

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB
(Formerly West Bengal University of Technology)

Syllabus for B. Sc. in Data Science
(Effective for Academic session 2019-20)

COURSE STRUTURE

Year	Semester	Paper Code	Paper Name	Credit	Distribution of Credits		
					L	T	P
1st	1 st	BSCDA- 101	English	4	3	1	
		BSCDA - 102	Discrete Mathematics	4	3	1	
		BSCDA - 103	Introduction to Statistical theory and methods	4	3	1	
		BSCDA -104	Foundation of Computer Science	4	3	1	
		BSCDA - 105	Database Management System	4	2	1	1
	Total Credits			20			
	2nd	BSCDA - 201	Soft-Skill for Business	4	2	1	1
		BSCDA - 202	Introduction to Statistics and Probability	4	3	1	
		BSCDA - 203	Introduction to Programming using Python	4	2		2
		BSCDA -204	Linear Mathematics	4	3	1	
		BSCDA - 205	Advanced MS Excel	4	2	1	1
	Total Credits			20			

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					L	T	P
2nd	3rd	BSCDA 301	Data Structures and Algorithms	4	2	1	1
		BSCDA 302	Data Warehousing and Mining	4	2	1	1
		BSCDA 303	Statistical theory of Hypothesis testing	4	3	1	1
		BSCDA 304	Data visualization using Business Intelligence	4	2	1	1
		BSCDA 305	Web Foundation	4	3	1	
		Total Credits		20			
	4th	BSCDA -401	Data visualization and data driven decision making	4	2	1	1
		BSCDA - 402	Statistical Analysis using SPSS	4	3	1	
		BSCDA - 403	Introduction to Regression Analysis	4	2		2
		BSCDA - 404	Generalized Linear Models	4	3	1	
		BSCDA - 405	Project- 1	4	1		3
		Total Credits		20			

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					L	T	P
3rd	5 th	BSCDA -501	Advanced Programming in Python	4	1	1	2
		BSCDA -502	Data Security	4	2	1	1
		BSCDA -503	Time Series	4	2	1	1
		BSCDA -504	Web Intelligence	4	2	1	1
		BSCDA -505	Introduction to Artificial Intelligence and Machine Learning	4	2	1	1
Total Credits				20			
	6th	BSCDA -601A/B/C/D	Optional Subject	4	2	1	1
		BSCDA -682	Major Project & Viva Voci	16			16
Total Credits				20			

Optional Subjects (any one):

- **Social Media and Web Analytics-** BSCDA -601A
- **Advanced Business Intelligence-** BSCDA -601B
- **Big Data Analytics-** BSCDA -601C
- **Information driven Entrepreneurship and Enterprise-** BSCDA -601D