



TECHNO INDIA UNIVERSITY
WESTBENGAL

**Syllabus of B.Sc. Biotechnology (NEP)
Course Curriculum for All Semester**



Department of Biotechnology

Techno India University, West Bengal

**EM-4, EM Block, Sector V, Bidhannagar,
Kolkata -700091, West Bengal**



B.Sc. in Biotechnology
Course Curriculum for All Semester

Semester I

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T11101	Biochemistry and Metabolism	3-1-0	4
TIU-UCH-MI-T11101	Chemistry – I	3-0-0	3
TIU-UCA-MD-T1101	Introduction to Computer Applications	2-1-0	3
TIU-UEN-AEC-S1101	Communicative English – I	2-0-0	2
TIU-UBT-CVA-T1101	Environmental Science	2-0-0	2
TIU-UBT-MJ-L11101	Biochemistry and Metabolism Lab	0-0-4	2
TIU-UCH-MI-L11101	Chemistry – I Lab	0-0-2	1
TIU-UBT-SEC-T1101	Instrumentation Technique – I	3-0-0	3



Semester II

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T12101	Introduction to Microbiology	3-1-0	4
TIU-UCH-MI-T12101	Chemistry – II	3-0-0	3
TIU-UBT-MD-T1202	Data Science	2-1-0	3
TIU-UEN-AEC-S1201	Communicative English – II	2-0-0	2
TIU-UBT-SEC-T1201	Industrial Fermentation	3-0-0	3
TIU-UBT-CVA-T1201	AI	2-0-0	2
TIU-UBT-MJ-L12101	Microbial Physiology Lab	0-0-4	2
TIU-UCH-MI-L12101	Chemistry Lab	0-0-2	1



Semester III

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T21201	Microbial Genetics	3-1-0	4
TIU-UBT-MI-T21201	Bioprocess Technology	3-1-0	4
TIU-ULIB-MD-T2101	Library and Information Science	3-0-0	3
TIU-UEN-AEC-T2101	Heritage of Modern Indian Languages-I	2-0-0	2
TIU-UBT-SEC-T2101	Molecular Diagnostics	3-0-0	3
TIU-UBT-MJ-L21201	Cytogenetics Lab	0-0-4	2
TIU-UBT-MI-L21201	Bioprocess Technology Lab	0-0-4	2



Semester IV

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T22201	Molecular Biology	3-1-0	4
TIU-UBT-MJ-T22202	Parasitology and Immunology	3-1-0	4
TIU-UBT-MI-T22201	Instrumentation and Technique- II	3-0-0	3
TIU-UEN-AEC-S2291A/B	Modern Indian Language – Hindi / Bengali	2-0-0	2
TIU-UWS-CVA-T2201	Gender Studies	2-0-0	2
TIU-UBT-MJ-L22201	Molecular Biology Lab	0-0-4	2
TIU-UBT-MJ-L22202	Parasitology and Immunology Lab	0-0-4	2
TIU-UBT-MI-L22201	Methods in Biology Lab	0-0-2	1



Semester V

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T31301	PLANT CELL AND TISSUE CULTURE	3-1-0	4
TIU-UBT-MJ-T31302	FOOD BIOTECHNOLOGY	3-1-0	4
TIU-UBT-MI-T31203	BIOSTATISTICS	3-1-0	4
TIU-UBT-MJ-L31302	FOOD AND PHARMACEUTICAL BIOTECHNOLOGY LAB	0-0-4	2
TIU-UBT-MJ-L31351	BIOSEPARATION TECHNOLOGY LAB	0-0-4	2
TIU-UBT-SEC-I3101	INTERNSHIP	0-0-8	4



Semester VI

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T32301	PLANT BIOTECHNOLOGY AND MOLECULAR BIOLOGY	3-1-0	4
TIU-UBT-MJ-T32302	RECOMBINANT DNA TECHNOLOGY	3-1-0	4
TIU-UBT-MJ-T32303	ANIMAL PHYSIOLOGY	3-1-0	4
TIU-UBT-MI-T32201	GIS AND REMOTE SENSING	3-1-0	4
TIU-UBT-MJ-L32301	PLANT BIOTECHNOLOGY LAB	0-0-4	2
TIU-UBT-MJ-L32302	RECOMBINANT DNA TECHNOLOGY LAB	0-0-4	2
TIU-UBT-MI-L32251	MAMMALIAN PHYSIOLOGY LAB	0-0-4	2
*EXIT OPTION WITH DEGREE COURSE IN BIOTECHNOLOGY			



Semester VII

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T41401	GENOMICS, PROTEOMICS AND BIOINFORMATICS	3-1-0	4
TIU-UBT-MJ-T41402	NANOMATERIALS AND TISSUE ENGINEERING	3-1-0	4
TIU-UBT-MI-T41301	AGRICULTURAL BIOTECHNOLOGY	2-0-0	2
TIU-UBT-MJ-L41401	MULTI-OMICS TECHNIQUE LAB	0-0-4	2
TIU-UBT-MJ-L41402	NANOTECHNOLOGY LAB	0-0-4	2
TIU-UBT-SEC-P4101	RESEARCH PROJECT	0-0-8	4



Semester VIII (Without Research)

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T42401	ANIMAL BIOTECHNOLOGY	3-1-0	4
TIU-UBT-MJ-T42403	ECOLOGY AND EVOLUTION	3-1-0	4
TIU-UBT-MI-T42302	DEVELOPMENTAL BIOLOGY	3-1-0	4
TIU-UBT-MI-T42303	ENVIRONMENTAL MANAGEMENT AND BIOREMEDIATION	3-1-0	4
TIU-UBT-MI-L42302	DEVELOPMENTAL BIOLOGY LAB	0-0-4	2
TIU-UBT-MI-L42303	ENVIRONMENTAL MANAGEMENT AND BIOREMEDIATION LAB	0-0-4	2

Semester VIII (With Research)

Course Code	Course Title	Contact Hrs./Week L-T-P	Credit
TIU-UBT-MJ-T42401	ANIMAL BIOTECHNOLOGY	3-1-0	4
TIU-UBT-MJ-T42402	MEDICAL AND PHARMACEUTICAL BIOTECHNOLOGY	3-1-0	4
TIU-UBT-MI-T42301	IPR	3-1-0	4
TIU-UBT-SEC-P4201	RESEARCH PROJECT	0-0-16	8