MIT-WPU
॥ विश्वशान्तिर्ध्रुवं ध्रुवा ॥

FACULTY OF ENGINEERING AND TECHNOLOGY

2024 - 25

B.Tech. Computer Science & Engineering

Programme Structure

mitwpu.edu.in

Division	Faculty of Engineering and Technology
School Name	School of Computer Science & Engineering
Department Name	Department of Computer Engineering and Technology
Programme Name	B.Tech. Computer Science & Engineering

Category-wise Credit Distribution

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

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 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	Odd(I)	Even(II)	Total Credits
First Year	22	21	43
Second Year	22	22	44
Third Year	22	20	42
Fourth Year	20	14	34

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	University Core	Advanced Excel	1
I	University Core	Financial Literacy	1
I	University Core	Yoga - II	1
I	University Core	Co-creation	1
I	University Core	Indian Constitution	1
		Total	12

II	University Core	IKS(General)	2
II	University Core	Sports	1
II	University Core	Research Innovation Design Entrepreneurship (RIDE)	1
II	University Core	Spiritual & Cultural Heritage; Indian Experience	2
II	University Electives	UE - I	3
II	University Electives	UE-II	3
II	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - I	1
II	University Electives	UE-III	3

Semester	Course Type	Course Name / Course Title	Total Credits
II	University Core	Rural Immersion	1
II	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - II	1
II	University Core	Managing Conflicts Peacefully: Tools and Techniques	2
		Total	20

III	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - III	1
III	University Core	Life Transformation Skills	1
III	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - IV	1
III	University Core	National Academic Immersion	2
III	Programme Electives	Programme Elective-I	4
III	Programme Electives	Programme Elective-II	4
III	Programme Electives	Programme Elective-III	4
III	Programme Electives	Programme Elective-IV	4
III	Programme Foundation	Engineering Mechanics	3
III	Programme Foundation	Linear Algebra and Differential Calculus	3
III	Programme Foundation	Chemistry	3
		Total	30

Semester	Course Type	Course Name / Course Title	Total Credits
IV	Programme Foundation	Physics	3
IV	Programme Foundation	Engineering Graphics	3
IV	Programme Foundation	Ideas and Innovations in Manufacturing	1
IV	Programme Foundation	Programming and Problem Solving	3
IV	Programme Foundation	Biology for Engineers	2
IV	Programme Foundation	Discrete Mathematics with Graph Theory	3
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Foundations of Computer Architecture and System Design	4
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Object Oriented Concepts using C++	2
IV	Programme Foundation	Differential Equations and Transform Techniques	4
IV	Programme Major	Data Structures	3
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Data Structures Laboratory	1
		Total	29

V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning – I	0
V	Programme Major	Microprocessor, Microcontroller and Applications	3

Semester	Course Type	Course Name / Course Title	Total Credits
V	Programme Foundation	Probability and Statistics	4
V	Programme Major	Database Management System	3
V	Programme Major	Database Management System Laboratory	1
V	Programme Major	Software Engineering and Modelling	3
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning – II	0
V	Programme Major	Operating System	3
		Total	21

VI	Programme Major	Operating System Laboratory	1
VI	Programme Major	Internet of Things Laboratory	1
VI	Programme Foundation	Operating System	0
VI	Programme Major	Operating System Laboratory	0
VI	Programme Foundation	Internet of Things Laboratory	0
VI	Programme Major	Design and Analysis of Algorithms	3
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Data Engineering and Data Visualization	3
VI	Programme Major	Machine Learning	4
VI	Programme Major	Machine Learning Laboratory	1
VI	Programme Major	Theory of Computation	3
VI	Programme Major	Full Stack Development Laboratory	1
		Total	17

Semester	Course Type	Course Name / Course Title	Total Credits
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Mini Project using Java Programming	1
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Seminar	1
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning – IV	0
VII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Capstone Project	6
VII	Programme Major	Information and Cyber Security	3
VIII	Programme Major	Distributed Computing	3
VIII	Programme Major	System Software and Compiler Design	4
		Total	18

	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Internship	10
	Programme Foundation	Indian Knowledge Systems-II	2
	Programme Major	AI and Expert Systems	3
	Programme Major	AI and Expert Systems Lab	1
		Total	16

Semester	Course Type	Course Name / Course Title	Total Credits
V	Programme Elective - I	A. Big Data Technologies	4
V	Programme Elective - I	B. Computer Graphics and 3D Modeling	4
V	Programme Elective - I	C. Wireless and Mobile Networks	4
V	Programme Elective - I	D. DevOps	4
V	Programme Elective - I	E. Foundations of Digital IC Design	4
V	Programme Elective - I	A. Deep Learning	4
V	Programme Elective - I	B. Augmented Reality and Virtual Reality	4
V	Programme Elective - I	C. Cyber Laws and Cyber Crime	4
V	Programme Elective - I	D. Parallel Programming	4
V	Programme Elective - I	E. Fundamentals of VLSI Design	4
VI	Programme Elective - II	A.Cognitive Computing and Natural Language Processing	4
VI	Programme Elective - II	B.Computer Vision	4
VI	Programme Elective - II	C.Vulnerability Identification and Penetration Testing	4
VI	Programme Elective - II	D.User Interface and User Experience Design	4
VI	Programme Elective - II	E. Blockchain Technology	4
VI	Programme Elective - II	A.Soft Computing	4
VI	Programme Elective - II	B.Unmanned Aerial Vehicle(UAV) and Drone Technology	4
VI	Programme Elective - II	C.Introduction to VLSI Design Verification and Testing	4
VII	Programme Elective -III	D.5G and Edge Computing	4
VII	Programme Elective -III	E.Digital Design Automation	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.