

Indrashil University



Department of Chemistry School of Science

B.Sc. Chemistry Semesters I-IV

Course Profile Academic Year: 2024 – 2025

**B.Sc. Chemistry Semester I
Course Structure**

Course Code	Course Name	Course Type	L-T-P	Credits
CH1 101	Organic Chemistry-I	Major Discipline Core (MDC)	2-0-0	2
CH1 102	Inorganic Chemistry-I		2-0-0	2
CH1 103	Organic Chemistry -I Laboratory		0-0-4	2
CH1 104	Inorganic Chemistry-I Laboratory		0-0-4	2
CH1 105	Basic Physics	Minor Discipline	2-0-0	2
CH1 106	Basic Physics Laboratory	Elective (MDE)	0-0-4	2
CH1 107	Chemistry in Daily Life	Multi-Disciplinary (MDS)	2-0-0	2
CH1 108	Chemistry in Daily Life Laboratory		0-0-4	2
CH1 109	English Language-1	Ability Enhancement Course (AEC)	2-0-0	2
CH1 110	Computer Technology & IT Skills for Chemists	Skill Enhancement Course (SEC)	1-0-2	2
CH1 111	Yoga for Wellness	Value Added Course (VAC)/ Indian Knowledge System (IKS)	1-0-2	2
Total			12L+0T+ 20P = 32 hrs.	22

**B.Sc. Chemistry Semester II
Course Structure**

Course Code	Course Name	Course Type	L-T-P	Credits
CH1 201	Organic Chemistry-II	Major Discipline Core (MDC)	2-0-0	2
CH1 202	Physical Chemistry-I		2-0-0	2
CH1 203	Organic Chemistry - II Laboratory		0-0-4	2
CH1 204	Physical Chemistry - I Laboratory		0-0-4	2
CH1 205	Physics of Semiconductor Devices	Minor Discipline Elective (MDE)	2-0-0	2
CH1 206	Physics of Semiconductor Devices Laboratory		0-0-4	2
CH1 207	Chemistry of Materials	Multi-Disciplinary (MDS)	2-0-0	2
CH1 208	Chemistry of Materials Laboratory		0-0-4	2
CH1 209	English Language-2	Ability Enhancement Course (AEC)	2-0-0	2
CH1 210	Techniques of Chemical Analysis	Skill Enhancement Course (SEC)	2-0-0	2
CH1 211	Health and Nutrition	Value Added Course (VAC)/ Indian Knowledge System (IKS)	2-0-0	2
Total			14L+0T+ 16P = 30 hrs.	22

**B.Sc. Chemistry Semester III
Course Structure**

Course Code	Course Name	Course Type	L-T-P	Credits
CH2 101	Organic Chemistry-III	Major Discipline Core (MDC)	2-0-0	2
CH2 102	Inorganic Chemistry-II		2-0-0	2
CH2 103	Physical Chemistry-II		2-0-0	2
CH2 104	Organic Chemistry-III Laboratory		0-0-4	2
CH2 105	Inorganic Chemistry - II Laboratory		0-0-4	2
CH2 106	Physical Chemistry – II Laboratory		0-0-4	2
		Minor Discipline Elective (MDE)		
CH2 107	Semiconductor Devices	Multi-Disciplinary (MDS)	2-0-0	2
CH2 108	Semiconductor Devices Laboratory		0-0-4	2
CH2 109	Soft Skills	Ability Enhancement Course (AEC)	2-0-0	2
CH2 110	Laboratory Operations and Safety Measures	Skill Enhancement Course (SEC)	1-0-2	2
CH2 111	Indian Culture and Civilization	Value Added Course (VAC)/ Indian Knowledge System (IKS)	1-0-2	2
Total			12L+0T+ 20P = 32 hrs.	22

**B.Sc. Chemistry Semester IV
Course Structure**

Course Code	Course Name	Course Type	L-T-P	Credits
CH2 201	Organic Chemistry-IV	Major Discipline Core (MDC)	2-0-0	2
CH2 202	Inorganic Chemistry-III		2-0-0	2
CH2 203	Physical Chemistry-III		2-0-0	2
CH2 204	Organic Chemistry - IV Laboratory		0-0-4	2
CH2 205	Inorganic Chemistry - III Laboratory		0-0-4	2
CH2 206	Physical Chemistry – III Laboratory		0-0-4	2
CH2 207	Application of Semiconductors	Minor Discipline Elective (MDE)	2-0-0	2
CH2 208	Application of Semiconductors Laboratory		0-0-4	2
		Multi-Disciplinary (MDS)		
CH2 209	Professional Communications	Ability Enhancement Course (AEC)	2-0-0	2
CH2 210	Software for Scientific Learning	Skill Enhancement Course (SEC)	2-0-0	2
CH2 211	Renewable Energy	Value Added Course (VAC)/ Indian Knowledge System (IKS)	2-0-0	2
Total			14L+0T+ 16P = 30 hrs.	22

**B.Sc. Chemistry Semester V
Course Structure**

Course Code	Course Name	Course Type	L-T-P	Credits
CH3 101	Basics of Spectroscopy	Major Discipline Core (MDC)	2-0-0	2
CH3 102	Inorganic Chemistry-IV		2-0-0	2
CH3 103	Physical Chemistry-IV		2-0-0	2
CH3 104	Basics of Spectroscopy Laboratory		0-0-4	2
CH3 105	Inorganic Chemistry - IV Laboratory		0-0-4	2
CH3 106	Physical Chemistry – IV Laboratory		0-0-4	2
CH3 107	Semiconducting Materials for Microelectronics	Minor Discipline Elective (MDE)	2-0-0	2
CH3 108	Semiconducting Materials for Microelectronics Laboratory		0-0-4	2
CH3 109	Semiconducting Materials for Solar Energy		2-0-0	2
CH3 110	Semiconducting Materials for Solar Energy Laboratory		0-0-4	2
		Multi-Disciplinary (MDS)		
		Ability Enhancement Course (AEC)		
CH3 111	Tools for Scientific Exploration	Skill Enhancement Course (SEC)	2-0-0	2
		Value Added Course (VAC) / Indian Knowledge System (IKS)		
Total			12L+0T+20P = 32 hrs.	22

**B.Sc. Chemistry Semester VI
Course Structure**

Course Code	Course Name	Course Type	L-T-P	Credits
CH3 201	Organometallics and Catalysis	Major Discipline Core (MDC)	2-0-0	2
CH3 202	Medicinal Chemistry		2-0-0	2
CH3 203	Spectroscopic Techniques		2-0-0	2
CH3 204	Organometallic and Catalysis Laboratory		0-0-4	2
CH3 205	Medicinal Chemistry Laboratory		0-0-4	2
CH3 206	Spectroscopic Techniques Laboratory		0-0-4	2
CH3 207	Semiconducting Materials for Photonics	Minor Discipline Elective (MDE)	2-0-0	2
CH3 208	Semiconducting Materials for Photonics Laboratory		0-0-4	2
		Multi-Disciplinary (MDS)		
CH3 209	Personality Development	Ability Enhancement Course (AEC)	2-0-0	2
		Skill Enhancement Course (SEC)		
		Value Added Course (VAC) / Indian Knowledge System (IKS)		
CH3 210	Project	Research Project/On the Job Training (RP/OJT)	0-0-8	4
Total			10L+0T+2 4P = 34 hrs.	22

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