



FACULTY OF
SCIENCE AND
HEALTH SCIENCE



2024 - 25

B.Sc. Chemistry (Industrial Chemistry)

Programme Structure

Division	Faculty of Science & Health Science
School Name	School of Science & Environmental Studies
Department Name	Department of Chemistry
Programme Name	B.Sc. Chemistry (Industrial Chemistry)

Credit Distribution

Course Type	Description
Programme Core	Courses dealing with foundations, depth and breadth of the major in which a student is admitted at MIT-WPU
Programme Electives	Open electives under the Programme allow students to specialise in a particular area connected to their major.
University Core	Courses that reflect the core MITWPU values and the mission of Life Transformation of students.
University Electives	Multidisciplinary courses across the faculties at MIT-WPU and outside the Programme core.

Semester	Course Type	Course Name / Course Title	Total Credits
I	University Core	Effective Communication	1
I	University Core	Critical Thinking	1
I	University Core	Environment and Sustainability	1
I	University Core	Foundations of Peace	2
I	University Core	Yoga - I	1
I	University Core	SLDP	1
I	Programme Foundation	Calculus	3
I	Programme Foundation	Fundamentals of Physical Chemistry	3
I	Programme Foundation	Physics	3
I	Programme Foundation	Physical Chemistry Lab – I	2
I	Programme Major	Industrial Chemistry	2

Semester	Course Type	Course Name / Course Title	Total Credits
II	University Core	Advanced Excel	1
II	University Core	Financial Literacy	1
II	University Core	Yoga - II	1
II	University Core	Co-creation	1
II	University Core	Indian Constitution	1
II	University Core	IKS(General)	2
II	University Core	Sports	1
II	Programme Foundation	Atomic structure, Periodicity of elements & Chemical bonding	3
II	Programme Foundation	Biochemistry	3
II	Programme Foundation	Biochemistry Lab	1
II	Programme Foundation	Differential Equations	3
II	Programme Foundation	Inorganic Chemistry Lab -I	2

III	University Core	Research Innovation Design Entrepreneurship (RIDE)	1
III	University Core	Spiritual & Cultural Heritage; Indian Experience	2
III	University Electives	UE - I	3
III	University Electives	UE-II	3
III	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - I	1
III	Programme Foundation	Material Chemistry	3
III	Programme Foundation	Organic & Material Chemistry Lab	3
III	Programme Major	Synthetic Organic Chemistry	3
III	Programme Major	Surface and colloidal Chemistry	2

Semester	Course Type	Course Name / Course Title	Total Credits
IV	University Electives	UE-III	3
IV	University Core	Rural Immersion	1
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - II	1
IV	Programme Foundation	Environmental Chemistry	3
IV	Programme Major	Advanced Organic Chemistry	3
IV	Programme Major	Organic Chemistry Lab I	2
IV	Programme Major	Polymer Chemistry	3
IV	Programme Major	Polymer Chemistry Lab	2
IV	Programme Major	Seminar I	1
IV	Programme Foundation	IKS 2- Indian Metallurgy	2
IV	University Core	Life Transformation Skills	1

V	University Core	Managing Conflicts Peacefully: Tools and Techniques	2
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - III	1
V	Programme Major	Coordination and Organometallic Chemistry	3
V	Programme Major	Inorganic Chemistry Lab -II	2
V	Programme Major	Molecular Spectroscopy	2
V	Programme Major	Physical Chemistry Lab II	2
V	Programme Electives	Programme Elective -I	4

Semester	Course Type	Course Name / Course Title	Total Credits
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Seminar I	1
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Programming and Problem Solving -I	3

VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - IV	1
VI	University Core	National Academic Immersion	2
VI	Programme Major	Analytical Chemistry	2
VI	Programme Major	Fundamentals of Computational Chemistry	2
VI	Programme Major	Organic Spectroscopy	3
VI	Programme Major	Organic Chemistry Lab II	2
VI	Programme Electives	Programme Elective – II	4
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Mini Project	4

VII	Programme Major	Analytical 1.1/ Organic 2.1/Polymer 3.1	4
VII	Programme Major	Analytical 1.2 /Organic 2.2/Polymer 3.2	4
VII	Programme Major	Analytical 1.3 /Organic 2.3/Polymer 3.3	4
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Research Methodology for Chemistry	4
VII	Programme Electives	Programme Elective III	4

Semester	Course Type	Course Name / Course Title	Total Credits
VIII	Programme Electives	Programme Elective –IV	4
VIII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Internship/Research Project	14
VIII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Molecular Modeling and Drug Design	2

Electives List

Semester	Programme Electives	Course Name / Course Title	Total Credits
V	Programme Elective - I	Textile Chemistry	4
V	Programme Elective - I	Bioorganic Chemistry	4
V	Programme Elective - I	Specialty Chemicals	4
VI	Programme Elective - II	Industrial Inorganic Chemistry	4
VI	Programme Elective - II	Bioinorganic Chemistry	4
VI	Programme Elective - II	Medicinal Chemistry	4
VII	Programme Elective - III	Paints and surface coatings	4
VII	Programme Elective - III	Natural Product Chemistry	4
VII	Programme Elective - III	Food Packaging Technology	4
VIII	Programme Elective - IV	Agrochemicals	4
VIII	Programme Elective - IV	Carbohydrate Chemistry	4
VIII	Programme Elective - IV	Perfumery and cosmetics	4

*Modifications to the programmes and courses are contingent upon adherence to university guidelines and procedures. Any proposed changes must undergo a thorough review process, including consultation with relevant academic departments, approval from the appropriate administrative bodies, and compliance with accreditation standards.

Additionally, consideration will be given to feedback from students, faculty, and other stakeholders to ensure that modifications align with the overall educational objectives and mission of the university. The implementation of any approved changes will be communicated transparently to the university community, and appropriate measures will be taken to facilitate a smooth transition for all affected parties.