



TECHNO INDIA UNIVERSITY
WESTBENGAL

**Course Structure of 4 years B.Sc. (H) Program
Chemistry**



Department of Chemistry

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



**4 years B.Sc. (H) Program
Chemistry
Course Curriculum**

Semester I

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T11101	Major 1	Basic Chemistry-I (Inorganic & Physical)	3-1-0	4
TIU-UPH-MI-T11101	Minor 1	Physics-I	3-0-0	3
TIU-UCH-MD-T11101	MDC 1	Chemistry in Daily Life	2-1-0	3
TIU-UEN-AEC-S1101	AEC 1	Communicative English - I	2-0-0	2
TIU-UCH-CVA-T1101	CVA / VAC 1	Environmental Science	2-0-0	2
TIU-UCH-MJ-L11101	Major 1 Lab	Basic Chemistry-I Lab	0-0-4	2
TIU-UPH-MI-L11101	Minor 1 Lab	Physics-I Lab	0-0-2	1
TIU-UCH-SEC-T1101	SEC 1	Laboratory Practices and Safety Rules	3-0-0	3
Total				20



Semester II

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T12101	Major 2	Basic Chemistry-II (Organic & Physical)	3-1-0	4
TIU-UPH-MI-T12101	Minor 2	Physics-II	3-0-0	3
TIU-UCH-MD-T1202	MDC 2	Pharmaceutical Chemistry	2-1-0	3
TIU-UEN-AEC-S1201	AEC 2	Communicative English - II	2-0-0	2
TIU-UCH-SEC-T1201	SEC 2	Basics of Forensic Chemistry	3-0-0	3
TIU-UCH-CVA-T1201	CVA / VAC 2:	Artificial Intelligence (AI)	2-0-0	2
TIU-UCH-MJ-L12101	Major 2 Lab	Basic Organic Chemistry Lab	0-0-4	2
TIU-UPH-MI-L12101	Minor 2 Lab	Physics-II Lab	0-0-2	1
Total				20



Semester III

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T21201	Major 3	Inorganic Chemistry-I	3-1-0	4
TIU-UMA-MI-T21201	Minor 3	Mathematics-I	3-1-0	4
TIU-ULIB-MD-T2101	MDC 3	Statistics for Chemistry	3-0-0	3
TIU-UEN-AEC-T2101	AEC 3	Heritage of Modern Indian Languages (Bengali/Hindi/Sanskrit <i>etc.</i>)	2-0-0	2
TIU-UCH-SEC-T2101	SEC 3	Polymer Chemistry	3-0-0	3
TIU-UCH-MJ-L21201	Major 3 Lab	Inorganic Chemistry Lab	0-0-4	2
TIU-UCH-SEC-L2101	SEC 3 Lab	Syntheses of Nanomaterials	0-0-4	2
Total				20



Semester IV

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T22201	Major 4	Organic Chemistry-I	3-1-0	4
TIU-UCH-MJ-T22202	Major 5	Physical Chemistry-I	3-1-0	4
TIU-UMA-MI-T22201	Minor 4	Mathematics-II	3-1-0	4
TIU-UEN-AEC-S2291A/B	AEC 4	Modern Indian Language - Hindi / Bengali	2-0-0	2
TIU-UWS-CVA-T2201	CVA / VAC 3	Gender Studies and Human Rights	2-0-0	2
TIU-UCH-MJ-L22201	Major 4 Lab	Organic Chemistry-I Lab	0-0-4	2
TIU-UCH-MJ-L22202	Major 5 Lab	Physical Chemistry-I Lab	0-0-4	2
Total				20



Semester V

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T31301	Major 6	Inorganic Chemistry-II	3-1-0	4
TIU-UCH-MJ-T31302	Major 7	Organic Chemistry-II	3-1-0	4
TIU-UCH-MI-T31203	Minor 5	Basics of Biochemistry	3-1-0	4
TIU-UCH-MJ-L31302	Major 6 Lab	Inorganic Chemistry-II Lab	0-0-4	2
TIU-UCH-MJ-L31351	Major 7 Lab	Organic Chemistry-II Lab	0-0-4	2
TIU-UCH-SEC-I3101	SEC-4	Internship (4-6 Weeks)	0-0-8	4
Total				20



Semester VI

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T32301	Major 8	Physical Chemistry-II	3-1-0	4
TIU-UCH-MJ-T32302	Major 9	Quantum Chemistry & Molecular Spectroscopy	3-1-0	4
TIU-UCH-MJ-T32303	Major 10	Green Chemistry	3-1-0	4
TIU-UCH-MI-T32201	Minor 6	Basics of Drug Design	2-1-0	3
TIU-UCH-MJ-L32301	Major 8 Lab	Physical Chemistry-II Lab	0-0-4	2
TIU-UCH-MJ-L32302	Major 9 Lab	Spectroscopy Lab	0-0-4	2
TIU-UCH-MI-L32251	Minor 6 Lab	Molecular Modeling Lab	0-0-2	1
Total				20



Semester VII

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T41401	Major 11	Bioinorganic Chemistry	3-1-0	4
TIU-UCH-MJ-T41402	Major 12	Natural Products	3-1-0	4
TIU-UCH-MI-T41301	Minor 7	Nanomaterials	3-1-0	4
TIU-UCH-MJ-L41401	Major 11 Lab	Bioinorganic Chemistry Lab	0-0-4	2
TIU-UCH-MJ-L41402	Major 12 Lab	Natural Products Lab	0-0-4	2
TIU-UCH-SEC-P4101	Project	Research Project (Phase I: Literature Review & Methodology)	0-0-8	4
Total				20



Semester VIII(With Research)

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T42401	Major 13	Analytical Chemistry	3-1-0	4
TIU-UCH-MJ-T42402	Major 14	Medicinal Chemistry	3-1-0	4
TIU-UCH-MI-T42302	Minor 8	Industrial Chemistry	3-1-0	4
TIU-UCH-SEC-P4201	Research Project	Research Project (Phase II: Execution, Thesis & Viva Voce)	0-0-16	8
Total				20



Semester VIII (Without Research)

Course Code	Course Type	Course Title	Contact Hrs./Week (L-T-P)	Credit
TIU-UCH-MJ-T42401	Major 13	Analytical Chemistry	3-1-0	4
TIU-UCH-MJ-T42402	Major 14	Medicinal Chemistry	3-1-0	4
TIU-UCH-MI-T42302	Minor 8	Industrial Chemistry	3-1-0	4
TIU-UCH-MI-T42303	Minor 9	Chemical Biology	3-1-0	4
TIU-UCH-MJ-L42401	Major 13 Lab	Analytical Chemistry Lab	0-0-4	2
TIU-UCH-MJ-L42402	Major 14 Lab	Medicinal Chemistry Lab	0-0-4	2
Total				20