

Curriculum

B.Sc. (Hons) Medical Biotechnology (3 years) and B.Sc. (Hons with Research) Medical Biotechnology (4 years)

SEMESTER I								
S. No	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1.		Biochemistry-I	Discipline Core Course 1	3	0	1	0	4
2.		Cell Biology	Discipline Core Course 2	3	0	0	0	3
3.		Medical Physiology-I	Discipline Core Course 3	3	0	1	0	4
4.		From Bucket	Generic Electives - 1	3	0	0	0	3
5.		Foreign Language -I (French/German)/	Ability Enhancement course-1	2	0	0	0	2
6.		Ecology and Environment	Skill Enhancement course- 1	2	0	0	0	2
7.		AI for Biosciences and Technology	Value Added Course-1	2	0	0	0	2
			TOTAL					20
SEMESTER II								
S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1		Medical Physiology-II	Discipline Core Course 4	3	0	1	0	3
2		Biochemistry-II	Discipline Core Course 5	3	0	1	0	4
3		Genetics	Discipline Core Course 6	3	0	0	0	3
4		From Bucket -2	Generic Electives - 2	3	0	0	0	3
5		Foreign Language -II (French/German)/	Ability Enhancement course-2	2	0	0	0	2

6		Introduction to Python Programming	Skill Enhancement course- 2	2	0	1	0	3
7		Bioethics and Biosafety	Value Added Course-2	2	0	0		2
			TOTAL					20
SEMESTER III								
S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1		Immunology	Discipline Core Course 7	3	0	0	0	3
2		Microbiology	Discipline Core Course 8	3	0	1	0	4
3		Molecular Biology	Discipline Core Course 9	3	0	1	0	4
4		From Bucket-3	Generic Electives - 3	3	0	0	0	3
5		Communicative English	Ability Enhancement course-3	2	0	0	0	2
6		Introduction to Bioinformatics	Skill Enhancement course- 3	2	0	0	0	2
7		Human Values and environmental Sciences	Value Added Course-3	2	0	0	0	2
			TOTAL					20
SEMESTER IV								
S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1		Bioinstrumentation	Discipline Core 10	3	0	0	0	3
2		Recombinant DNA technology	Discipline Core 11	3	0	1	0	4
3		Molecular Diagnostic and Therapeutics	Multi- Dis. Course 1	3	0	0	0	3
4		From Bucket 4 (GE)	Generic Electives - 4	3	0	0	0	3
5		Disaster Management	Ability Enhancement course-4	2	0	0	0	2
6		Introduction to R Programming	Skill Enhancement course- 4	2	0	0	0	2
7		Multidisciplinary Course-2	Multi- Dis. Course 2	3	0	0	0	3
			TOTAL					20
SEMESTER V								

S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1		Animal Cell culture	Discipline Core 12	3	0	1	0	4
2		Developmental Biology	Discipline Core 13	3	0	1	0	4
3		Research Methodology and Ethics	Multi- Dis. Course 3	4	0	0	0	4
4		DSE from Gr.1	DSE-1	3	0	0	0	3
5		Generic Elective (GE)	Generic Electives - 5	3	0	0	0	3
6		Internship	Industrial/Academic Internship	2	0	0	0	2
			TOTAL					20

SEMESTER VI

S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1		Drug design and Development	Discipline Core 14	3	0	2		5
2		Genomics and Proteomics	Discipline Core 15	4	0	0		4
3		DSE from Gr.1	DSE-2	4	0	0		4
4		DSE from Gr.1	DSE-3	4	0	0		4
5		Generic Elective (GE))	Generic Electives - 6	3	0	0		3
			TOTAL					20

After 3 years, Students will get the degree of B.Sc. (Hons) in Medical Biotechnology with Total Credits=120

SEMESTER VII

S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
1		Biosensor and Nanobiotechnology	Discipline Core 16	4	0	0		4
2		DSE from Gr.2	DSE-4	4	0	2		6
3		DSE from Gr.2	DSE-5	4	0	2		6
4		GE	Generic Electives - 7	3	0	1		4
5		GE	Generic Electives - 8	3	0	1		4
			TOTAL					24

SEMESTER VIII

S. No.	Course Code	Course Name	Category of Course	L	T	P	S	Credits
		Dissertation/Project	Dissertation/					16

			Project					
			TOTAL					16
		After 4 years, Students will get the degree of B.Sc. Medical Biotechnology (Hons with Research) with Total Credits=160						

List of Discipline Specific Electives (DSE)

Semester	Code	Electives- Course Name	L	T	P	C	Group
Sem V		Plant Biotechnology	3	0	0	3	Gr1
Sem V		Advanced Cell Biology and pathology	3	0	0	3	Gr1
Sem V		Genome Structure and Function	3	0	0	3	Gr1
Sem VI		Advanced Biomedical Immunology	3	0	0	3	Gr-1
Sem VI		Industrial Bioprocess Technology	3	0	0	3	Gr-1
Sem VI		Pharmacology and Toxicology	3	0	0	3	Gr-1

List of General (GE)

Semester	Code	Electives- Course Name	L	T	P	C	Group
Sem I		Introduction to Healthcare	3	0	0	3	Gr-1
Sem I		Introduction to Clinical Research	3	0	0	3	Gr-2
Sem II		Regulatory Affairs in Clinical Research	3	0	0	3	Gr-1
Sem II		Health information Management	3	0	0	3	Gr-2
Sem III		Nutraceutical and Functional Food	3	0	0	3	Gr-3
Sem III		Hospital and Healthcare Administration	3	0	0	3	Gr-2
Sem III		Nutrition in disease conditions	3	0	0	3	Gr-3
Sem IV		Renewable energy and Green Technology	3	0	0	3	Gr-2
Sem IV		Food Quality Testing and Evaluation	3	0	0	3	Gr-3
Sem V		Scientific Writing	3	0	0	3	Gr-1
Sem V		Introduction to Entrepreneurship	3	0	0	3	Gr-3
Sem VI		Biodiversity and Taxonomy	3	0	0	3	Gr-1
Sem VI		IPR	3	0	0	3	Gr-2
Sem VII		Cancer biology and regenerative medicine	3	0	1	4	Gr-1
Sem VII		Pharmacogenomics	3	0	1	4	Gr-2
Sem VII		Infectious diseases	3	0	1	4	Gr-1
Sem VII		Advanced Cytology	3	0	1	4	Gr-2

