MIT-WPU
॥ विश्वशान्तिर्ध्रुवं ध्रुवा ॥

FACULTY OF ENGINEERING AND TECHNOLOGY

M.Tech Mechanical Engineering

(Design Engineering)

Programme Structure

mitwpu.edu.in

Division	Faculty of Engineering and Technology
School Name	School of Engineering & Technology
Department Name	Department of Mechanical Engineering
Program Name	M.Tech Mechanical Engineering (Design Engineering)

COURSE BASKET

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

Semester I

Semester	Course Type	Course Name / Course Title	Total Credits
I	PM	Advanced Mathematics	3
I	PM	Advanced Mechanical Vibrations	4
I	PM	Advanced Stress Analysis	4
I	PM	Finite Element Analysis	4
I	PM	Research Methodology for Mechanical Engineers	4
I	PM	Software Lab	1
I	UC	Scientific Studies of Mind, Matter, Spirit and Consciousness	2
	UC	Yoga - I	1
		Total	**23**

Semester II

Semester	Course Type	Course Name / Course Title	Total Credits
II	PM	Analysis and Synthesis of Mechanisms	4
II	PM	Mechanics of Fracture and Fatigue	3
II	PM	System Modelling & Vehicle Dynamics	4
II	PE	Program Elective-I	4
II	PE	Program Elective-II	4
II	PR	Seminar	2
II	UC	Peace Building: Global Initiatives	2
		Total	**23**

Semester - III

Semester	Course Type	Course Name / Course Title	Total Credits
III	PM	Industrial Tribology	4
III	PE	Program Elective-III	4
III	PE	Program Elective-IV	4
III	PR	Research Project - I	8
		Total	**20**

SEMESTER - IV

Semester	Course Type	Course Name / Course Title	Total Credits
IV	PC	Internship	4
IV	PC	Research Project II	12
		Total	16

Professional Elective Tracks

Semester	Name of the Course	Type
II	Optimization Techniques	Program Elective - I
II	Technology Management	Program Elective - I
II	Design of Mechatronics & MEMS System	Program Elective - I
II	Design of Material Handling Systems	Program Elective - I
II	Theory of Plasticity	Program Elective - II
II	Additive Manufacturing Technology	Program Elective - II
II	Product Design and PLM	Program Elective - II
II	Artificial Intelligence & Machine Learning	Program Elective - II
III	Acoustics & Condition Monitoring	Program Elective - III
III	Mechanics of Composite Materials	Program Elective - III
III	Reliability Engineering	Program Elective - III
III	Industrial Instrumentation and Controls	Program Elective - III
III	Experimental Stress Analysis	Program Elective - IV
III	Design of Experiments	Program Elective - IV
III	Advances in Materials	Program Elective - IV
III	Design of Biomedical Devices	Program Elective - IV

*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.