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**SARVAJANIK
UNIVERSITY**

Sarvajani University
Sarvajani College of Engineering and Technology
Teaching scheme of Accelerated B. Tech.
(Artificial Intelligence and Data Science)
Effective from 2025-26



SEMESTER 1											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			C	H	CCE
1.	MC	BTMD27101	Induction Program	-	-	-	0	21 Days	-	-	-
2.	HSMC	BTAS20101	Technical Communication	2	0	0	2	2	50	50	100
3.	HSMC	BTAS20102	Technical Communication Lab	0	0	2	1	2	25	25	50
4.	HSMC	BTAS20103	Universal Human Values	2	0	0	2	2	50	50	100
5.	ESC	BTME22105	Manufacturing Practices and Workshop	0	0	2	1	2	25	25	50
6.	ESC	BTCO22101	Python Programming	2	0	0	2	2	50	50	100
7.	ESC	BTCO22102	Python Programming Lab	0	0	2	1	2	25	25	50
8.	ESC	BTEC22101	Applied Electronics	3	0	0	3	3	50	50	100
9.	ESC	BTEC22102	Applied Electronics Lab	0	0	2	1	2	25	25	50
10.	BSC	BTAS21105	Mathematics – 1	3	1	0	4	4	50	50	100
11.	BSC	BTAS21103	Semiconductor Physics	2	0	0	2	2	50	50	100
12.	BSC	BTAS21104	Semiconductor Physics Lab	0	0	2	1	2	25	25	50
TOTAL				14	1	10	20	25	425	425	850
SEMESTER 2											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			C	H	CCE
1.	ESC	BTCH22101	Energy and Environmental Engineering	2	0	0	2	2	50	50	100
2.	ESC	BTCH22102	Energy and Environmental Engineering Lab	0	0	2	1	2	25	25	50
3.	ESC	BTGN22101	Design Thinking	0	0	2	1	2	25	25	50
4.	ESC	BTCO22103	Programming for Problem Solving	2	0	0	2	2	50	50	100
5.	ESC	BTCO22104	Programming for Problem Solving Lab	0	0	2	1	2	25	25	50
6.	ESC	BTME22101	Engineering Graphics and Design	1	0	0	1	1	25	25	50
7.	ESC	BTME22102	Engineering Graphics and Design Lab	0	0	4	2	4	50	50	100
8.	ESC	BTGN22102	Electrical-Electronics Workshop	0	0	2	1	2	25	25	50
9.	ESC	BTEL22101	Basic Electrical Engineering	3	0	0	3	3	50	50	100
10.	ESC	BTEL22102	Basic Electrical Engineering Lab	0	0	2	1	2	25	25	50
11.	BSC	BTAS21107	Physics-Quantum Mechanics	3	0	0	3	3	50	50	100
12.	BSC	BTAS21201	Mathematics – 2	3	1	0	4	4	50	50	100
Total				14	1	14	22	29	450	450	900





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SEMESTER 3											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			C	H	CCE
1.	MC	BTMD27301	Indian Constitution	2	0	0	0	2	50	0	50
2.	BSC	BTAS21306	Probability and Statistics	3	1	0	4	4	50	50	100
3.	PCC	BTCO23305	Database Management Systems	3	0	0	3	3	50	50	100
4.	PCC	BTCO23306	Database Management Systems Lab	0	0	2	1	2	25	25	50
5.	PCC	BTIT23301	Data Structures	3	0	0	3	3	50	50	100
6.	PCC	BTIT23302	Data Structures Lab	0	0	2	1	2	25	25	50
7.	PCC	BTIT23303	Object-Oriented Analysis and Design	3	0	0	3	3	50	50	100
8.	PCC	BTIT23304	Object-Oriented Analysis and Design Lab	0	0	2	1	2	25	25	50
9.	PCC	BTIT23305	Computer Organization and Architecture	3	0	0	3	3	50	50	100
10.	PCC	BTAI233##M (A1)	MOOC – 1 (8 Weeks NPTEL Course)	2	0	0	2	0	50	50	100
TOTAL				19	1	6	21	24	425	375	800

NPTEL Courses (A1)	
BTAI23301M	Programing with Generative AI
BTAI23302M	Recommender Systems
BTAI233##M	Or any other relevant course approved by department





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SEMESTER 4											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			C	H	CCE
1.	HSMC	BTAS20301	Fundamental of Management for Engineers	3	0	0	3	3	50	50	100
2.	ESC	BTCO22409	Discrete Mathematics	3	1	0	4	4	50	50	100
3.	PCC	BTCO23401	Design and Analysis of Algorithms	3	0	0	3	3	50	50	100
4.	PCC	BTCO23402	Design and Analysis of Algorithms Lab	0	0	2	1	2	25	25	50
5.	PCC	BTCO23403	Operating Systems	3	0	0	3	3	50	50	100
6.	PCC	BTCO23404	Operating Systems Lab	0	0	2	1	2	25	25	50
7.	PCC	BTIT23401	Web Technologies	2	0	0	2	2	50	50	100
8.	PCC	BTIT23402	Web Technologies Lab	0	0	2	1	2	25	25	50
9.	PCC	BTAI23401	Fundamentals of Artificial Intelligence	3	0	0	3	3	50	50	100
10.	PCC	BTAI23402	Fundamentals of Artificial Intelligence Lab	0	0	2	1	2	25	25	50
11.	OEC	BTXX254##	Open Elective - 1	3	0	0	3	3	50	50	100
12.	PROJ	BTMD26401	Summer Internship / Training / Project – 1 (2 Weeks)	-	-	-	0	-	-	-	-
13.	PCC	BTAI2341#M (A2)	MOOC – 2 (12-Week NPTEL Course)	3	0	0	3	0	50	50	100
14.	PCC	BTAI2342#M (A3)	MOOC – 3 (12-Week NPTEL Course)	3	0	0	3	0	50	50	100
TOTAL				26	1	8	31	29	550	550	1100

NPTEL Courses (A2)	
BTAI23411M	Big Data Computing
BTAI23412M	Statistical Foundation for Big Data Analysis
BTAI2341#M	Or any other relevant course approved by department

NPTEL Courses (A3)	
BTAI23421M	Natural Language Processing
BTAI23422M	Neural Networks for Computer Vision and Natural Language Processing
BTAI2342#M	Or any other relevant course approved by department



SEMESTER 5											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			CCE	SEE	Total
1.	HSMC	BTGN20501	Foundations of Research and Innovation	2	1	0	3	3	50	50	100
2.	PCC	BTCO23503	Computer Networks	3	0	0	3	3	50	50	100
3.	PCC	BTCO23504	Computer Networks Lab	0	0	2	1	2	25	25	50
4.	PCC	BTAI23501	Machine Learning	3	0	0	3	3	50	50	100
5.	PCC	BTAI23502	Machine Learning Lab	0	0	2	1	2	25	25	50
6.	PCC	BTAI23503	Advanced Artificial Intelligence	3	0	0	3	3	50	50	100
7.	PEC	BTAI245##	Professional Elective - 1	3	0	0	3	3	50	50	100
8.	OEC	BTXX255##	Open Elective - 2	3	0	0	3	3	50	50	100
9.	PEC	BTIT247## (A4)	Professional Elective – 4	3	0	0	3	3	50	50	100
TOTAL				20	1	4	23	25	400	400	800

Professional Elective - 4 (A4)	
BTIT24701	Soft Computing Techniques
BTIT24702	Social Network Analysis
BTIT24703	Cloud Computing
BTIT24704	Blockchain Technology and Applications



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SEMESTER 6											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			C	H	CCE
1.	MC	BTMD27601	IKS-1 / NEP Course from Online Portal	2	0	0	0	2	50	0	50
2.	PCC	BTAI23601	Deep Learning	3	0	0	3	3	50	50	100
3.	PCC	BTAI23602	Deep Learning Lab	0	0	2	1	2	25	25	50
4.	PCC	BTAI23603	Data Analytics and Visualization	3	0	0	3	3	50	50	100
5.	PCC	BTAI23604	Data Analytics and Visualization Lab	0	0	2	1	2	25	25	50
6.	PEC	BTIT246##	Professional Elective - 2	3	0	0	3	3	50	50	100
7.	PEC	BTIT246##	Professional Elective - 2 Lab	0	0	2	1	2	25	25	50
8.	PEC	BTAI246##	Professional Elective - 3	3	0	0	3	3	50	50	100
9.	PEC	BTAI246##	Professional Elective – 3 Lab	0	0	2	1	2	25	25	50
10.	OEC	BTXX256##	Open Elective - 3	3	0	0	3	3	50	50	100
11.	PROJ	BTAI26601	Project - 1	0	0	4	2	4	50	50	100
12.	PROJ	BTMD26601	Summer Internship / Training / Project – 2 (4 Weeks)	-	-	-	0	-	-	-	-
13.	PCC	BTAI237##M (A5)	MOOC – 4 (12-Week NPTEL Course)	3	0	0	3	0	50	50	100
14.	PEC	BTAI247##M (A6)	MOOC - 5 (Professional Elective - 5)	3	0	0	3	3	50	50	100
TOTAL				23	0	12	27	32	550	500	1050

NPTEL Courses (A5)	
BTAI23701M	Introduction to Large Language Model
BTAI23702M	Deep Learning for Natural Language Processing
BTAI237##M	Or any other relevant course approved by department

NPTEL Courses (A6) (Professional Elective - 5)	
BTAI24705M	AI Engineering and MLOps
BTAI24706M	AI and Robotics
BTAI24707M	Artificial Intelligence for Healthcare
BTAI24708M	Responsible & Explainable AI Systems
BTAI247##M	Or any other relevant course approved by department





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SEMESTER 7											
Sr. No.	Category	Subject Code	Subject Name	Teaching Scheme (In Hours)			Total Credits	Total Hours	Evaluation Scheme (Marks)		
				L	T	P			C	H	CCE
1.	PROJ	BTAI26701	Project – 2	0	0	8	4	8	50	50	100
2.	PROJ	BTAI26801	Project - 3 / Internship	0	0	24	12	24	100	100	200
			TOTAL	0	0	32	16	32	150	150	300

