

INSTITUTE OF BIOTECHNOLOGY

CREDIT HOURS FOR UNDERGRADUATE AND GRADUATE DEGREES

A credit hour means teaching/earning a theory course for one hour each week throughout the semester.

Course	Duration of Class
Theory Course of 03 Credit Hours	3 classes of 01 hour per week Or 2 classes of 1.5 hours per week
Practical (Lab)Work/Field Work of 01 Credit Hour	02 to 03 contact hours per week

One credit hour in laboratory or practical work/project would require lab contact of two to three hours per week throughout the semester.

The credit hours are denoted by two digits within brackets with a hyphen/plus in between. The first digit represents the theory part while the second (right side) digit represents the practical.

Thus 3(3-0) means three credit hours of theory, while 4(3-1) means a total of four credit hours, of which three are of theory while one credit hour is for laboratory/studio work/field work/practical work supervised as mentioned above.

CLASS ATTENDANCE

A candidate with less than 75% of the attendance in a course shall not be eligible to appear in the final examination.

RULES REGARDING THE AFFILIATED COLLEGES (GOVERNMENT / PRIVATE)

. SEMESTER SYSTEM BASED DEGREES

The apportionment of marks is as under

(a) Mid-semester examination	20%
(b) At least 02 Assignments and 02 quizzes/ presentations.	10%
(c) Final examination (at least 20% of Final Exams will consist of Mid Term Course).	70%
Total	100%

GRADE POINT AVERAGE

21.6.1 Grade point and equivalence between letter grading and numerical grading shall be as follows:

Grade	Value	Marks (%)
A	4.00	85% or above
A-	3.75-3.95	80% to 84%
B+	3.35- 3.70	70% to 79%
B	3.00-3.28	65% to 69%
B-	2.70-2.94	60% to 64%
C+	2.35-2.63	55% to 59%
C	2.00-2.28	50 to 54%
C-	1.50-1.90	45 % to 49%
D	1.00-1.40	40 to 44%
I	(Incomplete)	
F (Fail)	0	<ul style="list-style-type: none">• Less than 40% for undergraduate & master level programs.• Less than 50% for MS/MPhil/PhD.
W	(Withdrawn)	Will not be included in GPA calculation.

* There is no "D" and "C-" Grades in Pharm-D, Electrical Engineering, MPhil and PhD programs.

In order to calculate the GPA, multiply Grade Point (next page) with the Credit Hours in each Course to obtain total grade points, add up to cumulative Grade Points and divide by the total number of Credit Hours to get the GPA for a Semester.

$$\text{GPA} = \frac{\sum (\text{GP} \times \text{Credit Hours}) \text{ courses of a semester}}{\text{Total Credit Hours of a semester}}$$

For calculating CGPA, sum total of GPs in a semester earned in different courses multiplied by respective credit hour of a course and divided by total numbers of credit hours.

$$\text{CGPA} = \frac{\sum (\text{GP} \times \text{Credit Hours}) \text{ of all courses in a programme}}{\text{Total Credit Hours of all courses in that Programme}}$$

21.6.2 Grade point (GP) shall be determined on the basis of numerical grade in the following table:

Percentage Marks	Grade Point (GP)	Percentage Marks	Grade Point (GP)	Percentage Marks	Grade Point (GP)	Percentage Marks	Grade Point (GP)
Grade "D" Range of Numerical value		Grade "C+" Range of Numerical value		Grade "B+" Range of Numerical value		Grade 'A' Range of Numerical value	
40	1.0	55	2.35	70	3.25	85.0 and above	4.00*
41	1.1	56	2.42	71	3.30		
42	1.2	57	2.49	72	3.35		
43	1.3	58	2.56	73	3.40		
44	1.4	59	2.63	74	3.45		
Grade "C-" Range of Numerical value		Grade "B-" Range of Numerical value		75	3.50		
45	1.5	60	2.70	76	3.55		
46	1.6	61	2.76	77	3.60		
47	1.7	62	2.82	78	3.65		
48	1.8	63	2.88	79	3.70		
49	1.9	64	2.94				
Grade "C" Range of Numerical value		Grade "B" Range of Numerical value		Grade "A-" Range of Numerical value			
50	2.0	65	3.00	80	3.75		
51	2.07	66	3.05	81	3.80		
52	2.14	67	3.10	82	3.85		
53	2.21	68	3.15	83	3.90		
54	2.28	69	3.20	84	3.95		

REQUIRED CREDIT HOURS AND DURATION OF DEGREE PROGRAMS

Following is the minimum and maximum duration of academic programs.

DEGREE PROGRAM	CREDIT HOURS	DURATION	
		MINIMUM	MAXIMUM
Under Graduate Program (BS and BBA etc.)	130	4 Academic Years	6 Academic Years

BS Biotechnology

ROAD MAP OF BS BIOTECHNOLOGY (2020-2024)

Semester 1		
BIT-301	Cell Biology	3(2-1)
BIT-303	Fundamentals of Genetics	4(3-1)
CSI-321	Introduction to Computing Applications	3(2-1)
ISL-321	Islamic Studies	2(2-0)
ISL-322	Ethics (For Non-Muslim only)	2(2-0)
ENG-321	Functional English	3(3-0)
MTH-321	Algebra and Trigonometry	3(3-0)
Semester 2		
BIT-302	Molecular Biology	4(3-1)
BIT-304	Biophysics	3(3-0)
BIT-306	Biodiversity and Systematics	3(3-0)
BCH-322	Elementary Biochemistry	3(2-1)
ENG-322	English Comprehension and Composition	3(3-0)
PST-321	Pakistan Studies	2(2-0)
Semester 3		
MIC-301	Introductory Microbiology	3(2-1)
BIT-403	Molecular Genetics	4(3-1)
BIT-405	Introduction to Biotechnology	3(2-1)
BIT-407	Essentials of Immunology	3(3-0)
BCH-421	Advanced Biochemistry	3(2-1)
CHM-305	General Chemistry	3(3-0)
Semester 4		
BIN-402	Introduction to Biological Data Retrieval	4(3-1)
BIT-404	Molecular Evolution	3(3-0)

STA-507	Biostatistics	4(3-1)
BIT-408	Biosafety	2(2-0)
BIT-410	Cell and Tissue Culture	3(2-1)
BIT-412	Microbial Biotechnology	3(2-1)
Semester 5		
BIN-501	Essentials of Biological Data Analysis	4(3-1)
BIT-503	Recombinant DNA Technology	4(3-1)
BIT-505	General Virology	3(3-0)
BIT-507	Techniques in Biotechnology	3(2-1)
BIT-509	Health Biotechnology	3(3-0)
BIT-511	Forensic Serology and DNA Typing	3(3-0)
Semester 6		
BIT-502	Proteomics	3(3-0)
BIT-504	Genomics	3(3-0)
BIT-506	Nanobiotechnology	3(3-0)
BIT-508	Agriculture Biotechnology	3(2-1)
BIT-510	Social, Ethical and Legal Aspects of Biotechnology	3(3-0)
BIT-512	Animal Biotechnology	3(3-0)
Semester 7		
BIT-601	Cell Signaling	3(3-0)
BIT-603	Industrial Biotechnology	4(3-1)
BIT-605	Food and Bioprocess Technology	3(2-1)
BIT-607	Literature Survey and Research Project Management	2(2-0)
BIT-609	Environmental Biotechnology	3(3-0)
BIT-611	Molecular Pathology	3(3-0)
Semester 8		
BIT-602	Research Methodologies in Biotechnology	3(0-3)
BIT-604	Recent Trends in Biotechnology	3(3-0)
	OR	
BIT-631	Project	6(0-6)

FACULTY OF LIFE SCIENCES, GULAB DEVI EDUCATIONAL COMPLEX, LAHORE

TIME TABLE (FALL - 2020-21) FOR INSTITUTE OF BIOTECHNOLOGY

MONDAY

ROOMS #	8:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-01:00	01:00-02:00
Saigal Block, Lecture Hall # 04	Functional English (ENG-321), 1st Micro, Biotech, Ms. Nosheen	Fundamentals of Genetics (BIT-303), 1st Biotech, Mr. Kiffayat			Islamic Studies (ISL-321), 1st Biotech, 1st Biochem, Ms. Ayesha Ibrahim	Cell Biology (BIT-301), 1st Biotech, Mr. Sohail
Computer Lab			Introduction to Computing Application (CSI-321), 1st HND & 1st Biotech, Mr. Junaid Altaf			

TUESDAY

ROOMS #	8:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-01:00	01:00-02:00
Saigal Block, Lecture Hall # 04	Functional English (ENG-321), 1st Micro, Biotech, Ms. Nosheen	Cell Biology (BIT-301), 1st Biotech, Mr. Sohail	Introduction to Computing Application (CSI-321), 1st HND & 1st Biotech, Mr. Junaid Altaf	Algebra & Trigonometry (MTH-321), 1st Biotech, Biochem, Mr. Zubair	Fundamentals of Genetics (BIT-303), 1st Biotech, Mr. Kiffayat	Islamic Studies (ISL-321), 1st Biotech, 1st Biochem, Ms. Ayesha Ibrahim

WEDNESDAY

ROOMS #	8:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-01:00	01:00-02:00
Saigal Block, Lecture Hall # 04	Functional English (ENG-321), 1st Micro, Biotech, Ms. Nosheen		Introduction to Computing Application (CSI-321), 1st HND & 1st Biotech, Mr. Junaid Altaf		Fundamentals of Genetics (BIT-303), 1st Biotech, Mr. Kiffayat	

THURSDAY

ROOMS #	8:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-01:00	01:00-02:00
Arian Block, Biotechnology Lab			Fundamentals of Genetics (BIT-303), 1st Biotech, Mr. Kiffayat			

FRIDAY

ROOMS #	8:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00		
Saigal Block, Lecture Hall # 04		Algebra & Trigonometry (MTH-321), 1st Biotech, Biochem, Mr. Zubair				

SATURDAY

ROOMS #	8:00-09:00	09:00-10:00	10:00-11:00	11:00-12:00	12:00-01:00	01:00-02:00
Saigal Block, Lecture Hall # 04			Algebra & Trigonometry (MTH-321), 1st Biotech, Biochem, Mr. Zubair			
AB-S.Floor, Room # 02					Cell Biology (BIT-301), 1st Biotech, Mr. Sohail	

Focal Persons

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