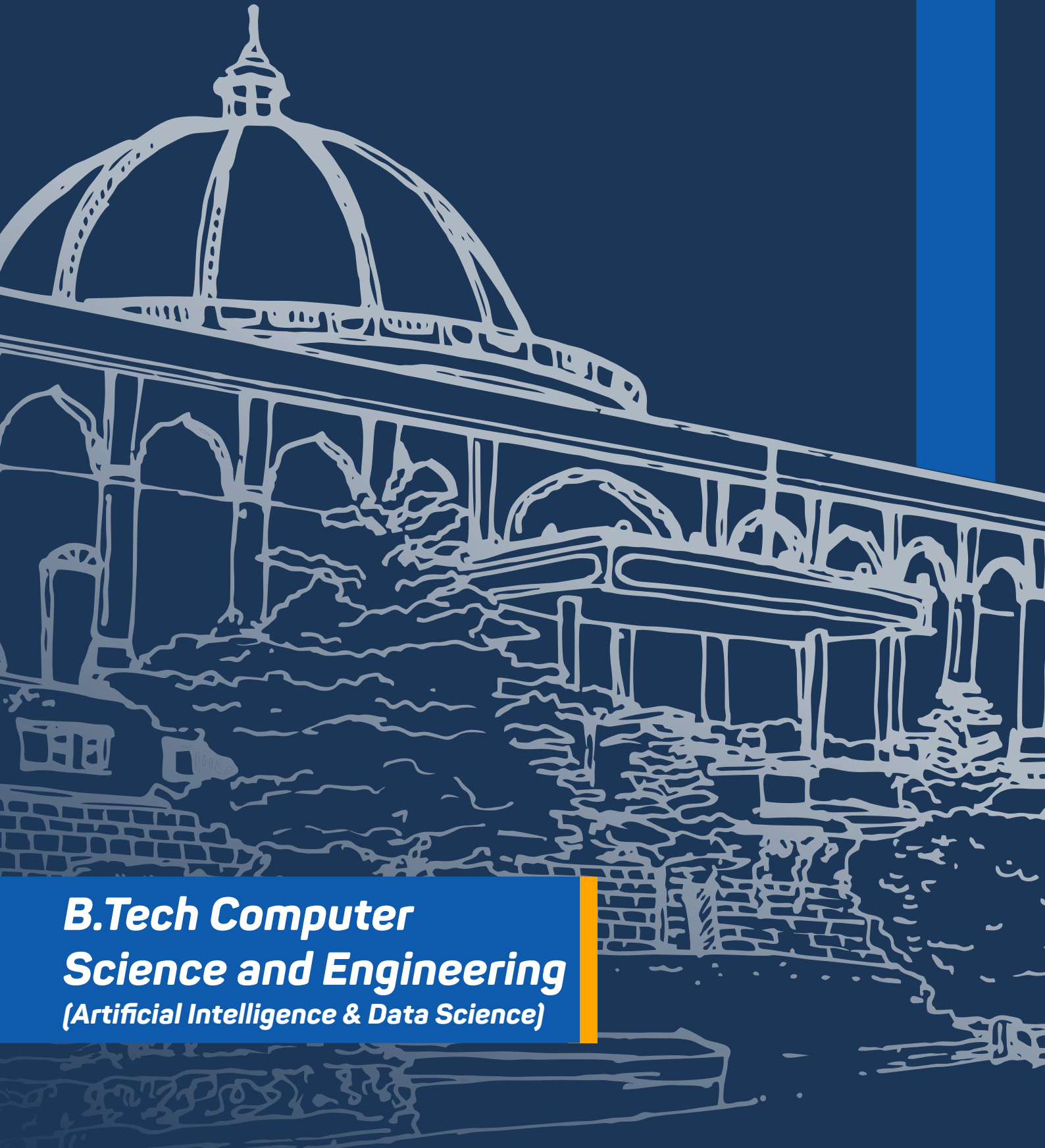




***B.Tech Computer
Science and Engineering***
(Artificial Intelligence & Data Science)

Division	Faculty of Engineering and Technology
School Name	School of Computer Science and Engineering
Department Name	Department of Computer Engineering and Technology
Programme Name	B.Tech Computer Science and Engineering (Artificial Intelligence & Data Science)

Semester	Odd (I)	Even (II)	Total Credits
First Year	20	20	40
Second Year	22	22	44
Third Year	22	22	44
Fourth Year	22	14	36

***** COURSE BASKET *****

Course Type	Description
Programme Core [PC]	Includes Programme Foundation [PF], Programme Major [PM], and Programme Capstone Project/ Problem Based Learning/ Seminar/ Internships [PR].
Programme Electives [PE]	Open electives under the programme allow students to specialise in a particular area connected to their major.
University Core [UC]	Courses that reflect the core MIT-WPU values and the mission of Life Transformation of students.
University Electives [UE]	Open electives under the programme allow students to specialise in a particular area connected to their major.

Semester I

Semester	Course Type	Course Name / Course Title	Total Credits
I	PF	Linear Algebra and Differential Calculus	3
I	PF	Engineering Chemistry	3
I	PF	Engineering Physics	3
I	PF	Engineering Graphics	3
I	PF	Ideas and Innovations in Manufacturing	1
I	UC	Python Programming	2
I	UC	Environment and Sustainability	1
I	UC	Yoga – I	1
I	UC	Financial Literacy	1
I	UC	Indian Constitution	1
I	UC	Sports	1
I	UC	Ability Enhancement Course	0
		Total Credits:	20

Semester II

Semester	Course Type	Course Name / Course Title	Total Credits
II	PF	Engineering Mechanics	3
II	PF	Foundations of Programming	4
II	PF	Discrete Mathematics with Graph Theory	3
II	PR	Foundations of Computer Architecture and System Design	4
II	UC	Yoga - II	1
II	UC	Co-creation	1
II	UC	Indian Knowledge System	2
II	UC	Foundations of Peace	2
		Total Credits:	20

Semester - III

Semester	Course Type	Course Name / Course Title	Total Credits
III	PF	Calculus and Numerical Methods	4
III	PF	Data Structures - I	3
III	PF	Data Structures - I Laboratory	1
III	PR	Object Oriented Programming Laboratory	1
III	PM	Database Management Systems	3
III	PF	Database Management Systems Laboratory	1
III	PM	Operating System Concepts	2
III	PM	Operating System Concepts Laboratory	1
III	UE	University Elective- I	3
III	UC	Spiritual and Cultural Heritage: Indian Experience	2
III	UC	Research Innovation Design Entrepreneurship	1
		Total Credits:	22

SEMESTER - IV

Semester	Course Type	Course Name / Course Title	Total Credits
IV	PF	Probability and Statistics	4
IV	PM	Data Structures - II	3
IV	PF	Data Structures -II Laboratory	1
IV	PM	Data Engineering and Intelligence	2
IV	PM	Data Engineering and Intelligence Laboratory	1
IV	PM	Artificial Intelligence Systems	2
IV	PM	Artificial Intelligence Systems Laboratory	1
IV	UE	University Elective - II	3
IV	PR	Cognitive Skills	1
IV	UC	Rural Immersion	1
IV	UC	Life Realisation Program	1
IV	PF	Indian Knowledge System (Sci.& Tech.)	2
		Total Credits:	22

Semester - V

Semester	Course Type	Course Name / Course Title	Total Credits
V	PM	Theory of Computation	3
V	PM	Full Stack Development Laboratory	1
V	PM	Embedded Systems and Internet of Things Laboratory	1
V	PE	Program Elective -I	4
V	PM	Machine Learning	3
V	PF	Machine Learning Laboratory	1
V	UE	University Elective – III	3
V	PM	Computer Network Fundamentals	2
V	PR	Computer Networks Fundamentals Laboratory	1
V	PF	Mini Project using Java Programming	1
V	UC	Managing Conflicts Peacefully: Tools and Techniques	4
		Total Credits:	22

Semester - VI

Semester	Course Type	Course Name / Course Title	Total Credits
VI	PM	Deep Learning Concepts	3
VI	PM	Deep Learning Concepts Laboratory	1
VI	PM	Software Engineering and Modelling	3
VI	PR	Software Engineering and Modelling Laboratory	1
VI	PM	Bigdata Technologies	3
VI	PM	Bigdata Technologies Laboratory	1
VI	PR	Tools for Data Science	2
VI	PE	Program Elective –II	4
VI	PR	Seminar	1
VI	PR	Competitive Coding	1
VI	UC	National Academic Immersion Program	2
VI	UC	Democracy, Leadership, Governance and Public Policy	0
		Total Credits:	22

Semester - VII

Semester	Course Type	Course Name / Course Title	Total Credits
VII	PM	Distributed and Cloud Computing	4
VII	PM	Information and Cyber Security	4
VII	PE	Program Elective –III	4
VII	PM	Cognitive Computing and Natural Language	4
VII	PR	Processing	4
		Total Credits:	22

Semester - VIII

Semester	Course Type	Course Name / Course Title	Total Credits
VIII	PE	Program Elective -IV /MOOC	4
VIII	PR	Internship	10
		Total Credits:	14

Program Electives

Semester	Course Type	Course Name / Course Title	Total Credits
V	PE - I	Design and Analysis of Algorithms	4
V	PE - I	Graph Machine Learning	4
V	PE - I	Geospatial Data Analysis	4
V	PE - I	AI Systems and Applications	4
VI	PE - II	Computer Vision	4
VI	PE - II	Augmented Reality and Virtual Reality	4
VI	PE - II	Edge Artificial Intelligence	4
VI	PE - II	Soft Computing	4
VI	PE - II	Product, Services and IT Service Management	4
VII	PE - III	Generative Artificial Intelligence	4
VII	PE - III	Time Series Analysis and Forecasting	4
VII	PE - III	Scalable Data Science	4
VII	PE - III	Blockchain Technology	4
VIII	PE - IV	Quantum Computing	4
VIII	PE - IV	Sentiment and Emotional Analysis	4
VIII	PE - IV	Pattern Recognition	4
VIII	PE - IV	Bioinformatics Algorithms and Applications	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.