



FACULTY OF  
ENGINEERING AND  
TECHNOLOGY



2024 - 25

**B.Tech. Electronics & Communication Engineering**  
(Artificial Intelligence and Machine Learning)

Programme Structure

<b>Division</b>	Faculty of Engineering and Technology
<b>School Name</b>	School of Engineering and Technology
<b>Department Name</b>	Department of Electrical and Electronics Engineering
<b>Programme Name</b>	B.Tech. ECE-Artificial Intelligence & Machine Learning

## Category-wise Credit Distribution

Category	Credits
Programme Foundation	34
Programme Major	48
Programme Electives	16
Programme Capstone Project/Problem-Based Learning/Seminar and Internships	32
University Core	24
University Electives	9

## 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	Linear Algebra and Differential Calculus	3
I	Programme Foundation	Chemistry	3
I	Programme Foundation	Ideas and Innovations in Manufacturing	1
I	Programme Foundation	Physics	3
I	Programme Foundation	Engineering Graphics	3
I	Programme Major	Multisim Lab	1
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	Engineering Mechanics	3
II	Programme Foundation	Programming and Problem Solving	3
II	Programme Foundation	Integral Calculus	3
II	Programme Foundation	Biology For Engineers	2
II	Programme Major	Basics of Electrical and Electronics Engineering	3

Semester	Course Type	Course Name / Course Title	Total Credits
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 (Sensors and Actuators Lab)	1
III	Programme Foundation	Probability and Statistics	4
III	Programme Foundation	Signals and Systems	4
III	Programme Major	Digital Electronics	4
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 (Data Science Lab)	1
IV	University Core	Life Transformation Skills	1
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Data Structures and Algorithms	2
IV	Programme Major	Communication Systems	4
IV	Programme Major	Analog Circuits and Applications	4
IV	Programme Major	Control System and Fuzzy Logic	3
IV	Programme Major	Microcontroller and Applications	4
V	University Core	Managing Conflicts Peacefully: Tools and Techniques	2
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - III (OOP Lab)	1

Semester	Course Type	Course Name / Course Title	Total Credits
V	Programme Electives	Programme Elective - I	4
V	Programme Foundation	IKS-2	2
V	Programme Major	Computer Network and Security	4
V	Programme Major	Artificial Intelligence and Machine Learning	4
V	Programme Major	Database Management System	1
V	Programme Major	Image Processing and Pattern Recognition	4
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - IV (Mini Project)	1
VI	University Core	National Academic Immersion	2
VI	Programme Electives	Programme Elective - II	4
VI	Programme Major	Deep Neural Network	4
VI	Programme Major	Natural Language Processing	4
VI	Programme Major	Optimization Techniques	4
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Seminar	1
VII	Programme Electives	Programme Elective - III	4
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Internship	12
VIII	Programme Electives	Programme Elective -IV	4
VIII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Capstone Project	13

\*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.