

## BSc (Biotechnology), Program Structure for Batch 2022-26

Semester-01			
Discipline Specific Core Courses [DSC]			
DSC-01	BTBSc101	Biochemistry & Metabolism	4
DSC-02	BTBSc103	Cell Biology	4
DSC-03	BTBSc105	Biotechnology and Human Welfare	4
DSC-04	BTBSc107	Biochemistry Lab	3
DSC-05	BTBSc 109	Cell Biology Lab	3
Ability Enhancement Compulsory Courses [AEC]			
AEC-01	EN-105	Communicative English	4
Total Credits			20

Semester-02			
Discipline Specific Core Courses [DSC]			
DSC-06	BTBSc102	Molecular Biology	4
DSC-07	BTBSc104	Genetics	3
DSC-08	BTBSc106	Microbiology	3
DSC-09	BTCY102	Chemistry-I	3
DSC-10	BTBSc108	Molecular Biology Lab	2
DSC-11	BTBSc110	Microbiology lab	2
Ability Enhancement Compulsory Courses [AEC]			
AEC-02	ES-101	Environmental Studies	4
Skill Enhancement Course			
SEC-01	BTIT 102	IT for biologists	3
Value Addition Courses [VAC]			
VAC-01	*BTBSc 112	Participation in sports/Cultural/Social activities	0
Total Credits			24

**\*BTBSC112 (Participation in sports/culture/social activities) is a compulsory non-credit course. Student must spend at least 03 hours per week for this course.**

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Semester-03			
Discipline Specific Core Courses [DSC]			
DSC-12	BTCH201	Chemistry-II	4
DSC-13	BTBSc201	Plant Physiology	4
DSC-14	BTBSc203	Animal Physiology	4
DSC-15	BTMA201	Biostatistics	3
DSC-16	BTBSc205	Fundamentals of Biotechnology	3
DSC-17	BTBSc207	Animal and plant physiology Lab	3
Generic Elective Courses [GEC] One to be selected			
GEC-01	BTBSc209	Basics of Forensic Science	2
	BTBSc211	Paper writing and Professional Communication	
Value Addition Courses [VAC]			
VAC-02	BTBSc213	Intellectual Property Rights	2
Total Credits			24

Semester-04			
Discipline Specific Core Courses [DSC]			
DSC-18	BTBSc202	Genetic Engineering-I	4
DSC-19	BTBSc204	Industrial Microbiology	4
DSC-20	BTBSc206	Enzymology	4
DSC-21	BTBSc208	Bioanalytical techniques-I	3
DSC-22	BTBSc210	Enzymology Lab	2
DSC-23	BTBSc212	GE lab	2
Generic Elective Courses [GEC] One to be selected			
GEC-02	BTBSc214	Molecular Diagnostics	2
	BTBSc216	Food Biotechnology	
Value Addition Courses [VAC]			
VAC-03	BTBSc218	Innovation and Entrepreneurship	3
Total Credits			24

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Semester-05			
Discipline Specific Core Courses [DSC]			
DSC-24	BTBSc301	Bioprocess Technology	4
DSC-25	BTBSc303	Immunology	4
DSC-26	BTBSc305	Animal Biotechnology	4
DSC-27	BTBSc307	Bioanalytical Techniques-II	3
DSC-28	BTBSc309	Animal Biotechnology Lab	2
DSC-29	BTBSc311	Bioprocess Lab	2
Discipline Specific Elective Courses [DSE] One to be Selected			
DSE-01	BtBSc313	Cancer Biology	2
	BtBSc315	Developmental Biology	
Generic Elective Courses [GEC] One to be Selected			
GEC-03	BtBSc317	Pharmaceutical Biotechnology	2
	BtBSc319	Nanobiotechnology	
Total Credits			23

Semester-06			
Discipline Specific Core Courses [DSC]			
DSC-30	BTBSc302	Plant Biotechnology	4
DSC-31	BTBSc304	Computational Biology	4
DSC-32	BTBSc306	Genomics and Proteomics	4
DSC-33	BTBSc308	Plant Biotechnology Lab	2
DSC-34	BTBSc310	Computational Biology Lab	2
Discipline Specific Elective Courses [DSE] One to be Selected			
DSE-02	BTBSc314	Environmental Biotechnology	2
	BTBSc316	Evolutionary Biology	
Generic Elective Courses [GEC] One to be Selected			
GEC-04	BTBSc318	Environmental Policy & Legislation	2
	BTBSc320	Database Management	
Value addition [VAC]			
VAC-05	BTBSc322	Seminar	2
		Total Credits	22

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Summer internship after 6<sup>th</sup> Semester

**BTBSC-401: Industrial Training/Survey/Research Project**

**(04 credits)**

Semester-07			
Discipline Specific Core Courses [DSC]			
DSC-35	BTBSc401	Summer Internship/ Industrial Training/Survey/Research Project	4
DSC-36	BTBSc403	Omics technologies	4
DSC-37	BTBSc405	Regulatory affairs, Biosafety & Bioethics	4
DSC-38	BTBSc407	Project Proposal preparation and presentation	2
DSC-39	BTBSc409	Term Paper & Presentation	6
		Total Credits	20

Semester-08 BSc (Hons.) Biotechnology with Research			
Discipline Specific Core Courses [DSC]			
DSC-40	BTBSc410	Dissertation	12
DSC-41	BTBSc402	Research Methodology and Scientific Communication Skills	2
DSC-42	BTBSc404	Emerging Technologies	4
DSC-44	BTBSc406	Entrepreneurship Development	2
		Total Credits	20