



FACULTY OF
ENGINEERING AND
TECHNOLOGY



2024 - 25

BCA Science

Programme Structure

Division	Faculty of Engineering and Technology
School Name	School of Computer Science & Engineering
Department Name	Department of Computer Science and Applications
Programme Name	BCA

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.

Summary for Four Years Together

Course Type	Total 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
Total	163

Semester	Odd(I)	Even(II)	Total Credits
First Year	22	21	43
Second Year	20	20	40
Third Year	20	21	41
Fourth Year	21	18	39

Semester	Course Type	Course Name / Course Title	Total Credits
I	Programme Foundation	Introduction to Digital Electronics	3
I	Programme Foundation	Probability and Statistics	3
I	Programme Major	Database Management System	4
I	Programme Major	Programming in C	4
I	University Core	Learning to Learn	1
I	University Core	Effective Communication	1
I	University Core	Indian Constitution	1
I	University Core	Environment and Sustainability	1
I	University Core	Critical Thinking	1
I	University Core	Digital Literacy	1
I	University Core	Yoga - I	1
I	University Core	SLDP	1
		Total:	22

II	Programme Foundation	Computer Organization & Introduction to Microprocessor	3
II	Programme Foundation	Discrete Mathematics	3
II	Programme Major	Basics of Web Technology	4
II	Programme Major	Lab on Advance C	1
II	Programme Major	Relational Database Management System	4
II	University Core	Yoga - II	1
II	University Core	Co-creation	1
II	University Core	Financial Literacy	1
II	University Core	IKS(General)	2
II	University Core	Sports	1
		Total:	21

Semester	Course Type	Course Name / Course Title	Total Credits
III	University Core	Research Innovation Design Entrepreneurship (RIDE)	1
III	Programme Foundation	Linear Algebra	3
III	Programme Major	Advanced Web Technologies	4
III	Programme Major	Data Structures Using C	4
III	University Core	Spiritual & Cultural Heritage; Indian Experience	2
III	University Electives	UE - I	2
III	University Electives	Rural Immersion	3
III	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Project Based Learning - I	1
		Total:	20

IV	University Electives	UE-II	2
IV	Programme Foundation	Computer Networks	3
IV	Programme Foundation	Python	4
IV	Programme Foundation	Software Engineering	3
IV	Programme Major	Object Oriented Programmemeing Using C++	4
IV	Programme Foundation	IKS - II	2
IV	University Core	Rural Immersion	1
IV	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Project Based Learning - II	1
		Total	20

Semester	Course Type	Course Name / Course Title	Total Credits
V	University Core	Managing Conflicts Peacefully: Tools and Techniques	2
V	Programme Major	Introduction to Machine Learning Using Python	4
V	Programme Major	Programming in JAVA	4
V	Programme Electives	Programme Elective -I	4
V	Programme Foundation	Operating System	3
V	University Electives	UE-III	2
V	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Project Based Learning - III	1
		Total	20

VI	University Core	Life Transformation Skills	2
VI	Programme Foundation	Internet Of Things	2
VI	Programme Foundation	Operational Research	2
VI	Programme Major	Advanced Java	4
VI	Programme Major	Introduction to Blockchain Technology	4
VI	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Project Based Learning - IV	1
VI	Programme Electives	Programme Elective -II	4
VI	University Core	National Academic Immersion	2
		Total	21

Semester	Course Type	Course Name / Course Title	Total Credits
VII	Programme Major	Cloud Computing	3
VII	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Mobile Application Development	4
VII	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	R Programming	4
VII	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Research Methodology	3
VII	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Research Paper and Proposal Writing	3
VII	Programme Electives	Programme Elective - III	4
Total:			21

VIII	Programme Capstone Project/ Problem Based Learning/Seminar and Internships	Full-Time Industry Project/ Internship	14
VIII	Programme Electives	Programme Elective - IV	4
Total			18

Semester	Programme Electives	Course Name / Course Title	Total Credits
V	Programme Elective - I	Data Mining and Wearhousing	4
V	Programme Elective - I	Agile Frameworks	4
V	Programme Elective - I	Introduction to NoSQL Database	4
V	Programme Elective - I	Enterprise Infrastructure Security	4
VI	Programme Elective - II	Introduction to Data Science	4
VI	Programme Elective - II	DevOps	4
VI	Programme Elective - II	Numeric and Text Analytics	4
VI	Programme Elective - II	Application and Web Application Security	4
VII	Programme Elective - III	Data Visualization Using Tableau	4
VII	Programme Elective - III	Testing and Automation-I	4
VII	Programme Elective - III	Health Care and Financial Analytics	4
VII	Programme Elective - III	Cloud Security	4
VIII	Programme Elective - IV	Deep Learning Using Python	4
VIII	Programme Elective - IV	Testing and Automation-II	4
VIII	Programme Elective - IV	Big Data Analytics	4
VIII	Programme Elective - IV	Ethical Hacking	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.