



॥ त्वं ज्ञानमयो विद्वानमयोऽसि ॥

2nd year B.Tech AI & Data Science Program Structure For AY 2020-21

Cat	Course	LTP	CH	NC	GC		Cat	Course	LTP	CH	NC	GC
I Semester							II Semester					
IE	Introduction to Electrical Engineering	3-0-2	5	-	4		IE	Engineering Mechanics	2-1-0	3	-	3
IE	Introduction to Computer Science	3-0-2	5	-	4		IS	Chemistry	3-0-0	3	-	3
IE	Introduction to Bioengineering	3-0-2	5	-	4		IS	Physics	3-0-0	3	-	3
							IS	Chemistry Lab	0-0-2	2	-	1
							IS	Physics Lab	0-0-2	2	-	1
IS	Mathematics I	3-1-0	4	-	4		IS	Mathematics II	3-1-0	4	-	4
IE	Engineering Visualization	0-0-2	2	-	1		IE	Engineering Realization	0-0-2	1	-	1
NE	Engineering Design I	0-0-2	2	1	-		NE	Engineering Design II	0-0-2	2	1	-
NH	Communication Skill I	0-0-2	2	1	-		NH	Communication Skill II	0-0-2	2	1	-
NH	Social Connect and responsibilities I	0-0-1	1	0.5	-		NH	Social Connect and responsibilities II	0-0-1	1	0.5	-
NH	Performing Arts I/ Sports I	0-0-1	1	0.5	-		NH	Performing Arts II/ Sports II	0-0-1	1	0.5	-
Total		12-1-14	27	3	17		Total		11-2-12	25	3	16
III Semester							IV Semester					
LS	PSSP	3-1-0	4	-	4		IE	Materials Science & Engineering (Electronic materials)	1 × 1-0-0	1	-	1
IE	i- Energy materials ii- Computational Materials Design	2X 1-0-0	2	-	2							
PC	Data Structures and Algorithms	3-0-2	5	-	4		IE	Pattern Recognition and Machine Learning	3-0-2	5	-	4
PC	Maths for Computing	3-1-0	4	0	4		IE	Thermodynamics	3-1-0	4	-	4
IE	Signals and Systems	3-1-0	4	-	4		PC	HMI	0-0-4	4	-	2
						PCS-1		2-0-2	2	-	3	
						PCS-2		3-0-2	4	-	4	
LS	Quantum Info Processing	3-0-0	3	-	3							
NE	Intro. To Profession	0-0-2	2	1			IH	Humanities I	3-0-0	3	-	3
Total		17-3-4	24	1	21		Total		15-1-10	24	-	21
V Semester							VI Semester					

PC	DA of Algorithms	3-1-0	4	-	4	PC	Data Visualization	3-0-3	6	-	4.5
	Artificial Intelligence	3-0-0	3	-	3		Deep Learning	3-0-3	6	-	4.5
	Optimization in ML	3-0-3	6	-	4.5		AI+X / DS+ X	3-0-0	3	-	3
	Data Engineering	3-0-3	6	-	4.5		Dependable AI	3-0-0	3	-	3
IH	Humanities II	3-0-0	3	-	3	PE	Programme/ Open Elective	6-0-0	6	-	6
NH	Professional Ethics I	0-1-0		1	-	NH	Ethics, Policy, Law and Regulations in AI	0-0-2		1	-
Total		15-2-6	22	1	19	Total		18-0-4	24	1	21
VII Semester						VIII Semester					
PP	B. Tech. Project	0-0-6	6	-	3	IH	Humanities IV	3-0-0	3	-	3
PCPE / OE	AI+X / DS+ X	3-0-0	3	-	3	PE/ OE	Programme/ Open Electives	15-0-0	15	-	15
	Programme/ Open Electives	6-0-0	6	-	6						
IH	Humanities III	3-0-0	3	-	3						
IS	Environmental Sci	2-0-0	2	-	2						
Total		14-0-6	21	-	17	Total		18-0-0	18	-	18
Total of graded and Non-Graded Credit									9	150	
Non-Graded Design Credits									6	-	
Grand Total									165		

Note: ES are proposed Engineering Science compulsory courses