School of Biological and Life Sciences
Galgotias University, Greater Noida, U.P, India-203201

		Program Structure for B.Sc. (Hons.) Biotechnology and B.Sc. (Hons) with research in Biotechnology [2024-2025]					
	S.N	**Course Name**	**Category of Course**	**L**	**T**	**P**	**Credits**
SEM-1	1	Fundamentals of Cell Biology	Core	3	0	1	4
	2	Biochemistry	Core	4	0	0	4
	3	Introduction to Biotechnology	Core	3	0	1	4
	4	Elective-1	Elective-1	2	0	0	4
	5	Ecology and environmental sciences	AEC	2	0	0	2
	6	Essentials of IT Tools	SEC	1	0	1	2
	7	Health and Nutrition /First Aid	VAC	2	0	0	2
				Total Credits			22
SEM-2	1	Principles of Genetics	Core	3	0	1	4
	2	Fundamentals of Microbiology	Core	3	0	1	4
	3	Biochemistry of Metabolism	Core	4	0	0	4
	4	Elective 2	Elective-2	4	0	0	4
	5	Logical communication	AEC	2	0	0	2
	6	Python Programming	MDC	1	0	1	2
	7	Art of Happiness	VAC	2	0	0	2
				Total Credits			22
Sem-3	1	Fundamentals of Molecular Biology	Core	3	0	1	4
	2	PLANT physiology	core	4	0	0	4
	3	Plant Biotechnology	core	3	0	1	4
	4	Elective-3	Electives - 3	4	0	0	4

School of Biological and Life Sciences
Galgotias University, Greater Noida, U.P, India-203201

	5	Critical Thinking & Writing	AEC	2	0	0	2
	6	Introduction to Artificial Intelligence	SEC	2	0	0	2
	7	Community Connect/ NCC/NSS/Vedic Mathematics	VAC	2	0	0	2
				Total Credits			22
SEM-4	1	Concepts of Immunology	Core	3	0	1	4
	2	ANIMAL PHYSIOLOGY	Core	4	0	0	4
	3	Recombinant DNA Technology	Core	3	0	1	4
	4	Elective-4	Elective-4	4	0	0	4
	5	Animal Biotechnology	Core	3	0	0	3
	6	Bioanalytical Techniques	Core	3	0	0	3
	7	Disaster Management	AEC	2	0	0	2
				Total Credits			24
SEM-5	1	Enzyme Technology	Core	3	0	1	4
	2	Biostatistics	MDC	4	0	0	4
	3	Food Biotechnology	SEC	3	0	1	4
	4	Elective-5	Elective-5	4	0	0	4
	5	BIOSAFETY AND BIOETHICS	AEC	2	0	0	2
	6	Internship	Industrial/Academic Internship	0	0	2	2
				Total Credits			20
SEM-6	1	Industrial Biotechnology	Core	3	0	1	4
	2	Bioinformatics	Core	3	0	1	4
	3	Waste Management and Environmental Sustainability	SEC	4	0	0	4
	4	IPR and Bio-entrepreneurship	MDC	2	0	0	2

	5	Elective-6	Elective-6	4	0	0	4
	6	Nanobiotechnology	MDC	3	0	0	3
	7	Academic and Research Report Writing	AEC	0	0	1	1
							22
		After 3 years, students will get a B.Sc. (Hons) Biotechnology with Total Credits= 132					
SEM-7	1	Genomics and Proteomics	Core	3	0	1	4
	2	ENVIRONMENTAL BIOTECHNOLOGY	Core	3	0	1	4
	3	Cancer Biology/Stem Cell	DSE-1	4	0	0	4
	4	Structural Biology and Vaccine Development/Drug Designing	DSE-2	4	0	0	4
	5	Elective-7	Elective-7				4
	6	Elective-8	Elective-8				4
					Total Credits		24
SEM-8	1	Dissertation	Dissertation				12
					Total Credits		12
After 4 Years, Students will get the degree of B.Sc. (Hons) with Research in Biotechnology with Total Credits= 168							

School of Biological and Life Sciences
Galgotias University, Greater Noida, U.P, India-203201

List of Electives

	Track-1 **Food and Agriculture Biotechnology**				
S.N	**Course Name**	**L**	**T**	**P**	**Credits**
1	Natural Resource Management and Sustainability	4	0	0	4
2	Nutraceutical and Functional Foods	4	0	0	4
3	Food Microbiology	4	0	0	4
4	Principles of Food Processing	4	0	0	4
5	AQUACULTURE AND Fish Processing technology	4	0	0	4
6	Mushroom Cultivation technology	4	0	0	4
7	BIO-FERTILIZER and Biopesticide	4	0	0	4
8	Food Standard and Quality Control	4	0	0	4
		Total			**32**
	Track-2 **Health and Pharmaceutical Biotechnology**				
S.N	**Course Name**	**L**	**T**	**P**	**Credits**
1	Medicinal Chemistry	4	0	0	4
2	Public Health and Epidemiology	4	0	0	4
3	Cell & Tissue Culture	4	0	0	4
4	Biomedical Devices	4	0	0	4
5	Molecular Pathogenesis of Infectious Diseases	4	0	0	4
6	Tissue Engineering & Regenerative medicine	4	0	0	4
7	Molecular Basis of Gene Therapy	4	0	0	4
8	Clinical Trials and Regulatory Affairs	4	0	0	4
		Total			**32**