

**Maulana Abul Kalam Azad University of Technology,
WB (Formerly known as West Bengal University of
Technology) Syllabus of B.Sc. in IT (Data Science)
Effective from academic session 2023-24**

Model curriculum structure for 4 year Non-AICTE UG programs for B.Sc. in IT (Data Science)

Sem	Major (Offline)	Minor (Blended Mode)	Inter Disciplinary (Offline)	Ability Enhancement (Offline)	Skill Enhancement (Online /Sessional)	Common Value Added Course (SESSIONAL)	Total credits
I	Sub 1: Fundamental of Programming using C Fundamental of Programming using C lab [3+2 credits]	Sub 1: Principles of Management [3 credits]	Any one from GE baskets Basket A or D [3 credits]	English & Professional Communication [2 credits]	Life Skills & Personality Development [2 credits]	Yoga/ Health & Wellness/ Sports [2 credits]	22
	Sub 2: Introduction to Digital Electronics Digital Electronics Lab [3+2 credits]						
II	Sub 1: Introduction to Data Science Introduction to Data Science Lab [3+2 credits]	Sub 1: Organization Behavior [3 credits]	Any one from GE baskets Basket B or E [3 credits]	Modern Indian Languages and Literature [2 credits]	IT Tools for Business [2 credits]	Critical Thinking/ NSS/ Mental Health [2 credits]	22
	Sub 2: Study of Computer Architecture and organization [5 credits]						

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III	Sub 1: Study of Data structure and Algorithms Data structure lab Using C/Python [3+2 credits]	Sub 1: Principles of Marketing [4 credits]	Any one from GE baskets Basket C or F [3 credits]	The Constitution, Human Rights & Law [2 credits]	Understanding basics of Cyber Security [2 credits]		21	
	Sub 2: Database Management System Database management System Lab [3+2 credits]							
IV	Sub 1: Data Handling and Visualization [4 credits]	Sub 1: Human resource Management [4 credits]		Society Culture & Human Behaviour [2 credits]			23	
	Sub 2: Operating System with UNIX Operating System with UNIX Lab [3+1 credits]							Sub 2: Sales and distribution management / E-Commerce [4 credits]
	Sub 3: OOPs with JAVA OOPs with JAVA lab [3+2 Credits]							
V	Sub 1: Computer Networking Computer Networking Lab [3+2 Credits]	Sub 1: Financial management [4 credits]			Internship to be started after exam of 4 th sem (sem break) and completed within 5 th sem(weekend) [4 credits]		22	
	Sub 2: Artificial Intelligence [5 Credits]							Sub 2: Entrepreneurship [4 credits]

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VI	Sub 1: Data Warehousing and Data Mining [4 credits]	Sub 1: Customer relationship management [4 credits] Sub 2: Career planning and management [4 credits]						22
	Sub 2: Machine Learning for Data Science Machine Learning for Data Science Lab [3+2 credits]							
	Sub 3: Web Technology Web Technology Lab [3+2 Credits]							
VII	Sub 1: Deep Learning [5 Credits]	Sub 1: Consumer behavior [4 credits] Sub 2: Strategic management [4 credits]						22
	Sub 2: Research Methodology [4 credits]							
	Sub 3: Computer Vision and Image Processing Computer Vision and Image Processing Lab [3+2 Credits]							

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VIII	Sub 1: IOT and its Application [5 Credits]				Research Project [12 credits]		22
	Sub 2: Big Data Analytics [5 Credits]						
	19 sub – 91 credits	11 sub – 42 credits	3 sub – 09 credits	4 sub – 08 credits	3 sub & Int & Proj – 22 credits	2 sub – 4 credits	176

Note:

1. Normally all 5 credit courses will be either theory (3) + practical (2) {100+100 marks} or theory (4) + tutorial (1) [100 marks]
2. Normally all 4 credit courses will be either theory (3) + tutorial (1) or theory (4) [100 marks]
3. Normally all 3 credit courses will be theory (3) – Inter disciplinary (5 to 6 baskets) [100 marks]
4. Normally all 2 credit courses AEC/SEC/CVA would be theory or online course
5. 7/8th semester Major subjects could include Projects in core, if required
6. 100/200/300/400 level should be maintained as per UGC document

**** The green coloured cells are modified as per the instruction given by competent authority remaining all are same as B.Sc. IT Draft syllabus. We have already sent our feedback regarding the modification needed for the selection of minor subjects and others.**