



FACULTY OF
ENGINEERING AND
TECHNOLOGY



2024 - 25

B.Tech. Computer Science & Engineering (Artificial Intelligence & Data Science)

Programme Structure

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(AI-DS)

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	Physics	3
I	Programme Foundation	Engineering Graphics	3
I	Programme Foundation	Ideas and Innovations in Manufacturing	1
I	Programme Foundation	Indian Knowledge Systems-II	2
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	Programme Foundation	Engineering Mechanics	3
II	Programme Foundation	Programming and Problem Solving	3
II	Programme Foundation	Biology for Engineers	2
II	Programme Foundation	Discrete Mathematics with Graph Theory	3
II	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Foundations of Computer Architecture and System Design	4

Semester	Course Type	Course Name / Course Title	Total Credits
III	University Core	Advanced Excel	1
III	University Core	Sports	1
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	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Project Based Learning - I	1
III	Programme Major	Object Oriented Programming using C++	1
III	Programme Foundation	Differential Equations and Transform Techniques	4
III	Programme Major	Data Structures	3
III	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Data Structures Laboratory	1
III	Programme Major	Database Management Systems	3
III	Programme Major	Database Management Systems Lab	1
IV	University Electives	UE-II	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	Operating Systems	3
IV	Programme Major	Operating Systems Laboratory	1

Semester	Course Type	Course Name / Course Title	Total Credits
IV	Programme Foundation	Probability and Statistics	4
IV	Programme Major	Data Engineering Concepts	3
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Data Engineering Concepts Lab	1
IV	Programme Major	Artificial Intelligence and Expert Systems	3
IV	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Artificial Intelligence and Expert Systems Lab	1
V	University Electives	UE-III	3
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	Machine Learning	3
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Machine Learning Lab	1
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Data Visualization using Python	1
V	Programme Major	Theory of Computation	3
V	Programme Major	Cognitive Computing and Natural Language Processing	3
V	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Cognitive Computing and Natural Language Processing Lab	1

Semester	Course Type	Course Name / Course Title	Total Credits
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	4
VI	Programme Major	Network and Cyber Security	2
VI	Programme Major	Network and Cyber Security Lab	1
VI	Programme Major	Deep Learning	3
VI	Programme Major	Deep Learning Laboratory	1
VI	Programme Major	Software Engineering and Modelling	3
VI	Programme Major	Data Science Using R Programming	1
VI	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Mini Project using Java Programming	1
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	Capstone Project	6
VII	Programme Major	Design and Analysis of Algorithm	3
VII	Programme Major	Distributed and Cloud Computing	3
VII	Programme Major	Big Data Technologies	4
VIII	Programme Electives	Programme Elective-IV	4
VIII	Programme Capstone Project/Problem Based Learning/Seminar and Internships	Internship	10

*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.