

B Tech in Computer Science & Engineering (AI&ML)

Year	THIRD SEMESTER							FOURTH SEMESTER						
	Sub. Code	Subject Name	L	T	P	C	Sub. Code	Subject Name	L	T	P	C		
II	MAT ----	Linear Algebra and Logic	3	0	0	3	MAT ----	Probability and Optimization	3	0	0	3		
	CSE 2171	Digital Systems and Computer Organization	3	1	0	4	CSE 2251	Database Systems	3	0	0	3		
	CSE 2172	Data Structures	3	1	0	4	CSE 2252	Design and Analysis of Algorithms	3	1	0	4		
	CSE 2173	Introduction to Data Analytics using Python	3	0	0	3	CSE 2271	Artificial Intelligence	3	1	0	4		
	CSE 2154	Object Oriented Programming	3	1	0	4	CSE 2272	Operating Systems	3	0	0	3		
	CSE 2174	Formal Languages and Automata Theory	3	0	0	3	****	Open Elective – I				3		
	CSE 2161	Data Structures Lab	0	0	3	1	CSE 2261	Algorithms Lab	0	0	3	1		
	CSE 2162	Digital Systems Design Lab	0	0	3	1	CSE 2262	Database Systems Lab	0	0	6	2		
	CSE 2163	Object Oriented Programming Lab	0	0	3	1	CSE 2263	Artificial Intelligence Lab	0	0	3	1		
				18	3	9	24				15	2	9	24
Total Contact Hours (L + T + P)			30				Total Contact Hours (L + T + P) + OE			26 + 3 = 29				
III	FIFTH SEMESTER							SIXTH SEMESTER						
	HUM 3052	Essentials of Management	3	0	0	3	HUM 3051	Engineering Economics and Financial Management	3	0	0	3		
	CSE 3171	Machine Learning	3	0	0	3	CSE 3271	Deep Learning	3	0	0	3		
	CSE 3172	Foundation of Computer Vision	3	0	0	3	CSE 3272	Big Data Analytics	3	0	0	3		
	CSE 3174	Parallel Computer Architecture and Programming	3	0	0	3	CSE ****	Program Elective – I	3	0	0	3		
	CSE 3175	Artificial Neural Network	3	0	0	3	CSE ****	Program Elective – II	3	0	0	3		
	****	Open Elective – II				3	****	Open Elective – III				3		
	CSE 3181	Computer Vision Lab	0	0	6	2	CSE 3281	Deep Learning Lab	0	0	6	2		
	CSE 3182	Parallel Programming Lab	0	0	6	2	CSE 3262	Internet Technologies Lab	1	0	3	2		
	CSE 3183	Machine Learning Lab	0	0	6	2	CSE 3263	Big Data Analytics Lab	0	0	3	1		
			15	0	9	24				16	0	9	23	
Total Contact Hours (L + T + P) + OE			24 + 3 = 27				Total Contact Hours (L + T + P) + OE			25 + 3 = 28				
IV	SEVENTH SEMESTER							EIGHTH SEMESTER						
	CSE ****	Program Elective – III	3	0	0	3	CSE 4298	Industrial Training				1		
	CSE ****	Program Elective – IV	3	0	0	3	CSE 4299	Project Work/Practice School				12		
	CSE ****	Program Elective – V	3	0	0	3								
	CSE ****	Program Elective – VI	3	0	0	3								
	CSE ****	Program Elective – VII	3	0	0	3								
	****	Open Elective – IV				3								
			15	0	0	18							13	
Total Contact Hours (L + T + P) + OE			15 + 3 = 18											

** Lab courses with [0 0 6 2] as LTPC pattern consists of three hours of regular lab and three hours of assigned project work.

<p>Minor Specializations</p> <p>I. AI in Healthcare CSE 4011: AI for Medical Image Analysis CSE 4012: Bio-Informatics CSE 4013: Healthcare Informatics CSE 4014: Applications of AI in Medicine</p> <p>II. Computer Vision CSE 4015: Deep Learning in Computer Vision CSE 4016: Computer Vision for Assistive Technologies CSE 4017: Autonomous Systems CSE 4018: Augmented Reality</p> <p>III. Internet of Things CSE 4019: Introduction to IoT CSE 4020: IoT in Agriculture CSE 4021: IoT for Healthcare CSE 4022: Smart Cities</p> <p>IV. Applied Natural Language Processing CSE 4061: Natural Language Processing CSE 4023: Speech Processing CSE 4024: Machine Translation CSE 4025: Deep Learning for Natural Language Processing</p>	<p>V. Cyber Security CSE 4058: Principles of Cryptography CSE 4056: Information Security CSE 4026: Blockchain Technology CSE 4027: AI in Cyber Security</p> <p>VI. Business Management HUM 4011: Financial Management HUM 4012: Human Resource Management HUM 4013: Marketing Management HUM 4014: Operations Management</p> <p>Other Programme Electives CSE 4028: Software Engineering CSE 4029: Compiler Design CSE 4040: Computer Networks CSE 4030: Distributed Systems CSE 4073: Pervasive Computing CSE 4031: Embedded Systems CSE 4062: Android Application Development CSE 4066: Ethical Hacking and Cyber Security CSE 4032: Data Warehousing and advanced Data Mining CSE 4070: Information Retrieval CSE 4034: Multimedia Retrieval CSE 4054: Soft Computing Paradigms</p>	<p>CSE 4035: Reinforcement Learning CSE 4036: Cognitive Systems CSE 4037: Robotics and Intelligent Systems CSE 4038: Machine Learning with Text using Python CSE 4074: Social Network Analysis CSE 4039: Pattern Anomaly and Detection CSE 4069: Human Computer Interface CSE 4075: Knowledge Representation And Ontology CSE 4076: Logical AI And Automated Reasoning</p> <p>Open Electives CSE 4041: Introduction to Artificial Intelligence CSE 4042: Introduction to Machine Learning CSE 4043: Natural Language Processing with Python CSE 4044: Introduction to Soft Computing Paradigms</p>
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