



FACULTY OF
ENGINEERING AND
TECHNOLOGY



2024 - 25

**B.Tech. Electrical &
Computer Engineering**

Programme Structure

Division	Faculty of Engineering and Technology
School Name	School of Engineering and Technology
Department Name	Department of Electrical and Electronics Engineering
Programme Name	B.Tech. Electrical & Computer 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	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	IKS(2)	2
I	Programme Foundation	Linear Algebra and Differential Calculus	3
I	Programme Foundation	Physics	3
I	Programme Foundation	Engineering Graphics	3
I	Programme Foundation	Ideas and Innovation in Manufacturing	1
I	Programme Foundation	Chemistry	3
		Total	22

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	Biology for Engineers	2
II	Programme Foundation	Engineering Mechanics	3

Semester	Course Type	Course Name / Course Title	Total Credits
II	Foundation of Electrical Engineering	Programme Foundation	3
II	Integral Calculus	Programme Foundation	3
II	Programming and Problem Solving	Programme Major	3
		Total	22

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 Major	Computer Organizations and Operating Systems	2
III	Programme Foundation	Differential Equations and and Transform Technique	4
III	Programme Major	Analog and Digital Electronics	4
III	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning-I	
		Total	20

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	University Core	Life Transformation Skills	1
IV	Programme Major	Electrical Machines	4
IV	Programme Foundation	Discrete Mathematics and Basic Statistics	4
IV	Programme Major	Control Systems	3
IV	Programme Major	Power Systems and Protection	4
IV	Programme Major	Microcontrollers and Applications	3
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning-II	
Total			24

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 Electives	Programme Elective - I	4
V	Programme Major	Communication Networks	3
V	Programme Major	Power Electronics	4
V	Programme Major	Database Management Systems	2
V	Programme Major	Data Structures and Algorithms	4

Semester	Course Type	Course Name / Course Title	Total Credits
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Minor Project - I	1
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning-III	
		Total	21

VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - IV	1
VI	University Core	National Academic Immersion	2
VI	Programme Electives	Programme Elective - II	3
VI	Programme Major	Electrical Vehicle Technology	3
VI	Programme Major	Full Stack Development	1
VI	Programme Major	Artificial Intelligence and Machine Learning	2
VI	Programme Major	Data Science for Engineers	4
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Minor Project - II	4
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning-IV	
		Total	20

Semester	Course Type	Course Name / Course Title	Total Credits
VII	Programme Electives	Programme Elective - III	4
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Capstone Project	12
		Total	16

VIII	Programme Electives	Programme Elective - IV	4
VIII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Internship	14
		Total	18

Programme Electives

V	Programme Elective - I	PLC and Automation	4
V	Programme Elective - I	Java Programming	4
V	Programme Elective - I	Advanced Machines	4
VI	Programme Elective - II	Renewable Energy Systems	4
VI	Programme Elective - II	Industry IoT	4
VI	Programme Elective - II	Software Engineering and Project Management	4
VII	Programme Elective - III	Smart Grid Systems	4
VII	Programme Elective - III	Industrial Drives and Systems	4
VII	Programme Elective - III	Blockchain Technologies	4
VIII	Programme Elective - IV	Cyber Security	4
VIII	Programme Elective - IV	Robotics	4
VIII	Programme Elective - IV	Business Analytics	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.