals of Clinical Research	2	0	0	2
Social Media Crimes and Awareness	2	0	0	2
Graphical Tools	1	0	1	2
Latex writing	1	0	1	2

List of Discipline Specific Electives (DSE)

Infectious Microbiology Specialization

Category of Course	Subject	L	T	P	Credits
Elective-1	Parasitology	4	0	0	4
	Virology	4	0	0	4
Elective-2	Toxicology and Vector Biology	3	0	1	4
	Bacteriology	3	0	1	4
Elective-3	Pharmaceutical Microbiology	4	0	0	4
Elective-4	Genomics	4	0	0	4
	Phycology and Mycology	3	0	1	4
Elective-5	Metagenomics	3	0	1	4
	Food and Dairy Microbiology	3	0	1	4
Elective-6	Medical Microbiology	3	0	1	4

Parasitology Specialization

Category of Course	Subject	L	T	P	Credits
Elective-1	Parasitology	4	0	0	4
	Virology	4	0	0	4
Elective-2	Toxicology and Vector Biology	3	0	1	4
	Bacteriology	3	0	1	4
Elective-3	Genetic disorders	4	0	0	4
	Plant Pathology	3	0	1	4
Elective-4	Genomics	4	0	0	4
	Phycology and Mycology	3	0	1	4
Elective-5	Metagenomics	3	0	1	4
Elective-6	Epigenetics and Chromatin Biology 4		0	0	4

Medical Biochemistry Specialization

Category of Course	Subject	L	T	P	Credits
Elective-1	Clinical correlations of disease	4	0	0	4
Elective-2	Toxicology and Vector Biology	3	0	1	4
	Medical Biochemistry	3	0	1	4
Elective-3	Genetic disorders	4	0	0	4
Elective-4	Genomics	4	0	0	4
	Biochemistry of Metabolism	4	0	0	4
Elective-5	Metagenomics	3	0	1	4
	Bioorganic and Medicinal Chemistry	3	0	1	4
Elective-6	Epigenetics and Chromatin Biology	4	0	0	4
	Hormones: Biochemistry and Function	4	0	0	4