Admissions/Batches/Session: 2023-24

Program Details
B.Sc. (Hons.) Biomedical Science - 3 years program

Course Category	For 3 years Program
Discipline Core Courses	60
Discipline Specific Electives (DSE)	12
Generic Electives	24
Multi-Disciplinary Courses (MDC)	10
Ability Enhancement Courses (AEC)	8
Skill Enhancement Courses (SEC)	10
Value Added Courses (VAC)	6
Industrial/Academic Internship	2
Dissertation	NA
Total Credits	**132**

Curriculum Structure
B.Sc. (Hons.) Biomedical Science - 3 years program

SEMESTER I							
S. No	**Course Code**	**Course Name**	**Category of Course**	**L**	**T**	**P**	**Credits**
1.		Fundamentals of Cell Biology	Discipline Core Course 1	3	0	1	4
2.		Biochemistry	Discipline Core Course 2	4	0	0	4
3.		Human Physiology- I	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. No.	**Course Code**	**Course Name**	**Category of Course**	**L**	**T**	**P**	**Credits**
1.		Human Physiology -II	Discipline Core Course 4	4	0	0	4
2.		Toxicology and Pharmacology	Discipline Core Course 5	3	0	1	4
3.		Biotechnology	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. No.	**Course Code**	**Course Name**	**Category of Course**	**L**	**T**	**P**	**Credits**
1.		Fundamentals of Molecular Biology	Discipline Core Course 7	3	0	1	4
2.		Introduction to Microbial World	Discipline Core Course 8	3	0	1	4
3.		Evolutionary and Developmental Biology	Discipline Core Course 9	4	0	0	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. No.	**Course Code**	**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.		One from the List of Choices	Skill Enhancement Course- 4	2	0	0	2

7.		Nanobiotechnology	Multi Disciplinary Course 2	3	0	0	3
			TOTAL				22
SEMESTER V							
S. No.	**Course Code**	**Course Name**	**Category of Course**	**L**	**T**	**P**	**Credits**
1.		Medical Biochemistry	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. No.	**Course Code**	**Course Name**	**Category of Course**	**L**	**T**	**P**	**Credits**
1.		Hormones: Biochemistry and Function	Discipline Core 14	4	0	0	4
2.		Metabolism of Biomolecules	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.) Biomedical Science 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

List of Generic Electives (GE) offered from Division of Life Sciences

S.No.	Sem	Code	Course name	L	T	P	C	Discipline
1.	I		Fundamentals of Cell Biology	3	0	1	4	Life Sciences
2.	II		Biochemistry & Physiology	4	0	0	4	Life Sciences
3.	III		Introduction to Microbial World	3	0	1	4	Life Sciences
4.	IV		Fundamentals of Molecular Biology	3	0	1	4	Life Sciences
5.	V		Concept of Immunology	3	0	1	4	Life Sciences
6.	VI		Gene Technology and Human Welfare	3	0	1	4	Life Sciences
7.	VII		Microbial Physiology and Metabolism	4	0	0	4	Microbiology
8.	VIII		Microbial Genetics and Genomics	3	0	1	4	Microbiology

9.	VII		Human Physiology- I	3	0	1	4	Biomedical Science
10.	VIII		Human Physiology -II	4	0	0	4	Biomedical Science
11.	VII		Biochemistry of Metabolism	4	0	0	4	Biochemistry
12.	VIII		Bioorganic and Medicinal Chemistry	3	0	1	4	Biochemistry
13.	VII		Diversity of Non-Chordates, Parasitology and Economic Zoology	3	0	1	4	Zoology
14.	VIII		Diversity of Chordates and Comparative Anatomy	3	0	1	4	Zoology