MIT-WPU
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FACULTY OF ENGINEERING AND TECHNOLOGY

2024 - 25

M.Tech (Mechanical-CAD/CAM/CAE)

Programme Structure

mitwpu.edu.in

Division	Faculty of Engineering and Technology
School Name	School of Engineering and Technology
Department Name	Department of Mechanical Engineering
Programme Name	Mechanical-CAD/CAM/CAE

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	Advanced Mathematics	3
I	PM	Additive Manufacturing	4
I	PM	Computer-Aided Design	4
I	PM	Discrete Event System Simulation	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
I	UC	Yoga	1
		Total	23

Semester	Course Type	Course Name / Course Title	Total Credits
II	PM	Automated Manufacturing System Modelling	3
II	PM	Computer Aided Engineering	4
II	PM	Micro & Nano Manufacturing Technology	4
II	PE	Programme Elective – I	4
II	PE	Programme Elective- II	4
II	PR	Seminar	2
II	UC	Peacebuilding: Global Initiatives	2
II	UC	Indian Knowledge System	2
		Total:	25

Semester	Course Type	Course Name / Course Title	Total Credits
III	PM	Flexible and Integrated Manufacturing	4
III	PE	Programme Elective-III	4
III	PE	Programme Elective-VI	4
III	PR	Research Project I	8
		Total:	20

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

List of Programme Electives

Semester	Course Type	Course Name / Course Title
II	Programme Elective - I	Integrated Product Design & Development
II	Programme Elective - I	Advanced Sheet Metal Forming
II	Programme Elective - I	Supply Chain Management
II	Programme Elective - I	Advanced Machine Design
II	Programme Elective - II	Biomechanics and Mechanobiology
II	Programme Elective - II	Computer-Aided Production Planning
II	Programme Elective - II	World Class Manufacturing
II	Programme Elective - II	Composite Materials
II	Programme Elective - III	Bioinstrumentation and System Design
II	Programme Elective - III	Advanced Engineering Materials
II	Programme Elective - III	Product Lifecycle Management
II	Programme Elective - III	Deformation Behaviour and Characterization Techniques
III	Programme Elective - IV	Biomaterials and Tissue Interaction
III	Programme Elective - IV	Customization of CAD/CAM Software
III	Programme Elective - IV	Industrial Robotics and Material Handling
III	Programme Elective - IV	Fatigue, Fracture, and Failure Analysis

*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.