



**FACULTY OF  
ENGINEERING AND  
TECHNOLOGY**



**2024 - 25**

**M.Tech Electronics and Communication Engineering  
(VLSI and Embedded Systems)**

**Programme Structure**

<b>Division</b>	Faculty of Engineering and Technology
<b>School Name</b>	School of Engineering and Technology
<b>Department Name</b>	Electrical and Electronics Engineering
<b>Program Name</b>	VLSI and Embedded System

## Course Basket

Course Type	Description
Programme Core	Courses dealing with foundations, depth and breadth of the major in which a 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 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.

Course Type	Description
University Core	7
University Elective	0
Programme Core	35
Programme Elective	16
Research Core (Seminar)	2
Research Core (Technical Writing)	0
Research Project	24
<b>Total</b>	<b>84</b>

Semester	Odd(I)	Even(II)	Total Credits
First Year	22	22	44
Second Year	22	18	40
<b>Total Credits</b>			<b>84</b>

Semester	Course Type	Course Name / Course Title	Total Credits
I	University Core	Scientific Studies of Mind, Matter, Spirit and Consciousness	2
I	University Core	Yoga	1
I	Programme Core	Analog and Digital VLSI Design	4
I	Programme Core	Embedded System Design and RTOS	4
I	Programme Core	Simulation Lab	3
I	Programme Core	Research Methodology	4
I	Programme Core	Artificial Intelligence Techniques and Applications	4
		<b>Total</b>	<b>22</b>

II	University Core	Peacebuilding: Global Initiatives	2
II	University Core	Indian Knowledge System	2
II	Research Core (Seminar)	Seminar	2
II	Programme Elective	Programme Elective - I	4
II	Programme Elective	Programme Elective - II	4
II	Programme Core	Industry 4.0 and Industrial IoT	4
II	Programme Core	Advanced Embedded Systems	4
		<b>Total</b>	<b>22</b>

III	Research Project	Project Stage - I	10
III	Programme Elective	Programme Elective - III	4
III	Programme Elective	Programme Elective - IV	4
III	Programme Core	Testing and Testability	4
		<b>Total</b>	<b>22</b>

Semester	Course Type	Course Name / Course Title	Total Credits
IV	Research Project	Project Stage - II	14
IV	Programme Core	Internship	4
		<b>Total</b>	<b>20</b>

## Programme Electives

Semester	Programme Electives	Course Name / Course Title	Total Credits
II	Programme Elective - I	Advanced VLSI Design	4
II	Programme Elective - I	Robotics and Automation	4
II	Programme Elective - II	System Verilog	4
II	Programme Elective - II	Automotive Embedded Systems	4
III	Programme Elective - III	Micro-Electromechanical Systems	4
III	Programme Elective - III	Deep Learning	4
III	Programme Elective - IV	Low Power VLSI Design	4
III	Programme Elective - IV	System on Chip	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.