1.	Title of the course	Artificial Intelligence
2.	Course number	CS514L
3.	Structure of credits	3-0-0-3
4.	Offered to	UG
5.	New course/modification to	Modification To CS5204/12
6.	To be offered by	Department of Computer Science and Engineering
7.	To take effect from	July 2022
8.	Prerequisite	CoT
9.	**Course Objective(s):** To provide foundations for Artificial Intelligence (AI) problem solving techniques, knowledge representation formalisms and basics, and discuss popular methods in machine learning	
10.	**Course Content:** Introduction to AI systems: History, Turing test, symbolsystems, agents and state of the art. DFS, BFS, Hill climbing,and Tabusearch. Randomized search strategies:Simulated annealing,and genetic algorithms.Strategies such as branch and bound,A*,IDA*, divide and conquer,and beam stack. Problem decomposition: Goal trees, AO*, rule based systems,and ReteNets Game playing methodologies: Minimax and AlphaBeta algorithms. Planning and constraint satisfaction including forward and backward search, goal stack planning, planning spaces,and constraint propagation.Logic and inferences: Propositional logic, first order logic, soundness and completeness, forward and backward chaining. Classification, regression,and clustering. Decision trees, and logistic regression.Ensemble methods and neuralnetworks. Clustering techniques. Deep learning systems:word2vec and reinforcement learning.	
11.	**Textbook(s):** 1. Deepak K, *A First Course in Artificial Intelligence*, McGraw Hill Education (India) (2013).	
12.	**Reference(s):** 1. Bishop C, *Pattern Recognition and Machine Learning*, Springer (2006).	