

**Maulana Abul Kalam Azad University of Technology, West Bengal**

**(Formerly known as West Bengal University of Technology)**

**Syllabus of B.Sc. in Data Science**

**Effective from academic session 2023-2024**

**Model curriculum structure for 4-year B.Sc. in Data Science, MAKAUT WB**

<b>Sem</b>	<b>Major (Offline)</b>	<b>Minor (Blended Mode)</b>	<b>Inter Disciplinary (Offline)</b>	<b>Ability Enhancement (Offline)</b>	<b>Skill Enhancement (Online /Sessional)</b>	<b>Common Value added Course (SESSIONAL)</b>	<b>TOTAL CREDITS</b>
I	2 sub x 5 credits <i>BDS101 : Basic Mathematics &amp; Statistics (4+1)</i> <i>BDS102:Introduction to Computing &amp; Programming with C (3+2)</i>	(1 sub x 3 credits)  Principles Of Management	Any one from GE baskets Basket A or D (3 credits)	AEC 101-English and Professional Communication	SEC 101- Life Skills & Personality Development (2 credits)	CVA 181- Yoga/ Health & Wellness/ Sports  (2 credits)	<b>22</b>
II	2 sub x 5 credits <i>BDS103: DBMS (3+2)</i> <i>BDS104: DSA (3+2)</i>	(1 sub x 3 credits)  Organization Behaviour/Business Ethics & Corporate Governance	Any one from GE baskets Basket B or E (3 credits)	AEC 102- Modern Indian Languages and Literature  (2 credits)	SEC 102- IT Skills  (2 credits)	CVA 182- Critical Thinking / NSS/ Mental Health/ Environmental Studies (2 credits)	<b>22</b>
III	2 sub x 5 credits <i>BDS201: Statistics for Data Sc - 1 (4+1)</i> <i>BDS202: AI &amp; ML - 1 (3+2)</i>	(1 sub x 4 credits)  Principles of Marketing/Business & Sustainability	Any one from GE baskets Basket C or F(3 credits)	AEC 201- The Constitution, Human Rights and Law (2 credits)	SEC 201- Understanding basics of Cyber Security  (2 credits)		<b>21</b>
IV	2 sub x 4 credits <i>BDS203: Statistics for Data Sc - 2 (3+1)</i> <i>BDS204: AI &amp; ML - 2 (2+2)</i> 1 sub x 5 credits <i>BDS205: Python for Data Science</i>	Human resource management /Corporate Social Responsibility (CSR)  (4 credits)		AEC 202A Society Culture and Human Behavior  (2 credits)			<b>23</b>

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	(3+2)	Sales and distribution management /E-Commerce (4 credits)					
V	2 sub x 5 credits <i>BDS301: Discrete Mathematics (4+1)</i> <i>BDS302: NLP (3+2)</i>	Financial management (4 credits)  Entrepreneurship (4 credits)			FYBMS 380 Internship (4 credits)		<b>22</b>
VI	2 sub x 5 credits <i>BDS303: Big Data Analysis (3+2)</i> <i>BDS304: Time Series Analysis (3+2)</i> 1 sub x 4 credits <i>BDS305: Data Visualization (2+2)</i>	Customer relationship management (4 credits)  Career planning and management/Managing Workplace Diversity (4 credits)					<b>22</b>
VII	2 sub x 5 credits <i>BDS401A: RM / BDS401B: PM (4+1)</i>	Consumer behaviour / Exploring					<b>22</b>

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	<i>BDS402: Deep Learning (3+2)</i> 1 sub x 4 credits <i>BDS403: Data Security (3+1)</i>	Business Opportunity (4 credits)					
		Strategic management/ Intellectual Property Rights (4 credits)					
VIII	2 sub x 5 credits <i>BDS404: IOT &amp; Sensor Data Analysis (4+1)</i> <i>BDS405: Social Network Analysis (4+1)</i>				FYBDS 480A: Capstone Project FYBDS 480B: Research project (12 credits)		<b>22</b>
	<b>19 sub - 91 credits</b>	<b>11 sub – 42 credits</b>	<b>3 sub – 09 credits</b>	<b>4 sub – 08 credits</b>	<b>3 sub &amp; Int &amp; Proj - 22 credits</b>	<b>2 sub – 4 credits</b>	<b>176</b>