



FACULTY OF
ENGINEERING AND
TECHNOLOGY



2024 - 25

M.Tech Chemical Engineering

Programme Structure

Division	Faculty of Engineering and Technology
School Name	School of Engineering & Technology
Department Name	Department of Chemical Engineering
Programme Name	Chemical Engineering

Course Basket

Course Type	Description
Programme Core	Courses dealing with foundations, depth and breadth of the major in which student is admitted at MIT-WPU
Programme Electives	Open electives under the programme allow students to specialize 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	PM	Chemical Process Synthesis and Design	4
I	PM	Numerical Methods and	4
I	PM	Renewables and Energy Systems	4
I	PM	Research Methodology for Chemical Engineers	4
I	UC	Scientific Studies of Mind, Matter, Spirit and Consciousness	2
I	PM	Computer Aided Chemical Engineering-I (CACH-E-I)	2
I	UC	Yoga	1
		Total	21

Semester	Course Type	Course Name / Course Title	Total Credits
II	PM	Analysis and Synthesis of Mechanisms	4
II	PM	Mechanics of Fracture and Fatigue	4
II	PM	System Modelling & Vehicle Dynamics	4
II	PE	Program Elective-I	4
II	UC	Program Elective-II	2
II	PM	Seminar	1
II	PR	Peacebuilding: Global Initiatives	2
Total:			21

Semester	Course Type	Course Name / Course Title	Total Credits
III	PE	Professional Elective-II [®]	4
III	PE	Professional Elective-III [®]	4
III	PR	Project Stage I	12
Total:			20

Semester	Course Type	Course Name / Course Title	Total Credits
IV	PE	Professional Elective-IV [®]	4
IV	PR	Internship	4
IV	PR	Project Stage II	12
Total:			20

List of Programme Electives

Semester	Course Type	Course Name / Course Title
II	Programme Elective - I	Advances in Energy Engineering and Management
II	Programme Elective - I	Polymer Industrial Manufacturing
II	Programme Elective - I	Advanced Water and Wastewater Treatment
III	Programme Elective - II	Principles of Energy Engineering
III	Programme Elective - II	Process Data Analytics
III	Programme Elective - II	Green Technology
III	Programme Elective - II	Process Intensification
III	Programme Elective - II	Polymer Waste Management
III	Programme Elective - III	Energy Engineering and Technology
III	Programme Elective - III	Process Safety Management
III	Programme Elective - III	Catalyst Technology
III	Programme Elective - III	Piping Design and Engineering
III	Programme Elective - III	Refinery Systems
IV	Programme Elective - IV	Multiphase Reactor Design
IV	Programme Elective - IV	Resources, Economics and Policies in Energy Engineering
IV	Programme Elective - IV	Chemical Process Engineering
IV	Programme Elective - IV	AI ML in Chemical Engineering
IV	Programme Elective - IV	Bioprocesses and bio-chemicals

*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.