

## B.Tech. (Data Science & Artificial Intelligence Engineering) 2022-26

Year	Semester-I	L	P	U	Semester-II	L	P	U
<b>I</b>	Mathematics-I	3	0	3	Mathematics-II	3	0	3
	English Language Skills	2	2	3	Physics	3	2	4
	Introduction to Electrical and Electronics Sciences	3	2	4	Environment Sciences & SDGs	2	0	2
	Chemistry	3	2	4	Digital Signal Processing	3	0	3
	Introduction to DS and AI	3	0	3	Professional Communication	3	0	3
	Computer Programming	3	2	4	Digital Fabrication	0	6	3
					Data Structures	2	4	4
	<b>Total No of Credits</b>	<b>21</b>			<b>Total No of Credits</b>	<b>22</b>		
<b>II</b>	<b>Semester-III</b>				<b>Semester-IV</b>			
	Introduction to IOT	3	0	3	Computer Organization and Architecture	3	0	3
	Object Oriented Programming Concepts	3	2	4	Artificial Intelligence	3	0	3
	Mathematics-III	3	0	3	Operating System	3	0	3
	Design and Analysis of Algorithms	3	0	3	Data Science	3	0	3
	Database Management Systems	3	2	4	Web enabled Technologies	3	0	3
	Principles of Managerial Economics	3	0	3	Industry coding practice (Python and R)	2	2	3
	Discrete Mathematics	3	0	3	Digital Humanities Eective I	3	0	3
	CRT	0	2	1	CRT	0	2	1
	MOOC ( Python Programming / Julia Programming)							
	<b>Total No of Credits</b>	<b>24</b>			<b>Total No of Credits</b>	<b>22</b>		
<b>SUMMER INTERNSHIP PROGRAM I (for Internship option only)</b>								<b>5</b>
<b>III</b>	<b>Semester-V</b>				<b>Semester-VI</b>			
	Soft computing	3	0	3	Speech Processing	3	0	3
	Machine Learning	3	2	4	Deep Learning	3	0	3
	Blockchain Technology	3	0	3	Big Data systems	3	2	4
	Computer Networks	3	2	4	Autonomous Vehicles	3	0	3
	Data Wrangling and Visualization	2	2	3	Core Elective-II	3	0	3
	Core Elective-I	3	0	3	Special Project / TIP/Capstone Project	0	6	3
	Audit Course				CRT	0	2	1
	CRT	0	2	1				
	<b>Total No of Credits</b>	<b>21</b>			<b>Total No of Credits</b>	<b>20</b>		
<b>IV</b>	<b>Semester-VII</b>				<b>Semester-VIII</b>			
	Internship Program II /				Internship Program II /			
	Thesis & Seminar /				Thesis & Seminar /			
	Specialization Electives (4)				Specialization Electives (4)			

Humanities Elective (1)		Humanities Elective (1)	
<b>Total No of Credits</b>	<b>20/18</b>	<b>Total No of Credits</b>	<b>20/18</b>
<b>Total No of Credits</b>			<b>173</b>

***The Program structure is subject to change (if required).***

Core Elective (V & VI Semester)			
Core Elective-I (V Semester)			
Course Title	L	P	U
Cyber Security	3	0	3
Database Security and Privacy	3	0	3
Ethical Hacking	3	0	3
Core Elective-II (VI Semester)			
Recommendation Systems	3	0	3
Predictive Analytics	3	0	3
Natural Language processing	3	0	3

Humanities Electives I (VII/VIII Semester)			
Course Title	L	P	U
Social Innovation	3	0	3

Specialization Electives (VII/VIII Semester)			
Data Science			
Course Title	L	P	U
Deep Learning	3	0	3
Natural Language Processing	3	0	3
Information retrieval	3	0	3
Applied Time Series Analysis	3	0	3

Artificial Intelligence			
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Course Title	L	P	U
Human Computer Interaction	3	0	3
Intelligent Control and Cognitive Systems	3	0	3
Pattern Recognition	3	0	3
Robotics	3	0	3

Cloud Computing			
Course Title	L	P	U
Distributed Cloud Computing	3	0	3
Security & Privacy in Cloud Computing	3	0	3
Cloud Administration	3	0	3
Real Time Data Analytics	3	0	3

Blockchain			
Course Title	L	P	U
Blockchain with IoT	3	0	3
Information Extraction and Retrieval	3	0	3
Image and Video Processing	3	0	3
Supply Chain Analytics	3	0	3

Internet of Things			
Course Title	L	P	U
Blockchain with IoT	3	0	3
Embedded Systems	3	0	3
AI & Humanities	3	0	3
Innovation & Entrepreneurship	3	0	3