MIT-WPU
॥ विश्वशान्तिर्ध्रुवं ध्रुवा ॥

FACULTY OF ENGINEERING AND TECHNOLOGY

B.Tech Electronics & Communication Engineering

(Artificial Intelligence and Machine Learning)

Programme Structure

mitwpu.edu.in

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 Electronics & Communication Engineering (Artificial Intelligence and Machine Learning)

Semester	Odd (I)	Even (II)	Total Credits
First Year	22	22	44
Second Year	22	22	44
Third Year	22	22	44
Fourth Year	16	17	33

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 specialise in a particular area connected to their major.
University Core	Courses that reflect the core MIT-WPU 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 I

Semester	Course Type	Course Name / Course Title	Total Credits
I	UC	Indian Constitution	1
I	UC	Environment and Sustainability	1
I	UC	Yoga - I	1
I	UC	Social Leadership Development Program	1
I	UC	Financial Literacy	1
I	PF	Linear Algebra and Differential Calculus	3
I	PF	Engineering Physics	3
I	PF	Basics of Electrical Engineering	4
I	PF	Engineering Mechanics	3
I	PF	Programming and Problem Solving	3
I	PF	Python Programming	1
		Total Credits:	**22**

Semester II

Semester	Course Type	Course Name / Course Title	Total Credits
II	UC	Yoga - II	1
II	UC	Co-creation	1
II	UC	AI for everyone	2
II	UC	Foundation of Peace	2
II	UC	Indian Knowledge System (General)	2
II	UC	Sports	1
II	PF	Integral Calculus	3
II	PF	Basics of Electronics Engineering	3
II	PF	Digital Electronics	4
II	PF	Engineering Chemistry	3
		Total Credits:	**22**

Semester - III

Semester	Course Type	Course Name / Course Title	Total Credits
III	UC	Spiritual and Cultural heritage: Indian Experience	2
III	UC	Research Innovation Design Entrepreneurship (RIDE)	1
III	UE	University Electives - I	3
III	PF	Calculus and Statistical Methods	4
III	PM	Signals and Systems	3
III	PF	Electronics Devices and Circuits	4
III	PF	Data Structures and Algorithms	3
III	Program Capstone Project/ Seminar and Internships	Sensors and Actuators	1
III	Program Capstone Project/ Seminar and Internships	Data Science	1
		Total Credits:	**22**

SEMESTER - IV

Semester	Course Type	Course Name / Course Title	Total Credits
IV	UC	Rural Immersion	1
IV	UC	Life Transformation Skills	1
IV	UE	University Electives - II	3
IV	PM	Analog Circuits and Applications	3
IV	PM	Analog and Digital Communication	4
IV	PM	Control Systems and Fuzzy Logic	3
IV	PM	Microcontroller and Applications	4
IV	PM	Optimization Techniques	2
IV	Program Capstone Project/ Seminar and Internships	Object Oriented Programming	1
		Total Credits:	**22**

Semester - V

Semester	Course Type	Course Name / Course Title	Total Credits
V	UC	Managing Conflicts Peacefully: Tools and Techniques	2
V	UE	University Electives - III	3
V	PE	Program Elective - I	4
V	PM	Digital Signal Processing	4
V	PM	Artificial Intelligence	2
V	PM	Machine Learning	4
V	PM	IOT Architectures and Protocols	3
		Total Credits:	**22**

Semester - VI

Semester	Course Type	Course Name / Course Title	Total Credits
VI	UC	National Academic Immersion Program	2
VI	PE	Program Elective - II	4
VI	PM	Machine Vision	4
VI	PM	Deep Neural Networks	4
VI	PM	Computer Networks and Security	4
VI	PM	VLSI Design	4
		Total Credits:	**22**

Semester - VII

Semester	Course Type	Course Name / Course Title	Total Credits
VII	PE	Program Elective - III	4
VII	Program Capstone Project/Seminar and Internships	Internship	12
		Total Credits:	16

Semester - VIII

Semester	Course Type	Course Name / Course Title	Total Credits
VIII	PE	Program Elective - IV	4
VIII	Program Capstone Project/ Seminar and Internships	Capstone Project	13
		Total Credits:	**17**

Program Electives

Semester	Course Type	Course Name / Course Title	Total Credits
V	PE - I	Embedded System Design and RTOS	4
V	PE - I	Database Management System	4
V	PE - I	Reinforcement Learning	4
V	PE - I	Embedded System Design and RTOS	4
V	PE - I	Blockchain Technology	4
V	PE - I	Electromagnetics and Radiating Systems	4
VI	PE - II	Analog and Digital VLSI Design	4
VI	PE - II	Full Stack Development	4
VI	PE - II	Natural Language Processing	4
VI	PE - II	Robotics and Automation	4
VI	PE - II	Applied Machine Learning	4
VI	PE - II	Wireless Communication and Networks	4
VII	PE - III	Testing and Testability	4
VII	PE - III	Cyber Security	4
VII	PE - III	Explainable Artificial Intelligence	4
VII	PE - III	Automotive Electronics	4
VII	PE - III	Augmented Reality and Virtual Reality	4
VII	PE - III	Wireless Sensor Networks	4
VIII	PE - IV	MEMS	4
VIII	PE - IV	Cloud Computing	4
VIII	PE - IV	Edge Intelligence	4
VIII	PE - IV	e-Vehicle	4
VIII	PE - IV	Autonomous Vehicle	4
VIII	PE - IV	Satellite Communication and Radar System	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.